

REVISITING THE LOCUS OF EXPERIENCE: ESSAYS ON
ORGANIZATIONAL LEARNING, CORPORATE DEVELOPMENT EXECUTIVES,
AND M&A PERFORMANCE

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ABSTRACT

REVISITING THE LOCUS OF EXPERIENCE: ESSAYS ON ORGANIZATIONAL LEARNING, CORPORATE DEVELOPMENT EXECUTIVES, AND M&A PERFORMANCE

Lisa Xiaolu Tang

Emilie R. Feldman

The relationship between experience, learning, and performance is one of the most central concepts in organizational learning and is a key antecedent to dynamic capabilities and superior performance. While many existing works have focused on learning at the organizational level, more recent works have begun to examine the importance of the individuals involved in this process. This is especially critical in strategic contexts, in which focal actors have a meaningful influence over organizational decisions and outcomes. In this dissertation, I explore these issues in the context of mergers and acquisitions (M&A). By introducing **Corporate Development Executives (CDEs)**, the focal actors specifically dedicated to leading M&A activities inside organizations, I shed light on the role of focal individual-level learning—whether it matters, when it matters, and how it impacts organizational learning, capabilities development, and performance. In Chapter 1, I highlight the challenges of learning from experience in strategic contexts such as M&A and develop a new framework for understanding the conditions under which organizational-level and focal individual-level experience may lead to effective learning and superior performance. In Chapters 2 and 3, I empirically test these ideas using a novel, hand-collected dataset on CDEs in S&P 500 information technology companies. I find evidence that CDEs' prior

M&A experience critically impacts subsequent M&A performance, and firm-level and CEO-level M&A experience serve as boundary conditions for their effectiveness. I also find that the environmental conditions of CDEs' initial M&A learning experience have persistent influences on their subsequent behaviors, in which individual experience can be both an enabler and a constraint on organizational outcomes. Together, these findings offer new theoretical insights on the locus of experience and the antecedents of performance heterogeneity. By accounting for the task-specific focal actor, this dissertation contributes to the literature on corporate strategy, organizational learning, and microfoundations of dynamic capabilities, and has managerial implications on how firms should source and manage talent for M&A, especially given their growing reliance on inorganic opportunities for growth and transformation.

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INTRODUCTION

“Organizations pursue intelligence. It is not a trivial goal. Its realization is imperfect, and the pursuit is endless. Every day there are failures to temper any successes. Nevertheless, the pursuit is often exhilarating.

It exalts the subtle textures of life and elevates coping with ordinary tasks to the artistry of history... Organizations and the individuals in them try to improve by contemplating and reacting to their experiences.”
(March, 2010: 1)

“Each M&A is a snowflake. It is similar but different each time.”

(J. Harris, personal communication, April 14, 2017)

Motivation and Research Questions

Where does superior performance come from? Much of the existing strategy literature has been devoted to answering this central question, and scholars have presented different theoretical perspectives based on resources (Barney, 1991; Peteraf, 1993; Wernerfelt, 1984), capabilities (Eisenhardt and Martin, 2000; Helfat *et al.*, 2007; Teece *et al.*, 1997), and knowledge (Grant, 1996; Kogut and Zander, 1992, 1993). Across these different perspectives, the relationship between experience, learning, and performance is one of the most widely accepted and assumed concepts, in which learning from prior experience is viewed as an important antecedent to superior performance and long-term survival.

However, learning from prior experience is very challenging (March, 2010), and we still only have partial answers to the perennial questions of whether organizations are able to learn from prior experience, how organizations learn, under what circumstances they learn, and how organizations can improve and sustain their learning outcomes (Cyert and March, 1963; Huber, 1991; Levitt and March, 1988). These questions are particularly germane in strategic contexts where learning is foundational to the development of organizational capabilities, yet mixed evidence still exists in empirical studies examining the relationship

between experience and performance (Barkema and Schijven, 2008; King, Bauer, and Schriber, 2018).

This dissertation will attempt to address some of these open questions about organizational learning in strategic contexts by examining learning at the level of the **task-specific focal actors**, or those individuals specifically dedicated to particular strategic tasks or activities within organizations. While many existing works have focused on learning at the organizational level, their implicit assumption that experience can be aggregated and attributed to the collective does not necessarily hold in strategic activities, in which a handful of individuals often meaningfully shape organizational decisions and outcomes.

In these contexts, it is critical to reexamine learning of the individuals specifically dedicated to these activities, especially as recent works have begun to highlight the contribution of individuals to organizational decisions and outcomes. For example, studies on variance decomposition have shown the importance of individuals in explaining the heterogeneity of firm outcomes (Adner and Helfat, 2003; Helfat and Martin, 2015; Meyer-Doyle, Lee, and Helfat, 2019), and works on the microfoundations of strategy have started to look beyond the most senior level of the organization to the specific actors within organizations (Arora, Fosfuri, and Gambardella, 2001; Balachandran, 2019; Felin *et al.*, 2012; Felin, Foss, and Ployhart, 2015; Fu, Tang, and Chen, 2020; Menz and Scheef, 2014).

Taking a multi-level perspective and expanding our understanding of learning beyond both organizational- and individual-levels to the task-specific focal actors (who often sit below the most senior level of the organization), I explore the following theoretical questions in this dissertation:

1. **Where does the locus of experience and learning in organizations reside?**

Is it at the organizational level or the individual level? If it is at the individual level, with which focal actors?

2. **What is the role of focal individual-level learning?** Does it matter, when does it matter, and how does it interact with and impact organizational-level learning, capabilities, and performance?

Research Context

I examine these two theoretical questions using the setting of mergers and acquisitions (M&A), which are some of the most important strategic activities organizations undertake each year in pursuit of new capabilities (Kaul and Wu, 2016; Puranam, Singh, and Zollo, 2006), growth (Capron and Mitchell, 2013; Hitt, Hoskisson, and Ireland, 1990), scope and scale expansions (Anand and Delios, 2002), resource reconfigurations (Bennett and Feldman, 2017; Capron, Dussauge, and Mitchell, 1998; Capron, Mitchell, and Swaminathan, 2001), and long-term competitive advantage (Feldman, 2020; Haspeslagh and Jemison, 1991; King *et al.*, 2018). More than ever, firms are undertaking M&A in record numbers, with worldwide M&A volume totaling US\$3.9 trillion in 2018 (Statista.com, 2018), almost double the amount spent on worldwide R&D activities (Riemschneider, 2018).

The M&A context has a long history for studying drivers of superior performance, and it is particularly suited to explore the questions on the locus of experience and the role of focal individual-level learning, given the existence and proliferation of dedicated M&A-specific actors across companies in the last few decades (EY, 2015). These actors are called the Corporate Development Executives (CDEs), and they are the focal actors leading M&A and inorganic growth efforts inside organizations. Unpacking the role of CDEs—who they

are, what they do, and how they matter in the context of M&A learning, capabilities development, and performance—is important theoretically, empirically, and phenomenologically.

Learning from experience in strategic contexts such as M&A is challenging because the implicit assumption of the comparability of experience does not hold. As the Head of Google’s M&A and Integration aptly described, “Each M&A is a snowflake. It is similar but different each time.” (J. Harris, personal communication, April 14, 2017) As such, organizational-level experience does not necessarily lead to learning effectiveness and performance improvements, which requires achieving both learning reliability and validity (March, Sproull, and Tamuz, 1991). For tasks in which the comparability of experience does not hold, organizational-level experience can allow firms to achieve the reliability of learning (i.e., stable, shared knowledge), but may not be a sufficient condition for achieving the validity of learning (i.e., accurate, causal knowledge). By accounting for the individuals involved in such tasks—the focal actors who are specifically dedicated to the task, or the CDEs—new theoretical insights could emerge on how organizations achieve both reliability and validity of learning, and subsequently superior performance.

From an empirical perspective, it is also important to examine the experience of the task-specific focal actors in the context of M&A, as it could help to unpack some of the mixed empirical results in existing studies on the relationship between M&A experience and performance. While M&A literature has a long history of studying learning in strategic contexts, and scholars have adopted the view that learning from prior M&A experience is essential (Barkema and Schijven, 2008), the empirical results on the experience-learning-performance relationship have been surprisingly mixed. Scholars have found positive

(Barkema, Bell, and Pennings, 1996; Bruton, Oviatt, and White, 1994; Fowler and Schmidt, 1989), negative (Uhlenbruck, Hitt, and Semadeni, 2006), U-shaped (Haleblian *et al.*, 2009), inverted U-shaped (Hayward, 2002), and non-significant results (Baum and Ginsberg, 1997; Lahey and Conn, 1990; Lubatkin, 1987), leading to a lively debate within the literature. As these prior studies have mostly examined M&A experience at the organizational level, shedding light on the focal actors dedicated to M&A inside organizations and their M&A experience as well as the potential interactions between individual-level and organizational-level experiences could bring new insights and answers to reconcile these mixed findings.

An empirical focus on the focal actors dedicated to M&A also complements existing research on the organizational processes of learning from experience. Scholars have introduced organizational routines (Levitt and March, 1988; March and Simon, 1958; Nelson and Winter, 1982) and deliberate learning as the key mechanisms through which experience may lead to the development of organizational capabilities and superior performance (Dyer, Kale, and Singh, 2001; Kale and Singh, 2007; Zollo and Singh, 2004; Zollo and Winter, 2002). An alternative research design that examines the focal actors involved in these learning processes can open new opportunities and additional ways of theorizing about different aspects of experience (e.g., the role of context), extending our understanding of the microfoundations of learning and capabilities development in M&A.

The CDE is also an important phenomenon in contemporary organizations. While limited research has examined the focal actors executing M&A inside organizations, they have received a lot of attention in the media, and appear to be critical resources that are competed for in the labor markets and in courts. Unlike other actors such as the CEO, the top management team members, or business unit leaders, these individuals sit below the C-

suite executives and play a unique role in the M&A process. As the internal deal captain of M&A, they are involved with every step and every decision in the M&A processes of the firm, from target screening to deal execution to post-merger integration., where these decisions all jointly impact subsequent M&A performance. As the existence of these dedicated M&A-specific human capital becomes increasingly prevalent (for example, in the S&P 500 IT sector, all firms have CDEs), and as M&A continues to be a key growth strategy for firms, it is vital to understand the phenomenon of CDEs and how these task-specific focal actors shape organizational capabilities and performance heterogeneity.

Overview of Each Chapter

I examine the above questions in the three chapters of this dissertation. In Chapter 1, I develop a new framework to unpack the relationship between experience, learning, and performance in strategic contexts such as M&A. I first review the existing literature on organizational learning and M&A experience, which has primarily been at the organizational level. I then propose a framework to understand why organizational-level experience may not lead to effective learning and superior performance and how accounting for the task-specific focal actor may help to overcome these challenges. I next revisit the existing empirical evidence on the M&A experience-performance relationship and explain why accounting for the phenomenon of CDEs, the focal actor in M&A, may help to resolve these mixed findings. I then outline some open questions and research opportunities in light of these considerations and conclude the chapter with a discussion on the potential generalizability of these ideas, especially given the proliferation of task-specific focal actors across organizations.

The subsequent two chapters of this dissertation empirically examine these issues with a novel, hand-collected dataset on the heads of corporate development in S&P 500 information technology companies. In Chapter 2, I introduce and argue that CDEs, the task-specific focal actors leading inorganic growth inside companies, are particularly critical for M&A learning and performance. Drawing on learning and cognition literature, I theorize that an inverted U-shaped relationship exists between CDEs' M&A experience and subsequent M&A performance, in which the inverted U is driven by misapplication challenges that may be overcome through variations in prior experience contexts across organizations and deal types. In studying the interactions of M&A experience across the CDE level, CEO level, and firm level, I also explore the boundary conditions of CDEs' effectiveness under different levels of CEO and firm M&A experience, and the potential implications of M&A experience on the variance of performance. By zooming in on the focal actors' task-specific experience, I hope to answer the first-order questions on whether, when, and why focal actor-level experience and learning shapes organizational-level performance.

In Chapter 3, I examine the antecedents of M&A capabilities by unpacking the relationship between CDEs' prior M&A experience contexts, mental representations, and M&A performance. By zooming out from the task-specific focal actors to the external environment in which they are embedded, I refocus the analyses on the antecedents of their experiences and demonstrate how the characteristics of their prior learning environments may shape their subsequent M&A behaviors. I argue that given the causally ambiguous nature of M&A, the initial learning environment may have a continuous influence over CDEs' mental representations of M&A. Specifically, when the initial learning environment is highly dynamic or concentrated, CDEs are likely to develop highly situational-specific

understanding of M&A, which may not be applicable in subsequent environments, resulting in suboptimal outcomes. CDEs' M&A experience serves as an important boundary condition, where the accumulation of experience may help to gradually mitigate these “shadows of the past.” By linking the conditions of focal actors' initial learning environments with subsequent organizational-level outcomes, this chapter seeks to highlight how variations in the external environment can be important sources of heterogeneity for managerial capabilities.

Intended Contributions

By accounting for the task-specific focal actor, this dissertation seeks to make several theoretical contributions. First, by revisiting the locus of organizational learning, I hope to unpack the implicit assumptions in current theoretical conceptualizations of the relationship between experience, learning, and performance, and bring clarity on the theoretical importance of and the conditions under which focal individual-level learning is critical for organizational-level learning and performance.

Second, I hope to contribute to the corporate strategy and M&A literature. By examining M&A experience the CDE level, CEO level, and firm level, as well as their interactions, I hope to partially resolve the inconsistent results among existing studies and answer the call for a greater understanding of antecedents of M&A performance (Haleblian *et al.*, 2009; King *et al.*, 2004). By introducing the CDEs, the focal actors in M&A, I extend existing research on the deliberate learning processes (Dyer *et al.*, 2001; Kale, 1999; Kale, Dyer, and Singh, 2002; Kale and Singh, 2007; Zollo, 1998; Zollo and Singh, 2004; Zollo and Winter, 2002) and dedicated functions (Kale *et al.*, 2002; Trichterborn *et al.*, 2016), and bring

new theoretical insights on how experience can be both an enabler and a constraint, depending on the context through which the experience takes place.

Third, by showing how task-specific focal actors may impact organizational performance, I hope to contribute to the current dialogue on the microfoundations of dynamic capabilities and the question of where M&A capabilities originate (Adner and Helfat, 2003; Helfat *et al.*, 2007; Helfat and Martin, 2015; Meyer-Doyle *et al.*, 2019; Zollo and Singh, 2004; Zollo and Winter, 2002). In addition, by examining how CDEs' understanding of M&A is shaped by their prior experiences and the environments through which these experiences are embedded, I hope to bring forth new insights on the antecedents of mental representations and managerial capabilities (Csaszar, 2018; Csaszar and Levinthal, 2016; Eggers and Kaplan, 2013; Tripsas and Gavetti, 2000).

By introducing CDEs as a critical group of actors in the M&A process and showing that their prior M&A experience matters for M&A learning, capabilities, and performance in meaningful ways, I revisit the locus of experience and learning in M&A and highlight how focal individual-level learning may meaningfully impact organizational-level outcomes. By shedding light on this phenomenon in contemporary organizations, the findings of this study also have managerial implications concerning on how firms should source and manage talent for their M&A functions, especially given firms' growing reliance on inorganic opportunities for growth and transformation.

CHAPTER 1. From Experience to Performance: An Integration of Organizational-Level and Individual-Level Learning in Strategic Contexts

The relationship between experience, learning, and performance has been a central issue in organizational learning over the past few decades and has attracted increasing attention among strategy scholars interested in understanding drivers of performance and capabilities development. While much of the existing work has focused on learning at the collective level, more recent works have begun to highlight the importance of accounting for individual-level factors for organizational-level outcomes and performance (Felin *et al.*, 2015; Gavetti *et al.*, 2012; Helfat and Martin, 2015). This is especially important in strategic contexts in which individual actors appear to be critical for decisions and outcomes (Balachandran, 2019; Meyer-Doyle *et al.*, 2019; Nadolska and Barkema, 2014). Yet limited understanding exists regarding the role of focal individual-level learning¹: whether it matters, when it matters, and how it interacts with organizational-level learning processes.

This chapter presents a theoretical overview of these issues and identifies some ways in which this gap can be addressed. I will begin with an overview of prior literature on the experience-learning-performance relationship, then propose a framework to understand why organizational-level experience may not lead to effective learning or superior performance and how accounting for the task-specific focal actor may help to overcome these challenges. I then outline potential ways we can integrate these considerations in strategic contexts such as M&A and conclude with a discussion on the generalizability of the ideas presented.

¹ I refer to the “focal actor” as the individual who is most relevant for a task, or the task-specific focal actor. I will provide an extended discussion on these individuals and why they are particularly important in section 1.2.

1.1 Existing Literature on Experience, Learning, and Performance

The concept of learning from experience—or experiential learning—has a long history in human scholastic thought. According to the Merriam-Webster dictionary, experience is defined as the “direct observation of or participation in events as a basis of knowledge.” The word itself comes from Latin “experiential,” or “a trial, proof, experiment; knowledge gained by repeated trials,” suggesting that learning and knowledge production are part of the very definition of the word experience itself. The earliest inquiries on the nature of experience can be traced back to Aristotle. In *Metaphysics*, Aristotle distinguishes between experience, art, and science. He viewed experience as a cognitive disposition that emerges from memory, whereas art and science reflect universal judgements that can be developed from a multitude of different experiences (Gregorić and Grgić, 2006). That is, when a person has an experience of something (“X”), he/she does not know its cause or why X is the case, only that X is the case. Unlike judgements of art and science, which reflect universal knowledge of the cause (of X), Aristotle argued that judgements of experience, no matter how universal they may be, are always bound to the particulars through which they are derived.

While this earliest notion of experience focuses on the complicated nature of learning from experience at the individual level, many of the most exciting developments on experiential learning in the last half century have been done at the organizational level. Since the 1950s, taking the firm as the unit of analysis and organizational intelligence as the goal (March, 2010), organizational theorists and strategy scholars have argued that organizational learning is an important way through which firms adapt to the changing environment and achieve superior performance (Chandler, 1962; Cyert and March, 1963; Fiol and Lyles, 1985;

Simon, 1991). Organizational learning, defined as “a change in the organization’s knowledge that occurs as a function of experience,” has since emerged as its own vibrant stream of research, where scholars aim to understand how “the process of creating, retaining, and transferring knowledge within an organization” may occur as organizations search for intelligence and superior performance (Argote, 2012: 31).

Focusing on the relationship between organizational experience, learning, and performance, I broadly classify the existing research since the 1950s into four evolving theoretical perspectives examining different questions regarding this multifaceted process.

1.1.1 “How”: Mechanisms of Organizational Learning (Evolutionary Perspective and Resource-Based View)

Many of the earliest works on organizational experience are grounded in the Carnegie School and the evolutionary view of the firm, focusing on the mechanisms of how organizational learning occurs. Drawing on the behavioral theory of the firm and the evolutionary perspective, scholars first conceptualized organizational learning as a routine-based, history-dependent, and target-oriented process, occurring iteratively when firms repeatedly engage in an activity, draw inferences from their experiences, store the inferred learnings, and retrieve them for future engagements in the activity (Cohen and Bacdayan, 1994; Cyert and March, 1963; Levitt and March, 1988; March and Simon, 1958). The accumulation of direct experience with a particular task or activity² enables the development and adaptation of organizational routines, meaning sets of repetitive patterns of activities that can be activated, developed, and adapted through trial and error (Gavetti and Levinthal,

² In this manuscript, I will use the word “task” and “activity” interchangeably. Task is a generic term that can be either simple (e.g., manufacturing production) or complex (e.g., M&A), and I will refer to M&A as a complex task or activity that is comprised of many smaller subtasks.

2000; Nelson and Winter, 1982). Routines are viewed as semi-automatic knowledge accumulation mechanisms and have been argued to be part of a firm's core resources (Barney, 2001; Winter, 1995).

Building on this conceptualization of learning from direct experience, Zollo and Winter (2002) highlighted the nature of organizational routines as tacit knowledge. The authors distinguished between two types of routines: operating routines and search routines. They described operating routines as those learning processes that are responsible for “the operational functioning of the firm,” while search routines as higher-order routines dedicated to the modification of operating routines and are key constituents of dynamic capabilities (Zollo and Winter, 2002: 341)³. The authors argue that the former type of routines are effective learning mechanisms when organizations engage in highly frequent and relatively homogeneous types of tasks that have well-defined action/performance linkages. However, these tacit, quasi-automatic processes would not be sufficient for relatively infrequent, heterogeneous and highly complex tasks, where more deliberate learning processes would be needed. Subsequent works since have adopted this view of routines as foundational to the development of dynamic capabilities (Helfat *et al.*, 2007; Helfat and Peteraf, 2003; Wibbens, 2019).

In addition to learning through the organization's direct experience, scholars have argued that learning could also occur indirectly through observing others' experiences, or vicarious learning (Argote and Ingram, 2000; Cyert and March, 1963; Levitt and March, 1988). Faced with insufficient information from their own experiences, organizations' decisionmakers can use vicarious learning to reduce uncertainty by observing and imitating

³ I will discuss the capabilities perspective on the relationship between experience, learning, and performance in more depth in section 1.1.3.

other organizations' actions and outcomes, especially when those peer organizations are visible and comparable (DiMaggio and Powell, 1983; Ingram and Baum, 1997b). Vicarious learning occurs through many channels, including indirect observations by managers (Ingram and Baum, 1997a, 1997b; Kim and Miner, 2007), employee mobilities (Mawdsley and Somaya, 2016; Rosenkopf and Almeida, 2003), board interlocks (Haunschild, 1993; Tuschke, Sanders, and Hernandez, 2014), and hiring of external advisors (Haunschild and Miner, 1997; McGrath, 2016).

1.1.2 “Whether and What”: Evidence of Organizational Learning and Nature of Knowledge (Knowledge-Based View)

Around the same time that the evolutionary perspective-based scholars highlighted the importance of routines for organizational learning, another group of scholars devoted their attention to examining the evidence of organizational learning and the properties of what is being learned, answering the questions of whether organizations learn and the nature of the knowledge itself.

One of the most famous and foundational empirical approaches comprised the studies examining the learning curve hypothesis, which posited that more experience with a particular task can increase associated efficiency/knowledge/learning/performance gains (Dutton and Thomas, 1984; Yelle, 1979). Using a routine-based view of the learning process (Argote, 2012; Argote and Epple, 1990), these learning curve-based studies often examined routine organizational activities such as the manufacturing production process of various products, including aircraft, ships, trucks, chemicals, pizza, refined petroleum, etc. Authors consistently found supporting evidence of a continuously improving learning curve—namely that the unit cost of production decreases at a decreasing rate with experience (Alchian,

1963; Darr, Argote, and Epple, 1995; Epple, Argote, and Devadas, 1991; Epple, Argote, and Murphy, 1996; Hirschmann, 1964; Rapping, 1965).

Taking a different approach from the manufacturing and operations context, strategy scholars have searched for empirical evidence of organizational learning in nonroutine, more strategic contexts such as mergers and acquisitions (Barkema and Schijven, 2008; Fowler and Schmidt, 1989; Haleblan and Finkelstein, 1999; Kusewitt, 1985), international expansions (Nadolska and Barkema, 2007; Pennings, Barkema, and Douma, 1994), alliances (Anand and Khanna, 2000; Kale, 1999), joint ventures (Barkema *et al.*, 1997; Sampson, 2005), and divestitures (McGrath, 2016; Shimizu and Hitt, 2005). Taking the organization's stock of experience with the particular strategic decision as the measure (usually as a count or a binary indicator of all prior or only recent experience with the task), these studies examined subsequent performance changes, in which a positive association between the number of prior task experiences and the subsequent task performance is taken as evidence of organizational learning.

Unlike the learning curve studies, however, no consistent evidence has emerged, especially on the relationship between organizational M&A experience and performance, the strategic learning context with the longest history of studying experiential learning (Barkema and Schijven, 2008). Indeed, across different studies, scholars have found mixed results, including positive (Barkema *et al.*, 1996; Bruton *et al.*, 1994; Fowler and Schmidt, 1989), negative (Uhlenbruck *et al.*, 2006), U-shaped (Haleblan *et al.*, 2009), inverted U-shaped (Hayward, 2002), and insignificant (Baum and Ginsberg, 1997; Lahey and Conn, 1990; Lubatkin, 1987) relationships, with the only agreement being that consistent findings do not exist (Barkema and Schijven, 2008; King *et al.*, 2004).

Given the initial mixed empirical results on the experience-performance relationship, a number of subsequent empirical studies have also highlighted the potential contingencies and conditions for knowledge transfer from prior experience. One influential idea is Haleblan and Finkelstein's theory of negative experience transfer, in which the authors adopt a behavior perspective to argue that transferring M&A routines from one industry to another is similar to inappropriately generalizing old lessons to new settings where they do not apply (Haleblan and Finkelstein, 1999). Other works also have shown that firms may learn, depending on the applicability of past deal experience to future deals and the reusability of routines (Barkema, Bell, and Pennings, 1996; Hayward, 2002; Lubatkin, 1983). For example, Nadolska and Barkema (2007) found that experience with domestic M&A and international joint ventures can be beneficial for subsequent foreign M&A expansion as certain lessons learned from these other corporate activities can be transferred to the foreign M&A context. Similar to the absorptive capacity logic (Cohen and Levinthal, 1990), these studies together suggest that relatedness between prior experiences and new encounters with the task enables effective learning and performance.

Evidence that is more difficult to observe but directly related to an organization's ability to learn from its prior experience is the organization's ability to replicate and transfer the knowledge gained from its prior experience. Examining the nature of knowledge and conditions for its transferability, scholars adopting the knowledge-based view of the firm (Grant, 1996; Kogut and Zander, 1992, 1993) characterized knowledge as tacit and difficult to observe (Grant, 1996; Polanyi, 1962), sticky (Szulanski, 1996; Winter, 1995), system-dependent (Winter, 1987), only partially codifiable (Kogut and Zander, 1992), and causally ambiguous (Lippman and Rumelt, 1982). These properties of knowledge also suggest that learning and knowledge transfer within and across organizations could be highly challenging.

1.1.3 “When”: Conditions for More Effective Organizational Learning (Capabilities-Based View)

In the late 1990s and early 2000s, scholars shifted from examining the questions of whether organizations learn from experience and the nature of the learning and knowledge transfer process to the matters of (i) when organizations learn, (ii) under what conditions organizations learn, and (iii) effective ways to organize the organizational learning process.

Drawing on the latest works on dynamic capabilities and the capabilities view of the firm, which see the existence of dynamic capabilities as the antecedent to sustained competitive advantage and superior performance (Eisenhardt and Martin, 2000; Teece and Pisano, 1994; Teece *et al.*, 1997), scholars at The Wharton School argued that deliberate learning mechanisms are critical to the development of dynamic capabilities in a series of influential papers (e.g., Zollo (1998), Kale (1999), Dyer, Kale and Singh (2001), Zollo and Winter (2002), Kale, Dyer and Singh (2002), Zollo and Singh (2004), Kale and Singh (2007), Kale and Singh (2009)).

In Zollo (1998), Kale (1999), Zollo and Winter (2002), Zollo and Singh (2004), and Kale and Singh (2007), the authors suggested that the development of semi-autonomous organizational routines is not the most effective channel through which past experience improves subsequent performance, given that routines are path-dependent, have limited cognitive content, and are agnostic of performance feedback. The development of routines from past experience may lead to process routinization or operating routines, but not higher-order capabilities. Instead, it is only through deliberate learning processes—the specific iterations of experience accumulation, knowledge articulation, knowledge codification, and internalization—that organizations can develop dynamic capabilities which improve their

subsequent task performance. These deliberate learning processes are especially important when the task is infrequent or heterogeneous (Zollo, 1998, 2009; Zollo and Winter, 2002), as superstitious learning could occur when it is difficult to compare each task experience as individuals enter and exit the organization, and key relevant factors for task performance evolve with the changing context of experience.

Testing these ideas empirically in the context of U.S. bank mergers, Zollo and Singh (2004) found that the existence of deliberate learning mechanisms, as evidenced by explicit codification of prior experience with post-acquisition integration process in manuals, systems, and other acquisition-specific tools, strongly and positively influences acquisition performance, while experience accumulation by itself does not. Focusing on the learning process in strategic alliances, Kale (1999), Dyer, Kale, and Singh (2001), Kale, Dyer and Singh (2002), and Kale and Singh (2007) together found that firms with greater alliance experience realize greater success with alliances, and the existence of a dedicated alliance function (with the intent of strategically coordinating alliance activity and capturing/disseminating alliance-related knowledge) leads to superior alliance success through the learning process. In both sets of studies, Zollo and Kale conceptualized the decision process on acquisitions and alliances, respectively, as a learning process which includes both tacit and codified knowledge.

Building on these works, recent work by Trichterborn *et al.* (2016) studied the existence of a dedicated function for M&A. Using a survey of 124 German firms, the authors found that M&A experience has a positive impact on M&A performance, and the existence of a dedicated function enables the development of M&A capability and superior M&A performance. Such a structure oversees and coordinates a firm's M&A activities, and it

allows firms to engage in the deliberate learning processes of articulation, codification, sharing, and internalization of knowledge (Trichterborn *et al.*, 2016: 767).

In sum, these studies show how deliberate learning from prior experience is a critical antecedent to the development of dynamic capabilities and superior performance. Deliberate learning from infrequent events consists of a consideration of the role of tacit and codified knowledge (Kale, 1999; Zollo, 1998; Zollo and Winter, 2002), repeatable processes (Dyer *et al.*, 2001; Kale and Singh, 2007; Zollo and Singh, 2004), and a dedicated organizational structure that enables these learning processes to take place (Kale *et al.*, 2002; Trichterborn *et al.*, 2016). As individual decision makers shape all three elements of deliberate learning, further exploration is needed on the evolutions of individual-level experience among decision makers and their influences on these learning processes and outcomes.

1.1.4 “Who”: Focal Actors in Organizational Learning (Microfoundations Perspective)

The last and most recent approach to thinking about experiential learning and the experience-learning-performance relationship relaxes the assumption of the firm as the unit of analysis as taken in earlier works and instead focuses on the individuals involved in the learning process. This approach is influenced by the “microfoundations” movement in strategy and organizational theory in the past decade, in which scholars have begun to call for more research that investigates the collective concepts in macro management “to understand how individual-level factors impact organizations, how the interaction of individuals leads to emergent, collective, and organization-level outcomes and performance, and how relations between macro variables are mediated by micro actions and interactions” (Felin *et al.*, 2015: 576). This movement touches a wide swath of areas within strategy and

organization theory, and while there is much debate on what constitutes “microfoundations research,” scholars largely agree that the starting point of this new research perspective is a reaction against the prevailing macro management research that has heavily focused on macro-level organizational factors at the expense of micro-level factors, i.e., the role and heterogeneity of individuals (Felin and Foss, 2005; Felin and Hesterly, 2007).

In relation to the organizational learning literature, an emerging stream of work has begun examining the microfoundations of the organizational learning processes (Adner and Helfat, 2003; Felin *et al.*, 2012; Felin and Foss, 2009, 2012; Helfat and Martin, 2015; Helfat and Peteraf, 2015), underscoring the importance of individual-level analysis. Focusing on the most senior actors in the organization, such as the board, the CEO, and the top management team (TMT), emerging works have begun to explore individual-level learning in strategic contexts like M&A. For example, McDonald, Westphal, and Graebner (2008) found that outside directors’ prior experience with M&A in specific industries or product markets have positive effects on the performance of focal firm’s acquisitions in the same industry or market. Examining the diversity of TMTs, Nadolska and Barkema (2014) found that heterogeneous teams acquire less than homogeneous teams, but benefit more from their prior experience and have more successful acquisitions. Meyer-Doyle *et al.* (2019) conducted a variance decomposition of acquisition behaviors, and found that the CEO-level factors are notably larger than firm-level factors in explaining M&A performance, consist with other works documenting the importance of the CEO-effect (Custódio and Metzger, 2013; Hambrick and Quigley, 2014; Quigley and Graffin, 2017; Quigley and Hambrick, 2015).

These four different approaches and theoretical perspectives on the experience-learning-performance relationship are summarized in Figure 1. This dissertation builds upon

the earlier three approaches and is a direct extension of the latest approach on learning. With an aim of shedding light on the focal actors involved in this process and further unpacking the experience-learning-capabilities-performance relationship, this work pushes beyond the aforementioned emphasis on individual-level analysis to introduce and highlight the importance of the most relevant individuals specifically dedicated to a given task or activity. These task-specific focal actors may not be at the most senior level of the organization or are part of the C-suite, but are the ones in charge of performing the task and leading the associated organizational learning processes. The next section will explain why, in strategic contexts like M&A, in which individuals have a large influence over organizational learning effectiveness and performance outcomes, examining learning at the focal actor level is important theoretically, empirically, and phenomenologically.

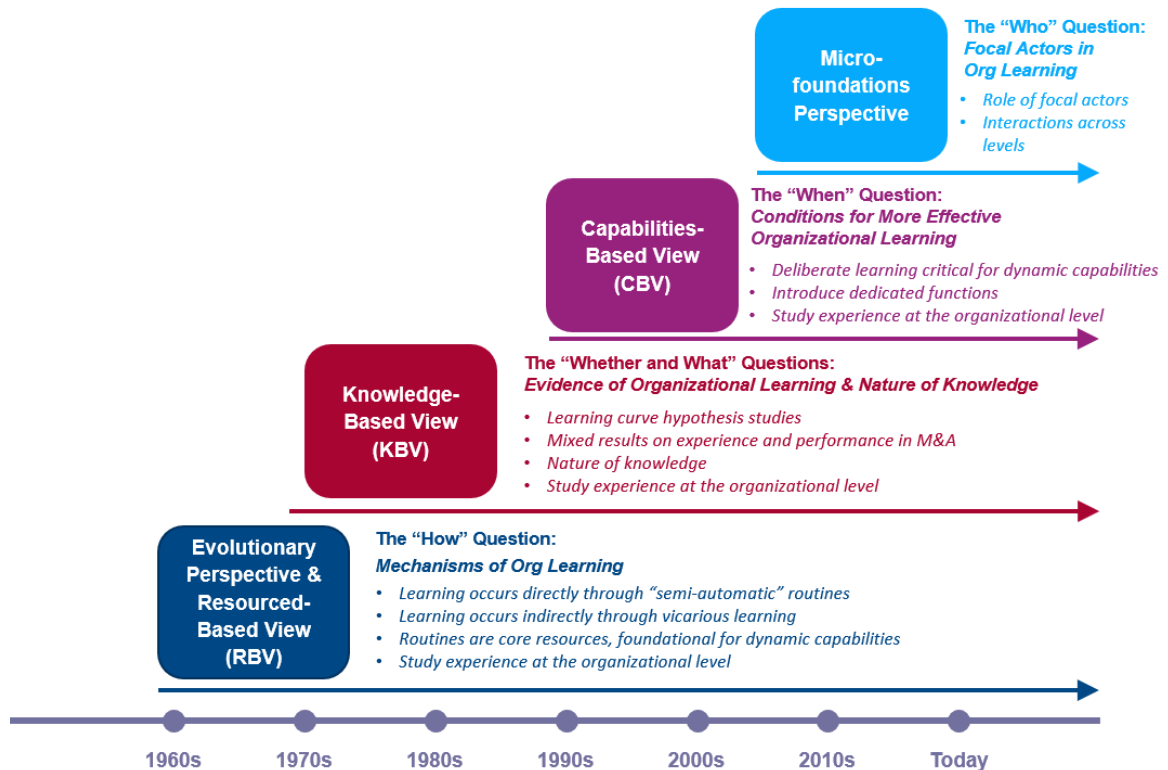


Figure 1. Summary of Existing Theoretical Perspectives on Experience-Learning-Performance

1.2 Why Isn't Examining Learning at the Organizational Level Enough in M&A?

1.2.1 A Theoretical Explanation

In order to understand why examining learning at the organizational level may not be sufficient for strategic activities such as M&A, I revisit the current theoretical model of how learning from experience improves performance and review its implicit assumptions.

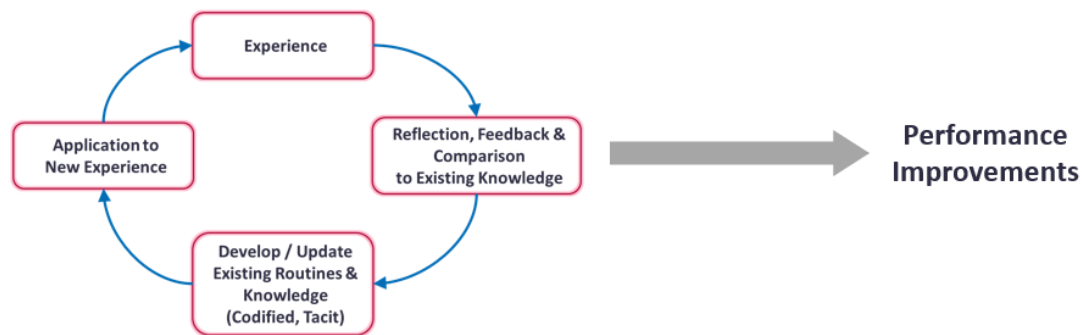


Figure 2. *Implicit Model of Experiential Learning in Prior Works*

Figure 2 illustrates the implicit model of experiential learning in existing works on the experience-learning-performance relationship. Some version of this model has been put forth by John Dewey, Kurt Lewin, and David Kolb, among others, to explain how individuals learn (Kolb, 1984), and I have modified it to incorporate our current understanding of the organizational learning process, based on existing literature as explained above. Broadly speaking, this model suggests that learning from experience occurs in four iterative stages: experience, reflection, knowledge conceptualization, and reapplication. The first stage of the cycle is the concrete experience with a particular task itself. The second stage is reflective observation, during which knowledge about the task is reflected upon and articulated, based on the new experience. If it is not the first experience with the task, then comparisons against what is already known about the task take place. The third stage is abstract conceptualization, in which knowledge about the task is developed, or

updated if it is not the first experience with the task, based on the reflections arising from the second stage. The knowledge developed and updated here could manifest both as tacit routines as well as codified knowledge. Last, in the fourth stage, the latest knowledge about the task is applied to the next encounter with the task, resulting in potential performance changes. The cyclical process then continues with this second experience of the task, where it enters the concrete experience stage of the next cycle. This process can continuously occur over each additional encounter with the task, though the extent of updating and modification may change with increased experience.

Drawing on works by James March, I argue that while this implicit model of organizational learning applies to simpler, routinized tasks such as assembling widgets in a factory where each experience is comparable to before, it does not apply in tasks that are complex and ever-changing such as M&A, in which each experience is similar but different from before (because organizational-level experience with the latter cannot establish both **reliability** and **validity** of learning, the two criteria of learning effectiveness necessary for subsequent superior performance). Figure 3 summarizes this theoretical argument.

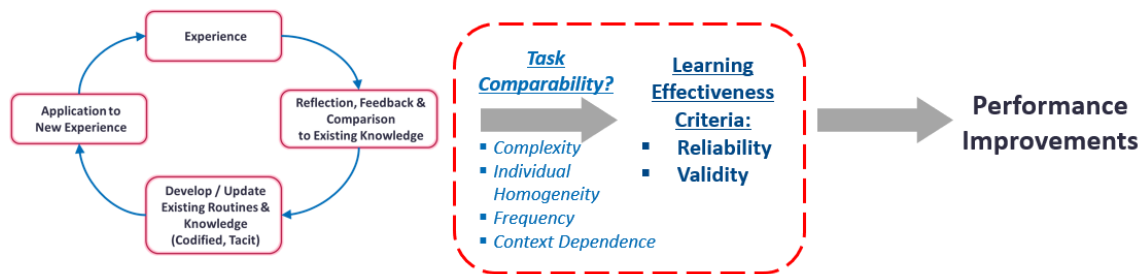


Figure 3. Proposed Model of Experiential Learning

According to March, Sproull, and Tamuz (1991: 6), a reliable learning process is “one by which an organization develops common understandings of its experience and makes its

interpretations public, stable, and shared,” while a valid learning process is “one by which an organization is able to understand, predict, and control its environment.” That is, reliability of learning is about the construction of stable, shared knowledge about a particular task (e.g., the assembly line should be set up in certain ways to ensure maximum output efficiency), while validity of learning is about the construction of causal beliefs about the particular task (e.g., doing x and y leads to z, which in turn helps to lower marginal cost per unit production).

When facing a routine-based, relatively homogeneous task, organizational-level experience can allow organizations to achieve both learning reliability and validity because each new encounter with the task will be comparable to the ones that have come before. According to Zollo (1998: 28), **task comparability** is defined as “the degree of similarity with which the task presents itself each time.” Taking the above example of learning how to build a widget on the assembly line, the task itself of manufacturing the widget is similar each time, regardless of whether it is being done on Monday or Friday, or whether it is done in factories in the U.S. or China. This is referred to as homogeneous comparability. The accumulation of more organizational experience producing the widget would allow the firm to develop codified manuals and processes about widget production, which can then be reliably repeated in many of its factories, regardless of which individual workers are producing the widgets. The accumulation of more organizational experience also enables a valid step-by-step understanding of how a widget should be produced on the assembly line, where workers can accurately produce the same exact widget, regardless of which workers are making them where. Thus, for more routine-based tasks that are highly comparable each time, organizational-level experience—via the development of routines or deliberate learning

mechanisms—has sufficient theoretical power to explain how superior performance may come about, as the model in Figure 3 illustrates. In other words, I propose that:

- **Proposition 1.** Organizational experience allows firms to develop both learning reliability and learning validity when task comparability is high.

In contrast, I argue that, for tasks that are more complex and constantly changing (tasks with heterogeneous comparability) there exists an inherent theoretical tension between an organization's ability to achieve reliable knowledge about these tasks and its ability to achieve valid and accurate knowledge about them, based on organizational-level experience alone. As there are many ways through which task comparability may be heterogeneous, let me first illustrate this argument with the example of M&A, in which each M&A is always similar but never identical.

M&A is a highly complex activity that has multiple stages and a series of different tasks, and the decisions made on the tasks in the earlier stages all jointly affect the ultimate outcomes of each transaction (Haspeslagh and Jemison, 1991; Zollo, 1998; Zollo and Singh, 2004). The tasks that need to be done within each stage may vary significantly, depending on the specific transaction, the decisionmakers involved, the objectives of the CEO/board, the firm, its stakeholders, the industry, the external environment, etc. Each task also involves multiple steps, may change from deal to deal, and is itself a multidimensional problem with potentially infinite solutions and no clear, ideal path. There is no consensus or magic formula that can lead to a good M&A, though many executives agree on what a good M&A is when they see one. Given its evolving and multidimensional nature, an M&A is also likely to involve different individuals from both inside and outside the firm, and the extent of involvement with the task may vary depending on the individuals' roles and responsibilities.

As the target company always changes for each transaction, each experience with M&A may not always be comparable to another, and what has worked previously may not necessarily apply to the next encounter with the task. As one business executive astutely put it, every M&A experience is a snowflake; each experience is similar but never the same (J. Harris, personal communication, April 14, 2017)⁴.

This illustration of M&A highlights a few key dimensions about the potential challenges of learning from experience when the task experience is similar but different each time, or has heterogeneous comparability. We can broadly separate task comparability into four key dimensions:

(i) Task complexity: whether the task has many interconnected, evolving parts with no definitive solutions or paths to superior outcomes. When the task has low complexity, each experience will be relatively homogeneous, and thus comparable with each other, which could then allow reliable and accurate knowledge to be developed about the task. When the task is highly complex, each part of the task and its underlying relationships may change each time, and there is likely to be a lack of clarity regarding the causal relationships between task decisions and outcomes (Zollo and Winter, 2002), making it potentially difficult to compare each experience.

(ii) Homogeneity of individuals involved with the task: the consistency of involvement, the interchangeability of their responsibilities and roles, and whether different individuals' experience with the task can be compared and aggregated.

When experience cannot be aggregated (i.e., when large variations exist among key

⁴ This challenge of learning from similar but different repeated events of a given task has been referred to as the problem of generalization (Choi and Levinthal, 2019).

individuals), comparability of experience becomes highly problematic if one only examines the collective experience or the experience of less-relevant individuals who are not very involved with the task.

(iii) Task frequency: whether enough information can be gathered about the task from existing stock of experience. When a task occurs frequently, there are more opportunities to learn about the task as the individual or the organization goes through the cyclical stages of experiential learning with each additional experience. However, if the task is a one-off event (March *et al.*, 1991), or if the task occurs infrequently (Zollo, 1998, 2009; Zollo and Winter, 2002), superstitious learning is likely to occur since it may be difficult to compare each instance to arrive at accurate causal beliefs about the task, especially as individuals enter and exit the organization, and key relevant factors evolve with the changing context/environment. If the task occurs too frequently, it may also be difficult to compare each experience as lessons learned from decisions under time pressure may be very different from those done through a methodical process (Hayward, 2002).

(iv) Context dependence: whether content of the task varies significantly across different contexts (e.g., firm, industry, macro-economic and political environmental conditions, etc.). When the environment associated with the task changes, comparability of experience may also be challenging, especially since the types of task experience may vary significantly depending on the context; thus, the knowledge gained under one context may not be applicable to a very different context.

While all four dimensions apply in the context of M&A—it is a highly complex task that involves different individuals with varying degree of involvement, occurs relatively

infrequently, is constantly changing, and is highly dependent on the internal and external firm conditions—these considerations will be generalizable beyond the M&A to any organizational task or activity in which any or all of these characteristics hold true.

Given these characteristics of tasks that have heterogeneous comparability, the reliability of learning—the construction of a stable, shared understanding of these tasks—may be possible to achieve through the accumulation of organizational experience as routines stabilize through more experience and a set of codified knowledge and manuals emerge over time. However, the validity of learning—the construction of an accurate understanding of the task—would be very difficult to establish and maintain. Achieving an up-to-date, accurate understanding of how a task should be done when the very task is changing each time would require a constant adaptation of the existing knowledge base, the very opposite of maintaining a shared stable organizational knowledge base. Optimizing learning reliability would thus imply limiting learning validity. In other words, I propose that:

- **Proposition 2.** Organizational experience allows firms to develop reliable knowledge of tasks with heterogeneous comparability but is not a sufficient condition for developing valid knowledge about these tasks.

This proposition summarizes the theoretical reason for why organizational-level experience cannot provide an adequate theoretical explanation for how experiential learning may lead to superior performance in strategic contexts like M&A. How, then, should this theoretical gap be explained? I contend that examining the locus of experience and learning for the focal task could provide the answer. As the cyclical experiential learning model on the left side of Figure 3 originated from social psychology studies on individual-level learning

(Kolb, 1984), it can be applied to individuals involved in performing tasks that have heterogeneous comparability.

In routinized, homogeneous tasks, such as the production of widgets, the homogeneity of individuals can be generally assumed—e.g., while the assembly line workers are important, who these individuals are does not have a significant impact on the learning outcomes, and they are generally interchangeable. In contrast, in less homogeneous tasks such as an M&A, the individuals involved often have unique roles and responsibilities, they cannot be easily exchanged/replaced, and the extent of their involvement with the task may vary. For example, in a M&A setting, a business unit manager may be highly removed from the day-to-day decision-making process of the deal, but if the transaction is relevant to his/her business unit, he/she may be asked to be involved with tasks related to due diligence, financial valuation, synergy estimation, and integration planning. In comparison, the corporate development executive, the focal actor who is in charge of leading the entire M&A process in this firm, will be highly involved with every step and every decision associated with this complex task, and he/she would not be easily exchanged with or replaced by any other individual inside the organization.

Given the heterogeneity of individuals, their roles, and extent of involvement in experiencing these tasks, different individuals will develop different understandings about the same task as they go through the cyclical process of experience, reflection, knowledge conceptualization, and reapplication. Those individuals who are most involved with the task—such as the example of the corporate development executive in M&A—are likely to have the most valid knowledge about the task, because they are the ones most able to adapt their existing knowledge base as they go through each additional experience. In other words,

these focal actors serve as the locus of experience and learning for this task within the organization, and they are the ones most likely to have a complete and accurate understanding of the causal beliefs associated with the task. As each encounter with the task changes, the task-specific focal actor is the one who will be constantly updating his/her understanding or know-how of the causal beliefs associated with the task, even if the rest of the organization are still assuming the old, shared knowledge of the task.

However, as each encounter with these tasks is never the same and the context in which the task is embedded is also changing, knowledge that may be valid under one context may not be valid in a subsequent iteration of the task if the external environment in which it is done has changed dramatically (e.g., doing M&A in a recession vs. doing M&A in an economic boom). In this sense, the focal individuals' knowledge about the task may not always be valid, even though they are adapting their knowledge base (vs. the stable organizational knowledge that may not be valid regardless of context). If these focal actors then misapply their knowledge during a new encounter with the task, we could expect negative performance consequences. In sum, accounting for experience of the most relevant actors for a given task, or the actual locus of experience and learning within organizations, can help us understand when and how the validity of learning may be achieved.

Note that for these tasks, the reliability of learning may also be achieved through learning at the focal individual level. As these individuals continue to accumulate know-how about the task and adapt their understanding based on the latest experience, they will also develop certain routines (e.g., patterns of interactions with others in the organization, specific steps to follow for all new analyses related to the task) and codifiable knowledge (e.g., how to organize the process, checklists of criteria). Some of these routines and

codifiable knowledge may not change dramatically from encounter to encounter and can be repeated and shared with the organization. In other words, for ever-changing tasks like M&A, the focal actor's prior experience could allow him/her to achieve both reliability and validity of learning, leading to subsequent superior performance.

- **Proposition 3.** Experience of task-specific focal actors allows them to develop both reliable and valid knowledge of tasks with heterogeneous comparability while also granting the organization access to valid knowledge about these tasks.

Figure 4 combines Propositions 1, 2, and 3, summarizing the proposed theoretical framework of how learning from experience may lead to superior performance, depending on task comparability. For more routinized, homogeneous tasks, learning from subsequent experience will be comparable with prior experience, and it does not depend on task complexity, frequency, heterogeneity of individuals involved, or the changing context. As such, organizational-level experience allows for the development of stable, shared, and accurate knowledge, which in turn improves subsequent performance. For more complex and evolving “snowflake”-type tasks, knowledge developed from prior experience serves as a basis of comparison but must be updated with each new encounter with the task, given its changing and context-dependent nature. Organizational experience alone cannot achieve both learning reliability and validity, highlighting the theoretical importance of accounting for the experience of the focal actor specifically dedicated to the task.

		<i>Task Comparability</i>	
		<i>Homogeneous</i>	<i>Heterogeneous</i>
<i>Nature of Experience</i>	Complexity	Simple (e.g., making widgets)	Complex (e.g., M&A)
	Locus of Experience	Organization (e.g., Homogeneity of Individuals)	Most Relevant Focal Individual (e.g., Heterogeneity of Individuals)
	Frequency	High	Low
	Context Dependence	No	Yes
<u>Reliability</u> of Learning from Experience		Organizational Experience Sufficient	Organizational Experience Sufficient
<u>Validity</u> of Learning from Experience		Organizational Experience Sufficient	Need Experience of Focal Individual

Figure 4. Summary of Theoretical Reasons for Examining Experience of the Focal Actor

1.2.2 An Empirical Explanation

From an empirical perspective, it is also important to examine the experience of the focal actor in the context of M&A, as it could help to resolve the puzzling empirical results in existing studies on the relationship between M&A experience and M&A performance.

M&A literature has the longest history of studying learning in strategic contexts (Barkema and Schijven, 2008); since the 1980s, theoretical insights developed from this context have made a significant impact on other organizational learning studies—e.g., the concept of negative knowledge transfer (Haleblian and Finkelstein, 1999) and deliberate learning mechanisms (Zollo, 1998; Zollo and Singh, 2004). Prior M&A scholars have generally adopted the view that learning should matter for M&A, but surprisingly, when M&A experience is measured at the organizational level, the empirical results on the experience-learning-performance relationship have been very mixed. For example, Barkema, Bell, & Pennings (1996), Fowler & Schmidt (1989), Nadolska & Barkema (2014) and Trichterborn *et al.* (2016) found a positive relationship between M&A experience and

performance, while Kusewitt (1985) and Uhlenbruck, Hitt and Semadeni (2006) found a negative relationship between M&A experience and performance. Haleblan and Finkelstein (1999) and Zollo and Reuer (2010) found a U-shaped relationship, while Hayward (2002) found an inverted U-shaped relationship, and Lahey and Conn (1990), Lubatkin (1983), Baum and Ginsberg (1997) and Zollo and Singh (2004) found no significant association between experience and performance.

These mixed results have led to a lively debate within M&A learning literature, with scholars making statements such as:

“... consistent findings on the relationship between acquisition experience and post-acquisition performance do not exist ...” (King *et al.*, 2004)

“... empirical evidence suggests that acquisition experience may not be positively associated with acquisition performance and could even hurt performance ...”
(Kolev and Haleblan, 2018)

“... the link between managerial experience and M&A success should not be underestimated ...” (Hitt, Harrison, and Ireland, 2001; King *et al.*, 2018)

These claims suggest that we simply do not know enough about the relationship between M&A experience and M&A performance, and more work should be done on this important antecedent to performance.

One explanation for these puzzling results is that organizational learning without deliberate learning processes is not enough for superior performance. Examining learning from infrequent and heterogeneous tasks, Zollo (1998), Zollo and Winter (2002) and Zollo (2009) argued that experience accumulation through routines and tacit knowledge is not

sufficient for the development of dynamic capabilities, and that instead deliberate knowledge articulation and codification are needed to generate higher-order capabilities. Building on this idea, Zollo and Singh (2004) documented how while firm-level M&A experience alone does not have a statistically significant relationship with subsequent M&A performance, the existence of deliberate learning processes dedicated to codification of prior M&A experience leads to the development of M&A capability and superior M&A performance.

Examining deliberate learning processes in the context of alliances, authors Kale, Dyer, and Singh, in a series of highly influential papers (Dyer *et al.*, 2001; Kale, 1999; Kale *et al.*, 2002; Kale and Singh, 2007, 2009), introduced the concept of alliance capability and the importance of the alliance function as a way to allow firms to deliberately articulate, codify, share, and internalize best practices on managing alliances. Along with Zollo (1998), Zollo and Winter (2002) and Zollo and Singh (2004), these papers lay the theoretical foundation for understanding how a dedicated function, or the organizational structure through which deliberate learning processes about the task occur, may lead firms to develop dynamic capabilities. As authors Kale, Dyer and Singh only examined the dedicated functions empirically in the context of alliances, in a recent study, Trichterborn *et al.* (2016) extended their arguments to the M&A context and found similar results regarding the dedicated functions for M&A, where the existence of a M&A function is positively associated with the development of M&A capabilities and superior subsequent M&A performance.

While this approach to understanding the mixed empirical results on the relationship between M&A experience and performance articulate the underlying learning processes associated with the task, limited attention was paid to the focal actors who sit in the dedicated functions and are involved in these learning processes (which would require a

different research design). Given the prevalence of these dedicated functions (for example, I found that in my empirical context of S&P 500 information technology companies, every firm has a dedicated M&A/corporate development function), a research design that explores these focal individuals and their M&A experience could help to further unpack these mixed findings. Examining the role of focal individual-level learning could also bring new insights on how individual-level experience interacts with organizational-level experience during tacit learning and deliberate learning processes. As individuals move across organizations as they accumulate task-specific skills (Nelson and Winter, 1982), an empirical focus unpacking where their experience come from could also open up opportunity and additional ways of theorizing on different aspects of experience and learning (such as the role of context) that would not be possible when solely examining experience at the organizational level.

Next, I present a brief overview of a typical M&A process and explain why the focal individuals in M&A—those actors sitting in the M&A functions and specifically dedicated to leading M&A activities for firms—have a large influence over M&A performance.

Overview of M&A Stages, Key Tasks, and Performance Drivers

Mergers and acquisitions, or M&A, are some of the most important strategic activities firms undertake each year to pursue growth and competitive advantage (Feldman, 2020; Haspeslagh and Jemison, 1991). An M&A transaction is a complex, multidimensional process involving many interdependent sub-activities across different stages (Zollo and Singh, 2004). Following prior works examining different stages of M&A (Haspeslagh and Jemison, 1991; King *et al.*, 2018; Puranam, 2001; Zollo, 1998), I classify a typical M&A into four recognizable stages: (Stage 1) Deal Sourcing and Target Selection, (Stage 2) Deal Execution, (Stage 3) Deal Announcement Completion, and (Stage 4) Integration and Post-

Deal Learning. I will briefly provide an overview on the sets of tasks and the potential knowledge needed for each stage, in which the decisions made at each stage all jointly affect the ultimate performance of the transaction.

In Stage 1 (deal sourcing and target selection), key decisions that must be made include identifying potential targets (through internal or external leads) and selecting appropriate targets to move on to the execution stage. Doing these tasks well requires unique access to the potential target opportunities, as well as knowledge on the screening process—what criteria to use, the indicators of potentially good and bad deals, when to move forward vs. drop potential transactions, etc.—all of which are only partially codifiable.

In Stage 2 (deal execution), the potential acquisition of a particular target company activates, and extensive interactions occur between the acquiring firm, the target company, and their advisors (if any). While the exact list of tasks in this stage varies depending on deal circumstances, there are several key tasks and decisions all transactions must go through in the execution stage, such as financial valuation and estimation of potential synergies, deal structure, payment type, whether to hire external advisors and their roles, integration planning, and negotiating key terms of the agreement. Performing these tasks well requires knowledge about organizing and executing the process; M&A task-specific knowledge on undertaking financial valuation, negotiation priorities, identifying signs of potential problems, knowing what to ask during due diligence, planning for integration, etc.; and transactive knowledge on the relevant knowledge holders (e.g., business unit managers and external advisors) inside and outside of the firm for each of the key decisions that must be made in this stage.

In Stage 3 (deal announcement and completion), after the negotiation is completed and both parties agree to the set of terms, the transaction becomes public. The key tasks and decisions that must be made in this stage include when and how to announce the transaction to all stakeholders, how to obtain shareholder approval, what to file with the SEC and regulatory authorities, and when to start the integration process. Doing these tasks well requires knowledge on stakeholder communication techniques and anticipation of potential concerns from shareholders and government agencies.

In the last stage of a typical M&A process (integration and post-deal learning), the transaction is officially completed, and integration of the target company takes place. A successful integration enables the firm to realize the expected value from the transaction. While the specific integration tasks and decisions vary across deals and firms, it generally involves creating an integration “playbook” (or adapting an existing playbook to the deal); implementing a post-deal organizational structure; establishing joint, top-management teams; realigning existing organizational resources from both firms; regularly reevaluating the various integration key metrics and milestones; and reflecting on and adapting the playbook once the integration is completed. Given the constantly evolving nature of the integration stage, having a codified manual helps to structure the process in important ways, but tacit knowledge is critical for effective integration.

The detailed review at each stage of a typical M&A process and the associated decisions highlights two key features of the process: the importance of tacit knowledge (in addition to codified knowledge) (as highlighted by Zollo (1998), Zollo and Singh (2004), Zollo and Winter (2002), and Meyer-Doyle *et al.* (2019)) and inter- and intra-organizational relationships. Both of these key antecedents of M&A success are individual-specific

properties and highly challenging to transfer to other actors or to the organization itself, as tacit knowledge resides within the individual's mind, and relationships are built from person to person. In other words, if we want to further unpack the mixed empirical findings and the existing understanding of the learning process in M&A, we should examine the focal actors who are actually executing M&A within organizations.

1.2.3 A Phenomenological Explanation

The phenomenon of dedicated functions for overseeing key strategic activities such as M&A or alliances has become increasingly prevalent in the last three decades. While existing research has argued and shown that the existence of these functions is critical for internalization of organizational learning, the development of capabilities, and subsequent superior performance (Kale *et al.*, 2002; Trichterborn *et al.*, 2016), limited works have examined the individuals sitting within those functions and leading these strategic activities. Given their increasing proliferation across all industries, from both a phenomenological and managerial perspective, it is important to examine these task-specific focal actors.

One such group of these task-specific focal actors are the **Corporate Development Executives (CDEs)**, who sit within and lead the corporate development function (CDF) or the M&A function within organizations. While the exact scope of responsibilities of the CDF may vary from firm to firm, I respectively define the CDF and the CDEs as the structure and people in charge of corporate development activities (in particular, inorganic growth strategies such as M&A and divestitures) in firms. Note that in some companies, the alliance function is part of the corporate development team, but in others they sit separately, more closely linked to the business development teams. Licensing, early-stage venture investments, and partnerships are also part of CDF in some firms. For the purpose of this

dissertation, I only focus on the M&A-related responsibilities for the CDF and CDEs as M&A is the core activity common to all corporate development teams. As such, I do not distinguish between M&A function, M&A executives, CDF, and CDEs in this manuscript.

The earliest discussion of the CDF/CDE occurs in Haspeslagh and Jemison's classic practitioner-orientated book on M&A in 1991, where the authors outline the potential benefits of the existence of a dedicated function. Since then, only two management papers—one on serial acquirers (Laamanen and Keil, 2008) and one on the existence of M&A functions (Trichterborn *et al.*, 2016)—have examined CDFs, but no existing studies have specifically examined the individuals sitting inside these functions, or what I refer to as the M&A-specific human capital or the task-specific focal actors dedicated to M&A.

CDEs appear to be highly important resources battled over by companies in the labor markets. For example, the media has often attributed Apple's uptick in M&A volume and performance since 2009 to its head of M&A, Adrian Perica, who joined from Goldman Sachs in 2009 and brought expertise and discipline to Apple's M&A process (*Bloomberg*, 29 May 2014; *Newsweek*, 4 April 2019). We also see business headlines pointing to poaching of competitors' CDEs, such as "Facebook Said to Hire Google Executive for M&A" (*New York Times*, 15 March 2011) or "GSK poaches Roche dealmaker" (*Reuters*, 18 April 2018). CDEs are even fought over in courts, such as the case of IBM's lawsuit against Dell over the poaching of its M&A chief (*Wall Street Journal*, 28 May 2009).

CDEs play a unique role in the M&A process: they lead the M&A process inside organizations, specifically charged with facilitating inorganic growth strategies for firms (Haspeslagh and Jemison, 1991; Laamanen and Keil, 2008; Trichterborn *et al.*, 2016). They are involved with every step and every detail in the M&A processes of the firm, from target

screening to deal execution to post-merger integration, and they are very different from other groups of individual actors that may be involved in the M&A process.

Unlike the business unit leaders, who are mostly focused on their own products/divisions/geographies and may have a deep understanding of all aspects of their units, CDEs have a broader view of the firm. Through their interactions with various business units within the organization, they usually have a good understanding of the strengths and weaknesses of all business units of the firm, as well as knowing how the various units collectively create value for the firm. When evaluating potential transactions, they are not only able to calculate the potential benefits for one business unit, but they are also able to account for the potential hidden benefits and/or costs to another business unit to accurately assess the overall financial and strategic impact to the firm—something business unit leaders may not be able to do.

CDEs are also different from other C-suite executives such as CEOs and board members, who often take a 10,000-foot view of the organization. They are charged with setting firms' overall strategies and visions; they may oversee all key strategic decisions of the firm, but are not actively involved with the ins and outs of every potential M&A idea as the CDEs are. In other words, while every M&A decision requires the CEO's (and board members') support and approval and may involve other relevant actors' participation (such as business unit leaders' industry knowledge during due diligence), CDEs are the actors most involved with and specifically dedicated to this complex task.

In addition, different from any other group of individual actors involved in the M&A process, CDEs play a unique role. Namely, they serve as the nexus linking all relevant parties from both inside and outside of the organization during the M&A process. Internally, CDEs

collect and implement inorganic growth objectives across the C-suite level and the business-unit level, serving as the centralized location whereby potential M&A ideas are evaluated and executed. They also act as internal learning centers of M&A know-how, in charge of developing manuals, codifying past lessons learned, and updating relevant M&A knowledge bases (Trichterborn *et al.*, 2016). Externally, CDEs serve as the firm's key contact liaising with all external parties relevant to the M&A process, including potential target firms, sellers, partners, and external advisors (Haspeslagh and Jemison, 1991). They are often the first individuals from the organization speaking to potential target companies, and they decide when and which external opportunities should be taken to the next steps.

Given CDEs' role as the most relevant and involved actor leading M&A inside organizations—their specific knowledge and inter- and intra-organizational relationships have significant influence over their own firm's M&A decisions in each stage and ultimate M&A performance—it is thus important to look inside the dedicated functions to examine this phenomenon of Corporate Development Executives and how they may affect organization's M&A decisions, learning, capabilities, and performance. With the increasingly common existence of CDEs within companies across a variety of industries (EY, 2015), insights on the phenomenon would also have meaningful managerial implications for how organizations may source M&A capabilities.

1.3 Open Questions and Research Opportunities

The set of arguments in the previous section highlights the importance of examining the task-specific focal actor for learning, especially when the task itself is ever-changing and heterogeneous. Building on the different dimensions of task comparability, I outline three potential approaches that can, separately and in combination, help scholars more effectively

account for the role of focal individual-level learning and unpack the various ways in which task-specific individual actors shape key organizational outcomes.

1.3.1 Locus of Experience: Task-Specific Focal Actor as the Unit of Analysis

One approach is to use the lens of the task-specific focal actor to revisit the question regarding the locus of experience and learning in M&A. According to Kaplan (1964: 78), “the locus problem may be described as that of selecting the ultimate subject-matter for inquiry in behavioral science, the attribute space for its description, and the conceptual structure within which hypotheses about it are to be formulated.” While existing literature has largely assumed that the locus of experience and learning resides at the collective, other studies have begun to highlight that individuals sitting at the organizational interface and leading particular strategic activities warrant further notice. For example, Seabright, Levinthal, and Fichman found in their study that the locus of auditor-client relationships resides with the individuals primarily responsible for the relationships; attachments of these individuals decreased the likelihood of switching, even when the two firms were no longer compatible (Levinthal and Fichman, 1988; Seabright, Levinthal, and Fichman, 1992). More recent works have examined the presence of Chief Strategy Officers and performance of strategically complex firms (Menz and Scheef, 2014), Chief Sustainability Officers and their influence on firms’ socially responsible activities (Fu *et al.*, 2020), and backgrounds and tenure of investment managers on corporate venture capital (CVC) investments’ innovation outcomes (Balachandran, 2019). Future works could follow a similar approach by examining the individual-level characteristics that are most relevant for learning, particularly when studying where the locus of experience and learning lies in strategic contexts like M&A.

Such an approach was not possible in prior studies of organizational learning, given data limitations on what was happening inside organizations, and those studies that were able to look at individual-level factors were often restricted to a single-firm setting or only the C-suite executives sitting at the top of the organization (Beckman, 2006; Coff and Kryscynski, 2011; Felin and Zenger, 2011; Nadolska and Barkema, 2014). However, one of the most exciting research opportunities in management research today is the availability of data. More than ever before, we are able to access records of individuals within the organization. With data sources such as LinkedIn, Glassdoor, Bloomberg, Pitchbook, Internet Wayback Machine, etc., researchers can, for the first time, collect comprehensive information about individuals—their career history, education backgrounds, social media postings, approximate compensation, etc.—beyond the most senior level of the organization. New data sources about the firm have also emerged, such as the recent explosion of textual data. Traditional data sources of individuals (e.g., Execucomp, S&P's People Intelligence, BoardEx, Orbis, DCA) usually only cover the senior, top-management team. Now researchers can take advantage of these new data sources to systematically build a database of key individuals, their detailed information, and their current and historical employers, presenting an opportunity to truly study the locus of organizational learning and the microfoundations of key strategic decisions and outcomes.

1.3.2 Zooming in: Accounting for Experience Composition and Heterogeneity

Another approach is to zoom in on what the focal actor brings to his/her role, or the composition of his/her prior experience. When individuals join a new organization, they carry with them unique sets of new resources for the firm including: (i) experiences in different industries, firms, and job functions; (ii) knowledge about different tasks and

learning environments, some of which are codifiable, but much could be tacit; and (iii) social capital or relationships with prior employers, competitors, advisors, investors, and other relevant stakeholders. Individuals' unique prior experiences and backgrounds have shaped how they arrived at their current roles and will continue to influence their actions, decisions, and outcomes going forward (Chang, 1996; Felin *et al.*, 2015; Helfat and Martin, 2015; Meyer-Doyle, 2012; Wright, Coff, and Moliterno, 2014). Research that can take advantage of the heterogeneity across individuals could help to shed light on when and how task-specific focal actors matter, answering open questions such as: What types of backgrounds and experiences are important for task success? What are the attributes of an effective task-specific focal actor? How does the breadth vs. depth of his/her experience influence performance? What types of knowledge are firm-specific vs. generalizable across firms? Do focal actors serve as conduits of knowledge transfer, and if so, how? What is the relationship between developing an internal dedicated function on a particular task vs. contracting external advisors—are they substitutes or complements? What types of career paths are optimal for task learning and performance? How do focal actors' relationships with other key actors in the organization influence their effectiveness? What are the most appropriate incentives and structures for optimal learning and performance?

While examining the relationship between a focal actor's prior experience and certain organizational outcomes, it is also important to note potential challenges of learning at the individual level. Individuals are boundedly rational (Simon, 1991), and not all of their learning from prior experiences would lead to subsequent improvements in performance. Individuals may suffer from biases, cognitive entrenchment and inertia, path-dependent local search, overconfidence, etc., all of which may result in superstitious learning and knowledge misapplications (Dane, 2010; Gavetti and Levinthal, 2000; Tripsas and Gavetti, 2000; Zollo,

2009). Examining the prior backgrounds and experience of individuals as well as their performance over time may shed light on the challenges of learning, addressing concerns (such as the challenges of learning from individuals' past experience and ways to overcome these impediments to learning) and bringing about a more nuanced view of the complex learning process within organizations.

1.3.3 Zooming out: Accounting for Varied Learning Contexts

A third approach could be to examine the focal actor as an individual within the broader learning environment. The learning environment includes all contextual features that may directly or indirectly shape his/her learning process. This may include the characteristics of the firm; the firm's competitors, advisors, stakeholders, industry characteristics and dynamics; broader technological evolution and disruptions; and macro-economic and geopolitical conditions. Recent works on initial labor market conditions (Altonji, Kahn, and Speer, 2016; Oreopoulos, Von Wachter, and Heisz, 2012; Oyer, 2006; Raaum and Røed, 2006; Schoar and Zuo, 2017) and imprinting (Hsu and Lim, 2014; Marquis and Tilcsik, 2013; Simsek, Fox, and Heavey, 2015; Tilcsik, 2014) show the potential long-lasting effects of the external learning environment, especially the environment(s) early in one's career. These studies provide a useful template to consider conceptually which characteristics of the environment may be relevant in studying experiential learning and how one may empirically incorporate the individuals' prior environment into the analyses on firm outcomes.

This zoomed-out approach could allow researchers to examine environmental contingencies associated with focal individual-level learning, bringing to the foreground the uncontrollable external forces that may enhance or limit the generalizability of individual-level experiential learning (Csaszar, 2018; Eisenhardt and Martin, 2000; Rockart and Wilson,

2019; Zollo and Winter, 2002). Research that can take advantage of the heterogeneity across focal actors' learning environments could also shed light on the antecedents of capabilities and what environments may be more conducive vs. destructive for reliable and valid task-related knowledge. In addition, focusing on the environment could be an opportunity to study selection dynamics of key strategic human capital, highlighting the potential fit between focal individual-level and organizational-level capabilities.

1.4 Generalizability and Conclusion

As organizations continue to redesign their internal structures to enhance effective and productive ways to sustain their performance, the importance of focal actors cannot be understated. Sitting below the C-suite, these middle-level managers serve as the locus through which key activities are organized and executed from within and across organizational boundaries. By introducing and focusing on the CDEs in the context of M&A, this chapter takes the first steps in integrating the organizational and individual levels, highlighting the theoretical importance of looking not only at the individual level, but at the focal individuals most relevant for a given task.

However, the generalizability of the ideas proposed here is not just limited to the context of M&A; it could be of relevance to scholars interested in corporate strategy, organizational learning, strategy human capital, and capabilities in general. The proposed model of experiential learning and the theoretical arguments presented in Section 1.2 can be applied to many organizational learning contexts, while the set of open research questions and approaches in Section 1.3 could be adopted to study a number of other strategic activities (e.g., alliances, joint ventures, corporate venture investments, divestitures, etc.) that

firms undertake as they continuously search for growth and long-term competitive advantage.

In the next two chapters of this dissertation, I empirically test the ideas developed thus far, focusing on the Corporate Development Executives: the task-specific focal actors in charge of M&A inside organizations. Through an examination of CDEs, I will empirically answer some of the previously identified questions on the locus of experience and learning, the role of focal individual-level learning, its impact on and interactions with organizational-level learning, capabilities development, and performance, and the contingent impact of the external learning environment, all in the context of mergers and acquisitions.

CHAPTER 2. Zooming in on the Focal Actor: Whether and How Corporate Development Executives Shape M&A Learning and Performance

2.1 Introduction

In today's rapidly changing global competitive landscape, mergers and acquisitions (M&A) have become ever more critical sources of growth, value creation, and long-term competitive advantage (Capron and Mitchell, 2013; Feldman, 2020; Haspeslagh and Jemison, 1991). In 2018, US\$2.9 trillion was spent on M&A globally (Statista.com, 2018), almost double the amount spent on worldwide R&D activities (Riemschneider, 2018). A long history of research has been conducted on the factors that drive the performance of M&A, including the role of learning from past experience (Barkema and Schijven, 2008; Halebian and Finkelstein, 1999). Drawing on the evolutionary theory of the firm, scholars have generally focused on learning at the organizational level, where routines, deliberate learning, and codification processes have been shown to be important antecedents to M&A capabilities and superior M&A performance (Trichterborn *et al.*, 2016; Zollo and Singh, 2004; Zollo and Winter, 2002).

However, the knowledge-based view of the firm and recent works on the microfoundations of dynamic capabilities suggest that individuals also play critical roles in organizational learning (Grant, 1996; Meyer-Doyle *et al.*, 2019). Individuals are highly involved in the codification and application of knowledge regarding specific tasks, and they bring a wealth of tacit knowledge from their heterogeneous backgrounds (Argote, 2012; Argote and Ingram, 2000). As strategic decisions like M&A are largely determined by a handful of individual decision makers inside companies, it is thus imperative to examine who these individuals are and how they shape M&A outcomes.

In this chapter, I introduce and argue that Corporate Development Executives (CDEs), the task-specific focal actors for inorganic growth inside organizations, are particularly important for M&A learning and performance. With their growing prevalence in the last three decades (EY, 2015), these individuals are now often competed for in labor markets and even fought over in courts (*Wall Street Journal*, 28 May 2009; *Reuters*, 18 April 2018). Unlike other actors such as CEOs or boards, CDEs are specifically responsible for orchestrating and overseeing the entire M&A process inside companies (Haspeslagh and Jemison, 1991; Laamanen and Keil, 2008; Trichterborn *et al.*, 2016). They are engaged in every step and every detail of the M&A decision process and play a unique organizational role as the nexus linking all relevant internal and external parties throughout the process. Shedding light on these individuals may bring new theoretical insights into how, whose, and what type of M&A experience impact M&A performance, and partly answer the question of where M&A capabilities come from.

To unpack the role of CDEs in shaping firms' M&A learning and performance outcomes, I make three sets of arguments. First, I propose that the locus of experience and learning in M&A is not necessarily at the organizational level, but instead resides with the focal actors specifically dedicated to the task—namely, the CDEs. Second, the complex and context-dependent nature of M&A poses both learning benefits and misapplication challenges, suggesting a net inverted U relationship between CDEs' prior experience and subsequent M&A performance. Third, greater variation in prior CDE experience contexts may mitigate these misapplication challenges, resulting in a net increasing relationship between their prior M&A experience and subsequent M&A performance.

Using a proprietary, hand-collected dataset on heads of corporate development built from LinkedIn and other web resources, I empirically test these arguments through an event study of all announced M&As by S&P 500 information technology companies from 1995-2015. I find an inverted U-shaped relationship between CDEs' prior M&A experience and subsequent M&A performance, in which more varied experience (based on CDEs' prior organizational and deal contexts) moderates this relationship. I also find that CEO-level and firm-level M&A experience serve as important boundary conditions for the effectiveness of CDEs. While firm M&A experience does not impact the mean of performance, it is negatively associated with the variance of performance. I also test and find evidence against several alternative explanations including selection based on firm-related factors, impression management, survivorship bias, productivity declines, reputation spillovers, other functional backgrounds of CDEs, financial advisors' experience, and previous partnerships between target and acquiring firms.

This study contributes to the corporate strategy literature by unveiling novel insights into the relationship between experience, learning, and performance in the context of M&A. By introducing CDEs as a critical group of actors in the M&A process and showing that their prior M&A experience matters for M&A performance in meaningful ways, this study builds on the emerging stream of research on dedicated corporate functions and the microfoundations of dynamic capabilities. The findings of this study also have managerial implications on how firms should source talent for their M&A functions, especially given firms' growing reliance on inorganic opportunities for growth and transformation.

2.2 Theoretical Background and Hypotheses

M&A is an important strategic action whereby firms can change their corporate scope, reconfigure their resource bases, and sustain their competitive advantage (Bennett and Feldman, 2017; Capron and Mitchell, 2013; Feldman, 2020; Haspeslagh and Jemison, 1991; Karim and Mitchell, 2000; Zollo, 1998). Understanding how firms can achieve superior M&A performance has continued to be an active area of research and debate among corporate strategy scholars (Haleblian *et al.*, 2009; King *et al.*, 2018), especially as M&A has become an even more critical source of growth (*Financial Times*, 2018).

2.2.1 Prior Literature on M&A Experience and Learning

Many scholars have argued that prior M&A experience is an important antecedent of learning how to make better M&A decisions and achieving superior M&A performance (Barkema and Schijven, 2008; Bauer and Matzler, 2014; Haleblian *et al.*, 2009; King *et al.*, 2018); many of the existing works on M&A experience have examined learning at the organizational level.

Studies examining the theoretical mechanisms through which organizational learning occurs have argued that learning from direct experience primarily occurs through two ways: routines and deliberate learning processes (Kale and Singh, 2007; Nelson and Winter, 1982; Zollo and Singh, 2004; Zollo and Winter, 2002). Routines are conceptualized as a semi-autonomous and iterative type of learning that is history-dependent and target-oriented, in which firms draw inferences from past experiences and retrieve the inferred learning for future similar engagements (Hoang and Rothaermel, 2005; Levitt and March, 1988; Zollo, 1998). Deliberate learning processes have been argued to be high-order capabilities that require intentional cognitive attempts to reflect on past accumulated experience of a task

(Zollo, 1998; Zollo and Winter, 2002) and may occur when firms have a dedicated function that focuses on articulation, codification, sharing, and internalization of knowledge learned from past experiences (Kale *et al.*, 2002; Trichterborn *et al.*, 2016). Based on these mechanisms, scholars have argued that organizational-level M&A experience should lead to subsequent improvements in performance.

However, the empirical studies examining the M&A experience-learning-performance relationship have found mixed results. For example, upon examining the direct relationship between organizational M&A experience and subsequent performance, Fowler and Schmidt (1989) and Barkema, Bell, and Pennings (1996) found a positive relationship while Haleblan and Finkelstein (1999) and Zollo and Reuer (2010) documented a U-shaped relationship; Hayward (2002) found an inverted U-shaped relationship, while Uhlenbruck, Hitt, and Semadeni (2006) found a negative relationship, and Lahey and Conn (1990), Lubatkin (1983), Baum and Ginsberg (1997) and Zollo and Singh (2004) found no significance. Building on these results, other works have also highlighted the potential contingencies for the experience-learning-performance relationship, such as the applicability of past deal experience to future deals and the reusability of routines (Barkema *et al.*, 1996; Hayward, 2002), the relatedness and similarities to what the firms have learned from prior M&A transactions (Haleblan and Finkelstein, 1999; Nadolska and Barkema, 2007), the differential effects of learning from successful or non-successful experiences (Kim, Kim, and Miner, 2009), and the existence of deliberate learning mechanisms and a dedicated M&A function (Trichterborn *et al.*, 2016; Zollo and Singh, 2004).

2.2.2 Individual- vs. Firm-Level M&A Experience and Learning

While foundational to our understanding of how learning from prior experience may impact strategic decisions such as M&A, these works implicitly make two assumptions. First, the learning process can be studied and measured at the organizational level, at which prior experience with a task may be codified, aggregated, and attributed to the collective property of the organization. Second, the reenactment of routines and the reapplication of knowledge from deliberate learning processes are largely firm-level properties, regardless of the heterogeneous backgrounds of the individuals involved and their mobility over time.⁵

These assumptions may be valuable simplifications for understanding many activities of the firm, such as making toys in factories or building liberty ships (Argote, Beckman, and Epple, 1997), but they do not always hold true for all activities of the firm, especially in strategic decisions like M&A that are largely determined by a few key actors inside the firm. In such contexts, reexamining the roles of the specific individuals dedicated to M&A and their prior experience is essential to our theoretical understanding of the relationship between organizational learning and performance, especially since individuals bring a wealth of tacit knowledge from their heterogeneous prior experiences and are highly involved in both knowledge codification and their reapplications (Argote, 2012; Zollo and Winter, 2002).

A few recent studies have begun to examine the prior M&A experience of the most senior individual actors of the organization, including the board of directors, CEOs, and the

⁵ In their theory-building sections, prior works often loosely referred to all individuals involved in the experience accumulation process as “managers” or “top managers” without specifying who these individuals are and their differential roles in relation to the task. Instead, they often implicitly assume that, regardless of which individuals are experiencing the task (and whether these individuals leave the organization), any actors’ accumulation of task experience can be aggregated to the firm level, as any knowledge gained from these experiences would be fully reflected in firm-level memory, routines, codified manuals and processes. Zollo and Winter (2002) and Zollo and Singh (2004) examined the processes of deliberate learning from experience, where they also highlight the importance of tacit knowledge.

top management teams (Gamache *et al.*, 2015; Jensen and Zajac, 2004; McDonald, Westphal, and Graebner, 2008; Meyer-Doyle *et al.*, 2019; Nadolska and Barkema, 2014). However, additional works examining other key strategic activities of the firm have also demonstrated the importance of looking beyond the C-level to the most relevant individual actor-level (Arora *et al.*, 2001; Fu, Tang, and Chen, 2018; Gruber, Harhoff, and Hoisl, 2013; Levinthal and Fichman, 1988; Seabright *et al.*, 1992). Focusing on the most relevant actor is especially important for M&A because it is a highly complex activity that requires not only specialized knowledge regarding every task, but also extensive intra- and inter-organizational relationships to ensure smooth coordination and access to privileged information. All of these properties are individual-specific and are not easily transferrable to other actors in the organization. In other words, a closer examination of the task-specific focal actor is critical for unpacking the theoretical mechanisms driving organizational learning in M&A.

2.2.3 Corporate Development Executives as the Locus of Experience in M&A

Corporate Development Executives (CDEs)⁶ serve as the task-specific focal actor for M&A within organizations and have become increasingly prevalent over the last three decades (EY, 2015). While their exact responsibilities may vary across organizations, the existence of the function in which they reside and their key responsibilities were first documented in Haspeslagh and Jemison (1991). Though the exact nomenclature many vary

⁶ Their nomenclature may vary across organizations, where they have been called Head of M&A, Head of Corporate Development, Corporate Business Development Executive, Chief Development Officer, etc. Throughout this paper, I refer to CDE as the individual whose main responsibility is to lead a firm's inorganic growth and all M&A efforts.

across firms, for the purpose of theorizing, throughout this manuscript I refer to CDE as the highest-ranking individual who leads the function in a given organization⁷.

CDEs provide an opportunity to reexamine where learning in M&A occurs. These executives are the dealmakers inside firms, specifically charged with the task of leading inorganic growth strategies (Haspeslagh and Jemison, 1991; Laamanen and Keil, 2008; Trichterborn *et al.*, 2016). They play a critical role in orchestrating and overseeing every task and every detail in the M&A lifecycle, from target screening and selection to deal execution to post-merger integration; the decisions made in each step directly impact the ultimate performance of each deal.

While they have been largely ignored by existing M&A literature, CDEs have been recognized in the business press as highly valuable resources of firms. For example, the media has attributed Apple's uptick in M&A volume and performance since 2009 to its Head of M&A, Adrian Perica, who joined from Goldman Sachs in 2009, bringing expertise and discipline to Apple's M&A process (*Bloomberg*, 29 May 2014; *Newsweek*, 4 April 2019). Competitors often battle over these executives, as seen in such headlines as "Facebook Said to Hire Google Executive for M&A" (*New York Times*, 15 March 2011) and "GSK poaches Roche dealmaker" (*Reuters*, 18 April 2018). CDEs are even fought over in courts, such as the case of IBM's lawsuit against Dell over the poaching of its M&A chief (*Wall Street Journal*, 28 May 2009).

CDEs are very different from other groups of actors involved in the M&A process. Unlike the business unit leaders who are mostly focused on their own

⁷ This manuscript is not focused on what factors drive companies to have CDEs in the first place (an important open question for future study), but rather, *given that they have a dedicated person leading M&A*, does that CDE matter, and how? In my empirical setting of the S&P 500 IT sector, all companies have CDEs.

products/divisions/geographies, CDEs take a broader view to develop an understanding of the strengths and weaknesses of each business unit of the firm and how, together, they create value for the firm. When evaluating potential transactions, they holistically assess the overall financial and strategic impact to other business units and the firm—something business unit leaders may not be able to do.

Similarly, CDEs differ from other C-suite executives such as CEOs and board members who set firms' overall strategies but, by necessity, take a 10,000-foot view of the organization. While M&A decisions require the CEO's (and board members') approval and may involve support from other relevant actors (e.g., legal, IR, accounting, other TMTs, etc.), CDEs are in the trenches, so to speak, with day-to-day responsibilities across all M&A workstreams.

In addition, CDEs play a unique organizational role as the nexus linking all relevant internal and external parties during the M&A process. Internally, CDEs collect and implement inorganic growth objectives across the C-suite and business unit level, serving as the centralized repository whereby potential M&A ideas are evaluated and executed. They also act as internal learning centers of M&A know-how, in charge of developing manuals, codifying past lessons, and updating relevant M&A knowledge bases (Trichterborn *et al.*, 2016). Externally, CDEs serve as the firm's primary liaison to all external parties relevant to the M&A process. They monitor and screen all external opportunities and decide when and where to source external advice (from investment bankers, consultants, lawyers and accountants).

Given CDEs' importance and unique role in the M&A process, we should reexamine the relationship between M&A experience, learning, and performance at the CDE level.

2.2.4 Corporate Development Executives and M&A Performance

Drawing on existing works on the learning curve hypothesis and managerial cognition, I argue that CDEs' prior M&A experience is a double-edged sword for subsequent M&A performance.

M&A scholars have conceptualized M&A as a highly complex, ever-changing, and multifaceted process with often ambiguous performance feedback (Barkema and Schijven, 2008; Zollo and Singh, 2004). A typical transaction usually goes through stages of target screening and selection, deal execution, deal announcement, deal completion, post-merger integration, and post-deal learning (Haspeslagh and Jemison, 1991; King *et al.*, 2018; Zollo, 1998). The decisions made at each step jointly affect subsequent task performance and overall deal results.

To cope with the complexity of M&A, CDEs are likely to develop and rely on mental representations and frameworks, which are cognitive tools that may improve the tractability of their decision-making but necessarily make implicit simplifications regarding the task environment (Csaszar and Levinthal, 2016; Eggers and Kaplan, 2013; Gavetti, 2012; Gavetti, Levinthal, and Rivkin, 2005; Levinthal, 2011). These cognitive tools can be both beneficial and limiting to subsequent M&A performance.

Potential Learning Benefits of CDEs' M&A Experience

On the one hand, these mental representations help CDEs to quickly gain efficiency and know-how on the various tasks in the M&A process. Studies on expertise and the learning curve perspective have found that repeated task experience helps managers to accrue relevant knowledge, skills, and abilities (KSAs), as well as improve overall competencies at conducting the task, which in turn may lead to better task performance

(Argote and Epple, 1990; Quinones, Ford, and Teachout, 1995). As such, CDEs with prior M&A experience are likely to have accumulated KSAs for the various tasks in the M&A process (e.g., sourcing better targets, conducting higher-quality due diligence, developing more accurate valuation estimates, adopting more comprehensive integration planning, etc.), all of which lead to improvements in the performance of future transactions.

However, performance improvements from these learning benefits are likely to be nonlinear, where *ceteris paribus*, improvements in performance, are likely to be greater at lower levels of experience than at higher levels (Darr *et al.*, 1995; Epple *et al.*, 1996). For example, when CDEs have very little or no prior M&A experience, they do not possess any knowledge on how a typical M&A process should be conducted (e.g., how to source potential targets, when to contact advisors, who to call and when, which documents to file), and thus may not be able to accurately evaluate the transaction's value, nor efficiently organize firms' resources, leading to suboptimal M&A outcomes. After a certain amount of transaction experience, CDEs begin to develop mental representations regarding the M&A process, and they may start applying them to future transactions and updating them along the way, thereby increasing M&A performance. As transaction experience accumulates, what can be learned from each new transaction becomes limited. Performance improvements may slow down, especially at higher levels of CDE M&A experience (e.g., the learning benefits and performance improvements gained from the 2nd deal to the 12th deal are likely to be more than from the 100th deal to the 110th deal).

Potential Misapplication Challenges of CDEs' M&A Experience

On the other hand, prior works have also highlighted the perils of mental rigidities and cognitive entrenchment (Dane, 2010; Leonard-Barton, 1992; Levinthal and March, 1993;

Tripsas and Gavetti, 2000), which may result in misapplications of existing mental representations to new transactions, especially at high levels of CDE M&A experience.

Like all individual decision makers, CDEs are boundedly rational (Simon, 1991), and their abilities to learn from experience are subject to the fact that experience is an imperfect teacher that is often causally ambiguous, noisy, path-dependent, and has flexible interpretations; any lessons learned are “likely to be incomplete, superstitious, self-confirming, or mythic” (March, 2010: 114). That is, learning how to conduct M&A transactions is not as simple as improving input/output ratios of learning curve studies, as every new M&A transaction is different from prior M&A in some way, especially since the target company is always different (Barkema and Schijven, 2008; Zollo, 2009). As one senior corporate development executive put it in an interview, “Every deal is a snowflake. They are similar but never exactly the same.” (J. Harris, personal communication, April 14, 2017)

Given the “similar but different” nature of each M&A and the context-dependent nature of their cognitive frameworks, CDEs should actively adapt and update their existing mental representations through future encounters with the task. However, as CDEs develop and become increasingly reliant on mental representations to deal with the complexities of M&A, these mental processes become increasingly automatic (Ericsson, 2006; Helfat and Peteraf, 2015). As their M&A experience increases, CDEs are likely to become cognitively entrenched in these existing understandings of the task, excessively relying on the “I have seen it before” mindset (Csaszar and Levinthal, 2016; Dane, 2010; Levitt and March, 1988); engaging in lower levels of active monitoring, learning, and vigilance-type behaviors (Johnson, 2012; Luciano *et al.*, 2018); and becoming complacent about their own abilities to

accurately assess new transactions⁸. At high levels of CDE M&A experience, these cognitive inertial forces are likely to result in misapplication of existing M&A know-how to new contexts, resulting in subsequent negative performance.

Net First-Order Effect of Learning from CDEs' M&A Experience

The combination of the above learning benefits and misapplication challenges suggests a net nonlinear relationship between CDEs' prior M&A experience and subsequent M&A performance, specifically an inverted U-shaped relationship. At low to moderate levels of prior experience, there is a positive association between CDEs' prior M&A experience and performance, due to the relative combinations of high learning benefits of experience and low misapplication challenges from cognitive entrenchments. However, at higher levels of CDEs' M&A experience, the potential performance improvements from learning benefits of experience are outweighed by the misapplication challenges of experience as the likelihood of misapplication and cognitive entrenchment increases with experience while the learning benefits are decreasing. Thus, I hypothesize that:

- **Hypothesis 1 (H1). There is an inverted U-shaped relationship between a CDE's prior M&A experience and subsequent M&A performance, *ceteris paribus*.**

2.2.5 Variation in CDEs' Prior Experience Contexts on M&A Performance

Having established the arguments for a baseline inverted U relationship between CDEs' prior M&A experience and subsequent M&A experience, it is important to also

⁸ I classify performance decreases resulting from overconfidence, hubris, and complacency behaviors as part of cognitive entrenchment and misapplication challenges as, under these conditions, the individuals also continue to rely on old mental representations, believing that their decisions are always right and rejecting any alternative considerations.

consider mechanisms that alleviate or enhance the challenges of misapplication by examining where CDEs' prior M&A experience comes from.

Prior works on learning rates and knowledge generation have highlighted the role of variation. Using an experimental study, Schilling *et al.* (2003) finds that some degree of task variation improves learning rates. Varying the content or the context of the task may enhance the learning process by allowing the individual actors to develop more abstract principles and a deeper understanding of the focal task (Graydon and Griffin, 1996; Paas, Van Merriënboer, and Adam, 1994; Schmidt, 1975). They may update their mental representations of the focal task by relating it to a general class of tasks, which in turn promotes rapid acquisition of related skills and knowledge sets that are similar but slightly different (in content or context) to those of the focal task.

Other works have also highlighted the potential benefits of variability in prior experience. Gavetti *et al.* (2005) finds that greater breadth of experience improves individual managers' mental representations and increases subsequent performance. Perkins (2014) shows that variations in learning contexts affect learning curves of multinational companies, where greater breadth of prior institutional experience prolongs subsequent survival of foreign investments. Furr (2019) examines the antecedents to product adaptation, and argues that start-up 'TMTs' pre-entry experience breadth increases the likelihood of product adaptations as 'TMTs' with greater breadth of experience may have greater absorptive capacity, increased ability to engage in knowledge recombination and integrative knowledge development, and have higher access to complementary knowledge.

Applying this logic to CDEs, I propose that more variation in CDEs' prior experience contexts may help to overcome the challenges of misapplication, leading to

superior M&A performance. If CDEs learn to conduct M&A only in a few contexts—such as doing M&A only in a few firms or conducting similar deal types—they are likely to develop refined mental representations and best practices on M&A that are very specific to these contexts. Misapplications are more likely to occur as CDEs overfit these existing mental representations to subsequent transactions without realizing that not all M&A knowledge can be applied across varying transaction types and contexts.

In contrast, if CDEs learn to conduct M&A in a variety of contexts—such as across multiple organizations or transaction types that are very different from each other—they would be able to update their mental representations with a more comprehensive mapping of M&A. As they see greater variety of iterations of how M&A may be done (in both deal content and deal context), they are more cognizant of the context-dependent nature, transferability, and limitations of their prior M&A experience. They are also less likely to be entrenched in existing cognitive frameworks, more able to recognize the specific nuances across deals, and become more vigilant in selecting and matching the right context-relevant knowledge to the subsequent transactions. This decreases the likelihood of misapplications, resulting in net improvements in performance.

A C-suite executive who was given a hypothetical hiring choice—a CDE who has done 40 M&A transactions in five different companies or a CDE who has done 100 deals in a single firm—said, “It depends, but I’d be inclined towards the former, as that guy probably has sat in more types of boats, navigated more currents, and seen more of the ocean.”(Interview participant, personal communication, March 13, 2019). This metaphor captures the core intuition behind this argument, as the former CDE probably has learned more, seen a lot more varied contexts under which M&A are done, and is better able to

recognize what M&A knowledge can be applied to which types of organizations, deals, and circumstances. Thus, I hypothesize that:

- **Hypothesis 2 (H2). There is an increasing relationship between a CDE's experience and M&A performance if the CDE has a more varied experience.**

2.3 Methods

2.3.1 Sample and Data Construction

This paper analyzes the effect of CDEs' prior M&A experience on M&A performance and the role of context variability on this relationship. In order to test the above hypotheses, I need a dataset containing different levels of M&A experience at the CDE-level, at the CEO-level, and at the firm-level. As no available data on CDEs exists, I manually construct such a dataset.

I begin the sample construction process with a list of all publicly traded information technology companies that have appeared at least once in the Standard & Poor's 500 index from 1995 to 2015⁹. I choose the information technology sector for several reasons. First, the information technology sector is one of the most acquisitive sectors in the S&P 500, representing approximately 20% of the total market capitalization of the index. Almost every company in this sector is active in M&A and has dedicated executives for M&A (which I manually verify). These characteristics of the industry are advantageous from an empirical design perspective as they allow me to avoid potential problematic selection issues. Second,

⁹ This includes software and services, technology hardware, and equipment and semiconductor companies, based on their industry codes using the Global Industry Classification Scheme (GICS), which classifies companies by their principal business activity. Scholars have also documented that that GICS is the best performing industry classification scheme for peer identification when compared to SICs and NAICS classification codes (Bhojraj, Lee, and Oler, 2003).

focusing on one sector allows me to observe a lot of M&A experience without the idiosyncrasies across industries. Third, the information technology/high-tech sector is also the setting of many prior strategy works on M&A, facilitating potential comparisons of results (Ahuja and Katila, 2001; Kapoor and Lim, 2007; King, Slotegraaf, and Kesner, 2008; Puranam, Singh, and Chaudhuri, 2009; Puranam *et al.*, 2006).

Corporate Development Executives Dataset

As my theory focuses on the CDEs in charge of M&A within their respective firms, I focus on identifying and collecting data on the highest-ranking individual in charge of M&A, who usually has the title Head of the Corporate Development or Head of M&A in the firms in my sample¹⁰. For each firm in the sample, I identify and hand-collect comprehensive data (demographics, education, employment history) on both the current and past CDEs through a comprehensive, iterative, manual search process using a combination of LinkedIn, BoardEx, Directory of Corporate Affiliations (DCA), Amadeus, Crunchbase, Bloomberg, Factiva, company filings, press releases, and web search results. Appendix A provides additional details on the data construction process, and Appendix B provides some descriptive information on the composition of the CDEs in the sample.

CEO Dataset

I construct a similar dataset for CEOs' backgrounds and prior M&A experience, beginning with the BoardEx dataset, which contains information on CEOs' prior employment, education, and demographics details, and is often used by studies on CEOs and boards (Custódio and Metzger, 2013; Falato, Li, and Milbourn, 2015). BoardEx typically

¹⁰ Note that the nomenclature on CDE varies across firms, where some may have the title Head of Corporate Development, others may have titles such as Head of Worldwide M&A, Head of Acquisitions, Corporate Development Senior Vice President, etc. Every effort has been made to ensure that the person identified is the most senior person in the firm in charge of M&A activities.

only includes information on prior jobs when the individuals were in a senior position, not their complete employment history since college graduation/first year of work. As M&A experience is of critical importance to my analyses, I manually collect the complete education and employment history of all CEOs.

Final Dataset

As I am interested in analyzing how prior M&A experience shapes subsequent M&A outcomes, I merge the CDEs' and CEOs' datasets to a panel of all announced M&A transactions by the focal information technology firms from 1995-2015, as well as detailed firm-level information collected from Compustat, CRSP, BoardEx, Professor Jay Ritter's online database of initial public offerings, and M&A performance data available from the WRDS Event Study. I drop deals when M&A market-based performance data is not available, or when key control variables (total assets, current ratio, and deal ownership status) are missing. My final sample consists of 3,638 deals announced by 112 information technology firms, 221 CEOs, and 243 CDEs from 1995 to 2015¹¹.

2.3.2 Variables

Dependent Variable: Cumulative Abnormal Stock Returns

Following prior M&A experience studies (Capron and Pistre, 2002; Halebian and Finkelstein, 1999; Hayward, 2002; Kim, Finkelstein, and Halebian, 2015), I use the event study approach to test my hypotheses. M&A performance is measured as cumulative

¹¹ Of the 154 information technology firms that were ever in the S&P 500 from 1995-2015, 26 companies were acquired in the late 1990s/early 2000s during the dot-com bubble, making the identification of pre-acquisition internal firm employee details extremely difficult. Of these remaining 128 companies, 117 engaged in M&A during the sample period. Three were dropped due to missing dependent variables, and two were dropped due to missing current ratio information, resulting in a total of 112 companies in the final analyses. I test and do not find any differences in market capitalization between companies that were dropped due to missing CDE information (26 companies) or key variables information (16 companies) from the final sample of 112 companies.

abnormal returns (CARs) of firms' stocks at the time of deal announcement. CARs enable an immediate and direct assessment of firms' strategic decisions on their valuations (MacKinlay, 1997), and has been extensively used by scholars to evaluate the performance of M&A (Zollo and Meier, 2008), alliances (Kale *et al.*, 2002), and other strategic decisions of the firm.

Using CARs to measure M&A performance following announcements makes two assumptions. First is a general assumption of market efficiency, in which investors are able to accurately assess the potential future value creation opportunities and challenges of the transaction, based on all available information disclosed at the time of the announcement. Second, the specific change in a firm's stock price is primarily driven by the announcement at a given time and not due to any other factors. I ensure that this assumption is met by testing all analyses excluding announcements that may be confounded by other simultaneous actions by the firm (e.g., dividend changes, stock splits, earnings announcements, stock repurchase programs, major executive appointments) (McWilliams and Siegel, 1997; Ryngaert, 1988) and by performing supplementary placebo analyses using an event window prior to the focal announcement (Eklund and Kapoor, 2019). For the main analyses, I calculate CAR using a three-day window at deal announcement (-1, +1). For robustness checks, I also test five-day (-2, +2) and seven-day (-3, +3) windows, all of which are in line with those used in prior studies (Haleblian and Finkelstein, 1999; McWilliams and Siegel, 1997; Zollo and Meier, 2008).

*Independent Variables: Acquisition Experience at CDE-Level, CEO-Level, Firm-Level*¹²

¹² In an ideal study, it would be great to combine both focal individual-level learning and organizational-level processes. However, the data requirements (i.e., detailed codification processes for how each company selects and integrates transactions, M&A routines, etc.) are beyond the scope of this study, as it would require a completely different research design and sample selection process, but it can be an important follow-up work.

CDEs' prior M&A experience is defined as the total number of announced deals that CDEs have done in prior jobs in corporate development functions or when they are specifically mentioned in prior job descriptions on LinkedIn before becoming CDE at the focal firm¹³. I assume that CDEs were involved in all deals done by prior employers when they were part of the dedicated corporate development/M&A functions within these firms. Total deal count best captures the aggregate M&A know-how gained by CDEs and the consequences of accumulating these experiences. Using total count is also consistent with prior M&A experience literature (Haleblian and Finkelstein, 1999; Hayward, 2002; Kim *et al.*, 2015; Vermeulen and Barkema, 2001; Zollo and Singh, 2004). For ease of display, this measure is scaled by 1/100.

Variability of CDEs' prior experience is operationalized in two ways. First, I measure it as the number of organizations CDEs have worked at prior to starting the current role. There are many ways CDEs can experience variability in their prior M&A experience contexts, the most salient one being the organizational environment itself. Firms are different in fundamental ways (Nelson, 1991) with potential M&A process differences such as reporting structures, investment focuses, analytical tools, approval process, and relationships with external venture capitalists and advisors.

Second, I measure variability by examining the variations in deal structures (stakes purchased) among CDEs' portfolios of prior deals, one of the most important decisions in a transaction. I classify all prior deals done by the CDEs into four types based on the

¹³ I believe this measure of CDE M&A experience is a better, more conservative measure of the stock of experience that the CDE brings to the role, compared to the potential alternative measure of a rolling count of announced deals up until focal deal year (i.e., including the new deals done in current job as CDE). While my results are robust to this alternative measure, I do not use it in my analyses as it conflates firm-level and CDE-level experiences.

acquirer's post-transaction ownership percentage in the target company: (i) acquisition of less than 5% (above which companies must disclose in filings); (ii) minority investment (5%-50%); (iii) majority investment (greater than 50% and less than 100%); (iv) full takeover (100% ownership). I then calculate a Herfindahl concentration index $\sum_{i=1}^n S_i^2$ for each CDE, where n is the total number of deal types he/she has done, and S_i is percentage of the number of deals done for each type to the total number of deals that he/she has done prior to starting the focal role as CDE.

While I do not theorize about the role of CEOs' prior M&A experience and firms' prior M&A experience, they have been the focus of almost all prior works studying the relationship between M&A experience and performance, so I include them in all my analyses.

CEOs' prior M&A experience is defined as the total number of announced deals before he/she joins the focal firm, where their prior M&A experience could have been gained during prior corporate development roles, CEO roles, or when specifically mentioned in job descriptions. For robustness checks, I also use alternative measures of CEO experience in terms of log transformations, count and binary indicators of recent deals, total count before joining the focal firm, or before starting the CEO role. For ease of display, this measure is scaled by 1/100.

Firms' prior M&A experience is measured as the log of firms' total number of announced deals prior to the focal deal year. Log transformation is the right measure of the variable as a plot of its distribution suggests a log-normal distribution that is highly skewed. Log transformation of experience has also been used in prior acquisition experience studies (Barkema *et al.*, 1996; Barkema and Schijven, 2008). For robustness checks, I also construct

alternative measures of firm M&A experience as total count, log transformation, count, and binary indicators of recent deals.

Control Variables

To rule out confounding effects from other variables impacting CARs and potentially biasing the relationship between CDEs' M&A experience and performance, I control for CDE-level, firm-level, and deal-level characteristics that might impact CARs of announced M&A (Haleblian and Finkelstein, 1999; Hayward, 2002; Nadolska and Barkema, 2014; Rabier, 2017).

At the CDE-level, I control for alternative aspects of CDEs' M&A experience that may also impact performance, namely their tenure in the current job as CDE and their tenure in the focal firm. This also allows me to control for potential productivity declines associated with increasing age and tenure (Levin and Stephan, 1991; Skirbekk, 2008).

At the firm level, I control for firms' market value using *Tobin's Q* (Gompers, Ishii, and Metrick, 2003), firm size using the log of total assets (Hayward, 2002; Zollo, 2009), firms' prior performance using return on assets (Capron and Shen, 2007; Hayward, 2002), firms' financial liquidity and leverage using current ratio (Haleblian and Finkelstein, 1999; Hayward and Hambrick, 1997), firms' diversification level using number of business segments (Nadolska and Barkema, 2014; Nary, 2017), and firms' age (Fowler and Schmidt, 1989). All firm-level controls are lagged by one year.

At the CEO level, I control for *CEO* tenure to account for CEO-specific impacts on the selection of CDEs and whether the firm had a new CEO in the prior year, given that new CEOs may be more likely to undertake acquisitions or pursue new strategies (Walters, Kroll, and Wright, 2007).

At the deal level, I control for deal relatedness (by SIC2 codes), whether the deal is a majority takeover, is above \$1Bn in deal size, cross-border, a tender offer, an auction, a hostile takeover, whether the target is public, and whether the target and acquirer have financial advisors.

2.3.3 Empirical Strategy

In an ideal world, I would be able to randomly assign identical firms with CDEs with different prior M&A experience levels in a large randomized field experiment. As this would not be possible, the core empirical challenge would be to reduce the potentially biasing effects of nonrandom selection on the CDE experience-firm pair, in which stock market reactions to the deal are driven by systematic differences in firms' selections of different CDE experience types.

I address this concern in five ways. First, since CARs are cumulative abnormal returns to a firm's stock price, it already accounts for any firm-specific characteristics that may be driving its decision to hire a particular CDE (which occurs before the announcements of subsequent M&A transactions) as the firm's stock price already reflects all the information known to the stock market. Second, the year and industry fixed effects help to account for unobserved heterogeneity across time that may impact the firm's selection of different types of CDE, such as the macro-economic environment for M&A or the overall industry changes. Third, I conduct a series of robustness checks accounting for potential firm-level and CDE-level characteristics that may bias the selection of CDEs with different M&A experience levels, including firm fixed effects (for a summary see Table 9 and Appendix C)¹⁴. Fourth, through field interviews with corporate development executives, I

¹⁴ I do not use firm fixed effects in my main analyses since the calculations of CAR already account for firm-level characteristics known to the market. Firm fixed effects would eliminate firms with only one deal in my

identify and account for the main hiring criteria that firms typically use—“familiarity with the process”—via the M&A experience variable itself and indicators for prior experience in professional services firms. Lastly, I run a simulation study explicitly modeling the firm-level selection effects on the relationship between CDE Experience and M&A performance (Appendix D).

All my analyses are run using ordinary least squares (OLS) with industry and year fixed effects and robust standard errors clustered at the acquirer level. The summary statistics and correlations are shown in Table 1.

2.4 Results

Hypothesis 1 predicts that there is an inverted U relationship between CDEs’ prior acquisition experience and focal M&A performance. Models (1) to (7) in Table 2 show the results of regressions testing this hypothesis. Model (2) replicates existing studies on firm experience and M&A performance where, without considering CDEs’ experience, firms’ prior M&A experience is negative but statistically insignificant, which is consistent with the results found in prior studies (King *et al.*, 2004; Zollo and Singh, 2004). Model (3) tests the potential counterargument that CEOs’ prior M&A experience is the driver of M&A performance. The coefficient of CEO experience is positive but again statistically insignificant. Model (4) combines both firm experience and CEO experience, but both coefficients remain statistically insignificant. Model (5) tests the linear effect of CDEs’ prior M&A experience on performance, where the estimate is statistically insignificant. Model (6) tests both the linear and the quadratic effects of CDEs’ prior M&A experience, in which the

sample, and restrict my results to be based on within firm variations rather than across firm variations. However, for robustness checks I retest all the models including firm fixed effects and find that all of my results hold.

positive and statistically significant linear term and negative and statistically significant square term support the predicted inverted U relationship in H1. Model (7) combines all three types of prior acquisition experience: CDE experience, firm experience, and CEO experience. Only the linear and quadratic terms of CDE experience are statistically significant (and larger in magnitude compared to Model (6)) while the main effects of firm and CEO experience remain statistically insignificant. This suggests that, at low levels of CDE experience, the learning benefits of experience dominate the misapplication challenges, and every additional M&A experience is positively associated with focal deal performance. However, at very high levels of CDE experience, the potential benefits of learning diminish and are overshadowed by the potential harmful effects arising from misapplication challenges and cognitive entrenchment; every incremental deal experience is negatively associated with performance at an increasing rate. Figure 1 illustrates this predicted relationship.

In terms of economic significance, the positive linear estimate of 0.01065 suggests that, for the CDEs with a low amount of prior M&A experience, a modest increase of 10 deals in CDE experience would be associated with a 0.1% increase in CAR of subsequent deals. Given the average industry market cap of \$41.5Bn, this translates to a \$38.5MM gain in shareholder value. A one-standard-deviation increase in CDE experience would be associated with a 0.4% increase in CAR, or a \$122.4MM gain in shareholder value. As the average firm conducts 3-4 deals a year, this would translate to nearly half a billion dollars gain each year, an economically meaningful effect.

To test the existence of the inverted U relationship in my sample, I run the three tests proposed in Lind and Mehlum (2010) and Haans *et al.* (2016, SMJ). I find that the results in Model (7) pass all three tests: (i) the quadratic term is statistically significant and

negative; (ii) the slope at minimum of CDE experience is positive and significant ($\beta = 0.01; p = 0.005$), the slope at the maximum of CDE experience is negative and significant ($\beta = -0.01; p = -0.037$); (iii) the turning point of the inverted U is at 90 deals, which is well within the data range of CDE experience of 0 to 202 deals. The “utest” command (a Stata user command written by Lind and Mehlum to test all three criteria directly) results in a p-value of 0.036, which further supports the hypothesized inverted U relationship between CDE prior acquisition experience and M&A performance.

Table 3 tests the robustness of the inverted U relationship using different measures of firm and CEO M&A experience that have been used in prior M&A studies—i.e., total count (Haleblian and Finkelstein, 1999; Hayward, 2002; Kim *et al.*, 2015; Laamanen and Keil, 2008; Vermeulen and Barkema, 2001; Zollo and Singh, 2004), log of total count (Barkema *et al.*, 1996), total count squared (Haleblian and Finkelstein, 1999), only recent deals in the last three years (Haunschild, 1993; Hou, Priem, and Goranova, 2017), last four years (Bruton *et al.*, 1994; Fowler and Schmidt, 1989; Trichterborn *et al.*, 2016), last five years (Capron and Shen, 2007; Haleblian and Finkelstein, 1999), binary indicators of having done a transaction in the last three years (Kroll *et al.*, 1997, 1997; Wright *et al.*, 2002), last four years (Kroll *et al.*, 1997) and last five years (Kroll *et al.*, 1997). The baseline inverted U association holds regardless of which alternative measures of firm M&A experience and CEO M&A experience are used in the regression models.

Tables 4 and 5 test Hypothesis 2 on the moderating effect of a high varied experience on the relationship between CDEs’ prior M&A experience and M&A performance. In Table 4, I measure variability by the number of prior organizational contexts that CDEs have been exposed to. As approximately 90% of my sample has worked

in fewer than five organizations, I test this hypothesis using three indicators in Models (1) to (3): CDEs having worked in at least two firms, at least three firms, and at least four firms. In all three models, the baseline inverted U only takes place if the CDE has worked in fewer organizational contexts. Model (1) and Figure 2 show the results when CDEs have worked in at least two organizations. The interaction with CDE experience squared is positive and statistically significant ($p = 0.016$), while the linear coefficient of the CDE experience interaction term is negative and statistically significant ($p = 0.097$). As the marginal plot in Figure 2 shows, the positive curvilinear relationship persists throughout the estimation window, and its confidence interval is above zero, supporting H2. Model (2) and Figure 3 show a similar set of results when CDEs have worked in at least three organizations. Model (3) shows the results when CDEs have worked in at least four firms, where the estimates are in line with (1) and (2) but are less precise, given the low number of observations that fall under the “at least four firms” category.

Table 5 tests Hypothesis 2 by measuring variability based on CDEs’ prior experience with different deal types. I calculate a Herfindahl index of CDE’s portfolio of prior deal structure types (from minority investments to full acquisitions), where a lower Herfindahl index indicates more variability in CDEs’ prior M&A experience. In Models (1) to (7), I test a range of binary indicators for low Herfindahl/less varied experience, with the indicator ranging from Herfindahl less than 0.38 to less than 0.50. H1 holds in all models, suggesting that when CDEs have a more concentrated portfolio of deal types, the inverted U relationship with subsequent M&A performance takes place. The direct effect of the interaction indicator and the linear interaction term in Models (1), (5), (6), and (7) are not statistically significant, while the quadratic interaction term is large in magnitude and statistically significant for all models where the Herfindahl is less than 0.40 to 0.50. Wald

tests of the quadratic terms and the quadratic interaction terms are significant ($p = 0.01$), suggesting that the positive quadratic interaction term dominates, supporting H2. In other words, through exposure to more varied deals with different structures and their associated considerations, CDEs are more able to recognize differences across deal types and the context-dependent nature of existing knowledge and frameworks. Figure 4 illustrates the predicted effects of CDEs' prior M&A experience on M&A performance in contexts of high variability in prior deal types.

2.4.1 Alternative Explanations and Supplementary Analyses

The non-random nature of the CDE-firm pair leads to several potential concerns around the identification of the effects of CDEs' prior M&A experience on subsequent M&A performance. Although I cannot directly identify a causal estimate of my hypothesized relationships, I conduct a series of robustness checks to explore the boundary conditions of my findings and test potential alternative explanations. I will briefly discuss the findings of high CEO M&A experience and low firm M&A experience as boundary conditions for the effectiveness of CDEs, as well as the results from alternative explanation tests on non-random selection of CDEs, impression management as a way to manipulate CARs, and other omitted variables concerns. I will revisit the importance of organizational-level experience and the interesting relationship between firm M&A experience and variance of performance at the end of this section.

1. Other Actors in the Organization and Their Interactions with CDEs

While the above sets of arguments and results highlight the importance of CDEs' prior M&A experience and their within-person experience variability for subsequent M&A performance, CDEs are also individual decision makers working within different organizations, where an important way through which they influence M&A performance is

their role as the executive coordinator among different actors in the organizations, from the C-suite decision makers such as the CEO to the supporting function staff. The effects of CDEs' prior M&A experience on performance are likely to vary depending on the prior M&A experience of these other actors in the M&A process.

CEO M&A Experience. A large body of work has documented the importance of CEOs in shaping M&A outcomes (Cannella and Hambrick, 1993; Haleblian *et al.*, 2009; Haspeslagh and Jemison, 1991; Haunschild, 1994; Hayward and Hambrick, 1997; Meyer-Doyle *et al.*, 2019). Specifically, we might expect that CEOs who are highly experienced in M&A may influence M&A outcomes, as CEOs are often hired for their expertise gained from prior employment, including M&A-related knowledge (Bragaw and Misangyi, 2017; Hayward and Hambrick, 1997). CEOs with significant M&A experience may be more likely to engage with CDEs on key deal decisions and take a centralized approach to M&A decision making (Csaszar, 2012; Csaszar and Eggers, 2013).

Table 3 tests different measures of CEO M&A experience, where there does not appear to be a direct relationship between CEO M&A experience and M&A performance. In Table 6, I test the interaction between High CEO M&A Experience and CDEs' prior M&A experience and find that their interactions do matter. H1 holds in all models, and the statistically significant positive quadratic interaction term dominates when CEO M&A experience is greater than 28 through 42 deals. These results provide evidence that an interactive, complementary effect exists between CDEs' and CEOs' M&A experience, in which high CEO M&A experience may help to limit the misapplication challenges associated with CDEs' prior experience. These results also support my theoretical argument on the variability of experience: variability occurs not only at the intra-personal CDE-level, but also

at the inter-personal level through CDEs' interactions with other experienced actors in the focal firm.

Firm M&A Experience. In addition to CEOs' M&A experience, existing literatures have also highlighted the role of firm-level M&A experience. We might expect that some amount of firm-level infrastructures or M&A routines may also change CDEs' ability to effectively execute and coordinate M&A, as CDEs often rely on other top management executives, business unit leaders, support function staff, etc., for certain internal workstreams during the M&A process (e.g., reviewing definitive agreements, assembling acquisition financing, drafting press releases), and these actors' prior experiences with M&A may also change the effectiveness of CDEs.

Table 7 tests this alternative explanation using different levels of firm-level M&A experience. H1 continues to hold across a range of binary indicators for low firm experience, providing evidence that the inverted U relationship between CDEs' prior M&A experience and M&A performance takes place when firms have a certain amount of M&A experience. However, when the firm has very limited prior M&A experience, the inverted U relationship flips to become a U-shaped relationship¹⁵, suggesting that in these contexts, it is perhaps better to hire a highly experienced CDE who can set up the internal processes, manuals, playbooks and M&A infrastructure for the firm.

2. Non-Random Selection of CDEs

Another explanation for the observed empirical findings could be that certain types of firms are better able to select CDEs with the right experience levels, which in turn results

¹⁵ Interestingly, the U-shaped finding under low firm-level experience is similar to the U-shaped relationship found in Haleblan and Finkelstein (1999). The average firm acquisition experience in their sample is 2.2 deals with a standard deviation of 2.2 deals, exactly the scenario of low firm experience that I test here.

in superior deal performance. While I cannot conduct random assignments to fully overcome this selection concern, in addition to using CARs as my dependent variable, I also try to account for time-invariant firm-level, CEO-level, and CDE-level characteristics that may drive the selection process. Table 8 shows the results of the models in Table 2, including firm fixed effects. The inverted-U relationship still holds in Models (7) and (8), and the magnitudes of the coefficients are comparable to those in Table 2, suggesting that even for within-firm analyses, changes in CDEs' prior M&A experience levels (i.e., changes in CDEs) do meaningfully change the performance of subsequent deals.

These results are evidence against the potential selection concern that certain firms may be better at choosing CDEs. That is, given the robustness of the inverted U result, the potential unobserved firm heterogeneity that could be driving the selection of CDEs must not be able to be explained by firm-invariant characteristics, prior M&A experience at the firm and CEO levels, changes in firm strategy due to prior operational results, the arrival of a new CEO, or the tenure effects of the CEO, which are the most plausible explanations for why certain firms may choose to hire a certain type of experienced CDEs. Table 9 and Appendix C summarize tests of other potential factors that may drive the unobserved CDE selection process across firms.

3. Impression Management

Existing works on the sociological explanation of markets have suggested that managers often take steps to actively impression-manage investors' reactions to firm announcements (Bansal and Clelland, 2004; Graffin, Carpenter, and Boivie, 2011; Merkl-Davies and Brennan, 2007). One alternative mechanism could be that CDEs with higher

levels of M&A experience are better at framing M&A, which in turn leads to better investor reactions. I address this concern in three ways.

First, if impression management is indeed the mechanism through which CDEs affect M&A performance, then there should be differences in the language used by firms with highly experienced CDEs vs. those with limited prior M&A experience. As shown in Table 1 of Appendix C, using the Linguistic Inquiry and Word Count (LIWC) lexicon (Pennebaker *et al.*, 2015), I do not find any systematic differences in the language used in the press releases between CDEs of different experience levels, indicating that perhaps the level of active impression management may not vary depending on CDEs' prior M&A experience levels¹⁶.

Second, I conduct analyses using M&A outcomes that are not driven by stock-market reactions or the influences of analysts. If impression management is the sole mechanism driving the relationship between CDEs' M&A experience and performance, the longer-term accounting-based performance post transaction would be self-correcting. I test alternative outcomes not influenced by stock market reactions and find that CDEs' prior M&A experience is negatively associated with days to deal completion and acquisition impairment likelihood. It is positively associated with the likelihood of deal completion and ROA two years after the acquisition, the amount of time firms usually need for integration (Zollo and Meier, 2008). These results provide suggestive evidence that CDEs are learning to

¹⁶ Since LIWC is a linguistic tool that mainly focuses on textual style rather than content, I also tried to conduct LDA topic modeling analysis, which is based on a "bag-of-words" approach to natural language processing (Blei, Ng, and Jordan, 2003). After extensive testing, unfortunately, I do not find coherent and consistent topics emerging from the 11,004-text corpus. The resulting topics often include keywords for deal characteristics and target and acquirer industries, but no systematic differences across the words associated for each topic. Perhaps further analyses can be conducted using a different sample with a larger corpus of documents.

execute better M&A transactions from their past experience and not solely adding value because of their impression-management skills¹⁷.

Lastly, to better understand the mechanisms through which CDEs' prior M&A experience may impact M&A performance, I also conduct extensive field interviews with senior corporate development executives at firms in my sample as well as with professional services providers who interact with many different CDEs across all industry settings. As one investment banker mentioned in an interview:

Experience really matters. You can really tell the difference between the heads of corp dev who have countless deals under their belt versus those [who] don't. The experienced ones always have the standard checklist of diligence questions and valuation models at hand, and more importantly, they always know what key questions to ask, and which key business assumptions are the real value drivers should they proceed with the transaction. (Interview participant, personal communication, May 15, 2019)

4. Other Potential Omitted Variables and Sample Selection Biases

In Table 9 and Appendix C, I also test for other potential omitted variables and sample selection concerns that may bias my estimates, including results driven by survivorship bias (Quinones, Ford, and Teachout, 1995; Sturman, 2003), lifecycle productivity declines (Levin and Stephan, 1991; Skirbekk, 2008), extremely acquisitive firms or time periods, firm reputation and firm celebrity status (Haleblian, Pfarrer, and Kiley, 2017; Pfarrer, Pollock, and Rindova, 2010), prior average M&A performance, CDEs' prior

¹⁷ While helpful as suggestive evidence, these alternative measures are problematic in many ways: (i) in my sample, almost all deals are completed after announcement, limiting the power of completion likelihood as a potential DV; (ii) days to completion is usually more of a process-level measure—it reflects execution skills (i.e., ability to file the relevant regulatory requirement documents and obtain shareholder approvals), where the scope of misapplications is limited; (iii) the likelihood of impairment is helpful, but more as an indicator of extremely poor performance (Rabier, 2017) and is also subject to potential internal reclassifications; and (iv) while accounting-based ROA is helpful as an overall indicator of M&A investment returns, it cannot be attributed to a specific deal and would be hard to disambiguate, given that the average firm in this sector does three to four deals each year.

functional backgrounds (e.g., investment banking, legal, consulting, private equity, start-up, engineering, operations, corporate finance, etc.), previous interactions between target and acquiring firm, and prior experience of the financial advisors.

5. Firm M&A Experience and Variance of Performance

One interesting observation from the above results is that a firm's M&A experience on its own does not impact M&A performance. Yet, organizational-level M&A experience has been one of the most researched variables in M&A studies since the late 1980s (King *et al.*, 2018), suggesting that perhaps something is missing from the picture. Revisiting March, Sproull, and Tamuz (1991), March (1991), and March (2010)'s arguments on experience as an imperfect teacher, I contend that firm-level experience is not the right level of analysis to think about the mean effects of experience (as my results demonstrate, CDEs may be a more appropriate alternative), but rather the variance effects of experience.

While March (1991) has always been quoted for exploration vs. exploitation in organizational learning (Ocasio, Rhee, and Boynton, 2020), he also put forth an interesting set of arguments on the potential performance variance reduction impact of experience accumulation in the second half of the paper. Specifically, March argues that the effects of learning from prior experience are realized in changes in the performance distribution, but the learning processes do not necessarily lead to improvements in both average performance and its variance (March, 1991). Specifically, increased knowledge on an activity often may reduce the variability of performance.

As work is standardized, as techniques are learned, variability, both in the time required to accomplish tasks and in the quality of task performance, is reduced. Insofar as that increase in reliability comes from a reduction in the left-hand tail, the likelihood of finishing last in a competition among many is reduced without changing the likelihood of finishing first. (March, 1991: 83)

Applying these arguments to the M&A experience setting would suggest that perhaps firms' accumulation of past acquisition experience and the development of associated M&A routines do shape M&A performance in that they increase firms' reliability of learning and performance and decrease their variability but may not necessarily impact their validity of learning, proxied by the mean of performance.¹⁸ Given the nature of M&A as a high-risk, high-return investment with the potential to completely transform companies or result in their bankruptcy, past firm-level M&A experience would likely help firms to avoid the latter case but has limited guidance on how to uncover the best value-creating targets (which is where CDEs could add value, as shown in the Results section).

To explore this alternative perspective on the importance of firm-level experience for performance, I rerun my analyses using the variance of CAR as my dependent variable. Variance is calculated as the square of the difference between focal deal's CAR and a rolling average of focal firm's prior M&A performance in the last year, last two years, last three years, last four years, and last five years. The results are similar across all models, and Table 10 shows the results based on variance demeaned by firm's last three years rolling average and last five years rolling average. I test each type of experience—CDE, CEO, firm—separately and jointly and found that only firm's prior experience is negatively associated variance. By empirically testing March (1991)'s arguments on the variance effect of experience, this study extends the literature on acquisition experience and shows how experience can influence both performance outcomes and distributions.

¹⁸ Chapter 1 provides a more extensive discussion on the differences between reliability and validity of learning, and why organizational-level learning could provide learning reliability but is not sufficient for learning validity.

2.5 Discussion

2.5.1 Summary of Results

This paper has investigated how the task-specific focal actor shapes firms' abilities to make superior strategic decisions in the context of mergers and acquisitions. Revisiting the M&A experience-learning-performance relationship, this study has four key findings.

First, I revisit the locus of organizational learning and introduce Corporate Development Executives, a previously unexamined group of important decision makers in the M&A process. I find evidence that CDEs, through their role and prior M&A experience, meaningfully shape M&A outcomes. While existing works have highlighted the importance of dedicated functions for M&A capabilities (Trichterborn *et al.*, 2016), this work examines the individuals within these functions, contributing to our understanding of the role of focal individual learning and the microfoundations of capabilities development (Felin *et al.*, 2012; Helfat and Martin, 2015; Kale and Singh, 2007; Meyer-Doyle *et al.*, 2019; Zollo, 1998; Zollo and Singh, 2004; Zollo and Winter, 2002).

Second, building on existing works in learning and cognitive inertia (Argote, 2012; Dane, 2010; Leonard-Barton, 1992; Tripsas and Gavetti, 2000), I propose and find support for the double-edged nature of CDEs' prior M&A experience. As CDEs improve their deal performance through learning and accumulation of experience, they are also subject to the perils of misapplication. These challenges of misapplication are enhanced at high levels of prior M&A experience, resulting in a net inverted U relationship between CDEs' prior M&A experience and subsequent M&A performance.

Third, I find that context variability helps CDEs to overcome the challenges of misapplication. Specifically, I find that there is a net increasing relationship between CDEs'

prior M&A experience and performance when CDEs have worked in more than two firms or have exposure to many different types of deal structures. In contrast, the inverted U relationship takes place when there is less variability in CDEs' prior M&A experience contexts. These findings suggest a new theoretical mechanism on how cognitive inertia and learning rigidities may be reduced, enriching the current works on managerial cognition (Csaszar & Levinthal, 2016; Eggers & Kaplan, 2013; Gavetti & Levinthal, 2000).

Fourth, while I do not find any direct relationships between CEOs' and firms' M&A experience with M&A performance, I find that they serve as important boundary conditions. High CEO M&A experience mitigates the negative performance consequences at high ends of CDE experience, complementing and enhancing CDEs' effectiveness, while prior firm M&A experience acts as a necessary but insufficient condition for CDEs' ability to effectively drive M&A processes within the organizational context. Furthermore, firm M&A performance is negatively associated with the variance of performance, evidence that organizational-level experience accumulation is important for reliability of learning and performance. In other words, the effectiveness of CDEs may vary depending on the organizational contexts and their interactions with other relevant actors in the M&A process. By considering M&A experience across the CDE level, CEO level, and firm level, as well as their interactions, I show that the mixed findings of positive, negative, U-shaped, and inverted U-shaped relationships between M&A experience and performance in existing literature can be explained by looking at different levels of the CDEs experience curve. *Ceteris paribus*, the positive relationship exists at low to moderate amount of CDE experience, and the negative relationship exists at very high levels of CDE experience (when CDE experience is less varied), while the U-shaped relationship exists only when firms have very limited prior M&A experience. The finding of the U-shaped relationship in contexts of low

firm experience also helps to explain why authors haven't been able to replicate the U-shaped relationship proposed in Haleblan & Finkelstein (1999), one of the foundational works on M&A experience and the subject of much debate in M&A literature (Bauer and Matzler, 2014; King *et al.*, 2018; Kolev and Haleblan, 2018).

Taking all these results together, a revised model of experience as a multi-dimensional construct emerges. Learning in M&A not only occurs at the organizational level, but also resides with and is critically shaped by the individuals specifically dedicated to the task. These findings also highlight the importance of context variability in experience for effective learning; a large amount of M&A experience gained across a wide variety of organizational and deal contexts may culminate in the development of M&A capabilities and superior M&A performance.

2.5.2 Limitations and Future Research

This study has several limitations, each of which raises important avenues for further research on this phenomenon.

First, this study does not fully address the empirical challenge of non-random selection of the CDE-firm pairs. Given the nature of CARs and the inclusion of year, industry, and firm fixed effects, I believe that my OLS results are strongly indicative of the underlying relationships. Future works could potentially address this issue with larger samples across multiple industries and years since CDEs are highly prized resources that tend to move across firms. If a sufficiently large number of CDE mobility events can be observed, a matching approach can be used to create matched pairs at the firm level and the CDE level, allowing us to better parse out the effect of CDE M&A experience from unobservable individual- and firm-level characteristics.

Second, I cannot rule out alternative explanations driving the observed inverted U relationship between CDEs' prior M&A experience and deal performance. I find evidence indicating the existence of both learning benefits and misapplication challenges, as well as evidence against the various potential alternative explanations that may bias my estimates. Future works may use within-firm data to examine the joint effects of both organizational-level M&A codification processes and individual-level CDE experience, or take an inductive qualitative approach to further unpack the role of CDEs in the M&A lifecycle.

Third, I do not have measures of the M&A processes within firms that have been used in earlier studies of M&A capabilities (Trichterborn *et al.*, 2016; Zollo, 1998; Zollo and Singh, 2004). Incorporating these considerations of learning processes would require intrafirm survey instruments on M&A decision making for the firms in the sample, which would not be feasible under the current research design. As the granular data on CDEs and their experiences brings new insight and extends our knowledge of the locus of experience and capabilities within firms, future work could combine both the data on CDEs and the information regarding M&A processes to further unpack the microfoundations of M&A learning and capabilities development.

Lastly, the findings from this study may not be generalizable to all industries and firms. My sample consists of large, public, S&P 500 information technology companies. While they all have CDEs, not all industries are as acquisitive as the high-tech sector, and the existence, prevalence, and reporting structures of CDEs may vary across industries. For example, while most firms in my sample seem to have an identifiable individual in charge of M&A, pharmaceutical companies tend to organize by drug therapeutic classes, often running within each division rather than at the overall organizational level. Future works could

examine the external validities of findings in this study by comparing CDEs across industries and examining how the structural differences across industries and firms may change the ways they shape M&A across organizational contexts. These additional data on CDEs across industries could also allow us to model the factors predicting their existence, adding potential boundary conditions to the findings in this study.

2.6 Conclusion

This chapter examines how individual-level learning shapes organizational-level outcomes by empirically examining how Corporate Development Executives shape M&A performance. Through a multilevel perspective, I reconceptualize and find evidence that the locus of experience and learning in M&A is not at the organizational level, but instead resides with the actors most engaged with the focal task and their interactions within the organizational context. Individual-level learning may lead to superior organizational performance if it comes from repeated experiences accumulated across a variety of organizational and deal contexts. Integrating works across corporate strategy, organizational learning, and dynamic capabilities, this study contributes to our understanding of the drivers of superior M&A performance, and offers important implications for managers involved in shaping inorganic growth strategies across organizations.

CHAPTER 3. Zooming out: How Do Corporate Development Executives' Prior Task Environments Shape M&A Capabilities and Performance?

3.1 Introduction

Mergers and acquisitions (M&A) is an important strategy through which firms access new capabilities (Kaul and Wu, 2016; Puranam *et al.*, 2006), achieve growth objectives (Capron and Mitchell, 2013; Hitt *et al.*, 1990), enter new product or geographic markets (Anand and Delios, 2002), reconfigure their existing resource base to adapt to the changing environment (Bennett and Feldman, 2017; Capron *et al.*, 1998, 2001), and sustain long-term competitive advantage (Feldman, 2020; Haspeslagh and Jemison, 1991). More than ever, firms are undertaking M&A in record numbers, with worldwide M&A volume totaling US\$3.9 trillion in 2018 (Statista.com, 2018), almost double the amount spent on worldwide R&D activities (Riemschneider, 2018). Extensive literature exists on the heterogeneity of M&A behaviors and performance, in which scholars have argued that a firm's ability to engage and realize value from their M&A activities, or M&A capability, is a critical dynamic capability and a driver of superior M&A performance (Helfat *et al.*, 2007; Laamanen and Keil, 2008; Zollo, 1998; Zollo and Singh, 2004).

However, where M&A capabilities originate remains an open and active area of research. Recent works in M&A literature suggest that examining the individuals involved (Meyer-Doyle, 2012; Meyer-Doyle *et al.*, 2019), especially the dedicated M&A-specific focal actor, or the Corporate Development Executives (CDEs) in charge of leading M&A efforts inside organizations (Chapter 2), is a promising avenue of investigation. In the cognition literature, an emerging stream of work has also begun to call attention to the importance of

mental representations (Csaszar, 2018; Csaszar and Levinthal, 2016; Gavetti and Levinthal, 2000), suggesting that examining managers' mental representations could be one approach to understand managerial capabilities and the microfoundations of dynamic capabilities (Helfat and Peteraf, 2015). While these two streams of research together highlight the importance of task-specific actors and their mental representations for organizational-level outcomes, we still know very little about the antecedents of their mental representations (Csaszar, 2018). An examination of these cognitive underpinnings of individual-level capabilities in M&A can thus yield novel insights on the heterogeneity in organizational-level decisions and performance outcomes.

In this chapter, I address this important gap by revisiting the implicit assumptions on how individuals develop and update their mental representations. Drawing on the cognition and experiential learning literatures (Csaszar, 2018; Csaszar and Levinthal, 2016; Gavetti and Levinthal, 2000; Levinthal, 1997), I argue that the external learning environment in which actors are embedded influences the content of their experience, and in turn the development of their mental representations and their subsequent updates. In the context of M&A, where feedback is often causally ambiguous (Lippman and Rumelt, 1982; Zollo and Singh, 2004), subsequent updates of actors' existing understanding of the task often become challenging. As a result, these actors are likely to be disproportionately influenced by their mental representations from their initial learning environment, or when they first begin their career in M&A (Levinthal, 2003). When their initial learning environment is highly dynamic or concentrated, they are likely to develop highly situationally specific mental representations of the task, which may not be applicable in subsequent environments, resulting in potentially suboptimal performance outcomes. However, as they accumulate additional M&A

experience and learn more about the task, the negative influences of their initial learning environment may be gradually mitigated.

I empirically test these arguments through an event study of all announced M&As by S&P 500 information technology companies from 1995-2015, using a proprietary, hand-collected dataset on Corporate Development Executives (CDEs) built from LinkedIn and other web resources. I find negative relationships between environmental dynamism and industry concentration of CDEs' initial M&A experience and their subsequent M&A performance. I also find that CDEs' M&A experience positively moderates these relationships, where the accumulation of additional M&A experience can eventually help to overcome the persistent negative influences of the initial learning environment. I test and find evidence against several alternative explanations, including the influence of CEOs, learning from CDEs' more recent environments, and selection based on context similarity.

This study contributes to the corporate strategy, dynamic capabilities, and organizational learning literatures by unveiling new insights on the antecedents of mental representations in the context of M&A. By linking individual actors' initial learning environmental conditions with subsequent organizational-level outcomes, this study highlights how variations in the external environment can be an important source of heterogeneity for managerial capabilities and their impact on subsequent task performance. The findings of this study also have managerial implications on how firms should source talent across organizational boundaries and how to manage this talent subsequently; while individuals may bring in much-needed experience and knowledge, firms must also be mindful of the context-dependent nature of their experience.

3.2 Theoretical Background

The role of individual managers has begun to receive growing attention in the dynamic capabilities literature (Adner and Helfat, 2003; Helfat *et al.*, 2007; Helfat and Peteraf, 2015). Variance decomposition studies have shown that individual managers account for nontrivial portions of firm outcomes (Adner and Helfat, 2003; Bertrand and Schoar, 2003; Datta, Rajagopalan, and Zhang, 2003; Meyer-Doyle *et al.*, 2019; Quigley, Crossland, and Campbell, 2017; Quigley and Hambrick, 2015; Zhang and Rajagopalan, 2010). In the context of M&A, recent work has shown that individual-level factors drive a large portion of the variance of M&A behaviors and performance (Meyer-Doyle *et al.*, 2019). In revisiting the relationship between M&A experience and performance, I introduced in Chapter 2 the dedicated, task-specific focal actors in M&A, or the Corporate Development Executives (CDEs), and showed that these individuals play a critical role in shaping M&A capabilities and performance at the organizational level.

Given the importance of individual-level factors in shaping the heterogeneity in firm behaviors, scholars have begun to call for further understanding of managerial-level dynamic capabilities (Helfat *et al.*, 2007; Helfat and Martin, 2015). Some recent studies suggest that examining managers' mental representations¹⁹, or the models of reality held in individuals' minds, could be one approach to understanding managerial capabilities and the microfoundations of dynamic capabilities (Csaszar and Levinthal, 2016; Helfat and Peteraf, 2015). These cognitive tools allow individuals to generate predictions about reality, and have

¹⁹ Throughout this manuscript, I use the terms 'mental representations' 'cognitive tools' and 'cognitive frameworks' interchangeably, where they all refer to the simplified models of reality individuals develop in their minds to represent their understanding of the reality (Csaszar and Levinthal, 2016; Walsh, 1995).

been shown to be a basis for decision and performance differences among firms (Barr, Stimpert, and Huff, 1992; Gary and Wood, 2011; Gavetti and Levinthal, 2000; Walsh, 1995).

For example, through their study on Polaroid's efforts to pursue opportunities posed by digital imaging, (Tripsas and Gavetti, 2000) highlighted the importance of individual managers' cognition in organizational adaptations to radical technological change, in which senior managers' search processes in a new environment are deeply interconnected with their existing strategic beliefs and mental representations of the world. (Eggers and Kaplan, 2009) found that CEO attention to emerging technologies affects the timing of incumbent entry into a radical new technological market and is a key driving force of organizational adaptation. Helfat *et al.* (2007) documented the way in which the mindset of Rubbermaid's CEO contributed to the company's difficulty in adjusting to a changing marketplace. Danneels (2011) showed how misunderstandings by the top management team of Smith-Corona on the key company resources and their potential applications in new markets contributed to the company's demise.

While these prior works have carefully documented the impact of relying on mental representations for organizational outcomes, less attention has been paid to understanding the antecedents of these cognitive tools—i.e., where and how managers have developed their mental representations, and how these mental representations may evolve over time. In a recent review on strategic representations, Csaszar (2018) argued that these cognitive tools are “the most important capability for managers” (Csaszar, 2018: 615), and called for further understanding on how the representation formation process works. Answering this question is particularly important in strategic contexts like M&A, in which individual actors largely shape firm's decisions and outcomes.

3.2.1 Prior Learning Environment, Mental Representations, and Task Performance

I begin answering this question of where mental representations come from by revisiting the experiential learning literature. Existing works in cognition and learning suggest that individuals develop mental representations of particular tasks through the accumulation of repeated experience with the task (Louis and Sutton, 1991; Walsh, 1995; Weick, 1995; Zollo and Winter, 2002). When an actor receives stimuli from the external environment (i.e., the experience), he/she develops certain simplified model of the task in his/her minds, and then iteratively update this understanding through application to and performance feedback from the next encounter with the task²⁰ (Gavetti and Levinthal, 2000; Kolb, 1984; Levitt and March, 1988).

An important aspect of this iterative updating process is the environment through which the experience takes place (Csaszar, 2018; Posen and Levinthal, 2012); the environment shapes the content of the experience and, in turn, managers' mental representations. That is, in a given environment, if only type X of the task exists, then actors' mental representations of the task would be based on their experiences with type X (i.e., not other types that are not observable under the current environmental conditions) (Rockart and Wilson, 2019). However, when the environment changes, these earlier understandings may not be applicable, and their continued reapplications to new environments could result in suboptimal performance (Zollo and Winter, 2002). In these new environments, actors can then engage in problemistic search and update their mental representations on the task based on performance feedback to better fit these understandings with the current environment (Cyert and March, 1963; Levitt and March, 1988; Posen *et al.*, 2018).

²⁰ See Chapter 1 for a more detailed review of the experiential learning model.

While this explanation of how the external learning environment of tasks underlies the development of mental representations is generally in line with existing literature (Csaszar and Levinthal, 2016; Gavetti and Levinthal, 2000), this explanation makes an implicit assumption regarding the availability and clarity of feedback from the environment, which does not hold in strategic contexts. In strategic contexts where feedback is unavailable or highly ambiguous, further explanation is needed on how the external environment shapes actors' mental representations.

I will next examine this in the context of mergers and acquisitions, in which individual-level factors have been shown to be important in driving the heterogeneity in behaviors and performance (Meyer-Doyle *et al.*, 2019; Chapter 2). Scholars have repeatedly documented the ambiguous nature of feedback in M&A (Barkema and Schijven, 2008; Haspeslagh and Jemison, 1991; Zollo and Singh, 2004), in which it is often difficult to disentangle “causal relationships between the decisions or actions taken and the performance outcomes obtained” (Zollo and Winter, 2002: 348).

3.2.2 M&A and the Persistent Influence of the Initial Learning Environment

There is a long history of studying dynamic capabilities in the M&A context (Puranam *et al.*, 2009; Trichterborn *et al.*, 2016; Zollo, 1998; Zollo and Singh, 2004). This context is also particularly suited to study the antecedents of mental representations and managerial M&A capabilities, given the existence of the dedicated task-specific focal actor, or the Corporate Development Executives (CDEs) (Chapter 2). While their exact nomenclature may vary across firms, for the purpose of theorizing, throughout this

manuscript I refer to the CDE as the highest-ranking individual who leads the M&A function in a given organization²¹.

CDEs are the individuals within organizations specifically charged with the task of executing and leading inorganic growth strategies (Haspeslagh and Jemison, 1991; Laamanen and Keil, 2008; Chapter 2). As their understanding of M&A has a direct impact on the organization's subsequent M&A outcomes, CDEs are therefore the most appropriate actors to examine the antecedents of M&A-specific mental representations.

Drawing on the cognition, learning, and imprinting literatures, I argue that, in order to understand where M&A-specific mental representations come from, we should examine the initial learning environment of CDEs' prior task-specific experience.

Specifically, I argue that CDEs' first encounter with M&A weakly imprints on all their subsequent understanding of the task. Imprinting can be defined as "a process whereby, during a brief period of susceptibility, a focal entity develops characteristics that reflect prominent features of the environment, and these characteristics continue to persist despite significant environmental changes in subsequent periods" (Marquis and Tilcsik, 2013: 199). Following (Levinthal, 2003), I distinguish between strong form of imprinting and weak form of imprinting, where the strong form precludes the ideas of adaptation and change from the initial state, while the weak form "incorporates notions of change but views these change processes as constrained and guided by [the] initial state" (Levinthal, 2003: 100).

²¹ Their nomenclature may vary across organizations, where they have been called Head of M&A, Head of Corporate Development, Corporate Business Development Executive, Chief Development Officer, etc. In the data collection process, I make every effort to identify and collect information on the highest-ranking individual whose main responsibility is to lead a firm's inorganic growth and all M&A efforts.

CDEs are most susceptible to influences of weak imprinting when they first begin their new role as a M&A specialist. Prior career studies have shown that when individuals transition into new roles and identities, they are especially open to environmental stimuli (Azoulay, Liu, and Stuart, 2017; Schein, 1971). They are likely to experience a great deal of uncertainty (Ashforth and Saks, 1996) and are highly motivated to reduce these uncertainties through cognitive unfreezing (DiRenzo, 1977; Ibarra, 1999; Marquis and Tilcsik, 2013), or the tendency to adopt and develop mental representations that fit with current environment (Campbell, 1965; Dokko, Wilk, and Rothbard, 2009). As such, CDEs are motivated to quickly develop mental frameworks of M&A that maximize fit with available M&A activities in the current environment when they first begin their new careers in M&A.

Moreover, given the characteristics of M&A as complex and causally ambiguous (Barkema and Schijven, 2008; Hitt *et al.*, 2001; Zollo and Singh, 2004; Zollo and Winter, 2002), CDEs' subsequent efforts at updating their understanding of M&A are likely to be more path-dependent local adaptations over time (Levinthal, 1997), rather than the creation of drastically different mental representations each time. CDEs often do not have clear feedback on the potential consequences of updating their mental representations of the task (Barkema and Schijven, 2008; Lippman and Rumelt, 1982; Zollo and Winter, 2002), since they often do not know which parts of their prior understanding of M&A are wrong or are simply inapplicable to the new transaction (Galpin and Herndon, 2007; Haspeslagh and Jemison, 1991).

This implies that CDEs are likely to continue to refer to what has previously worked, often long after the initial learning period. As Gavetti and Levinthal (2000) shows, while actors' initial imperfect mental representations allow them to think intelligently about distant

points in the fitness landscape, they still provide “cognitive blinders” that constrain subsequent search efforts (Gavetti and Levinthal, 2000; Levinthal, 2003: 102). Individuals are motivated to engage in problemistic search to improve their existing mental representations when their performance is below aspirational levels (Cyert and March, 1963; Posen *et al.*, 2018). However, when performance feedback on M&A is often mixed and cannot be clearly attributed to specific assumptions (Barkema and Schijven, 2008; Zollo and Singh, 2004; Zollo and Winter, 2002), CDEs are less likely to engage in distant search efforts, resulting in a slow adjustment process (Levinthal, 1997).

Over time, as CDEs become used to their new identities as M&A specialists, routines begin to develop as CDEs continue to rely on their existing understanding of the task (i.e., what has worked before), and competency traps and cognitive inertia may also set in (Leonard-Barton, 1992; Levinthal, 1996; Levinthal and March, 1993; Levitt and March, 1988; Tripsas and Gavetti, 2000). This combination of weak imprinting, local path-dependent search, and competency traps together suggest that the initial learning environment of CDEs’ first M&A experience could have a potentially long-lasting impact.

Having established the theoretical argument for the importance of examining CDEs’ initial learning environment, I will next unpack which aspects of the environment are particularly critical for M&A learning and the conditions under which these influences may be mitigated.

3.3 Hypotheses Development

In order to examine the relationship between CDEs’ initial M&A learning environment and subsequent M&A performance, I revisit the classic 1984 paper by Dess and Beard on the key dimensions of the organizational task environments and argue that

environmental dynamism and industry concentration are critical task environment characteristics that may influence CDEs' understanding of M&A.

3.3.1 Initial Environmental Dynamism and M&A Learning

Environmental dynamism has been conceptualized in terms of unpredictability, turbulence, instability, uncertainty, and volatility (Aldrich, 1979; Dess and Beard, 1984), and it is one of the most studied dimensions of the external environment. (Eisenhardt and Martin, 2000) characterizes highly dynamic environments as “high velocity” markets where “market boundaries are blurred, successful business models are unclear, and market players (i.e., buyers, suppliers, competitors, complementers) are ambiguous and shifting” (Eisenhardt and Martin, 2000: 1111). Uncertainty in such an environment cannot be modeled as a probability because it is not possible to specify *a priori* the possible future states, and decision makers cannot reliably forecast future events based on known information at hand (Anderson and Tushman, 1990).

Organizational learning scholars have highlighted the challenges of learning in a highly dynamic environment. High environmental uncertainty reduces the reliability of learning, making it more difficult for individuals to discover the optimal path or repeat prior successes (Levinthal and March, 1981). The value of experience can be undermined in dynamic environments (Argote, 2012; Gavetti and Levinthal, 2000; Rockart and Wilson, 2019) where performance feedback becomes highly ambiguous, resulting in superstitious learning and situation-specific knowhow (Eisenhardt and Martin, 2000; Herriott, Levinthal, and March, 1985; Levinthal, 1997; Levitt and March, 1988).

During turbulent environments, the types of M&A undertaken by firms may be drastically different from other contexts. For example, firms may pursue many transactions

in a very short time period as they are likely to be focused on completing transactions before these windows of opportunity close. Given the unpredictability of future revenue streams, the types of targets selected are more to maximize the short-term, immediate value-creation prospects, rather than long-term transformational synergies. Firms may also undertake large and diversifying M&A investments, expecting that some of these risky bets might turn out to be homeruns as environmental conditions change.

As CDEs begin their new careers as M&A specialists and participate in such transactions in this dynamic, turbulent initial learning environment, they are likely to develop mental representations of M&A that are highly specific to the current context but not applicable to other contexts (Rockart and Wilson, 2019). For example, they may form an understanding that maximizing transaction speed is a key driver of M&A performance, and in-depth due diligence, risk analyses, long-term valuation models, and integration planning are not critical elements of M&A, but rather just formalities and checklists. They may also learn to embrace risks, believing that taking big bets and investing in unrelated industries are good justifications for undertaking M&A. Furthermore, as they are likely to experience very chaotic M&A processes, they may discount the importance of the repeatable processes and deliberate learning mechanisms.

While all of these understandings of M&A could be reasonable during this initial learning environment, these highly situationally specific knowhow are likely to lead to suboptimal decisions and outcomes in other environments, especially since the existence of synergies, the pursuit of in-depth due diligence, valuation and integration planning, and the use of knowledge codification processes have all been shown to be key drivers of M&A performance (Haspeslagh and Jemison, 1991; King *et al.*, 2018; Puranam *et al.*, 2009; Singh

and Montgomery, 1987; Zollo and Singh, 2004). As CDEs begin to accumulate M&A experience in other environments, they may update their initial mental representations through path-dependent local search, but these earlier imprints will likely to continue to cast a “shadow” over future outcomes (Levinthal, 2003). In other words, I hypothesize that:

- **Hypothesis 1 (H1): There is a negative relationship between environmental dynamism of a CDE’s initial M&A experience and subsequent M&A performance, *ceteris paribus*.**

3.3.2 Initial Industry Concentration and M&A Learning

Another dimension of the organizational task environment that is important for M&A learning is the distribution of resources in the environment (Aldrich, 1979; Dess and Beard, 1984; Starbuck, 1976). When organizations compete in industries that require many different inputs and produce many different outputs, they are likely to find resource acquisition or disposal of output to be more complicated and multidimensional than organizations competing in industries with fewer different inputs and outputs, as the number and variety of organizations with which they must interact are much greater (Dess and Beard, 1984).

The exact term that scholars have used to capture this idea varies across papers—whereas Dess and Beard labeled this dimension as “environmental complexity,” Aldrich classified it as environmental “homogeneity-heterogeneity” or “concentration-dispersion,” and Starbuck described it in terms of “organizational density” (Dess and Beard, 1984: 57). As scholars have generally measured this construct in terms of industry and geographic concentration ratios (Anderson and Tushman, 1990; Dess and Beard, 1984; Keats and Hitt, 1988; Palmer and Wiseman, 1999), I label this dimension of the organizational task

environment as simply “industry concentration” to reflect its theoretical underpinnings regarding the fragmentation of structure. In a highly concentrated environment, there are fewer organizations, fewer inputs and outputs, and limited diversity in terms of organizational product market scope and geographic operations.

Under such an environment, companies are likely to engage in repeated games and oligopolistic competition (Dess and Beard, 1984). When CDEs learn to do M&A in highly concentrated industries, they are likely to see less competition for potential targets (vs. highly competitive auction processes when a broad base of interested buyers compete for the same target company), observe acquirers with disproportionately greater negotiating power relative to targets, participate in straightforward due diligence exercises, and spend most of their efforts on stakeholder dynamics. Given the oligopolistic nature of such an environment, firms’ objectives and focus on each M&A are often driven by external “soft agreements,” anticipation and imitation of competitor moves, and multimarket contact and competition across other products and markets (Sengul and Dimitriadis, 2015), rather than the intrinsic value creation potential of a particular transaction.

I argue that, when a CDE’s initial M&A learning takes place in a highly concentrated industry, their resulting mental representations of M&A are likely to be simpler, situationally specific understandings of the task that are less applicable in subsequent contexts. For example, if a CDE’s first M&A job was in the container shipping industry in which only a few large players exists due to consolidation, he/she may form an understanding that shareholder management is the most critical criteria for the success of a M&A transaction, as opposed to other performance drivers like valuation (which is usually not undertaken by container shipping companies but outsourced to third-party appraisers) or integration

planning (containers can be easily integrated and re-deployed post-acquisition). While this relatively simplistic view of the M&A process may serve him/her well during this initial period, it fails to highlight the underlying complexities and interactions across the different activities within the M&A process that are likely to be critical for subsequent M&A performance (Barkema and Schijven, 2008; Haspeslagh and Jemison, 1991). In other words, I hypothesize that:

- **Hypothesis 2 (H2): There is a negative relationship between industry concentration of a CDE's initial M&A experience and subsequent M&A performance, *ceteris paribus*.**

3.3.3 Moderating Effect of Prior M&A Experience

While the above arguments highlight the potential constraints of CDEs' initial learning environment on subsequent M&A performance, I contend that the accumulation of additional M&A experience by CDEs can help them to eventually overcome these persistent "shadows" as they update their mental representations of M&A through a gradual adjustment process.

Drawing on the experiential learning literature (and findings from Chapter 2), I argue that additional M&A experience allows CDEs to improve their mental representations of the task over time. Repeated experience helps managers to accrue relevant knowledge, skills, and abilities (KSAs), develop more detailed mental mappings, and improve overall efficiencies and competencies at conducting the task, all of which in turn can lead to better subsequent task performance (Argote and Epple, 1990; Quíñones *et al.*, 1995). In other words, CDEs who accumulate extensive M&A experience are likely to have KSAs for the various sub-tasks in the M&A process (e.g., sourcing better targets, conducting higher-quality due diligence,

developing more accurate valuation estimates, adopting more comprehensive integration planning, etc.) and have a set of more refined know-how about M&A, which in turn can lead to improvements in the performance of their future transactions. Indeed, scholars examining drivers of M&A performance have repeatedly argued for these learning benefits of experience (Barkema and Schijven, 2008; Haspeslagh and Jemison, 1991; King *et al.*, 2004, 2018), and several studies have documented positive effects of prior M&A experience on subsequent M&A performance (Barkema *et al.*, 1996; Fowler and Schmidt, 1989; Nadolska and Barkema, 2014; Trichterborn *et al.*, 2016)²².

These learning benefits gained through the accumulation of M&A experience allow CDEs to gradually adapt their situationally specific initial understandings of M&A, mitigating the suboptimal performance influences of the initial learning environment. When CDEs first begin learning about M&A in a highly dynamic or concentrated environment, they develop mental representations of M&A that are highly congruent with the initial environmental conditions, and thus incongruent with subsequent task environments (Haleblian and Finkelstein, 1999; Rockart and Wilson, 2019). However, as they accumulate more M&A experience, they are likely to see M&A done in many different environments (Barkema and Schijven, 2008). They will likely begin noticing the similar but different nature of M&A, and become more able to understand the differences across M&A transactions as well as the conditions under which prior know-how may be applied (Schilling *et al.*, 2003; Chapter 2). They develop a more refined understanding of M&A, make more appropriate inferences from their past M&A experiences (Laamanen and Keil, 2008; Walsh, 1995), gradually

²² While scholars agree on the importance of M&A experience, empirical studies have found mixed results on the relationship between M&A experience and M&A performance. Chapter 2 investigates these mixed results as well as the main effect of CDEs' M&A experience.

improving the fit between their mental representations of the task and the focal task.

However, this adjustment process is likely to be a series of slow gradual changes given the complex and causally ambiguous nature of M&A, in which each mental representation update is the result of path-dependent local search (Levinthal, 1997, 2003). These gradual adjustments can help to reduce the lingering negative influences of CDEs' initial learning environment, resulting in improved performance. In other words, I hypothesize that:

- **Hypothesis 3a (H3a): CDEs' M&A experience moderates H1. Specifically, CDEs' M&A experience positively moderates the relationship between their initial environmental dynamism and subsequent M&A performance.**
- **Hypothesis 3b (H3b): CDEs' M&A experience moderates H2. Specifically, CDEs' M&A experience positively moderates the relationship between their initial industry concentration and subsequent M&A performance.**

3.4 Methods

3.4.1 Data and Sample

This paper analyzes the effect of task-specific focal actors' initial learning environment characteristics on subsequent performance and the moderating role of their task experience in the context of M&A. I begin my sample construction process with a list of all publicly traded information technology companies that have appeared at least once in the Standard & Poor's 500 index from 1995 to 2015²³. I choose the information technology sector for several reasons. First, the information technology sector is one of the most

²³ This includes software and services, technology hardware and equipment, and semiconductor companies, based on their industry codes using the Global Industry Classification Scheme (GICS), which classifies companies by their principal business activity. Scholars have also documented that GICS is the best performing industry classification scheme for peer identification when compared to SICs and NAICS classification codes (Bhojraj *et al.*, 2003).

acquisitive sectors in the S&P 500, representing approximately 20% of the total market capitalization of the index. Almost every company in this sector is active in M&A and has dedicated executives for M&A (which I manually verify). These characteristics of the industry are advantageous from an empirical design perspective as they allow me to avoid potentially problematic selection issues. Second, focusing on one sector allows me to observe a lot of M&A experience without the idiosyncrasies across industries. Third, the information technology/high-tech sector is also the setting of many prior strategy works on M&A, facilitating potential comparisons of results (Ahuja and Katila, 2001; Kapoor and Lim, 2007; King *et al.*, 2008; Puranam *et al.*, 2009, 2006).

As my theory centers on the focal actor in M&A—the CDEs, I focus on identifying and collecting data on the highest-ranking individual in charge of M&A, who usually has the title Head of the Corporate Development or Head of M&A in the firms in my sample²⁴. For each firm in the sample, I identify and hand-collect comprehensive data (demographics, education, employment history) on both the current and past CDEs through a comprehensive, iterative manual search process using a combination of LinkedIn, BoardEx, Directory of Corporate Affiliations (DCA), Amadeus, Crunchbase, Bloomberg, Factiva, company filings, press releases, and web search results. Appendix A provides additional details on the CDE identification process, and Appendix B provides some descriptive information on the composition of the CDEs in the sample.

Using the data on CDEs' detailed career histories, I then construct a panel of their prior M&A jobs and manually identify the primary industry SIC code for each prior

²⁴ Note that the nomenclature on CDE varies across firms, where some may have the title Head of Corporate Development, others may have titles such as Head of Worldwide M&A, Head of Acquisitions, Corporate Development Senior Vice President, etc. Every effort has been made to ensure that the person identified is the most senior person in the firm in charge of M&A activities.

employer from Compustat, SDC Platinum, Pitchbook, Crunchbase, SICCODE Business Database, and web searches. I then collect industry-level measures for each employer SIC code from Compustat, including the current firms in the sample. I also construct the same dataset for CEOs' of all the companies in the sample.

As I am interested in analyzing how prior M&A learning environments shape subsequent M&A outcomes and how prior M&A experience moderates these relationships, I merge the CDEs' and CEOs' datasets to a panel of all announced M&A transactions by the focal information technology firms from 1995-2015, as well as detailed firm-level information collected from Compustat, CRSP, BoardEx, Professor Jay Ritter's online database of initial public offerings, and M&A performance data available from WRDS Event Study. I drop deals when M&A market-based performance data is not available, or when key control variables (total assets, current ratio, and deal ownership status) are missing. My final sample consists of 3,638 deals announced by 112 information technology firms, 221 CEOs, and 243 CDEs from 1995 to 2015²⁵.

3.4.2 Variables

Dependent Variable: Cumulative Abnormal Stock Returns

Following prior M&A experience studies (Capron and Pistre, 2002; Halebian and Finkelstein, 1999; Hayward, 2002; Kim *et al.*, 2015), I use the event study approach to test

²⁵ Of the 154 information technology firms that were ever in the S&P 500 from 1995-2015, 26 companies were acquired in the late 1990s/early 2000s during the dot-com bubble, making the identification of pre-acquisition internal firm employee details extremely difficult. Of these remaining 128 companies, 117 engaged in M&A during the sample period. Three were then dropped due to missing dependent variables, and two were dropped due to missing current ratio information, resulting in a total of 112 companies in the final analyses. I test and do not find any differences in market capitalization between companies that were dropped due to missing CDE information (26 companies) or key variables information (16 companies) from the final sample of 112 companies.

my hypotheses. M&A performance is measured as cumulative abnormal returns (CARs) of firms' stocks at the time of deal announcement. CARs enable an immediate and direct assessment of firms' strategic decisions on their valuations (MacKinlay, 1997) and has been extensively used by scholars to evaluate the performance of M&A (Zollo and Meier, 2008), alliances (Kale *et al.*, 2002), and other strategic firm decisions.

Using CARs to measure M&A performance following announcements makes two assumptions. The first is a general assumption of market efficiency in which investors can accurately assess the potential future value-creation opportunities and challenges of the transaction based on all available information disclosed at the time of the announcement. Second, the specific change in a firm's stock price is primarily driven by the announcement at a given time, and not due to any other factors. I ensure that this assumption is met by testing all analyses excluding announcements that may be confounded by other simultaneous actions by the firm (e.g., dividend changes, stock splits, earnings announcements, stock repurchase programs, major executive appointments) (McWilliams and Siegel, 1997; Ryngaert, 1988), and by performing supplementary placebo analyses using an event window prior to the focal announcement (Eklund and Kapoor, 2019). For the main analyses, I calculate CAR using a three-day window at deal announcement (-1, +1). For robustness checks, I also test five-day (-2, +2) and seven-day (-3, +3) windows, all of which are in line with those used in prior work (Haleblian and Finkelstein, 1999; McWilliams and Siegel, 1997; Zollo and Meier, 2008).

Independent Variables: Environmental Dynamism, Industry Concentration, CDE M&A Experience

Environmental dynamism reflects the amount of turbulence, instability, or volatility present in a given environment (Aldrich, 1979; Dess and Beard, 1984). To capture these

ideas, I follow existing research's approach of measuring based on dispersions of industry sales around a regression trend line (Brauer and Wiersema, 2012; Dess and Beard, 1984; Farjoun and Levin, 2011; Keats and Hitt, 1988; Misangyi *et al.*, 2006). Specifically, I calculate industry dynamism for each year by first regressing the annual average sales in each industry over the five years prior to the focal year (i.e., industry dynamism for 2015 is based on the regression of sales for the years 2011 to 2015), and then dividing the standard error of the regression slope coefficient by the mean value of sales. The part of the regression that the general linear model is unable to predict is thus a direct measure of the change in sales that is not predictable using trend analysis. This measure is calculated at the three-digit SIC code level for each employer-year²⁶, where larger value indicates greater industry dynamism.

Industry concentration reflects the distribution of activities and resources in a given environment (Aldrich, 1979; Dess and Beard, 1984). Drawing on prior works (Anderson and Tushman, 1990; Dess and Beard, 1984; Keats and Hitt, 1988; Palmer and Wiseman, 1999), I measure the level of concentration or fragmentation in an industry in two ways: industry concentration by sales concentration of the firms in the industry (hereafter referred to as “industry concentration”) and industry concentration by sales concentration of the geographic operations in the industry (hereafter referred to as “geographic concentration”). Industry concentration is calculated as the sum of the squares of the market shares (by sales) of the firms within the industry. Following Dess and Beard (1984), I calculate geographic concentration as the sum of the squares of the market shares (by sales) of the different geographic segments within the industry, based on the historical geographic segments data

²⁶ I do not calculate the industry dynamism at the four-digit SIC code level, as I do not have complete five-year historical sales data for each four-digit industry. For robustness, I also calculate industry dynamism at the two-digit and one-digit SIC code levels, but they are too coarse and do not best capture the varying learning conditions across the different environments.

provided by Compustat. Both measures reflect the theoretical assumptions in the theory section—i.e., concentrated industries have fewer actors, establishments, and geographic expansions, and have a lower average range of organizational activities and linkages. Both industry concentration measures are calculated at the four-digit SIC code level for each employer-year²⁷, where a larger value indicates greater concentration. For ease of interpretation, I use the standardized measures of the three independent variables.

CDEs' prior M&A experience is defined as the total number of announced deals that CDEs have done in prior jobs in corporate development functions or when they are specifically mentioned in prior job descriptions on LinkedIn before becoming CDE at the focal firm. I assume that CDEs were involved in all deals done by prior employers when they were part of the dedicated corporate development/M&A functions within these firms. Total deal count best captures the aggregate M&A know-how gained by CDEs and the consequences of accumulating these experiences. Using total count is also consistent with prior M&A experience literature (Haleblian and Finkelstein, 1999; Hayward, 2002; Kim *et al.*, 2015; Vermeulen and Barkema, 2001; Zollo and Singh, 2004). For ease of display, this measure is scaled by 1/100.

Control Variables

To rule out confounding effects from other variables impacting CARs and potentially biasing the relationship between the characteristics of CDEs' initial learning environment and performance, I control for CDE-level, firm-level and deal-level

²⁷ For robustness, I also calculate industry concentration and geographic concentration at the three-digit, two-digit and one-digit SIC code levels, but they are less detailed when compared to the four-digit level measure and do not best capture the varying learning conditions across the different environments.

characteristics that might impact CARs of announced M&A (Haleblian and Finkelstein, 1999; Hayward, 2002; Nadolska and Barkema, 2014; Rabier, 2017).

At the CDE-level, I control for alternative aspects of CDEs experiences that may also impact performance; namely, their tenure in the current job as CDE and their tenure in the focal firm. This also allows me to control for potential productivity declines associated with increasing age and tenure (Levin and Stephan, 1991; Skirbekk, 2008).

At the firm-level, I control for firms' market value using Tobin's Q (Gompers *et al.*, 2003), firm size using the log of total assets (Hayward, 2002; Zollo, 2009), firms' prior performance using return on assets (Capron and Shen, 2007; Hayward, 2002), firms' financial liquidity and leverage using current ratio (Haleblian and Finkelstein, 1999; Hayward and Hambrick, 1997), firms' diversification level using number of business segments (Nadolska and Barkema, 2014; Nary, 2017), and firms' age (Fowler and Schmidt, 1989). All firm-level controls are lagged by one year.

At the CEO-level, I control for CEO tenure to account for CEO-specific impacts on the selection of CDEs and whether the firm has a new CEO in the prior year, given that new CEOs may be more likely to undertake acquisitions or pursue new strategies (Walters *et al.*, 2007).

At the deal level, I control for deal relatedness (by SIC2 codes), whether the deal is a majority takeover, is above \$1Bn in deal size, cross-border, a tender offer, an auction, a hostile takeover, whether the target is public, whether the deal involves cash payment, and whether the target and acquirer have financial advisors. For robustness, I control for CDE M&A experience (both linear and quadratic terms), firm M&A experience, and CEO M&A experience, as introduced in Chapter 2.

3.4.3 Empirical Strategy

In an ideal setting, I would be able to randomly assign identical firms with CDEs with different initial M&A learning environments in a large randomized field experiment. As this is not possible, the core empirical challenge would be to reduce the potentially biasing effects of nonrandom selection on the CDE Initial Environment-Firm pair, where stock market reactions to the deal are driven by systematic differences in firms' selections of different CDE-initial-environment types across years.

I address this concern in several ways. First, since CARs are cumulative, abnormal returns to a firm's stock price, it already accounts for any firm-specific characteristics that may be driving its decision to hire a particular CDE with a certain prior experience profile (which occurs before the announcements of subsequent M&A transactions), and the firm's stock price already reflects all the information known to the stock market. Second, I include firm and year fixed effects across all models to help to account for unobserved heterogeneity across time that may impact the firm's selection of different types of CDE, such as the macro-economic environment for M&A or the overall industry changes, the characteristics of the firm's industry, etc. Third, I conduct robustness checks testing for potential selection based on the similarity between CDEs' prior environmental characteristics and firm's current environment. Lastly, through field interviews with corporate development executives, I find that the main hiring criteria that firms typically use are based on familiarity with the M&A process (with I account for by including M&A experience and experience in professional services firms in robustness checks) rather than systematic selections based on CDEs' prior learning environments.

All my analyses are run using ordinary least squares (OLS) with firm and year fixed effects and robust standard errors clustered at the acquirer level²⁸. The summary statistics and correlations are shown in Table 11.

3.5 Results

Hypothesis 1 predicts that there is a negative relationship between the environmental dynamism in CDEs' initial learning environment and focal M&A performance. Models (1) to (7) in Table 12 show the results of regressions testing this hypothesis. Model (1) tests for this hypothesis directly, where the initial industry dynamism is negative and statistically significant as predicted. Model (2) controls for the focal firms' current year industry dynamism as one may argue that current level of industry dynamism may also influence M&A performance either directly or indirectly through its similarity with CDEs' initial environment. Models (3) to (6) test for the alternative explanation that the CDE is not the focal actor for M&A inside organizations; rather, it is the CEO who makes all decisions during the M&A process, and thus the analyses should examine the CEOs' initial learning environment instead. In all models, the industry dynamism of CEOs' initial learning environment is not statistically significant, while CDEs' initial industry dynamism remains negative and statistically significant. Model (7) combines the CDEs' and CEOs' initial industry dynamism and the focal firm's current industry dynamism, along with the M&A experience variables presented in Chapter 2. The negative relationship between the CDEs' initial industry dynamism and M&A performance still holds with similar magnitude, along with the predicted inverted U relationship between CDEs' stock of M&A experience,

²⁸ Since using firm fixed effects eliminates only one firm that has one observation during the sample period, I include firm fixed effects in all my models, as it will help to account for firm-specific characteristics driving the nonrandom nature of the CDE-firm pair. However, this will restrict my findings to be based on within firm variations rather than across firm variations.

suggesting that these are two separate channels through which CDEs can use their prior experience to influence M&A performance.

Hypothesis 3a predicts that the accumulation of M&A experience moderates the negative relationship between CDEs' initial environmental dynamism and subsequent M&A performance (H1), and Model (8) in Table 12 shows the results testing this hypothesis. The positive and significant coefficient on the interaction term between the industry dynamism of CDEs' initial learning environment and CDEs' M&A experience suggests that the accumulation of additional M&A experience can help to overcome the persistent negative effect of the initial learning environment.

In terms of economic significance, these results imply that an increase of one standard deviation of CDEs' initial industry dynamism is associated with a 0.18% decrease in CAR of subsequent deals. Given the average industry market cap of \$41.5Bn, this translates to a \$75MM loss in shareholder value. As the average firm conducts three to four deals a year, this would be equivalent to nearly \$300MM loss each year, an economically meaningful effect. The positive coefficient estimate on the interaction term in Modal (8) indicates that an increase of 34 deals in CDEs' M&A experience would result in a net zero CAR, mitigating the negative influence of the initial industry dynamism on subsequent performance.

Hypothesis 2 predicts that there is a negative relationship between the industry concentration in CDEs' initial learning environment and focal M&A performance. Models (1) to (7) in Tables 13 test this hypothesis using the concentration of sales of the firms in each industry as the measure for industry concentration. Across models, the coefficient for CDEs' initial industry concentration is negative and statistically significant, regardless of the inclusion of firm's current industry concentration measure or the CEOs' initial industry

concentration (Models (3) to (6)). Model (7) combines CDEs', CEOs' initial industry concentration, and the focal firm's current industry concentration, along with the CDEs' M&A experience variables presented in Chapter 2. While the negative relationship between CDEs' initial industry concentration and M&A performance still holds with the predicted inverted U relationship between CDEs' stock of M&A experience and M&A performance, their magnitudes differ significantly from prior estimates. The estimated coefficient on CDEs' initial industry concentration is now -0.00258, suggesting that an increase of one standard deviation of CDEs' initial industry concentration is associated with a 0.258% decrease in CAR of subsequent deals, equivalent to \$107MM loss per deal, or nearly half a billion dollars per year, for the average firm in the industry. This is a much higher loss in comparison to the economic impact based on initial industry dynamism in Table 12.

Models (1) to (7) in Table 14 test Hypothesis 2 using industry concentration by geographies, or geographic concentration. Similar to Tables 12 and 13, the coefficient estimates for CDEs' initial geographic concentration are negative and statistically significant across all models, regardless of the inclusion of firm's current geographic concentration measure or the CEOs' initial geographic concentration (Models (3) to (6)). Model (7) combines CDEs' and CEOs' initial geographic concentration, the focal firm's current geographic concentration, and the M&A experience variables presented in Chapter 2. While the magnitude and direction of CDEs' initial geographic concentration still hold, the linear estimate for CDE M&A experience is now smaller, and the quadratic estimate for CDE M&A experience is no longer statistically significant ($p = 0.161$). One explanation is that perhaps the variations in performance previously explained by the quadratic term are now captured by the initial geographic concentration variable as there may not be enough observations with large CDE M&A experience.

In terms of economic significance, these results imply that an increase of one standard deviation of CDEs' initial geographic concentration is associated with a 0.455% decrease in CAR of subsequent deals, equivalent to \$189MM loss per deal, or over half a billion dollars a year, for the average firm in the industry, a much higher loss in comparison to the economic impact based on initial industry dynamism in Table 12.

Hypothesis 3b predicts that the accumulation of M&A experience moderates H2, and Model (8) in Table 13 and Model (8) in Table 14 show the results testing this moderating effect. While the interaction term between CDEs' prior M&A experience and initial industry concentration in Model (8) in Table 13 is not statistically significant, the interaction term between CDEs' prior M&A experience and initial geographic concentration in Model (8) in Table 14 is positive and statistically significant. These results together suggest that the initial persistent negative influences can be overcome through gradual learning adjustments from the accumulation of additional M&A experience, in which 63 deals could result in a net zero influence on CAR based on the estimates in Table 14.

Table 15 tests Hypotheses 1, 2, 3a and 3b together. Models (1) to (5) show the results of combining industry dynamism with industry concentration (of sales by firms), controlling for firm's current industry environment and CEOs' initial learning environment. Across all models, CDEs' initial industry concentration is negative and statistically significant as predicted while the initial industry dynamism measure is negative and statistically insignificant ($p = 0.124$), suggesting that some of the explanatory power of the variable is soaked up by the industry concentration measure. Model (6) tests the positive moderating effect of CDEs' prior M&A experience, where the interaction term of initial industry dynamism with CDEs' prior M&A experience is positive and statistically significant, while

the interaction term of initial industry concentration with CDEs' prior M&A experience is positive but not statistically significant ($p = 0.116$). Models (7) to (11) show the results of combining industry dynamism with geographic concentration, controlling for firms' current industry environment and CEOs' initial learning environments. Across all five models, both CDEs' initial industry dynamism and geographic concentration are negative and statistically significant. Model (12) tests the positive moderating effect of CDEs' prior M&A experience, where both of the interaction terms of initial industry dynamism and initial geographic concentration with CDEs' prior M&A experience are positive and statistically significant. These results together suggest that Hypotheses 1, 2, H3a, and H3b are all supported.

3.5.1 Alternative Explanations and Supplementary Analyses

The nonrandom nature of the CDE-firm pair leads to several potential concerns around the identification of the effects of CDEs' initial learning environment on subsequent M&A performance. Although I cannot directly identify a causal estimate of my hypothesized relationships, I conduct a series of robustness checks to explore alternative explanations regarding the proposed theoretical mechanism of the initial learning environment and the potential nonrandom selection nature of the CDE-firm pairs.

1. Alternative Explanation: Other (Recent) Learning Environments

While I have articulated the theoretical argument for examining the initial learning environment and its persistent effects on subsequent task performance in the theory section, one immediate concern is that the same effects exist for all subsequent learning environments. That is, there is nothing special about the first learning environment—experience with M&A in highly dynamic and concentrated environments (be it first, second, sixth, etc.) could have negative consequences for subsequent performance in general.

Alternatively, given the literature on the importance of recent experience (Argote, 2013; Barkema and Schijven, 2008; David and Brachet, 2011; Easterby-Smith and Lyles, 2011; Levitt and March, 1988), perhaps the environmental characteristics of CDEs' most recent M&A learning experience also matter.

Table 16 tests this alternative argument using three different temporal measures. Models (2), (6), and (10) show the results of the baseline model using measures of industry dynamism, industry concentration, and geographic concentration from the CDEs' most recent M&A learning environment (i.e., the last year in M&A-related roles before starting in his/her current role as the head of corporate development). The coefficient estimates on the most recent environment measures are not statistically significant across all three models.

Models (3), (7), and (11) test this alternative argument using the average of prior environmental characteristics across all the years that CDEs had been involved in M&A-related roles before starting in their current role. This measure gives equal weight to all experience years. Again, the coefficient estimates on these average environment measures are not statistically significant across all three models.

Models (4), (8) and (12) combine both of these approaches and test the weighted average of CDEs' prior M&A experience years, where more recent years are given greater weights on a proportional basis (i.e., each year has one more weight than the year before). Yet again, the coefficient estimates on these depreciated average environment measures are not statistically significant across all three models. These alternative "temporal slices" of CDEs' prior learning environments further strengthen the evidence for the importance and long-lasting impact of the initial learning environment, when CDEs first develop their mental representations of M&A.

2. Alternative Explanation: Similarity/Fit with Current Environment

Another explanation for the main results in Tables 12 to 15 could relate to the similarity or fit between current industry environments and earlier learning environments. That is, the negative relationship between the initial learning environment and current environment is solely driven by the differences across these contexts. When the current environment is highly similar to prior environments, regardless of whether this refers to the initial environment or the most recent one, they should be able to apply what they know and achieve positive performance outcomes. For example, if the CDE is currently doing deals in a highly dynamic environment but they have only learned how to do M&A in less dynamic environments, they would misapply what they know, resulting in negative performance; however, if they have learned to do M&A in more dynamic environments, they would then be able to apply what they know and achieve more positive outcomes.

I test this alternative argument in two ways. First, I measure for environmental similarity directly as the squared distance between industry environment measures of current year and CDEs' prior experience years, including the initial year, the most recent year, the average of all prior years, and the weighted average of all prior years. Table 17 shows the results of these similarity measures for industry dynamism, industry concentration, and geographic concentration.

Models (1) to (5) test for similarities in industry dynamism. While the results for the initial year (Models (1) and (3)) and the most recent year (Models (2) and (3)) are not statistically significant, the results for the average and depreciated average are negative and statistically significant, implying that when the current industry environment is different from what the CDEs have typically experienced before, negative performance consequences

take place. Models (6) to (10) test for similarities in industry concentration. None of the tested coefficients are statistically significant, suggesting that industry concentration–level similarity is not an explanation for the negative relationship between CDEs’ initial learning environment and current deal performance. However, the negative and statistically significant results on geographic concentration from Models (11) to (14) offer some tentative evidence that perhaps differences across environmental contexts do matter, or at least are part of the explanation for the negative relationship between initial learning environment and current deal performance.

Given these mixed results on the different squared distance measures of environmental similarity, I rerun the main results to directly control for this environmental similarity explanation. If the similarity/difference between current year’s environment and CDEs’ initial learning environment is the main explanation for the results in Tables 12 to 15, then by controlling for this directly, the negative and statistically significant relationships between industry dynamism, industry concentration, and geographic concentration with M&A performance should no longer be statistically significant. Table 18 shows the results from this test. Across all models, the hypothesized negative relationships remain negative and statistically significant, whereas the similarity measures are not statistically significant. This test is especially important for the geographic concentration models, given the previously statistically significant results from Table 17. The results from Table 17 and 18 together provide additional evidence for my arguments on the initial learning environment, highlighting the persistent nature of these initial mental representations as a separate mechanism from selection based on context similarity.

3. Nonrandom Selection of CDEs

Another explanation for the observed empirical findings could be that certain types of firms are better able to select CDEs with the right initial learning environments, which in turn result in the observed differences in deal performance. I cannot conduct random assignments to fully overcome this selection concern, but in addition to using CARs as my dependent variable, I account for time-invariant firm-level, CEO-level, and CDE-level characteristics that may drive the selection process, with all results including firm fixed effects. In addition, I find evidence against selection based on firms' current environmental needs in all models and potential selection based on the similarity/fit between firms' current environment and CDEs' prior learning environments in Tables 17 and 18. Thus, any further unobserved firm heterogeneity that could be driving the selection of CDEs must not be able to be explained by firm-invariant characteristics, firm, CDE and CEO prior M&A experience, environmental needs, changes in firm strategy due to prior operational results, the arrival of a new CEO, or the tenure effects of the CEO.

3.6 Discussion

3.6.1 Summary of Results

This paper has investigated how the initial task-learning environment shapes the task-specific focal actors' mental representations and capabilities in the context of mergers and acquisitions. By reexamining the M&A experience-learning-performance relationship in terms of the environmental context through which an experience is accumulated, this study has four key findings.

First, I highlight the importance of the initial task environment in which complex activities such as M&A are learned. I find evidence that the initial M&A learning

environment has a persistent impact on the focal actor's understanding of the task and subsequent M&A performance. By shedding light on the antecedents of managerial capabilities, I answer the call for greater understanding of the formation of mental representations (Csaszar, 2018). This joins the growing empirical studies linking individuals' task-specific mental representations with firm performance, as prior works have generally been verbal theories or simulations (Gary and Wood, 2011; Helfat and Peteraf, 2015; Martignoni, Menon, and Siggelkow, 2016; Menon, 2018), and the top management team studies have proxied managerial cognition using education, professional background, and age of individuals (Finkelstein *et al.*, 2009; Hodgkinson and Sparrow, 2002).

Second, I identify and find support for specific dimensions of the task environment that are important for developing an accurate mental representations of M&A. Highly dynamic and concentrated initial learning environments impede effective and generalizable M&A learning, resulting in a negative relationship with subsequent M&A performance. By integrating the individuals' prior task environments with focal firm performance, this brings greater nuances to existing works examining the role of external environments on organizational outcomes (Dess and Beard, 1984; Keats and Hitt, 1988; Marquis and Tilcsik, 2013).

Third, while I identify the potential challenges of learning M&A in an initially highly dynamic or concentrated environment, I also find that the inverted U relationship between CDE M&A experience and M&A performance identified in Chapter 2 still holds. Moreover, CDEs' prior M&A experience has a positive moderating effect on the relationship between their initial learning environment and subsequent performance, suggesting that while CDEs' initial experience could be a constraint, additional experience accumulation serves as an

enabler of subsequent performance improvements. This adds to the corporate strategy and M&A experience literature (Barkema and Schijven, 2008; Halebian and Finkelstein, 1999), further highlighting the conditions under which M&A experience may or may not lead to superior performance.

Lastly, building on the arguments from Chapter 1 and Chapter 2, I show that the focal actor in M&A—the Corporate Development Executive—is a key level of analysis to unpack the relationship between M&A experience, learning, and performance. As the captains of M&A, CDEs draw on their prior experience and M&A know-how to make decisions throughout the M&A process, and their practices are critically shaped by the environments in which they first learned to do M&A. CEO-level analyses may not have sufficient explanatory power in unpacking the role of prior learning environments, as these actors are less engaged with the day-to-day decision-making activities in a typical M&A process. This builds on the microfoundations movement in strategy (Felin and Foss, 2005; Felin *et al.*, 2015; Helfat and Martin, 2015), bringing greater insights on how individual-level heterogeneity influences organizational-level key outcomes.

Taken together, these results provide a more nuanced understanding of experience as a highly context-dependent construct emerges. Not all experiences are equal, especially when compared to the first experience. Lessons learned in earlier years may have a persistent impact on subsequent performance as much of an individual's understanding of a task is shaped by the initial imprints of task structures and subsequent local search and adaptation. As the M&A-specific focal actors have a large influence over organizations' M&A decisions and outcomes (Chapter 2), unpacking where these CDEs' understanding of M&A come from and how they may be shaped and embedded with the external environment itself is an

important step towards unpacking the micro-drivers of M&A capabilities and superior M&A performance.

3.6.2 Limitations and Future Research

This study has several limitations, each of which raises important avenues for further research on this phenomenon.

First, this study does not fully address the empirical challenge of nonrandom selection of the CDE-firm pairs. Given the nature of CARs and the inclusion of firm and year fixed effects, and the tests accounting for selection based on current and prior environmental characteristics, I believe that my OLS results are highly indicative of the underlying relationships. Future works could potentially address this issue with larger samples across multiple industries and years, especially since CDEs are highly prized resources that tend to move across firms. If a sufficiently large number of CDE mobility events can be observed, a matching approach can be used to create matched pairs at the firm level and the CDE level, allowing us to better parse out the effect of CDEs' initial learning environment from unobservable characteristics at the individual and firm levels.

Second, I cannot rule out alternative mechanisms driving the negative relationship between CDEs' initial learning environment and deal performance. I find evidence against the mechanism of context similarity and other temporal measures of environmental characteristics that may bias my estimates. Future works could construct other measures of similarity with different time windows, depreciation rates, or experience-type compositions, or take an institutional logics approach to examine the lasting influences of competing logics on M&A decisions and outcomes as the environment changes over time (Almandoz, 2014; Lounsbury, 2001; Marquis and Lounsbury, 2007; Thornton and Ocasio, 1999) to further

unpack the evolving role of the external environment on M&A learning. Given the immediacy of transactions, additional works could also explore more direct measures of CDEs' mental representations of M&A, perhaps through surveys or inductive case studies, to further tease out the influence of the initial environment vs. the fit between current and prior understandings of the task. As this work does not examine the role of team members who are reporting to the CDEs and the supporting actors within the firm, other works could also further examine the interactive effects of M&A experience, and test whether the experience effects may vary depending on deal, individual, team, firm, or environmental characteristics over time.

Third, the findings from this study may not be generalizable to all industries and firms. My sample consists of large, public, S&P 500 information technology companies. Future works could examine the external validities of findings in this study by examining CDEs from other industries, or other dedicated actors (e.g., head of alliances, head of investments, etc.) and how their prior experience environments influence their subsequent learning and performance. Studies across industry contexts and tasks could allow us to examine the generalizability of the initial learning environment finding, adding potential boundary conditions to the findings in this study.

3.7 Conclusion

This chapter zooms out from the earlier chapters' focus on the task-specific focal actors to the external environment that these individuals are part of. By highlighting the persistent influence of CDEs' initial learning environment on their subsequent performance, I shed light on the antecedents of heterogeneous managerial capabilities and build on the emerging literature examining task-specific focal actors and their importance for

organizational-level capabilities and performance. By bringing the external environment into the foreground, I also revisit the ambiguities of experience à la (March, 2010) and show how experience can serve as both an enabler and a constraint of subsequent learning and performance, depending on the context through which the experience takes place.

Integrating works across corporate strategy, cognition, organizational learning, and dynamic capabilities, this study contributes to our understanding of the microfoundations of M&A capabilities and offers important implications for how firms may source their M&A-specific human capital as they rely on inorganic growth for long-term competitive advantage.

CONCLUSION

“The creation and contemplation of imaginative understanding are distinctively and gloriously human . . . Intelligence involves the beauties of crafting understandings of experience, as reflected in the grace of storytelling and the elegance of model building. It also involves the efficiencies of adaptation, as reflected in the use of experience as careful analysis and pragmatic improvement. The lessons of experience are both monuments to the splendor of human imagination and instruments of effective problem solving.” (March, 2010: 120)

Summary

This dissertation revisits the locus of experience and learning and examines the role of focal individual-level learning in strategic contexts. By introducing and examining the Corporate Development Executives, the task-specific focal actors leading M&A inside organizations, I show how accounting for the focal individuals involved in the learning process helps to answer many of the open questions in organizational learning, corporate strategy, and microfoundations of dynamic capabilities.

In Chapter 1, I develop a new framework to unpack the relationship between experience, learning, and performance in strategic contexts such as M&A. Revisiting March, Sproull, and Tamuz (1991), I reconceptualize the effectiveness of learning from experience in terms of reliability and validity and highlight the underlying theoretical tension between organizational-level experience and the validity of learning. As the comparability of experience varies depending on task complexity, individual roles, task frequency, and context, organizational-level learning is a necessary but insufficient condition for achieving both reliability and validity of learning. I then lay out the challenges of learning from

experience in strategic contexts like M&A and explain why accounting for the task-specific focal actor is important theoretically, empirically, and phenomenologically.

I test these issues empirically in Chapters 2 and 3, using a novel, hand-collected dataset on CDEs in S&P 500 information technology companies. Chapter 2 zooms in on the task-specific focal actor in M&A, delving into the relationship between their M&A experience and subsequent M&A performance. By examining M&A experience across CDE, CEO, and firm levels, I theorize and find evidence that an inverted U-shaped relationship exists between CDEs' M&A experience and subsequent M&A performance, in which the inverted U is driven by misapplication challenges that may be overcome through variations in prior experience contexts across organizations and deal types. While I do not find CEO-level and firm-level experience as main effects, I find that they serve as important boundary conditions. High CEO M&A experience mitigates the negative performance consequences at high ends of CDE experience, complementing and enhancing CDEs' effectiveness, whereas firm M&A experience acts as a necessary but insufficient condition, improving the reliability of performance but not necessarily its mean.

In Chapter 3, I explore the microfoundations of M&A capabilities by examining where mental representations originate. By zooming out from the focal actors to the external environment in which they are embedded, I highlight the contingent nature of experience. I argue and find that the external learning environment critically shapes CDEs' understanding of the task. In the context of M&A in which feedback is often unavailable or causally ambiguous, the mental representations from their initial learning experience may have persistent influences on future behaviors. Specifically, I find evidence that when CDEs' initial learning environments are highly dynamic or concentrated, they are likely to develop

highly situationally specific understanding of M&A, which may not be applicable in subsequent environments, resulting in suboptimal performance consequences. However, the accumulation of additional M&A experience can help to overcome these “shadows of the past,” highlighting the dual nature of experience as both an enabler and a constraint for subsequent performance.

Contributions

By shedding light on the Corporate Development Executives (CDEs), the focal actors in M&A, and the ways they shape organizational learning, capabilities, and performance, this dissertation makes several important contributions.

First, I contribute to works in organizational learning by investigating and theorizing the importance of experience and learning at the task-specific focal actor level. Through a reconceptualization of the existing model of experiential learning, I introduce a new framework for understanding the necessary and sufficient conditions under which organizational-level and focal individual-level experience may lead to effective learning and superior performance, depending on the comparability of experience. This conceptual framework is not specific to the M&A context but could be generalized across a variety of organizational activities in which focal actors critically shape organizational outcomes.

Second, I contribute to the capabilities view of the firm and build on existing works on the microfoundations of dynamic capabilities (Adner and Helfat, 2003; Eisenhardt and Martin, 2000; Helfat *et al.*, 2007; Helfat and Martin, 2015; Meyer-Doyle *et al.*, 2019; Teece *et al.*, 1997). While existing studies have examined the importance of deliberate learning processes (Dyer *et al.*, 2001; Kale, 1999; Kale *et al.*, 2002; Kale and Singh, 2007; Zollo, 1998; Zollo and Singh, 2004; Zollo and Winter, 2002) and the dedicated M&A functions

(Trichterborn *et al.*, 2016) for dynamic capabilities, this work studies the individuals involved in these learning processes. By looking inside the dedicated functions and introducing the dedicated individuals leading M&A efforts, I show how these focal actors, through their prior experiences and initial learning environments, critically shape the development of organizational M&A capabilities.

Third, I contribute to the corporate strategy literature and existing conversations on M&A experience (Barkema and Schijven, 2008; Haleblan and Finkelstein, 1999; King *et al.*, 2018; Trichterborn *et al.*, 2016; Zollo, 1998; Zollo and Singh, 2004). By considering M&A experience across the CDE level, CEO level, and firm level, as well as their interactions, I help to reconcile the inconsistent findings in existing studies on the M&A experience-learning-performance relationship, answering the call for a greater understanding of antecedents of M&A performance (Haleblan *et al.*, 2009; King *et al.*, 2004). Taking a multilevel approach, I show that the mixed findings of positive, negative, U-shaped, and inverted U-shaped relationships between M&A experience and performance in existing literature can be partially explained by looking at different levels of the CDEs experience curve. *Ceteris paribus*, the positive relationship exists at low to moderate amount of CDE experience, and the negative relationship exists at very high levels of CDE experience (when CDE experience is less varied), while the U-shaped relationship exists only when firms have very limited prior M&A experience. The finding of the U-shaped relationship in contexts of low firm experience also helps to explain why authors haven't been able to replicate the U-shaped relationship proposed in Haleblan and Finkelstein (1999), one of the foundational works on M&A experience and the subject of much debate in M&A literature (Bauer and Matzler, 2014; King *et al.*, 2018; Kolev and Haleblan, 2018).

Fourth, I add new insights to the works on mental representations and managerial cognition (Csaszar, 2018; Csaszar and Levinthal, 2016; Eggers and Kaplan, 2013; Gavetti and Levinthal, 2000). By examining the variability of experience, I demonstrate that variations in individuals' prior experience allow the development of more complex and refined understandings of the task, unveiling a new theoretical mechanism through which cognitive inertia and learning rigidities may be reduced. Moreover, by probing the persistent influence of the initial learning environment, I highlight potential antecedents to mental representations and show how variations in individuals' external environments can be sources of heterogeneity for managerial capabilities, joining the conversation on how mental representations may influence organizational capabilities and strategic outcomes (Csaszar, 2018; Csaszar and Levinthal, 2016, 2016; Eggers and Kaplan, 2013; Gavetti and Levinthal, 2000; Helfat and Peteraf, 2015; Tripsas and Gavetti, 2000).

A new model of experience as a multidimensional construct emerges, in which the locus of experience and learning in M&A resides with the task-specific focal actors, whose prior experiences and external learning environments meaningfully shape their influences on M&A performance across different organizational contexts. Building on March (2010)'s arguments on the ambiguities of experience, I bring further evidence on its dual nature as both "the best teacher" and "the teacher of fools" (March, 2010: 1) with its effectiveness varying depending on the context through which the experience takes place.

The findings from this work also bring greater attention to the phenomenon of task-specific focal actors, or those individuals who are specifically dedicated to particular strategic tasks or activities within organizations and who often sit below the most senior level of the organization. By introducing CDEs as a critical group of focal actors in the M&A process

and highlighting their role as the nexus of the M&A, I shed light on an important group of actors in contemporary organizations. While limited research has considered these individuals, they are critical resources companies compete for in labor markets and in courts, and their existence has become commonplace across organizations today (EY, 2015). By examining CDEs, I introduce a new empirical context and a dataset that can serve as fertile ground for future research, contributing to the emerging research studying key actors below the C-suite (Fu, Tang, and Chen, 2018; Menz and Scheef, 2014).

Lastly, these findings also join conversations on the portability of stars and the emerging focus on generalists vs. specialists in the literature on strategic human capital (Ferguson and Hasan, 2013; Groysberg and Lee, 2009; Groysberg, Lee, and Nanda, 2008; Huckman and Pisano, 2006; Merluzzi and Phillips, 2016; Teodoridis, Bikard, and Vakili, 2019). I show that the benefits of hiring stars (in this case, CDEs or M&A specialists) must be understood in terms of the types of experience they bring in, the applicability of the knowledge they possess across different environments, as well as their interactions with existing firm-level M&A infrastructure and other key decision makers inside various organizational contexts. These are important managerial implications on how firms should source M&A talent and build M&A capabilities, and they could be applied to other strategic contexts in which focal actors critically influence organizational behaviors.

Implications for Practice

The findings from this dissertation have managerial implications on how firms should build M&A capabilities and how they should select and manage human capital in their M&A functions. All results highlight the importance of CDEs, the individuals who lead

and execute M&A inside organizations, suggesting that firms should pay particular attention to their hiring process and their subsequent training and development.

Implications for Selection of CDEs

From field interviews with current senior and junior corporate development managers in technology companies, I found that the current approach to hiring individuals into the corporate development function consists of two main criteria: (i) whether the individual knows how to run the process (e.g., have they done M&A before in other firms or worked as an investment banker), and (ii) whether the individual has a passion for the business (e.g., industry knowledge and willingness to make cold calls, attend small conferences, and hunt for opportunities). The findings from this dissertation suggest that the hiring process should be much more in-depth, changing the focus from “whether they have done M&A” to “which types of M&A they have done and under what contexts” while being mindful of the current organizational needs and experience levels.

More specifically, the type of CDE needed may depend on the organization’s existing level of M&A experience. If the firm has very limited experience with M&A and does not have any existing manuals, playbooks, or processes in place, it is better to bring in a very seasoned CDE to build up the M&A/corporate development function. A highly experienced CDE can help to institute routines, manuals, and playbooks for various tasks related to target selection, deal execution, and post-merger integration. He/she can also develop procedures for deliberate learning and knowledge codification after each new transaction, train others within the organization (e.g., legal team, treasurer, tax audit teams, etc.) on their M&A-related responsibilities, and bring additional expertise (either as hires to the internal corporate development team or as advisors during the deal execution process).

When the organization has some amount of M&A experience and has existing routines in place for M&A, then it is particularly important to audit the portfolio of M&A experiences of potential candidates before hiring them into the CDE role, rather than simply check on the aggregate number of transactions they have done. It is paramount to understand the composition and heterogeneity of their existing M&A experience—e.g., what industries and deal types they have experienced (industry, size, structure, public/private, crossborder, payment type, complexity, etc.) as well as the performance outcomes of their prior deals (long-term and short-term). A key focus for this process is to understand whether the potential CDEs can identify, articulate, and address the differences across their prior deal contexts, as well as distinguish generalizable vs. contextual lessons from their prior experiences with different types of deals.

The findings from Chapters 2 suggest that there is a potential advantage to hiring CDEs externally. When a CDE has seen a variety of different organizational contexts and deal types, he/she may have made many mistakes, seen many scenarios of how deals could have played out, and developed an understanding of M&A best practices that could be generalized across different contexts. While there are advantages to this “second-hire” approach to sourcing talent, the results from Chapter 3 also point to its potential pitfalls; the organizational environments of former employers may have persistent influences on individuals’ subsequent behaviors, some of which may not be optimal for the new employer.

Implications for Management of CDEs

The findings from this dissertation also highlight several ongoing practices that firms should consider after they have hired a particular CDE. First, it is crucial to manage the relationship between the CDE and the CEO. When the CEO has extensive M&A

experience and is focused on inorganic growth as part of the company's strategy, the CDE is most effective when a partnership exists between these two key actors. The results from Chapter 2 suggest that if CDEs and highly experienced CEOs can work together as a team, each bringing his/her prior M&A knowledge and engaging in productive discussions of key M&A decisions, more superior M&A outcomes can be obtained. However, when the CEO does not possess much M&A experience but desires inorganic growth for the company, it is vital to empower the CDE with deal-related autonomy (i.e., listen to their M&A-specific expertise on deal specifics) and organization-wide support (especially from the business units when it comes to due diligence and integration planning) while ensuring the alignment of proper incentives (e.g., link deal-related metrics to their compensation). During my field interviews, I found that most companies do not link CDEs' compensation to deal-related metrics, which may lead to a misalignment of incentives and focus.

One of the key takeaways from this dissertation is the importance of being an active learner. Reinforcing findings from prior works on deliberate learning processes (Zollo, 1998; Zollo and Singh, 2004; Zollo and Winter, 2002), my results suggest that regular deliberate learning processes to examine lessons learned from prior transactions and their generalizability are critical for subsequent performance. At the end of every deal, CDEs and M&A managers should conduct a post-mortem analysis and deliberately reflect, articulate, and codify knowledge on what did or did not work within discrete workstreams, what they could have done better, assumptions made about the performance drivers of the deal, and realizability (or not) of projected KPI targets, culminating in an evolving set of generalizable lessons for future transactions.

Lastly, a key aspect of being an active learner is the adoption of the “contingency of experience” mindset. Regardless of a CDE’s M&A experience levels, it is essential to remind them through training and internal workshops that every deal is a snowflake, so what he/she learned may not always apply in future transactions. It is also important to reflect on the external environmental conditions of prior experiences, which shape the types of deals they might have experienced during those circumstances and the lessons learned, and whether these lessons and knowhow could be applied to the current M&A, given the new environmental conditions.

Open Questions for Future Research

The dissertation generates a number of novel insights on the nature of focal individual-level learning in strategic contexts. Reflecting on the work I have done, I see many open questions and exciting new avenues for future research to further examine the task-specific focal actors in organizations, and to combine this perspective with our existing understanding of organizational-level and individual-level learning. I highlight below some of the most interesting opportunities that I hope to explore in the near future.

Further Decomposition of Experience:

First, while this work has examined the aggregate focal actor-level task-specific experience effects as well as the potential persistent impact of the actor’s initial experience, future work could further break down the composition of experience. These focal M&A-specific actors not only bring in M&A experience, but also come from diverse careers and organizational backgrounds. It would be very interesting to consider questions such as: What types of career paths and functional backgrounds are optimal for M&A learning and performance? While the analyses in this dissertation focus on task-specific experience from

CDEs' corporate development roles, could certain types of functional backgrounds or career paths make them better learners and more able to avoid the challenges of misapplication and cognitive inertia? Are there any interactive effects between their task-specific experience and other related or unrelated task experience? Do particular types of backgrounds facilitate superior performance of particular tasks across the different stages of the M&A process? Are there any trade-offs in maximizing outcomes across these different stages of M&A?

As more recent studies have begun to highlight the roles of external advisors in influencing organizational strategy (Chatain and Meyer-Doyle, 2017; Golubov, Petmezas, and Travlos, 2012; Hayward, 2003; McGrath, 2016; Sleptsov, Anand, and Vasudeva, 2013; Zhang and Li, 2010), and as CDEs often have prior experience in professional services firms (financial, legal, accounting, consulting, etc.), it would also be interesting to examine the relationship between their prior experience in professional services and their subsequent reliance on external advisors. Are they substitutes or complements? Do their old ties carry over, or have they learned to be more selective when sourcing external advice?

Additional works could also further disaggregate the composition of CDEs' prior M&A experience to investigate how specific types of M&A experience (e.g., size, structure, industry, shareholders, geography, performance outcomes, etc.) may impact subsequent M&A behaviors and long-term performance. As the macro-economic environmental conditions underlie the availability of M&A opportunities and the types of M&A activities that can take place, it would also be interesting to study the composition of CDEs' M&A experience across different time periods and environmental conditions, and the potential interactive influences of different M&A logics over time (Almandoz, 2014; Marquis and Lounsbury, 2007). Answers to these above questions could have theoretical implications for

the literatures on the boundaries of the firm and careers of strategic human capital, in addition to the current contributions to organizational learning, corporate strategy, and dynamic capabilities.

Mobilities Across Firm Boundaries:

Second, this dissertation extends prior works on learning by introducing CDEs as the focal actors in M&A, and has focused on examining the first-order relationships between these task-specific focal actors and organizational outcomes. Future work could take a different research design, explicitly addressing the nonrandom match nature of the CDE-firm pair. As random assignments of CDEs with different experiences and backgrounds to similar firms would be highly difficult to do, an alternative could be to explore the mobilities of CDEs across different organizations, where the same individual serves as the Head of Corporate Development in multiple firms. In my setting of S&P 500 IT companies, there are only 12 cases of CDE mobility during the sample period; future studies could gather this information for the entire S&P 500 or the S&P 1500 companies. Such a dataset on CDE mobilities would allow researchers to account for unobservable individual-level characteristics and to take a matching approach based on relevant CDE, CEO, and firm characteristics, both of which could help to shed light on the causal nature of the relationships identified in this work.

Examining the mobilities of task-specific focal actors could also enhance our understanding of inter-organizational knowledge flow. Building on existing studies on vicarious learning (Haunschild and Miner, 1997; Ingram and Baum, 1997a; Kim and Miner, 2007; Levitt and March, 1988; Rosenkopf and Almeida, 2003; Tuschke *et al.*, 2014), future works that track the mobilities of CDEs across different firms and the types of activities

these firms pursued before, during, and after their tenure could bring additional insights into the microfoundations of inter-organizational knowledge transfer, and identify new channels through which knowledge may flow across firm boundaries. Moreover, such an approach could also provide an opportunity to unpack the generalizability of knowledge in strategic contexts, and address open questions regarding firm-specific knowledge and the effectiveness of generalists vs. specialists (Chen, Huang, and Meyer-Doyle, 2017; Dokko *et al.*, 2009; Ferguson and Hasan, 2013; Groysberg *et al.*, 2008; Huckman and Pisano, 2006; Merluzzi and Phillips, 2016; Teodoridis *et al.*, 2019).

Expand Related Learning Concepts Beyond Firm-Level:

Third, as this dissertation has shown how the effectiveness of the task-specific focal actors may vary depending on organizational contexts, there are also interesting implications for and potential opportunities to expand on our existing understanding of other concepts in organizational learning that have largely been examined at the firm level.

For example, absorptive capacity is one of the most influential constructs in management research, and it has traditionally been considered to be a property of the organization. In their seminal paper, Cohen and Levinthal defined absorptive capacity (AC) as “the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends” (Cohen and Levinthal, 1990: 128). The authors used firm-level R&D expenditure as a proxy for AC, and subsequent works have also adopted similar organizational-level measures such as the number of scientists working in R&D departments or the stock of patents/publications/other countable knowledge inputs and outputs (Lichtenthaler, 2009; Minbaeva *et al.*, 2003; Todorova and Durisin, 2007; Volberda, Foss, and Lyles, 2010; Zahra and George, 2002).

However, similar to the concept of experiential learning examined in this dissertation, AC also occurs at the individual level. While often ignored in subsequent citations, Cohen and Levinthal explicitly stated in their 1990 paper that “an organization’s absorptive capacity will depend on the absorptive capacity of its individual members” (Cohen and Levinthal, 1990: 131). In a recent perspective on the concept, Volberda, Foss and Lyles (2010) called for a greater understanding of the managerial antecedents of AC, and argued that “the learning behavior of individuals and the choices they make with respect to training, education, knowledge sharing, etc., are important foundations of organization level AC” (Volberda, Foss, and Lyles, 2010: 944).

The findings from this dissertation suggest that examining the AC of the specific focal actors involved in a particular organizational activity could be a fruitful way of further understanding the antecedents of firm-level AC. Future works that empirically study AC of the specific individuals involved in a particular activity could take a similar approach as the current work, unpacking individual actors’ prior backgrounds, experiences, and intra- and inter-organizational relationships to understand their stock of knowledge on the given activity. This approach would build on the original theoretical conceptualization of AC, as “the sort of knowledge that individuals should possess to enhance organizational absorptive capacity... not simply include substantive, technical knowledge; it also includes awareness of where useful complementary expertise resides within and outside the organization” (Cohen and Levinthal, 1990: 133).

In fact, although AC has traditionally been examined in relation to organic growth and R&D activities, it is also relevant in the context of M&A. As inorganic growth through M&A is often used in conjunction with and to enhance organic growth efforts (Capron and

Mitchell, 2013; Cassiman and Veugelers, 2006; Tang and Feldman, 2020), the prior experience of CDEs in a particular industry (through M&A transactions and/or prior functional roles) could help to enhance the development of organizational AC in that sector. That is, when a CDE has an in-depth understanding of a particular industry that the focal firm is planning to expand into via inorganic growth, it is likely that he/she is more able to identify the most relevant and value-creating target companies for the focal firm and can better assimilate and exploit opportunities in this industry, compared to other CDEs without such AC. Future works could thus leverage the dataset from this dissertation to examine the antecedents of organizational AC and the interactions of AC across different levels, complementing prior works that have studied this construct primarily at the firm level.

In addition, the findings on the task-specific focal actor involved in M&A learning also generate potential opportunities to expand on the existing works on knowledge codification processes at the organizational level. In their influential studies on deliberate learning mechanisms, Zollo (1998), Kale (1999), Dyer, Kale and Singh (2001), Zollo and Winter (2002), Kale, Dyer and Singh (2002), Zollo and Singh (2004) and Kale and Singh (2007) highlighted the importance of tacit and codified knowledge and repeatable organizational processes for knowledge articulation and codification. Taking a different research design to focus on the individual actors instead of organizational processes, this work complements these prior studies. Moreover, many of the findings from this work suggest that a future study combining data on both focal actors and organizational level processes could be an important next step in expanding our understanding of the complicated nature of learning in organizations.

As focal actors are highly involved in the development and updating of organizational knowledge codification and deliberate learning processes, it would also be interesting to understand their interaction effects. For example, what type of CDEs are most effective at instituting and updating knowledge codification processes? As CDEs turn over, how can organizations best capture value from their M&A human-capital and internalize their knowhow to ensure that lessons learned from past successes and failures are passed on to future generations of task-specific focal actors? Given the potential misapplications of past experience (as identified in Chapters 2 and 3), what organizational processes and knowledge updating mechanisms can help to mitigate these challenges and ensure the effectiveness of CDEs over time? Answers to these questions could further enhance our understanding of the interplay between focal actors and firm-level processes and outcomes.

Furthermore, as this work has mainly focused on the highest individual leading M&A activities, it would also be meaningful to consider the role of the M&A team sitting below the CDE. Future studies could take a team-level approach to the study of M&A learning, and further explore the interplay of learning across different levels of the organization (firm-level, CEO, TMT, CDE, M&A team members, business unit heads). Such an approach could complement the empirical findings and the theoretical framework proposed in this dissertation, adding nuances on the necessary and sufficient conditions for the reliability and validity of learning across levels, and further contributing the microfoundations of M&A learning and capabilities.

Boundary Conditions Across Contexts:

Lastly, it would be interesting to examine the task-specific focal actors in other strategic contexts, industries, and geographies. While these task-specific focal actors have

been widespread and commonplace in sectors like the information technology industry and countries like the United States, their existence, prevalence, incentives, and reporting structures may vary across contexts.

For example, there may be interesting variations across industries, as different industries may be driven by varying competitive dynamics and M&A waves (Brauer and Wiersema, 2012; Haleblan *et al.*, 2009). In certain industries, it is possible that not every firm has a focal actor for M&A (especially when M&A is not a critical part of the firm's overall strategy), or has a CDE who is dedicated to M&A vs. a variety of other operational responsibilities, etc. There may also be fundamental differences in reporting structure—in my sample, all CDEs sit in a centralized function and report directly to the CEO/CFO, but in other industries, they may sit within the various business units (EY, 2015). Future work could replicate the analyses from this dissertation in industries that vary drastically from the IT sector to generate additional insights on the boundary conditions of these findings.

It would also be interesting to track the emergence of these task-specific focal actors across different geographic regions. While their existence has become prevalent in the U.S. and many European countries, firms in emerging markets are just beginning to invest in the professionalization of their M&A functions as they look outside of their borders for growth and expansion opportunities through crossborder M&A (Luo and Tung, 2007; Tang and Zhao, 2020). Since many of these firms are open to collaboration as they explore new forms of organizing and build up their internal capabilities, there may be opportunities for in-depth qualitative studies to directly observe the emergence of these roles, or undertake field experiments with companies within and across business groups. These different methodological approaches could complement and further expand this work.

In conclusion, by revisiting the relationship between experience, learning, and performance, this dissertation highlights the importance of the task-specific focal actor. Individual experience can serve as antecedents to organizational capabilities and superior performance, depending on the context through which the experience takes place. I hope this work is the beginning of a productive stream of research on corporate strategy, organizational learning, and the microfoundations of dynamic capabilities.

FIGURES AND TABLES

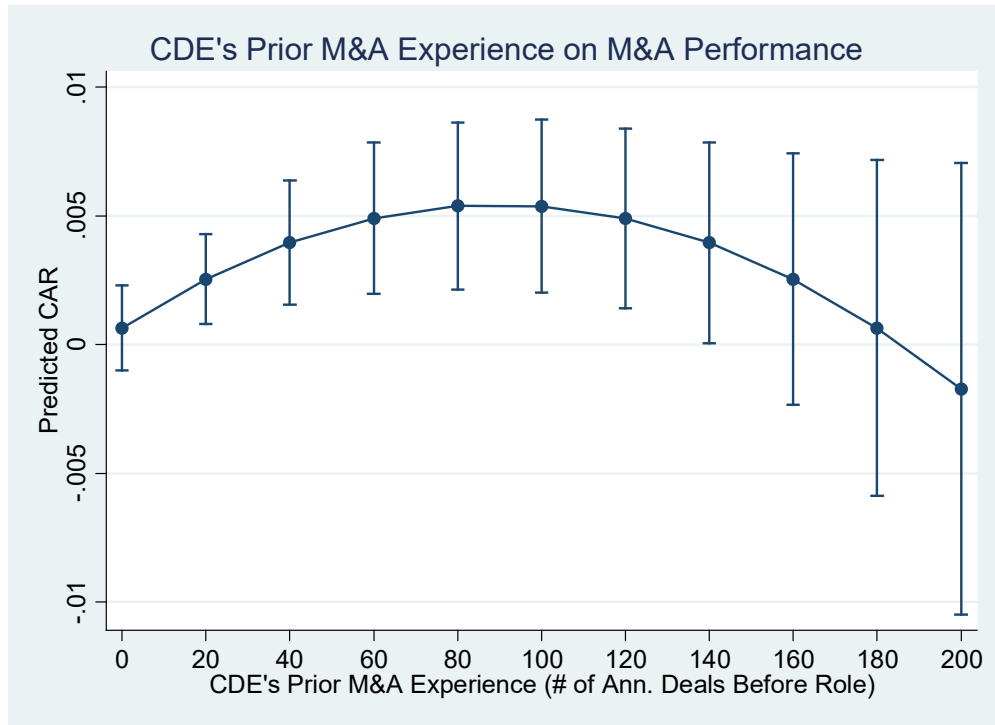


Figure 5. Inverted-U Relationship Between CDE M&A Experience and Performance

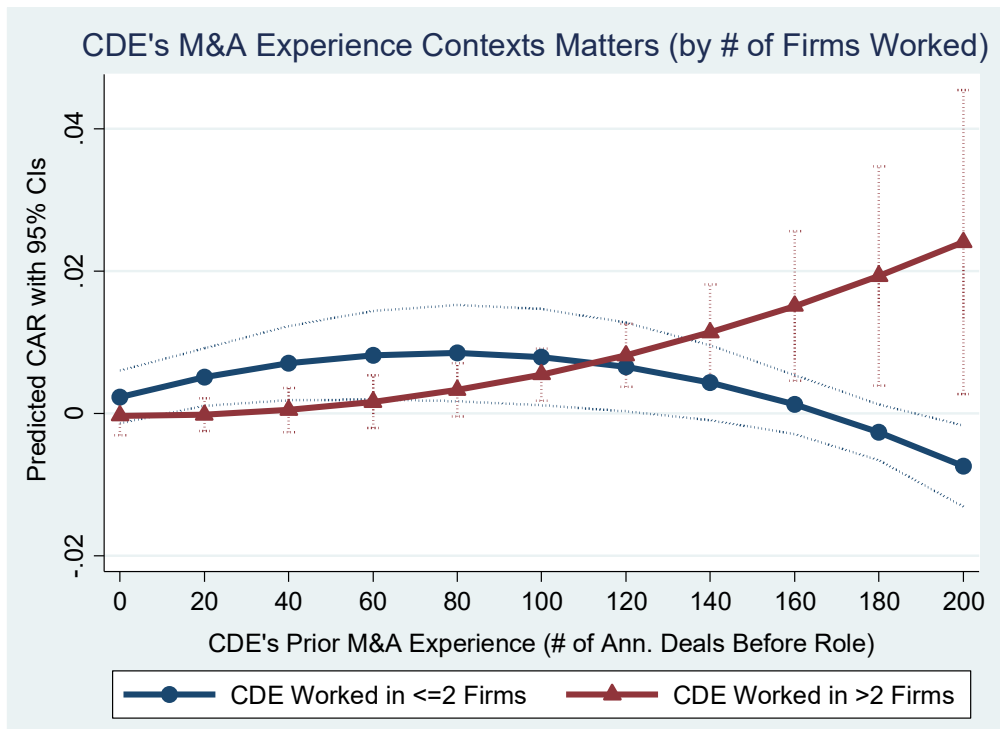


Figure 6. Moderating Role of Prior Organizational Contexts

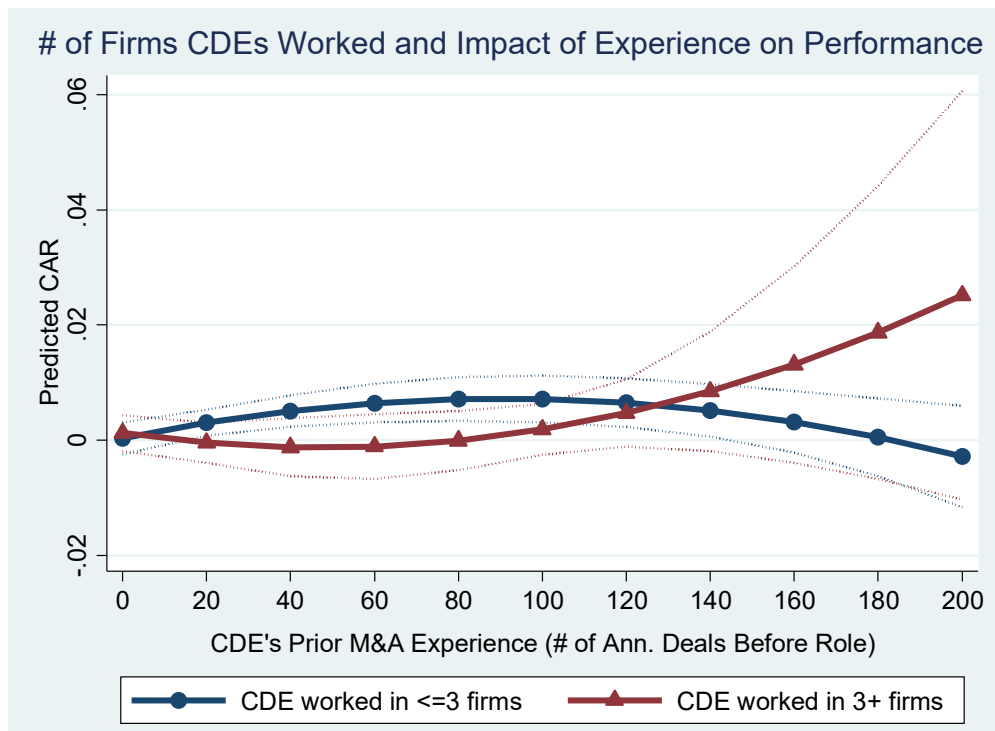


Figure 7. Moderating Role of Prior Organizational Contexts

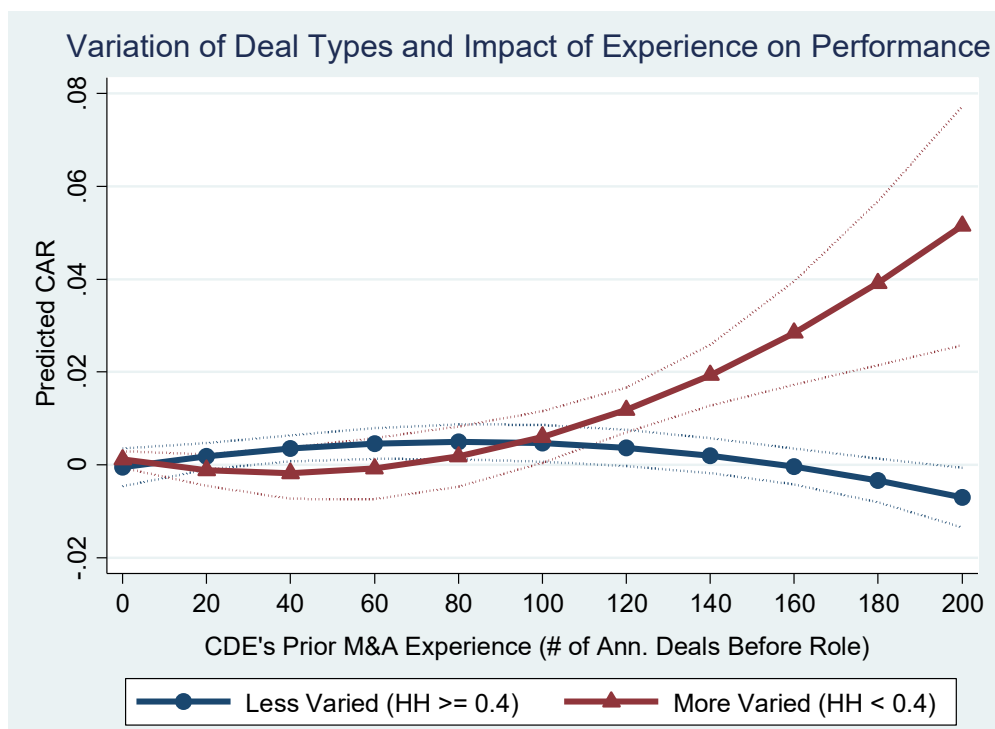


Figure 8. Moderating Role of Prior Deal Types

Table 1. Chapter 2 Summary Statistics and Correlations

	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	
(1) DV = CAR (-1, +1)	0.00	0.04	(0.37)	0.31	1.00																												
(2) CDE M&A Experience	0.19	0.38	0.00	2.02	(0.01)	1.00																											
(3) CDE M&A Experience Squared	0.18	0.53	0.00	4.08	(0.01)	0.92	1.00																										
(4) Firm M&A Experience	3.54	1.17	0.00	5.74	(0.06)	0.40	0.25	1.00																									
(5) CEO M&A Experience	0.03	0.10	0.00	1.29	0.01	(0.03)	(0.05)	0.01	1.00																								
(6) CDE Worked in 2+ Firms	0.64	0.48	0.00	1.00	0.02	0.01	(0.01)	(0.17)	0.08	1.00																							
(7) CDE Deal Experience HH < 0.40	0.60	0.49	0.00	1.00	0.01	(0.43)	(0.26)	(0.21)	0.01	0.01	1.00																						
(8) CDE Tenure in Current Job	3.58	4.33	0.00	26.00	(0.02)	(0.14)	(0.11)	0.12	(0.14)	(0.20)	0.14	1.00																					
(9) CDE Tenure in Firm	7.89	7.25	0.00	32.00	(0.02)	0.14	0.04	0.32	(0.17)	(0.51)	(0.17)	0.50	1.00																				
(10) CDE Tenure in Corp Dev Function	3.50	5.06	0.00	27.00	(0.02)	0.60	0.46	0.20	(0.04)	0.02	(0.64)	(0.14)	0.21	1.00																			
(11) Acquiror Tobin's Q	3.79	5.02	0.59	78.57	(0.02)	(0.05)	(0.05)	(0.09)	(0.08)	0.01	0.09	(0.05)	(0.13)	(0.14)	1.00																		
(12) Acquiror Size	9.35	1.48	4.59	12.35	(0.06)	0.44	0.33	0.71	0.00	(0.25)	(0.27)	0.03	0.32	0.25	(0.15)	1.00																	
(13) Acquiror Prior Performance	0.08	0.18	(4.58)	0.48	0.03	0.09	0.07	0.11	0.01	(0.04)	(0.04)	0.07	0.08	0.02	0.11	0.13	1.00																
(14) Acquiror Current Ratio	2.62	2.19	0.67	36.19	0.00	0.01	0.02	(0.10)	0.07	0.17	0.14	(0.04)	(0.15)	(0.09)	0.19	(0.05)	0.05	1.00															
(15) Acquiror Business Segments	7.51	3.83	1.00	20.00	(0.03)	0.06	0.04	0.33	0.02	(0.15)	(0.04)	0.21	0.27	0.06	(0.25)	0.35	(0.02)	(0.26)	1.00														
(16) Deal Relatedness	0.53	0.50	0.00	1.00	0.02	(0.05)	(0.05)	(0.09)	0.08	0.33	0.11	(0.06)	(0.20)	(0.07)	0.04	(0.22)	0.03	0.15	(0.13)	1.00													
(17) Target Has Financial Advisor	0.35	0.48	0.00	1.00	0.01	(0.03)	0.01	(0.05)	0.01	(0.05)	0.02	0.03	0.01	(0.02)	(0.02)	(0.02)	(0.01)	(0.05)	0.05	0.03	1.00												
(18) Acquiror Has Financial Advisor	0.16	0.37	0.00	1.00	(0.04)	(0.04)	(0.01)	(0.11)	0.00	(0.04)	(0.02)	(0.01)	0.01	0.00	(0.02)	(0.09)	(0.03)	(0.01)	0.02	0.04	0.36	1.00											
(19) Post-Deal Has Majority Ownership	0.94	0.24	0.00	1.00	0.05	0.06	0.05	0.00	0.04	0.16	(0.09)	(0.09)	(0.03)	0.08	(0.13)	(0.03)	(0.05)	0.03	0.00	0.10	0.08	0.05	1.00										
(20) Deal \$1Bn+	0.04	0.21	0.00	1.00	(0.04)	0.03	0.03	(0.01)	0.02	(0.03)	(0.02)	(0.01)	0.00	0.00	0.03	0.05	0.02	0.03	0.03	0.01	0.25	0.39	0.03	1.00									
(21) Target Public	0.13	0.33	0.00	1.00	(0.06)	(0.06)	(0.04)	(0.03)	0.02	(0.09)	0.04	0.03	0.00	(0.03)	0.04	0.00	0.01	(0.02)	0.04	0.02	0.31	0.45	(0.26)	0.36	1.00								
(22) Auction	0.00	0.06	0.00	1.00	(0.02)	(0.01)	(0.01)	0.01	0.00	0.04	0.01	(0.03)	(0.04)	(0.02)	0.00	(0.01)	0.00	0.00	0.01	0.02	0.07	0.10	0.01	0.04	0.12	1.00							
(23) Hostile Attitude	0.00	0.02	0.00	1.00	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	0.01	0.01	(0.01)	(0.02)	(0.01)	0.01	0.00	0.01	0.00	0.02	0.02	0.02	0.04	0.00	0.08	0.04	0.00	1.00						
(24) Tender	0.03	0.17	0.00	1.00	(0.02)	(0.02)	(0.01)	0.00	0.02	0.00	0.01	0.01	(0.01)	0.00	(0.02)	0.00	0.00	(0.01)	0.05	0.04	0.19	0.30	0.02	0.12	0.44	0.17	0.10	1.00					
(25) Crossborder	0.33	0.47	0.00	1.00	0.01	(0.05)	(0.05)	0.00	(0.02)	(0.07)	0.02	0.03	0.11	(0.02)	(0.02)	0.04	0.03	(0.06)	0.09	(0.02)	(0.13)	0.01	(0.19)	(0.07)	0.03	0.01	(0.01)	0.05	1.00				
(26) Firm Age	35.40	29.62	1.00	164.00	(0.03)	0.10	0.00	0.34	0.00	(0.42)	(0.20)	0.10	0.50	0.30	(0.23)	0.34	0.02	(0.26)	0.42	(0.30)	0.01	0.05	(0.01)	0.00	0.03	(0.01)	(0.01)	0.01	0.08	1.00			
(27) Firm Has New CEO	0.11	0.31	0.00	1.00	0.00	(0.07)	(0.06)	0.04	0.04	(0.02)	0.07	0.04	0.02	(0.03)	(0.04)	0.03	(0.02)	(0.04)	(0.01)	0.01	(0.01)	(0.01)	(0.03)	(0.02)	0.01	0.03	(0.01)	0.01	0.03	0.00	1.00		
(28) CEO Tenure	6.89	6.95	0.00	39.00	0.01	0.16	0.22	(0.03)	(0.18)	0.14	(0.11)	(0.03)	(0.05)	0.05	0.01	0.06	0.09	0.01	0.05	0.06	0.06	(0.01)	0.03	0.06	0.04	0.02	0.05	0.01	(0.10)	(0.13)	(0.29)	1.00	

Table 2. Baseline Results

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Controls Only	Controls + Firm	Controls + CEO	Controls + Firm + CEO	Controls + CDE	Controls + CDE	Baseline
CDE M&A Experience					0.00196 (0.333)	0.00926** (0.026)	0.01065** (0.011)
CDE M&A Experience Squared						-0.00519* (0.054)	-0.00592** (0.033)
Firm M&A Experience		-0.00101 (0.309)		-0.00100 (0.313)			-0.00121 (0.234)
CEO M&A Experience			0.00459 (0.508)	0.00447 (0.516)			0.00384 (0.596)
CDE Tenure in Current Job					-0.00028 (0.199)	-0.00023 (0.284)	-0.00018 (0.412)
CDE Tenure in Firm					0.00007 (0.615)	0.00002 (0.881)	0.00003 (0.815)
Acquiror Tobin's Q	-0.00012 (0.570)	-0.00011 (0.605)	-0.00011 (0.603)	-0.00010 (0.635)	-0.00012 (0.552)	-0.00013 (0.520)	-0.00011 (0.587)
Acquiror Size	-0.00173** (0.019)	-0.00119 (0.170)	-0.00172** (0.020)	-0.00119 (0.172)	-0.00201** (0.010)	-0.00214** (0.008)	-0.00156* (0.086)
Acquiror Prior Performance	0.01144 (0.191)	0.01166 (0.176)	0.01137 (0.194)	0.01160 (0.179)	0.01189 (0.166)	0.01183 (0.167)	0.01191 (0.160)
Acquiror Current Ratio	-0.00007 (0.885)	-0.00008 (0.856)	-0.00008 (0.863)	-0.00009 (0.835)	-0.00009 (0.845)	-0.00012 (0.789)	-0.00016 (0.726)
Acquiror Business Segments	-0.00009 (0.741)	-0.00007 (0.810)	-0.00010 (0.722)	-0.00007 (0.790)	-0.00003 (0.918)	-0.00002 (0.931)	-0.00001 (0.973)
Deal Relatedness	-0.00129 (0.530)	-0.00116 (0.566)	-0.00133 (0.517)	-0.00121 (0.553)	-0.00134 (0.504)	-0.00145 (0.472)	-0.00136 (0.500)
Target Has Financial Advisor	0.00364** (0.025)	0.00359** (0.027)	0.00363** (0.025)	0.00358** (0.027)	0.00372** (0.021)	0.00389** (0.020)	0.00383** (0.022)
Acquiror Has Financial Advisor	-0.00349 (0.319)	-0.00359 (0.303)	-0.00343 (0.324)	-0.00354 (0.307)	-0.00367 (0.291)	-0.00356 (0.307)	-0.00363 (0.293)
Post-Deal Has Majority Ownership	0.00702** (0.024)	0.00700** (0.025)	0.00697** (0.025)	0.00695** (0.025)	0.00692** (0.026)	0.00687** (0.027)	0.00682** (0.028)
Deal \$1Bn+	-0.00418 (0.474)	-0.00431 (0.462)	-0.00421 (0.470)	-0.00434 (0.458)	-0.00421 (0.470)	-0.00426 (0.464)	-0.00444 (0.447)
Target Public	-0.00531 (0.194)	-0.00535 (0.191)	-0.00538 (0.187)	-0.00542 (0.185)	-0.00520 (0.201)	-0.00529 (0.192)	-0.00538 (0.185)
Auction	-0.01227 (0.360)	-0.01193 (0.373)	-0.01218 (0.363)	-0.01185 (0.376)	-0.01243 (0.351)	-0.01259 (0.341)	-0.01195 (0.366)
Hostile Attitude	-0.04254*** (0.000)	-0.04304*** (0.000)	-0.04256*** (0.000)	-0.04306*** (0.000)	-0.04305*** (0.000)	-0.04342*** (0.000)	-0.04360*** (0.000)
Tender	0.00135 (0.817)	0.00149 (0.798)	0.00134 (0.819)	0.00147 (0.800)	0.00144 (0.805)	0.00154 (0.791)	0.00168 (0.771)
Crossborder	0.00203 (0.177)	0.00194 (0.201)	0.00206 (0.171)	0.00197 (0.195)	0.00206 (0.168)	0.00213 (0.152)	0.00204 (0.171)
Firm Age	-0.00003 (0.247)	-0.00002 (0.334)	-0.00003 (0.253)	-0.00002 (0.339)	-0.00004 (0.211)	-0.00004 (0.175)	-0.00004 (0.214)
Firm Has New CEO	0.00175 (0.517)	0.00173 (0.527)	0.00178 (0.512)	0.00175 (0.522)	0.00190 (0.486)	0.00217 (0.429)	0.00219 (0.428)
CEO Tenure	0.00008 (0.419)	0.00006 (0.512)	0.00009 (0.371)	0.00008 (0.453)	0.00007 (0.498)	0.00010 (0.301)	0.00010 (0.347)
Constant	0.02394** (0.026)	0.02080* (0.074)	0.02402** (0.026)	0.02090* (0.072)	0.02841** (0.013)	0.03019** (0.010)	0.02649** (0.033)
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0276	0.0279	0.0277	0.0280	0.0284	0.0289	0.0294
N	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01*

Table 3. Baseline Results - Robustness Checks with Different Firm/CEO Experience Measures

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	Panel A				Panel B				Panel C				Panel D				Panel E			
	Log(All Prior Deals)				Firm = All Prior Deals				Firm Experience = Last 5 Years				Firm Experience = Last 4 Years				Firm Experience = Last 3 Years			
CDE M&A Experience	0.01065** (0.011)	0.01094** (0.010)	0.01135** (0.015)	0.01138** (0.019)	0.00907** (0.025)	0.01066** (0.027)	0.00962** (0.030)	0.01085** (0.030)	0.00886** (0.028)	0.00939** (0.033)	0.01001** (0.016)	0.00967** (0.032)	0.00905** (0.025)	0.00969** (0.028)	0.00899** (0.032)	0.00936** (0.038)	0.00906** (0.029)	0.00965** (0.034)	0.00927** (0.027)	0.00965** (0.032)
CDE M&A Experience Squared	-0.00592** (0.033)	-0.00610** (0.026)	-0.00654** (0.026)	-0.00655** (0.026)	-0.00510* (0.059)	-0.00602** (0.049)	-0.00554* (0.052)	-0.00624** (0.047)	-0.00494* (0.070)	-0.00539* (0.062)	-0.00551** (0.040)	-0.00557* (0.051)	-0.00506* (0.063)	-0.00559* (0.052)	-0.00506* (0.068)	-0.00543* (0.059)	-0.00506* (0.067)	-0.00556* (0.057)	-0.00518* (0.058)	-0.00556* (0.051)
Firm M&A Experience (Log of Total # Deals)	-0.00121 (0.234)	-0.00117 (0.251)	-0.00134 (0.203)	-0.00134 (0.217)																
Firm M&A Experience (Total # Deals / 1000)					0.00347 (0.850)	-0.02101 (0.622)	0.00019 (0.992)	-0.02378 (0.601)												
Firm M&A Experience Squared					0.09238 (0.430)		0.08998 (0.472)													
Firm M&A Experience (# Deals in Last n Years / 100)									0.00179 (0.709)	0.00088 (0.865)			0.00101 (0.862)	-0.00023 (0.971)			0.00132 (0.854)	-0.00009 (0.990)		
Firm M&A Experience (= 1 if Has M&A in Last n Years)											-0.00099 (0.835)	-0.00092 (0.845)			0.00441 (0.426)	0.00436 (0.433)			-0.00026 (0.961)	-0.00029 (0.955)
CEO M&A Experience (# Deals Before Firm / 100)	0.00384 (0.596)	-0.00597 (0.644)			0.00358 (0.624)	-0.00590 (0.651)			0.00360 (0.621)		0.00480 (0.495)		0.00362 (0.618)		0.00369 (0.613)		0.00364 (0.615)		0.00356 (0.623)	
CEO M&A Experience (# Deals Before Firm / 100) Squared		0.01806 (0.443)				0.01844 (0.431)														
CEO M&A Experience (# Deals Before Job / 100)			0.00370 (0.355)	0.00334 (0.755)			0.00252 (0.533)	0.00232 (0.836)		0.00224 (0.592)		0.00254 (0.510)		0.00260 (0.535)		0.00251 (0.516)		0.00256 (0.536)		0.00253 (0.510)
CEO M&A Experience (# Deals Before Job / 100) Squared				0.00047 (0.971)				0.00021 (0.988)												
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0294	0.0296	0.0295	0.0295	0.0290	0.0293	0.0290	0.0291	0.0290	0.0290	0.0287	0.0290	0.0290	0.0290	0.0293	0.0293	0.0290	0.0290	0.0290	0.0290
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

p-values in parentheses: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$

Table 4. Variation in Prior Organizational Contexts

DV = CAR [-1, +1]

	(1)	(2)	(3)
	Variety of Organizational Contexts in CDEs' Prior Experience		
	At Least 2 Firms	At least 3 Firms	At least 4 Firms
CDE M&A Experience	0.01607** (0.036)	0.01527** (0.004)	0.01284** (0.005)
CDE M&A Experience Squared	-0.01046** (0.013)	-0.00842** (0.005)	-0.00697** (0.012)
Indicator = 1 if CDE Worked in > N Firms	-0.00262 (0.354)	0.00091 (0.706)	0.00292 (0.300)
Indicator * CDE Experience	-0.01670* (0.097)	-0.02596** (0.035)	-0.03426* (0.093)
Indicator * CDE Experience Squared	0.01688** (0.016)	0.01976* (0.056)	0.02593 (0.124)
Firm M&A Experience	-0.00137 (0.162)	-0.00120 (0.223)	-0.00114 (0.256)
CEO M&A Experience	0.00478 (0.499)	0.00301 (0.693)	0.00367 (0.627)
Controls	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes
R2	0.0306	0.0301	0.0301
N	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

Table 5. Variation in Prior Deal Contexts

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	HH < 0.38	HH < 0.40	HH < 0.42	HH < 0.44	HH < 0.46	HH < 0.48	HH < 0.50
CDE M&A Experience	0.01225** (0.049)	0.01361** (0.027)	0.01361** (0.027)	0.01361** (0.027)	0.01193* (0.050)	0.01223* (0.066)	0.01223* (0.066)
CDE M&A Experience Squared	-0.00766** (0.018)	-0.00844** (0.009)	-0.00844** (0.009)	-0.00844** (0.009)	-0.00756** (0.016)	-0.00778** (0.021)	-0.00778** (0.021)
Indicator = 1 if Deal Type Herfindahl < N	0.00160 (0.485)	0.00168 (0.464)	0.00168 (0.464)	0.00168 (0.464)	0.00163 (0.482)	0.00132 (0.609)	0.00132 (0.609)
Indicator * CDE Experience	-0.01248 (0.602)	-0.02908** (0.026)	-0.02908** (0.026)	-0.02908** (0.026)	-0.01120 (0.287)	-0.01488 (0.165)	-0.01488 (0.165)
Indicator * CDE Experience Squared	0.01569 (0.398)	0.02876** (0.002)	0.02876** (0.002)	0.02876** (0.002)	0.01502** (0.046)	0.01821** (0.018)	0.01821** (0.018)
Firm M&A Experience	-0.00129 (0.216)	-0.00138 (0.173)	-0.00138 (0.173)	-0.00138 (0.173)	-0.00127 (0.217)	-0.00133 (0.201)	-0.00133 (0.201)
CEO M&A Experience	0.00468 (0.510)	0.00484 (0.497)	0.00484 (0.497)	0.00484 (0.497)	0.00486 (0.495)	0.00507 (0.476)	0.00507 (0.476)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0305	0.0307	0.0307	0.0307	0.0306	0.0306	0.0306
N	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

Table 6. Boundary Conditions: High CEO M&A Experience

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	>= 95th Perc.	>= 96th Perc.	>= 97th Perc.	>= 97th Perc.	>= 97th Perc.	>= 97th Perc.	>= 97th Perc.	>= 98th Perc.	>= 98th Perc.	>= 99th Perc.
	+26 Deals	+28 Deals	+30 Deals	+32 Deals	+34 Deals	+36 Deals	+38 Deals	+40 Deals	+42 Deals	+44 Deals
CDE M&A Experience	0.00945** (0.023)	0.00940** (0.021)	0.00940** (0.021)	0.00940** (0.021)	0.00936** (0.022)	0.00936** (0.022)	0.00936** (0.022)	0.00937** (0.021)	0.00938** (0.021)	0.00939** (0.021)
CDE M&A Experience Squared	-0.00511* (0.054)	-0.00509* (0.050)	-0.00509* (0.050)	-0.00509* (0.050)	-0.00507* (0.052)	-0.00507* (0.052)	-0.00507* (0.052)	-0.00507* (0.052)	-0.00507* (0.051)	-0.00508* (0.051)
Indicator =1 if CEO Experience >= X Deal	0.00077 (0.804)	0.00036 (0.912)	0.00036 (0.912)	0.00036 (0.912)	-0.00043 (0.925)	-0.00043 (0.925)	-0.00043 (0.925)	-0.00044 (0.924)	-0.00018 (0.973)	-0.00021 (0.969)
Indicator * CDE Experience	-0.02826 (0.553)	-0.02543 (0.641)	-0.02543 (0.641)	-0.02543 (0.641)	-0.01522 (0.825)	-0.01522 (0.825)	-0.01522 (0.825)	0.00154 (0.985)	-0.00189 (0.984)	0.05015 (0.815)
Indicator * CDE Experience Squared	0.04809 (0.472)	0.25797** (0.002)	0.25797** (0.002)	0.25797** (0.002)	0.24464** (0.014)	0.24464** (0.014)	0.24464** (0.014)	0.22004* (0.057)	0.22455* (0.080)	0.14810 (0.625)
Firm M&A Experience	-0.00131 (0.209)	-0.00128 (0.210)	-0.00128 (0.210)	-0.00128 (0.210)	-0.00129 (0.217)	-0.00129 (0.217)	-0.00129 (0.217)	-0.00128 (0.215)	-0.00128 (0.207)	-0.00128 (0.206)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acqui	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0293	0.0308	0.0308	0.0308	0.0308	0.0308	0.0308	0.0308	0.0308	0.0308
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01*

Table 7. Boundary Conditions: Low Firm M&A Experience

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	< 5th Perc.	< 10th Perc.	< 15th Perc.	< 20th Perc.	< 25th Perc.	< 30th Perc.	< 35th Perc.	< 40th Perc.
	< 1 Deal	< 3 Deals	< 4 Deals	< 6 Deals	< 7 Deals	< 9 Deals	< 10 Deals	< 12 Deals
	(4th perc)	(10th perc)	(15th perc)	(23rd perc)	(25th perc)	(31st perc)	(35th perc)	(40th perc)
CDE M&A Experience	0.00840** (0.035)	0.00831** (0.035)	0.00911** (0.020)	0.00961** (0.018)	0.00945** (0.024)	0.00964** (0.019)	0.00995** (0.018)	0.00911** (0.028)
CDE M&A Experience Squared	-0.00461* (0.069)	-0.00458* (0.065)	-0.00486** (0.046)	-0.00518** (0.036)	-0.00508** (0.045)	-0.00520** (0.033)	-0.00538** (0.030)	-0.00423* (0.099)
Indicator = 1 if Firm Experience < X Deals	0.00248 (0.614)	0.00581 (0.131)	0.00601* (0.065)	0.00322 (0.249)	0.00367 (0.189)	0.00455* (0.055)	0.00456* (0.057)	0.00240 (0.275)
Indicator * CDE Experience	-0.82702** (0.019)	-0.35405** (0.004)	-0.10899 (0.121)	-0.08365** (0.019)	-0.06584** (0.039)	-0.07223** (0.018)	-0.07052** (0.007)	-0.01123 (0.417)
Indicator * CDE Experience Squared	6.41450** (0.031)	0.73918*** (0.000)	0.16356* (0.097)	0.12675** (0.047)	0.09651** (0.028)	0.11368** (0.011)	0.11036** (0.010)	0.00319 (0.633)
CEO M&A Experience	0.00202 (0.775)	-0.00177 (0.763)	0.00273 (0.695)	0.00288 (0.684)	0.00343 (0.635)	0.00463 (0.529)	0.00455 (0.540)	0.00243 (0.743)
Turning Point of the U	29	24	31	30	31	29	29	n/a
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0302	0.0328	0.0305	0.0300	0.0300	0.0308	0.0309	0.0293
N	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01*

Table 8. Baseline Results with Firm Fixed Effects

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Controls + Only	Controls + Firm	Controls + CEO	Controls + Firm + CEO	Controls + CDE	Controls + CDE	Baseline
CDE M&A Experience					0.00305 (0.101)	0.01017** (0.044)	0.01044* (0.051)
CDE M&A Experience Squared						-0.00567* (0.092)	-0.00572* (0.098)
Firm M&A Experience		-0.00467 (0.153)		-0.00473 (0.150)			-0.00501 (0.129)
CEO M&A Experience			0.00344 (0.788)	0.00459 (0.713)			0.00351 (0.777)
CDE Tenure in Current Job					0.00019 (0.623)	0.00025 (0.501)	0.00027 (0.480)
CDE Tenure in Firm					-0.00003 (0.900)	-0.00007 (0.761)	-0.00004 (0.844)
Acquiror Tobin's Q	-0.00058** (0.004)	-0.00062** (0.002)	-0.00057** (0.008)	-0.00060** (0.004)	-0.00058** (0.006)	-0.00058** (0.005)	-0.00061** (0.004)
Acquiror Size	-0.00776** (0.009)	-0.00689** (0.021)	-0.00778** (0.009)	-0.00690** (0.022)	-0.00790** (0.009)	-0.00801** (0.008)	-0.00711** (0.019)
Acquiror Prior Performance	0.00765 (0.394)	0.00785 (0.375)	0.00760 (0.399)	0.00779 (0.381)	0.00784 (0.379)	0.00783 (0.381)	0.00802 (0.362)
Acquiror Current Ratio	-0.00046 (0.393)	-0.00062 (0.280)	-0.00050 (0.384)	-0.00067 (0.268)	-0.00045 (0.417)	-0.00042 (0.437)	-0.00062 (0.300)
Acquiror Business Segments	0.00027 (0.618)	0.00024 (0.661)	0.00026 (0.630)	0.00023 (0.676)	0.00020 (0.716)	0.00020 (0.710)	0.00015 (0.785)
Deal Relatedness	-0.00037 (0.877)	-0.00038 (0.871)	-0.00038 (0.872)	-0.00040 (0.865)	-0.00038 (0.872)	-0.00042 (0.861)	-0.00045 (0.852)
Target Has Financial Advisor	0.00448** (0.007)	0.00438** (0.008)	0.00448** (0.007)	0.00437** (0.009)	0.00454** (0.006)	0.00462** (0.006)	0.00451** (0.008)
Acquiror Has Financial Advisor	-0.00311 (0.344)	-0.00325 (0.323)	-0.00309 (0.345)	-0.00322 (0.324)	-0.00318 (0.333)	-0.00314 (0.339)	-0.00328 (0.316)
Post-Deal Has Majority Ownership	0.00698** (0.046)	0.00718** (0.039)	0.00694** (0.047)	0.00714** (0.040)	0.00690** (0.050)	0.00688* (0.050)	0.00707** (0.043)
Deal \$1Bn+	-0.00565 (0.343)	-0.00578 (0.329)	-0.00568 (0.341)	-0.00582 (0.326)	-0.00573 (0.336)	-0.00583 (0.329)	-0.00602 (0.311)
Target Public	-0.00425 (0.297)	-0.00424 (0.297)	-0.00430 (0.294)	-0.00431 (0.292)	-0.00414 (0.311)	-0.00420 (0.303)	-0.00421 (0.302)
Auction	-0.00889 (0.540)	-0.00928 (0.531)	-0.00882 (0.543)	-0.00920 (0.534)	-0.00836 (0.565)	-0.00827 (0.568)	-0.00850 (0.565)
Hostile Attitude	-0.04405*** (0.000)	-0.04491*** (0.000)	-0.04402*** (0.000)	-0.04488*** (0.000)	-0.04367*** (0.000)	-0.04347*** (0.000)	-0.04414*** (0.000)
Tender	-0.00124 (0.836)	-0.00103 (0.862)	-0.00122 (0.839)	-0.00100 (0.867)	-0.00133 (0.825)	-0.00123 (0.839)	-0.00099 (0.868)
Crossborder	0.00294** (0.047)	0.00293** (0.045)	0.00294** (0.047)	0.00293** (0.045)	0.00296** (0.043)	0.00301** (0.039)	0.00300** (0.037)
Firm Age	-0.00530*** (0.000)	-0.00431*** (0.000)	-0.00530*** (0.000)	-0.00430*** (0.000)	-0.00535*** (0.000)	-0.00535*** (0.000)	-0.00431*** (0.000)
Firm Has New CEO	0.00177 (0.539)	0.00171 (0.559)	0.00177 (0.540)	0.00171 (0.559)	0.00206 (0.483)	0.00195 (0.506)	0.00190 (0.526)
CEO Tenure	0.00016 (0.415)	0.00016 (0.397)	0.00017 (0.410)	0.00017 (0.385)	0.00017 (0.405)	0.00017 (0.389)	0.00019 (0.365)
Constant	0.58095*** (0.000)	0.47811*** (0.000)	0.58126*** (0.000)	0.47718*** (0.000)	0.58641*** (0.000)	0.58738*** (0.000)	0.47850*** (0.000)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0934	0.0944	0.0935	0.0944	0.0938	0.0941	0.0952
N	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01*

Table 9. Summary of Alternative Explanation and Robustness Checks

Empirical Concern	Robustness Test	Results
<i>The main results may be sensitive to or driven by ...</i>	<i>To mitigate this concern, I ...</i>	<i>See Table(s)</i>
(i) Selection Effects		
unobservable heterogeneity in the CDE-firm matching		
...they are better at choosing CDEs	Control for firm fixed effects	Table 8
...they anticipate new strategic directions	Control for new CEO, CEO tenure, lagged operating performance in all	Tables 2 to 8
...they anticipate uptick in M&A activities	Control for average M&A intensity prior to the focal year	Tables 3
...they want to revamp M&A platform because of prior poor M&A performance	Control for prior negative CARs, average CARs among last n deals, prior M&A impairment	Appendix C Table 4
...they want to create a dedicated M&A function	Control for whether focal CDE is the first CDE, prior CDE history, year of first CDE in firm	Appendix C Table 4
(ii) Impression Management		
...active impression management of stock markets' reactions to M&A announcements (i.e. the stock market reactions are not driven by assessments of the NPV of the transaction, but shaped by how CDEs are framing and portraying the transaction in press releases)	(1) Use natural language processing techniques (LIWC, LDA topic modeling) to compare differences between high vs low experienced CDEs; (2) Test for alternative M&A outcomes that are not driven by stock-market reactions or the influence of analysts; (3) Conduct extensive field interviews with professional services providers (i.e. investment bankers, legal, consultants) who interact with many different CDEs to understand differences in behaviors between high vs low experienced CDEs	Appendix C Table 1
(iii) Sample Selection Bias		
results may be driven by ...		
...productivity declines over time	Control for CDEs' tenure and tenure squared in the current job and current	Table 3
...sample selection due to survivorship bias (i.e. attrition of really good/bad CDEs over time, so those left in sample may have high experience only because they have been around the longest)	Control for CDEs' tenure and tenure squared in the corporate development function	Appendix C Table 3
...extremely acquisitive or large companies	Exclude the largest and most acquisitive firms one at a time (Apple, Cisco, Google, IBM, Intel, Microsoft)	Appendix C Table 5
...dot-com bubble era active deal activities	Exclude deals from 1995-2000	Appendix C Table 5
(iv) Omitted Variable Bias		
...M&A experience of other actors in the firm	(1) Sequentially add CEO M&A Experience and Firm M&A Experience; (2) Test alternative measures of CEO and Firm M&A Experience; (3) Interact Indicators for High/Low CEO and Firm M&A Experience	Table 2 Table 3 Tables 6, 7
...reputation spillovers of celebrity firms	Control for firm reputation based on Halebian et al. (2017)	Appendix C Table 2
...availability of targets	Control for lagged target industry-level deal activity by SIC 3 and SIC 4	Appendix C Table 6
...prior interactions between target and acquirer	Control for prior partnership between target and acquirer	Appendix C Table 6
...prior M&A experience of the financial advisor	Control for target and acquirer's financial advisors' recent experience in the target sector by SIC3 and SIC4	Appendix C Table 6
(v) Other Characteristics of the CDE		
...functional background in professional services firms	Control for whether the CDE worked in investment banking, legal, consulting, hedgefund or private equity	Appendix C Table 7
...relevant technical background from prior engineering / technology-related jobs or education training	Control for whether the CDE was an ex engineer, or have a science-based education	Appendix C Table 7
...whether they have an MBA	Control for whether the CDE has a MBA	Appendix C Table 7
...whether they attended an elite institution	Control for whether the CDE had attended an elite institution (US News top 50 schools)	Appendix C Table 7
...whether they are from abroad	Control for whether the CDE came from abroad	Appendix C Table 7
...innate ability / other unobservable characteristics that	Control for CDE fixed effects using CDE M&A experience as a rolling count of announced deals prior to focal year (limited statistical power)	Appendix C Table 8

Table 10. Explore Experience-Performance Variance Relationship

DV = Variance of CAR (demeaned by firm's prior performance)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Demeaned by Firm's Rolling L5Y CAR Average				Demeaned by Firm's Rolling L3Y CAR Average			
CDH M&A Experience	0.00029 (0.323)			0.00039 (0.224)	0.00035 (0.280)			0.00043 (0.208)
Firm M&A Experience		-0.00044** (0.025)		-0.00042** (0.030)		-0.00035* (0.061)		-0.00033* (0.069)
CEO M&A Experience			-0.00084 (0.291)	-0.00089 (0.317)			-0.00099 (0.287)	-0.00108 (0.288)
CDH Tenure in Current Job	-0.00010** (0.012)			-0.00009** (0.026)	-0.00012** (0.008)			-0.00011** (0.014)
CDH Tenure in Firm	0.00004* (0.076)			0.00004* (0.063)	0.00005** (0.046)			0.00005** (0.041)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0991	0.0988	0.0963	0.1015	0.1249	0.1224	0.1209	0.1266
N	3638	3638	3638	3638	3638	3638	3638	3638

p-values in parentheses: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.001$

Table 11. Chapter 3 Summary Statistics and Correlations

	Mean	S.D.	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)
(1) DV = CAR (-1, +1)	0.00	0.04	(0.37)	0.31	1.00																														
(2) CDE's Initial Environment - Dynamism	0.00	1.00	(1.34)	7.83	(0.03)	1.00																													
(3) Firm's Current Environment - Dynamism	0.00	1.00	(1.30)	6.40	(0.04)	0.30	1.00																												
(4) CEO's Initial Environment - Dynamism	0.00	1.00	(1.20)	4.06	0.00	0.14	0.19	1.00																											
(5) CDE's Initial Environment - Industry Concentration	0.00	1.00	(0.97)	4.36	(0.03)	(0.01)	0.03	0.00	1.00																										
(6) Firm's Current Environment - Industry Concentration	0.00	1.00	(0.91)	3.37	(0.03)	(0.12)	(0.02)	(0.05)	0.59	1.00																									
(7) CEO's Initial Environment - Industry Concentration	0.00	1.00	(1.03)	3.78	0.02	0.02	(0.01)	0.21	0.11	0.00	1.00																								
(8) CDE's Initial Environment - Geographic Concentration	0.00	1.00	(1.44)	4.96	(0.02)	(0.13)	0.03	0.03	0.42	0.31	0.14	1.00																							
(9) Firm's Current Environment - Geographic Concentration	0.00	1.00	(1.37)	4.63	(0.01)	(0.12)	0.00	0.03	0.38	0.60	0.15	0.62	1.00																						
(10) CEO's Initial Environment - Geographic Concentration	0.00	1.00	(1.27)	3.37	0.02	(0.02)	0.07	0.00	(0.04)	(0.03)	0.01	0.14	0.15	1.00																					
(11) CDE Tenure in Current Job	3.58	4.33	0.00	26.00	(0.02)	0.03	0.12	0.20	0.11	0.02	0.05	0.13	0.04	(0.15)	1.00																				
(12) CDE Tenure in Firm	7.89	7.25	0.00	32.00	(0.02)	(0.13)	(0.02)	0.08	0.14	0.25	(0.10)	0.02	0.03	(0.23)	0.50	1.00																			
(13) Firm Has New CEO	0.11	0.31	0.00	1.00	0.00	0.05	0.07	0.02	0.01	0.00	(0.01)	(0.02)	(0.03)	0.00	0.04	0.02	1.00																		
(14) CEO Tenure	6.89	6.95	0.00	39.00	0.01	(0.05)	(0.11)	(0.19)	0.00	0.07	0.07	0.03	0.08	0.16	(0.03)	(0.05)	(0.29)	1.00																	
(15) Acquiror Tobin's Q	3.79	5.02	0.59	78.57	(0.02)	(0.02)	(0.07)	(0.12)	(0.06)	(0.14)	0.01	(0.08)	(0.12)	(0.01)	(0.05)	(0.13)	(0.04)	0.01	1.00																
(16) Acquiror Size	9.35	1.48	4.59	12.35	(0.06)	(0.08)	(0.06)	0.12	0.03	0.28	(0.25)	(0.16)	(0.13)	(0.06)	0.03	0.32	0.03	0.06	(0.15)	1.00															
(17) Acquiror Prior Performance	0.08	0.18	(4.58)	0.48	0.03	(0.15)	(0.22)	(0.02)	0.01	0.00	(0.02)	0.02	0.01	0.00	0.07	0.08	(0.02)	0.09	0.11	0.13	1.00														
(18) Acquiror Current Ratio	2.62	2.19	0.67	36.19	0.00	0.07	0.08	(0.05)	(0.22)	(0.30)	0.04	(0.23)	(0.32)	(0.07)	(0.04)	(0.15)	(0.04)	0.01	0.19	(0.05)	0.05	1.00													
(19) Firm Age	35.40	29.62	1.00	164.00	(0.03)	(0.01)	0.02	0.13	0.31	0.53	(0.07)	0.20	0.36	(0.12)	0.10	0.50	0.00	(0.13)	(0.23)	0.34	0.02	(0.26)	1.00												
(20) Acquiror Business Segments	7.51	3.83	1.00	20.00	(0.03)	0.13	0.11	0.11	0.09	0.17	(0.14)	0.00	0.00	0.02	0.21	0.27	(0.01)	0.05	(0.25)	0.35	(0.02)	(0.26)	0.42	1.00											
(21) Deal Relatedness	0.53	0.50	0.00	1.00	0.02	0.01	(0.08)	(0.02)	(0.30)	(0.36)	0.07	(0.04)	(0.16)	0.04	(0.06)	(0.20)	0.01	0.06	0.04	(0.22)	0.03	0.15	(0.30)	(0.13)	1.00										
(22) Target Has Financial Advisor	0.35	0.48	0.00	1.00	0.01	0.03	0.06	0.03	0.05	0.03	0.01	0.06	0.05	0.06	0.03	0.01	(0.01)	0.06	(0.02)	(0.02)	(0.01)	(0.05)	0.01	0.05	0.03	1.00									
(23) Acquiror Has Financial Advisor	0.16	0.37	0.00	1.00	(0.04)	0.06	0.06	0.08	0.04	0.02	0.00	0.02	0.04	0.00	(0.01)	0.01	(0.01)	(0.01)	(0.02)	(0.09)	(0.03)	(0.01)	0.05	0.02	0.04	0.00	0.08	0.04	0.00	1.00					
(24) Post-Deal Has Majority Ownership	0.94	0.24	0.00	1.00	0.05	(0.06)	(0.04)	(0.07)	0.02	0.07	(0.03)	0.02	0.04	0.02	(0.09)	(0.03)	(0.03)	0.03	(0.13)	(0.03)	(0.05)	0.03	(0.01)	0.00	0.10	0.08	0.05	1.00							
(25) Deal \$IBn+	0.04	0.21	0.00	1.00	(0.04)	0.01	0.03	(0.01)	0.02	0.02	(0.03)	0.00	(0.01)	0.03	(0.01)	0.00	(0.02)	0.06	0.03	0.05	0.02	0.03	0.00	0.03	0.01	0.25	0.39	0.03	1.00						
(26) Target Public	0.13	0.33	0.00	1.00	(0.06)	0.05	0.04	0.02	0.02	(0.01)	0.01	0.00	(0.01)	0.03	0.03	0.00	0.01	0.04	0.04	0.00	0.01	(0.02)	0.03	0.04	0.02	0.31	0.45	(0.26)	0.36	1.00					
(27) Auction	0.00	0.06	0.00	1.00	(0.02)	0.00	(0.02)	0.01	0.00	(0.01)	0.00	0.00	0.02	0.00	(0.03)	(0.04)	0.03	0.02	0.00	(0.01)	0.00	0.00	(0.01)	0.01	0.02	0.07	0.10	0.01	0.04	0.12	1.00				
(28) Hostile Attitude	0.00	0.02	0.00	1.00	(0.02)	0.00	0.00	(0.01)	(0.01)	(0.01)	(0.01)	0.00	0.00	0.02	(0.01)	(0.02)	(0.01)	0.05	0.01	0.00	0.01	0.00	(0.01)	0.02	0.02	0.02	0.04	0.00	0.08	0.04	0.00	1.00			
(29) Tender	0.03	0.17	0.00	1.00	(0.02)	0.01	0.00	0.01	(0.01)	(0.02)	(0.01)	(0.01)	(0.03)	0.03	0.01	(0.01)	0.01	0.01	(0.02)	0.00	0.00	(0.01)	0.01	0.05	0.04	0.19	0.30	0.02	0.12	0.44	0.17	0.10	1.00		
(30) Crossborder	0.33	0.47	0.00	1.00	0.01	(0.01)	0.00	0.07	(0.04)	0.00	(0.05)	(0.03)	(0.02)	(0.09)	0.03	0.11	0.03	(0.10)	(0.02)	0.04	0.03	(0.06)	0.08	0.09	(0.02)	(0.13)	0.01	(0.19)	(0.07)	0.03	0.01	(0.01)	0.05	1.00	
(31) Full Cash	0.21	0.41	0.00	1.00	0.00	0.06	0.08	0.05	0.01	(0.04)	0.03	(0.01)	0.01	0.08	(0.01)	(0.08)	0.02	0.02	(0.06)	(0.10)	(0.04)	(0.03)	(0.04)	0.03	0.05	0.24	0.31	0.02	0.14	0.34	0.08	0.03	0.28	(0.03)	1.00

Table 12. Influence of Initial Environmental Dynamism on M&A Performance

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CDE	CDE + Firm	CEO	CEO + Firm	CDE + CEO	CDE + CEO + Firm	Include M&A Experience	Interact w/ M&A Experience
CDE's Initial Environment - Industry Dynamism	-0.00185* (0.073)	-0.00183* (0.080)			-0.00190* (0.067)	-0.00187* (0.074)	-0.00178* (0.081)	-0.00236** (0.046)
CEO's Initial Environment - Industry Dynamism			0.00085 (0.513)	0.00087 (0.507)	0.00094 (0.460)	0.00095 (0.456)	0.00113 (0.348)	0.00107 (0.401)
Current Environment - Industry Dynamism		-0.00090 (0.533)		-0.00098 (0.499)		-0.00091 (0.525)	-0.00077 (0.614)	-0.00087 (0.545)
CDE M&A Experience							0.00997* (0.056)	0.00781** (0.042)
CDE M&A Experience Squared							-0.00551* (0.100)	
CDE's Initial Environment x CDE M&A Experience								0.00685* (0.094)
Firm M&A Experience							-0.00511 (0.121)	
CEO M&A Experience							0.00313 (0.802)	
CDE Tenure in Current Job	0.00021 (0.579)	0.00021 (0.572)	0.00013 (0.727)	0.00014 (0.716)	0.00023 (0.558)	0.00023 (0.552)	0.00037 (0.344)	0.00037 (0.353)
CDE Tenure in Firm	-0.00005 (0.809)	-0.00005 (0.830)	0.00001 (0.981)	0.00001 (0.964)	-0.00006 (0.784)	-0.00005 (0.803)	-0.00010 (0.649)	-0.00012 (0.589)
Firm Has New CEO	0.00186 (0.519)	0.00197 (0.500)	0.00171 (0.551)	0.00184 (0.527)	0.00189 (0.512)	0.00200 (0.492)	0.00215 (0.476)	0.00245 (0.408)
CEO Tenure	0.00017 (0.400)	0.00018 (0.370)	0.00017 (0.396)	0.00018 (0.364)	0.00017 (0.383)	0.00019 (0.355)	0.00021 (0.320)	0.00022 (0.286)
Acquiror Tobin's Q	-0.00058** (0.007)	-0.00058** (0.005)	-0.00058** (0.005)	-0.00059** (0.004)	-0.00057** (0.007)	-0.00058** (0.005)	-0.00060** (0.004)	-0.00057** (0.007)
Acquiror Size	-0.00782** (0.009)	-0.00779** (0.010)	-0.00793** (0.007)	-0.00791** (0.007)	-0.00798** (0.007)	-0.00796** (0.007)	-0.00727** (0.016)	-0.00811** (0.008)
Acquiror Prior Performance	0.00725 (0.433)	0.00684 (0.460)	0.00747 (0.395)	0.00702 (0.426)	0.00703 (0.436)	0.00662 (0.465)	0.00701 (0.429)	0.00682 (0.450)
Acquiror Current Ratio	-0.00048 (0.386)	-0.00048 (0.385)	-0.00044 (0.418)	-0.00044 (0.417)	-0.00045 (0.412)	-0.00045 (0.411)	-0.00059 (0.327)	-0.00029 (0.605)
Firm Age	-0.00497*** (0.000)	-0.00496*** (0.000)	-0.00530*** (0.000)	-0.00528*** (0.000)	-0.00493*** (0.000)	-0.00492*** (0.000)	-0.00390*** (0.000)	-0.00491*** (0.000)
Acquiror Business Segments	0.00024 (0.675)	0.00021 (0.709)	0.00024 (0.675)	0.00021 (0.713)	0.00023 (0.691)	0.00020 (0.726)	0.00012 (0.839)	0.00015 (0.797)
Deal Relatedness	-0.00024 (0.919)	-0.00027 (0.911)	-0.00040 (0.868)	-0.00042 (0.860)	-0.00029 (0.901)	-0.00032 (0.893)	-0.00044 (0.855)	-0.00035 (0.883)
Target Has Financial Advisor	0.00450** (0.007)	0.00452** (0.007)	0.00443** (0.008)	0.00445** (0.008)	0.00448** (0.008)	0.00451** (0.007)	0.00452** (0.008)	0.00455** (0.007)
Acquiror Has Financial Advisor	-0.00308 (0.354)	-0.00309 (0.353)	-0.00322 (0.330)	-0.00322 (0.329)	-0.00315 (0.343)	-0.00315 (0.342)	-0.00335 (0.311)	-0.00324 (0.327)
Post-Deal Has Majority Ownership	0.00681* (0.055)	0.00686* (0.053)	0.00702** (0.047)	0.00708** (0.045)	0.00687* (0.054)	0.00693* (0.052)	0.00706** (0.046)	0.00668* (0.061)
Deal \$1Bn+	-0.00578 (0.333)	-0.00568 (0.342)	-0.00569 (0.340)	-0.00558 (0.350)	-0.00581 (0.332)	-0.00570 (0.341)	-0.00604 (0.312)	-0.00573 (0.338)
Target Public	-0.00422 (0.324)	-0.00427 (0.319)	-0.00417 (0.330)	-0.00423 (0.324)	-0.00407 (0.342)	-0.00412 (0.336)	-0.00410 (0.338)	-0.00411 (0.336)
Auction	-0.00842 (0.570)	-0.00856 (0.563)	-0.00912 (0.533)	-0.00928 (0.525)	-0.00893 (0.547)	-0.00908 (0.539)	-0.00909 (0.541)	-0.00838 (0.566)
Hostile Attitude	-0.04551*** (0.000)	-0.04570*** (0.000)	-0.04371*** (0.000)	-0.04396*** (0.000)	-0.04569*** (0.000)	-0.04590*** (0.000)	-0.04645*** (0.000)	-0.04607*** (0.000)
Tender	-0.00143 (0.812)	-0.00148 (0.804)	-0.00141 (0.814)	-0.00147 (0.806)	-0.00147 (0.806)	-0.00152 (0.799)	-0.00126 (0.832)	-0.00141 (0.813)
Crossborder	0.00284* (0.052)	0.00280* (0.054)	0.00290** (0.050)	0.00286* (0.052)	0.00283* (0.054)	0.00279* (0.056)	0.00287** (0.045)	0.00281* (0.051)
Payment Cash	0.00032 (0.898)	0.00034 (0.892)	0.00030 (0.907)	0.00032 (0.901)	0.00028 (0.911)	0.00030 (0.905)	0.00036 (0.887)	0.00032 (0.898)
Constant	0.54834*** (0.000)	0.54777*** (0.000)	0.58055*** (0.000)	0.57936*** (0.000)	0.54494*** (0.000)	0.54431*** (0.000)	0.43991*** (0.000)	0.34289*** (0.000)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0943	0.0944	0.0937	0.0938	0.0944	0.0946	0.0962	0.0953
N	3638	3638	3638	3638	3638	3638	3638	3638

p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01

Table 13. Influence of Initial Industry Concentration on M&A Performance

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CDE	CDE + Firm	CEO	CEO + Firm	CDE + CEO	CDE + CEO + Firm	Include M&A Experience	Interact w/ M&A Experience
CDE's Initial Environment - Industry Concentration	-0.00200** (0.044)	-0.00252** (0.024)			-0.00199** (0.046)	-0.00253** (0.025)	-0.00258** (0.022)	-0.00261** (0.016)
CEO's Initial Environment - Industry Concentration			-0.00051 (0.651)	-0.00053 (0.643)	-0.00047 (0.686)	-0.00056 (0.619)	-0.00085 (0.481)	-0.00058 (0.594)
Current Environment - Industry Concentration		0.00276 (0.253)		0.00047 (0.829)		0.00286 (0.248)	0.00374 (0.160)	0.00289 (0.248)
CDE M&A Experience							0.00893* (0.064)	0.00300 (0.215)
CDE M&A Experience Squared							-0.00583* (0.073)	
CDE's Initial Environment x CDE M&A Experience								0.00556 (0.246)
Firm M&A Experience							-0.00539 (0.113)	
CEO M&A Experience							0.00827 (0.556)	
CDE Tenure in Current Job	0.00015 (0.654)	0.00015 (0.660)	0.00012 (0.747)	0.00012 (0.753)	0.00015 (0.655)	0.00015 (0.663)	0.00026 (0.442)	0.00010 (0.761)
CDE Tenure in Firm	-0.00004 (0.842)	-0.00003 (0.874)	0.00001 (0.965)	0.00001 (0.952)	-0.00004 (0.836)	-0.00004 (0.868)	-0.00006 (0.789)	0.00003 (0.917)
Firm Has New CEO	0.00195 (0.498)	0.00200 (0.489)	0.00178 (0.541)	0.00178 (0.541)	0.00203 (0.485)	0.00210 (0.471)	0.00214 (0.478)	0.00202 (0.497)
CEO Tenure	0.00018 (0.387)	0.00017 (0.407)	0.00019 (0.370)	0.00019 (0.372)	0.00020 (0.354)	0.00020 (0.356)	0.00024 (0.285)	0.00018 (0.423)
Acquiror Tobin's Q	-0.00059** (0.006)	-0.00061** (0.005)	-0.00060** (0.006)	-0.00060** (0.006)	-0.00060** (0.007)	-0.00062** (0.006)	-0.00065** (0.004)	-0.00061** (0.007)
Acquiror Size	-0.00817** (0.008)	-0.00812** (0.008)	-0.00778** (0.009)	-0.00776** (0.010)	-0.00816** (0.008)	-0.00811** (0.008)	-0.00729** (0.019)	-0.00816** (0.008)
Acquiror Prior Performance	0.00773 (0.381)	0.00793 (0.363)	0.00771 (0.390)	0.00775 (0.385)	0.00778 (0.377)	0.00799 (0.358)	0.00830 (0.334)	0.00796 (0.362)
Acquiror Current Ratio	-0.00042 (0.448)	-0.00038 (0.496)	-0.00048 (0.385)	-0.00047 (0.392)	-0.00043 (0.438)	-0.00039 (0.485)	-0.00061 (0.318)	-0.00047 (0.402)
Firm Age	-0.00480*** (0.000)	-0.00525*** (0.000)	-0.00531*** (0.000)	-0.00541*** (0.000)	-0.00478*** (0.000)	-0.00525*** (0.000)	-0.00432*** (0.000)	-0.00531*** (0.000)
Acquiror Business Segments	0.00025 (0.655)	0.00030 (0.595)	0.00023 (0.677)	0.00024 (0.671)	0.00024 (0.670)	0.00029 (0.609)	0.00022 (0.706)	0.00029 (0.608)
Deal Relatedness	-0.00041 (0.865)	-0.00039 (0.870)	-0.00034 (0.886)	-0.00033 (0.888)	-0.00040 (0.866)	-0.00038 (0.872)	-0.00048 (0.841)	-0.00035 (0.883)
Target Has Financial Advisor	0.00461** (0.007)	0.00458** (0.007)	0.00447** (0.008)	0.00446** (0.008)	0.00463** (0.006)	0.00461** (0.007)	0.00459** (0.007)	0.00463** (0.006)
Acquiror Has Financial Advisor	-0.00316 (0.343)	-0.00320 (0.338)	-0.00317 (0.338)	-0.00318 (0.337)	-0.00318 (0.340)	-0.00321 (0.335)	-0.00335 (0.314)	-0.00334 (0.317)
Post-Deal Has Majority Ownership	0.00687* (0.053)	0.00694* (0.050)	0.00692** (0.049)	0.00694** (0.049)	0.00683* (0.053)	0.00690* (0.050)	0.00701** (0.044)	0.00701** (0.049)
Deal \$1Bn+	-0.00548 (0.356)	-0.00544 (0.359)	-0.00570 (0.338)	-0.00570 (0.338)	-0.00550 (0.353)	-0.00547 (0.356)	-0.00585 (0.320)	-0.00553 (0.349)
Target Public	-0.00439 (0.304)	-0.00437 (0.306)	-0.00431 (0.314)	-0.00430 (0.315)	-0.00440 (0.304)	-0.00438 (0.306)	-0.00449 (0.292)	-0.00437 (0.306)
Auction	-0.00894 (0.542)	-0.00884 (0.546)	-0.00881 (0.552)	-0.00879 (0.553)	-0.00909 (0.540)	-0.00901 (0.542)	-0.00899 (0.549)	-0.00875 (0.554)
Hostile Attitude	-0.04355*** (0.000)	-0.04351*** (0.000)	-0.04354*** (0.000)	-0.04354*** (0.000)	-0.04352*** (0.000)	-0.04347*** (0.000)	-0.04395*** (0.000)	-0.04333*** (0.000)
Tender	-0.00157 (0.794)	-0.00154 (0.798)	-0.00136 (0.820)	-0.00135 (0.823)	-0.00156 (0.795)	-0.00152 (0.800)	-0.00116 (0.846)	-0.00148 (0.806)
Crossborder	0.00288* (0.052)	0.00292** (0.049)	0.00290** (0.049)	0.00290** (0.049)	0.00287* (0.053)	0.00290* (0.050)	0.00295** (0.041)	0.00298** (0.043)
Payment Cash	0.00036 (0.886)	0.00041 (0.872)	0.00036 (0.887)	0.00037 (0.885)	0.00039 (0.879)	0.00044 (0.863)	0.00054 (0.832)	0.00043 (0.866)
Constant	0.53465*** (0.000)	0.57647*** (0.000)	0.58169*** (0.000)	0.59096*** (0.000)	0.53381*** (0.000)	0.57708*** (0.000)	0.47930*** (0.000)	0.36328*** (0.000)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0943	0.0945	0.0936	0.0936	0.0943	0.0946	0.0963	0.0950
N	3638	3638	3638	3638	3638	3638	3638	3638

p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01

Table 14. Influence of Initial Geographic Concentration on M&A Performance

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	CDE	CDE + Firm	CEO	CEO + Firm	CDE + CEO	CDE + CEO + Firm	Include M&A Experience	Interact w/ M&A Experience
CDE's Initial Environment - Geographic Concentration	-0.00450** (0.006)	-0.00438** (0.008)			-0.00453** (0.006)	-0.00442** (0.007)	-0.00455** (0.005)	-0.00556*** (0.000)
CEO's Initial Environment - Geographic Concentration			0.00018 (0.893)	0.00037 (0.784)	0.00040 (0.772)	0.00054 (0.690)	0.00086 (0.498)	0.00060 (0.657)
Current Environment - Geographic Concentration		-0.00239 (0.335)		-0.00314 (0.177)		-0.00256 (0.298)	-0.00241 (0.367)	-0.00262 (0.325)
CDE M&A Experience							0.00938** (0.032)	0.00498** (0.035)
CDE M&A Experience Squared							-0.00445 (0.161)	
CDE's Initial Environment x CDE M&A Experience								0.00884** (0.004)
Firm M&A Experience							-0.00532 (0.113)	
CEO M&A Experience							0.00472 (0.683)	
CDE Tenure in Current Job	0.00021 (0.536)	0.00021 (0.546)	0.00012 (0.747)	0.00012 (0.753)	0.00021 (0.536)	0.00021 (0.547)	0.00036 (0.301)	0.00019 (0.580)
CDE Tenure in Firm	-0.00001 (0.961)	-0.00004 (0.851)	0.00001 (0.952)	-0.00003 (0.906)	-0.00001 (0.971)	-0.00004 (0.857)	-0.00009 (0.700)	-0.00001 (0.966)
Firm Has New CEO	0.00149 (0.599)	0.00160 (0.575)	0.00168 (0.561)	0.00180 (0.534)	0.00147 (0.606)	0.00158 (0.581)	0.00182 (0.539)	0.00210 (0.479)
CEO Tenure	0.00012 (0.531)	0.00013 (0.489)	0.00016 (0.414)	0.00017 (0.375)	0.00012 (0.538)	0.00013 (0.497)	0.00015 (0.453)	0.00014 (0.448)
Acquiror Tobin's Q	-0.00064** (0.004)	-0.00065** (0.004)	-0.00058** (0.005)	-0.00058** (0.005)	-0.00063** (0.006)	-0.00063** (0.006)	-0.00064** (0.005)	-0.00062** (0.007)
Acquiror Size	-0.00852** (0.005)	-0.00864** (0.004)	-0.00776** (0.010)	-0.00790** (0.008)	-0.00846** (0.006)	-0.00856** (0.005)	-0.00778** (0.015)	-0.00838** (0.006)
Acquiror Prior Performance	0.00801 (0.356)	0.00817 (0.345)	0.00760 (0.399)	0.00775 (0.387)	0.00788 (0.366)	0.00800 (0.357)	0.00828 (0.334)	0.00869 (0.306)
Acquiror Current Ratio	-0.00028 (0.630)	-0.00029 (0.614)	-0.00047 (0.396)	-0.00048 (0.386)	-0.00029 (0.631)	-0.00030 (0.614)	-0.00047 (0.454)	-0.00066 (0.255)
Firm Age	-0.00486*** (0.000)	-0.00464*** (0.000)	-0.00533*** (0.000)	-0.00502*** (0.000)	-0.00486*** (0.000)	-0.00462*** (0.000)	-0.00356*** (0.000)	-0.00442*** (0.000)
Acquiror Business Segments	0.00018 (0.737)	0.00016 (0.771)	0.00025 (0.656)	0.00021 (0.697)	0.00019 (0.730)	0.00016 (0.763)	0.00006 (0.907)	0.00014 (0.791)
Deal Relatedness	-0.00031 (0.895)	-0.00032 (0.893)	-0.00035 (0.884)	-0.00035 (0.883)	-0.00031 (0.895)	-0.00032 (0.893)	-0.00043 (0.855)	-0.00050 (0.834)
Target Has Financial Advisor	0.00446** (0.007)	0.00452** (0.006)	0.00444** (0.008)	0.00451** (0.007)	0.00445** (0.007)	0.00451** (0.006)	0.00452** (0.007)	0.00458** (0.006)
Acquiror Has Financial Advisor	-0.00318 (0.340)	-0.00319 (0.337)	-0.00314 (0.343)	-0.00314 (0.343)	-0.00315 (0.345)	-0.00315 (0.344)	-0.00332 (0.317)	-0.00341 (0.307)
Post-Deal Has Majority Ownership	0.00699** (0.049)	0.00703** (0.048)	0.00695** (0.048)	0.00699** (0.048)	0.00698** (0.049)	0.00701** (0.048)	0.00708** (0.044)	0.00673* (0.059)
Deal \$1Bn+	-0.00564 (0.340)	-0.00565 (0.339)	-0.00568 (0.342)	-0.00570 (0.339)	-0.00566 (0.340)	-0.00568 (0.338)	-0.00603 (0.306)	-0.00581 (0.325)
Target Public	-0.00416 (0.331)	-0.00421 (0.326)	-0.00430 (0.315)	-0.00436 (0.309)	-0.00416 (0.331)	-0.00421 (0.326)	-0.00420 (0.324)	-0.00405 (0.340)
Auction	-0.01040 (0.478)	-0.01046 (0.474)	-0.00861 (0.557)	-0.00871 (0.552)	-0.01033 (0.483)	-0.01036 (0.481)	-0.01019 (0.494)	-0.00978 (0.498)
Hostile Attitude	-0.04484*** (0.000)	-0.04507*** (0.000)	-0.04345*** (0.000)	-0.04367*** (0.000)	-0.04457*** (0.000)	-0.04472*** (0.000)	-0.04525*** (0.000)	-0.04490*** (0.000)
Tender	-0.00152 (0.801)	-0.00151 (0.802)	-0.00140 (0.815)	-0.00142 (0.813)	-0.00159 (0.792)	-0.00160 (0.790)	-0.00140 (0.814)	-0.00181 (0.763)
Crossborder	0.00286* (0.054)	0.00285* (0.055)	0.00292** (0.048)	0.00290** (0.049)	0.00287* (0.053)	0.00286* (0.054)	0.00294** (0.043)	0.00280* (0.059)
Payment Cash	0.00040 (0.873)	0.00042 (0.868)	0.00033 (0.896)	0.00035 (0.891)	0.00040 (0.874)	0.00041 (0.871)	0.00048 (0.849)	0.00062 (0.804)
Constant	0.56501*** (0.000)	0.55146*** (0.000)	0.58222*** (0.000)	0.56312*** (0.000)	0.56336*** (0.000)	0.54826*** (0.000)	0.43805*** (0.000)	0.32277*** (0.000)
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0958	0.0960	0.0935	0.0939	0.0958	0.0961	0.0978	0.0979
N	3638	3638	3638	3638	3638	3638	3638	3638

p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01

Table 15. Influence of Initial Learning Environment on M&A Performance – All

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Industry Dynamism + Industry Concentration						Industry Dynamism + Geographic Concentration					
	CDE	CDE + Firm	CEO	CEO + Firm	All	with CDE M&A Experience	CDE	CDE + Firm	CEO	CEO + Firm	All	with CDE M&A Experience
CDE's Initial Environment - Industry Dynamism	-0.00165 (0.115)	-0.00160 (0.128)			-0.00157 (0.124)	-0.00252** (0.036)	-0.00194* (0.057)	-0.00197* (0.057)			-0.00199* (0.057)	-0.00269** (0.023)
CEO's Initial Environment - Industry Dynamism			0.00106 (0.430)	0.00112 (0.403)	0.00119 (0.367)	0.00121 (0.361)			0.00084 (0.521)	0.00079 (0.555)	0.00079 (0.550)	0.00085 (0.499)
Current Environment - Industry Dynamism		-0.00087 (0.550)		-0.00104 (0.474)	-0.00092 (0.527)	-0.00078 (0.592)		-0.00046 (0.753)		-0.00083 (0.576)	-0.00046 (0.756)	-0.00043 (0.770)
CDE's Initial Environment - Industry Concentration	-0.00179* (0.077)	-0.00227** (0.048)			-0.00231** (0.042)	-0.00294** (0.006)						
CEO's Initial Environment - Industry Concentration			-0.00082 (0.459)	-0.00088 (0.430)	-0.00071 (0.506)	-0.00067 (0.511)						
Current Environment - Industry Concentration		0.00283 (0.248)		0.00097 (0.645)	0.00321 (0.177)	0.00334 (0.150)						
CDE's Initial Environment - Geographic Concentration							-0.00457** (0.006)	-0.00439** (0.009)			-0.00439** (0.009)	-0.00577*** (0.000)
CEO's Initial Environment - Geographic Concentration									0.00009 (0.949)	0.00023 (0.868)	0.00032 (0.817)	0.00031 (0.821)
Current Environment - Geographic Concentration								-0.00250 (0.323)		-0.00283 (0.236)	-0.00253 (0.314)	-0.00260 (0.318)
CDE's Initial Industry Dynm x CDE M&A Experience						0.01040** (0.013)						0.00837** (0.045)
CDE's Initial Industry Contr x CDE M&A Experience						0.00794 (0.116)						
CDE's Initial Geog Contr x CDE M&A Experience												0.00881** (0.002)
CDE M&A Experience						0.01089** (0.015)						0.01072** (0.006)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0949	0.0952	0.0938	0.0940	0.0956	0.0969	0.0966	0.0969	0.0937	0.0941	0.0971	0.1005
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$*

Table 16. Testing Alternative Explanation - Other Time Periods

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Baseline (Initial Environment)	Alternative Measures of Dynamism			Baseline (Initial Environment)	Alternative Measures of Industry Concentration			Baseline (Initial Environment)	Alternative Measures of Geographic Concentration		
		Most Recent	Avg	Depreciated Avg		Most Recent	Avg	Depreciated Avg		Most Recent	Avg	Depreciated Avg
CDE's Learning Environment - Industry Dynamism	-0.00187* (0.074)	0.00021 (0.853)	-0.00125 (0.282)	-0.00099 (0.369)								
CEO's Learning Environment - Industry Dynamism	0.00095 (0.456)	0.00175 (0.204)	0.00171 (0.286)	0.00087 (0.530)								
Current Environment - Industry Dynamism	-0.00091 (0.525)	-0.00098 (0.506)	-0.00111 (0.450)	-0.00106 (0.473)								
CDE's Learning Environment - Industry Concentration					-0.00253** (0.025)	-0.00182 (0.107)	-0.00097 (0.413)	-0.00108 (0.399)				
CEO's Learning Environment - Industry Concentration					-0.00056 (0.619)	0.00241* (0.090)	0.00069 (0.580)	0.00106 (0.365)				
Current Environment - Industry Concentration					0.00286 (0.248)	0.00077 (0.726)	0.00025 (0.909)	0.00026 (0.906)				
CDE's Learning Environment - Geographic Concentration									-0.00442** (0.007)	-0.00041 (0.749)	-0.00055 (0.669)	-0.00045 (0.707)
CEO's Learning Environment - Geographic Concentration									0.00054 (0.690)	0.00243 (0.101)	0.00147 (0.355)	0.00093 (0.571)
Current Environment - Geographic Concentration									-0.00256 (0.298)	-0.00310 (0.200)	-0.00327 (0.182)	-0.00309 (0.200)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0946	0.0943	0.0946	0.0941	0.0946	0.0954	0.0938	0.0940	0.0961	0.0950	0.0943	0.0941
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

Table 17. Testing Alternative Explanation - Context Similarity / Differences Over Time (Based on Squared Distance between Current and Prior Years)

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Industry Dynamism					Industry Concentration					Geographic Concentration				
	Similarity btw Current Year vs. Prior:					Similarity btw Current Year vs. Prior:					Similarity btw Current Year vs. Prior:				
	Initial	Most Recent	Initial + Most Recent	Avg	Deprec. Avg	Initial	Most Recent	Initial + Most Recent	Avg	Deprec. Avg	Initial	Most Recent	Initial + Most Recent	Avg	Deprec. Avg
Difference btw Current and Initial Learning Environment	0.00004 (0.966)		0.00014 (0.872)			0.00160 (0.294)		0.00161 (0.253)			0.00186** (0.001)		-0.00100 (0.158)		
Difference btw Current and Most Recent Learning Environment		-0.00109 (0.538)	-0.00111 (0.530)				-0.00106 (0.170)	-0.00107 (0.181)				0.00269** (0.001)	-0.00206** (0.044)		
Difference btw Current and Prior Avg Learning Environment				-0.00263* (0.073)					-0.00133 (0.204)					-0.00325** (0.002)	
Difference btw Current and Prior Depreciated Avg Learning Environment					-0.00246* (0.084)					-0.00138 (0.187)					-0.00106 (0.234)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0935	0.0938	0.0938	0.0951	0.0949	0.0939	0.0937	0.0941	0.0940	0.0940	0.0945	0.0949	0.0951	0.0955	0.0938
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$*

Table 18. Testing Alternative Explanation - Context Similarity / Differences Over Time (Account for Differences Directly)

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
CDE's Initial Environment - Industry Dynamism	-0.00221* (0.056)	-0.00264** (0.039)					-0.00212* (0.070)	-0.00296** (0.026)	-0.00226** (0.049)	-0.00304** (0.016)
Difference between Current and Initial Environment - Industry Dynamism	0.00074 (0.461)	0.00061 (0.538)					0.00071 (0.476)	0.00063 (0.515)	0.00086 (0.385)	0.00083 (0.395)
CDE's Initial Environment - Industry Concentration			-0.00199** (0.049)	-0.00209** (0.048)			-0.00174* (0.081)	-0.00239** (0.034)		
Difference between Current and Initial Environment - Industry Concentration			0.00159 (0.156)	0.00129 (0.293)			0.00178 (0.101)	0.00126 (0.305)		
CDE's Initial Environment - Geographic Concentration					-0.00394** (0.037)	-0.00546** (0.002)			-0.00426** (0.029)	-0.00600*** (0.001)
Difference between Current and Initial Environment - Geographic Concentration					-0.00086 (0.194)	-0.00026 (0.709)			-0.00056 (0.408)	-0.00006 (0.936)
CDE's Initial Industry Dynamism x CDE M&A Experience		0.00682* (0.071)						0.00976** (0.016)		0.00818** (0.034)
CDE's Initial Industry Concentration x CDE M&A Experience				0.00465 (0.327)				0.00715 (0.147)		
CDE's Initial Geographic Concentration x CDE M&A Experience						0.00886** (0.005)				0.00914** (0.002)
CDE M&A Experience		0.00731** (0.048)		0.00219 (0.370)		0.00449* (0.062)		0.00911** (0.049)		0.00984** (0.005)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0944	0.0950	0.0947	0.0950	0.0960	0.0976	0.0955	0.0966	0.0969	0.0993
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

APPENDIX A. Coding Procedures Used to Identify CDEs

First, I created a pool of potential candidates for Corporate Development Executives (CDEs) based on publicly available LinkedIn profiles, with the help of research assistants (RAs) who conducted independent Boolean title searches on LinkedIn, using keywords “M&A,” “acquisition,” “integration,” “merger,” “divestiture,” “strategy,” “corporate development,” “business development,” “transaction,” “transformation,” “head,” “Vice President,” “Senior Vice President,” “Executive Vice President,” and short forms of each of these terms. LinkedIn has become the standard networking tool used by business professionals, and CDEs often utilize LinkedIn to source deals as well as interact with outside advisors. As such, they have incentives to keep their information as accurate and up to date as possible, including their current title and detailed descriptions of their roles and responsibilities. This initial identification process by RAs resulted in 2,906 potential candidates. Note that LinkedIn searches can only be performed on titles held by current employees of a company, not their historical titles.

Next, I create additional pools of potential CDE candidates from existing executive information provided by Amadeus, BoardEx, and DCA. Observations are added to this pool if their titles contain any of the following: M&A, merger, acquisition, corp dev, dev, corp strat, strategy, integration, divestiture, spin-off, acq, strat. This text filtering process resulted in a total of 21,090 records from Amadeus, 24,382 records from BoardEx, and 333,803 records from DCA.

After the different pools of potential candidates are built, I conduct a thorough manual Google search of each individual from the different pools, as well as a general search

on Google for a company's current and past CDE (using a combination of the aforementioned keyword searches). A person is identified as the "Corporate Development Executive" for a particular firm if the following criteria are met (in order of importance).

- (1) There are company press releases or news articles which clearly refer to them as the person in charge of corporate development or M&A or inorganic activities of the firm.
- (2) They are reported as the most senior person (typically Vice President or Senior Vice President) for corporate development, corporate business development, or M&A on company websites, annual reports, or transaction prospectuses.
- (3) Their titles and descriptions on LinkedIn clearly identify them as the person responsible for company-wide corporate development activities.
- (4) Their titles and descriptions on Amadeus/BoardEx/DCA clearly identify them as the person responsible for company-wide corporate development activities, and there are other web results indicative of their seniority/responsibilities in firm.

For each identified CDE, I collect his or her prior education and employment history based on the relevant LinkedIn profiles (where 80% of identified CDEs have public LinkedIn profiles with detailed prior experience history), Bloomberg, company websites, and press releases. For the missing items (education degrees, graduation years, missing gaps in career history, demographics characteristics), I manually triangulate the data based on Pitchbook, Crunchbase, high school/college yearbooks and reunion pages, social media postings, disclosed biographies on various websites, and any available information resulting from extensive web searches.

APPENDIX B. Summary of Backgrounds of CDEs in S&P 500 IT (1995-2015)

	%
Female	8%
Born in 1940s (current age: 69-78)	5%
Born in 1950s (current age: 59-68)	21%
Born in 1960s (current age: 49-58)	50%
Born in 1970s (current age: 39-48)	22%
From Abroad	16%
Has Education in Foreign Country	18%
Has Natural Science Education	27%
Has Social Science Education	48%
Has Humanities Education	17%
Has MBA	56%
Has JD	12%
Has Masters	71%
Has PhD	8%
Had Corp Dev Jobs Before CDE	45%
Had IBD Jobs Before CDE	21%
Had Legal Jobs Before CDE	9%
Had Consulting Jobs Before CDE	25%
Had PE/Investing Jobs Before CDE	16%
Had Engineer Jobs Before CDE	17%
Had Management/Operations Jobs Before CDE	40%
Had Marketing Jobs Before CDE	38%
Had Corporate Finance Jobs Before CDE	26%
Had Entrep. Jobs Before CDE	11%
Had IR Jobs Before CDE	1%
Had HR Jobs Before CDE	1%
Had Government Jobs Before CDE	5%

APPENDIX C. Supplementary Analyses on Alternative Explanations

1. Impression Management

If impression management is indeed the mechanism CDEs use to affect M&A performance through prior experience, then we would expect to see differences between the language used in press releases by firms with highly experienced CDEs vs. those with CDEs who have limited prior M&A experience. To test this, I first collect all press releases and relevant news articles for all deals in my sample, which resulted in a corpus of 11,004 documents. Next, I apply the Linguistic Inquiry and Word Count (LIWC) lexicon (Pennebaker *et al.*, 2015) and compare textual differences between high- vs. low-experienced CDEs (I use 90 deals as the cutoff since it is the estimated turning point of the inverted U). Table 1 shows the regression results of CDE experience against various textual outcomes, including degree of positive and negative affect language (Piezunka and Dahlander, 2019), analytical thinking (Pennebaker *et al.*, 2014), authority (Kacewicz *et al.*, 2014), negation, and language complexity (Piezunka and Dahlander, 2019; Tausczik and Pennebaker, 2010). After controlling for deal-specific and firm-specific characteristics, I don't find any systematic differences between highly experienced vs. inexperienced CDEs.

Table 1. Testing Alternative Explanation: Impression Management (LIWC Analyses)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
DV:	Positive Affect Language		Negative Affect Language		Analytical Thinking		Authority		Negation		Language Complexity (# of Words > 6 Letters)	
High CDE M&A Experience: (=1 if CDE M&A Experience > 90 Deals)	0.16645 (0.315)		-0.02836 (0.582)		0.26974 (0.324)		-0.17162 (0.709)		-0.03010 (0.350)		-0.24020 (0.796)	
CDE M&A Experience		0.14069 (0.373)		-0.01597 (0.669)		-0.02865 (0.903)		0.46215 (0.297)		-0.01575 (0.569)		-0.23691 (0.671)
Deal Relatedness	-0.00812 (0.921)	-0.00874 (0.915)	0.04088 (0.119)	0.04086 (0.119)	-0.10524 (0.509)	-0.10202 (0.521)	-0.00334 (0.995)	-0.01272 (0.980)	-0.01541 (0.448)	-0.01546 (0.447)	-0.66909** (0.013)	-0.66763** (0.013)
Target Has Financial Advisor	0.04634 (0.473)	0.04812 (0.453)	0.00835 (0.742)	0.00824 (0.746)	0.24946* (0.078)	0.24615* (0.081)	-0.17456 (0.600)	-0.16174 (0.625)	-0.04428** (0.009)	-0.04437** (0.009)	0.30723 (0.254)	0.30385 (0.257)
Acquiror Has Financial Advisor	0.02184 (0.813)	0.01989 (0.828)	0.00641 (0.850)	0.00654 (0.847)	0.45404** (0.002)	0.45718** (0.001)	-0.14688 (0.762)	-0.15979 (0.742)	-0.06247** (0.002)	-0.06236** (0.002)	-0.69941** (0.012)	-0.69576** (0.013)
Post-Deal Has Majority Ownership	-0.08671 (0.529)	-0.08673 (0.531)	-0.01077 (0.826)	-0.01098 (0.823)	-1.09245*** (0.000)	-1.08566*** (0.000)	-0.79012 (0.384)	-0.80625 (0.373)	0.00878 (0.843)	0.00853 (0.846)	1.17701** (0.022)	1.17795** (0.022)
Deal \$1Bn+	0.00737 (0.956)	0.00884 (0.947)	0.07994** (0.049)	0.07962* (0.050)	0.60378** (0.036)	0.60866** (0.036)	-1.18546** (0.048)	-1.19291** (0.048)	0.00216 (0.934)	0.00180 (0.946)	-0.68352 (0.185)	-0.68530 (0.187)
Target Public	0.95837*** (0.000)	0.95669*** (0.000)	-0.07255** (0.017)	-0.07203** (0.017)	0.62178*** (0.000)	0.61149*** (0.000)	1.34653** (0.008)	1.36616** (0.007)	-0.10067*** (0.000)	-0.10008*** (0.000)	-2.67251*** (0.000)	-2.67107*** (0.000)
Auction	-0.38837 (0.401)	-0.37705 (0.413)	-0.02646 (0.837)	-0.02759 (0.831)	0.38727 (0.430)	0.37998 (0.441)	-0.99936 (0.548)	-0.95038 (0.565)	0.00396 (0.950)	0.00288 (0.963)	0.17735 (0.925)	0.15763 (0.933)
Hostile Attitude	-0.98301** (0.002)	-0.97836** (0.002)	1.03315*** (0.000)	1.03213*** (0.000)	-2.21605*** (0.000)	-2.20098*** (0.000)	12.06186*** (0.000)	12.03926*** (0.000)	0.72145*** (0.000)	0.72033*** (0.000)	-8.13959*** (0.000)	-8.14532*** (0.000)
Tender	0.34416 (0.140)	0.34607 (0.138)	-0.05311 (0.206)	-0.05363 (0.201)	0.31675 (0.228)	0.32588 (0.216)	2.55962** (0.010)	2.54338** (0.011)	0.02145 (0.530)	0.02087 (0.540)	-0.35532 (0.673)	-0.35728 (0.672)
Crossborder	-0.21340** (0.008)	-0.21172** (0.008)	-0.04542** (0.029)	-0.04553** (0.029)	0.39505** (0.014)	0.39236** (0.014)	0.35994 (0.415)	0.37102 (0.397)	-0.03552* (0.066)	-0.03562* (0.065)	-0.63546** (0.023)	-0.63860** (0.022)
Firm Age	-0.12215*** (0.000)	-0.12267*** (0.000)	0.01525*** (0.000)	0.01526*** (0.000)	0.03882 (0.105)	0.04047* (0.094)	-0.44609*** (0.000)	-0.45148*** (0.000)	0.00411* (0.054)	0.00411* (0.058)	-0.17695*** (0.000)	-0.17587*** (0.000)
Year, Industry (SIC2), Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acqui	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.1819	0.1820	0.1131	0.1130	0.2936	0.2934	0.1780	0.1781	0.1287	0.1286	0.4298	0.4299
N	3398	3398	3398	3398	3398	3398	3398	3398	3398	3398	3398	3398

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

In addition, I conduct analyses using M&A outcomes that are not driven by stock market reactions or the influences of analysts. I find that CDEs' prior M&A experience is negatively associated with days to deal completion and acquisition impairment likelihood and positively associated with the likelihood of deal completion and ROA two years after the deal. While helpful as suggestive evidence, these alternative measures are problematic in many ways: (i) in my sample, almost all deals are completed after announcement, limiting the power of completion likelihood as a potential DV; (ii) days to completion is usually more process-orientated, so the scope for misapplications is limited; (iii) the likelihood of impairment is helpful, but more as an indicator of extremely poor performance (Rabier, 2017), and is subject to internal reclassifications; (iv) accounting-based ROA is useful as an overall indicator of M&A investment returns, but it cannot be attributed to a specific deal,

which is problematic given that the average firm in this sector does three to four deals each year. For these reasons, I do not rely on these alternative outcomes in my analyses.

2. Reputation Spillovers

Some recent research has found that firm reputation and firm celebrity status impact stock market reactions when releasing unexpected announcements (Haleblian *et al.*, 2017; Pfarrer *et al.*, 2010). To test this mechanism, I account for firms' reputation per Haleblian *et al.* (2017) and firm fixed effects, and I find that the inverted U relationship still holds.

Table 2. Testing Alternative Explanation: Reputation Spillovers

DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Firm	CEO	Firm + CEO	CDE	Firm + CEO + CDE	Firm + CEO + CDE + Firm FEs	High Reputation Interactions
CDE M&A Experience				0.00935** (0.025)	0.01084** (0.010)	0.01057* (0.057)	0.00948* (0.070)
CDE M&A Experience Squared				-0.00531** (0.048)	-0.00610** (0.026)	-0.00570* (0.097)	-0.00482* (0.072)
Firm M&A Experience	-0.00107 (0.278)		-0.00107 (0.277)		-0.00127 (0.213)	-0.00505 (0.127)	-0.00128 (0.210)
CEO M&A Experience		0.00568 (0.407)	0.00571 (0.404)		0.00493 (0.489)	0.00374 (0.762)	0.00484 (0.492)
High Reputation Firm	0.00175 (0.543)	0.00187 (0.527)	0.00214 (0.476)	0.00158 (0.595)	0.00211 (0.502)	0.00082 (0.851)	0.00173 (0.632)
High Reputation * CDE M&A Experience ⁽¹⁾							0.00971 (0.441)
High Reputation * CDE M&A Experience Squared ⁽¹⁾							-0.00876 (0.357)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effects	No	No	No	No	No	Yes	No
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0281	0.0279	0.0282	0.0290	0.0296	0.0952	0.0298
N	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

⁽¹⁾ High Reputation is calculated as a binary indicator rather than depreciated per Haleblian *et al.* (2017)

3. Survivorship Bias

Existing works on individual job performance have also documented an inverted-U relationship between length in a job and job performance, where survivorship bias has been argued to be an alternative explanation for this empirical observation (Quinones *et al.*, 1995; Sturman, 2003). Specifically, individuals that are very good at their jobs would be promoted, while the bottom performers would be fired, so those left in sample may have a high amount of experience only because they have been around the longest. To rule out this alternative explanation of survivorship bias, in addition to accounting for tenure in the job and in firm (included in all my analyses), I also test for CDEs' tenure in the corporate development function, replicating all models of Table 3. The estimates on 'CDE Tenure in Corporate Development Function' are negative and statistically significant, suggesting that survivorship bias is indeed a plausible concern. After accounting for this, the hypothesized inverted-U relationship between CDEs' M&A experience and performance actually becomes more statistically significant and larger, indicating that CDEs are in fact gaining M&A-specific knowledge with each additional deal, not just from time spent in the function.

Table 3. Testing Alternative Explanation: Survivorship Bias
DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
	Panel F				Panel G				Panel H				Panel I				Panel J			
	Firm = Log(All Prior Deals)				Firm = All Prior Deals				Firm Experience = Last 5 Years				Firm Experience = Last 4 Years				Firm Experience = Last 3 Years			
CDE M&A Experience	0.01632*** (0.001)	0.01676*** (0.001)	0.01665*** (0.001)	0.01669*** (0.002)	0.01480** (0.001)	0.01615** (0.002)	0.01527** (0.002)	0.01619** (0.004)	0.01400** (0.002)	0.01436** (0.003)	0.01424** (0.002)	0.01424** (0.002)	0.01430** (0.002)	0.01472** (0.002)	0.01387** (0.002)	0.01399** (0.003)	0.01419** (0.002)	0.01455** (0.003)	0.01410** (0.002)	0.01422** (0.003)
CDE M&A Experience Squared	-0.00795** (0.004)	-0.00819** (0.003)	-0.00835** (0.004)	-0.00836** (0.004)	-0.00714** (0.008)	-0.00792** (0.009)	-0.00753** (0.008)	-0.00805** (0.011)	-0.00682** (0.012)	-0.00715** (0.013)	-0.00708** (0.009)	-0.00708** (0.009)	-0.00697** (0.009)	-0.00736** (0.009)	-0.00676** (0.010)	-0.00696** (0.011)	-0.00692** (0.011)	-0.00726** (0.011)	-0.00687** (0.009)	-0.00707** (0.009)
CDE Tenure in Current Job	-0.00020 (0.343)	-0.00021 (0.320)	-0.00019 (0.386)	-0.00019 (0.383)	-0.00025 (0.248)	-0.00023 (0.294)	-0.00024 (0.273)	-0.00021 (0.332)	-0.00026 (0.242)	-0.00025 (0.254)	-0.00025 (0.250)	-0.00025 (0.250)	-0.00025 (0.244)	-0.00024 (0.260)	-0.00026 (0.231)	-0.00026 (0.236)	-0.00025 (0.241)	-0.00024 (0.255)	-0.00025 (0.248)	-0.00025 (0.254)
CDE Tenure in Firm	0.00005 (0.706)	0.00004 (0.746)	0.00003 (0.829)	0.00003 (0.838)	0.00006 (0.689)	0.00004 (0.798)	0.00004 (0.753)	0.00003 (0.844)	0.00004 (0.759)	0.00003 (0.834)	0.00003 (0.836)	0.00003 (0.836)	0.00004 (0.749)	0.00003 (0.835)	0.00005 (0.720)	0.00003 (0.802)	0.00004 (0.752)	0.00003 (0.834)	0.00004 (0.754)	0.00003 (0.837)
CDE Tenure in Corporate Development Function	-0.00037* (0.059)	-0.00038* (0.056)	-0.00036* (0.073)	-0.00036* (0.073)	-0.00035* (0.083)	-0.00036* (0.085)	-0.00035* (0.087)	-0.00035* (0.097)	-0.00033 (0.101)	-0.00033 (0.106)	-0.00032 (0.101)	-0.00032 (0.101)	-0.00033* (0.091)	-0.00033* (0.098)	-0.00033* (0.085)	-0.00033* (0.098)	-0.00033* (0.091)	-0.00033* (0.099)	-0.00033* (0.088)	-0.00032 (0.101)
Firm M&A Experience (Log of Total # Deals)	-0.00144 (0.158)	-0.00140 (0.169)	-0.00153 (0.144)	-0.00152 (0.154)																
Firm M&A Experience (Total # Deals / 1000)					-0.00682 (0.724)	-0.02557 (0.555)	-0.00972 (0.629)	-0.02739 (0.549)												
Firm M&A Experience Squared						0.07074 (0.553)		0.06675 (0.607)												
Firm M&A Experience (# Deals in Last n Years / 100)									0.00024 (0.960)	-0.00043 (0.935)			-0.00071 (0.904)	-0.00165 (0.792)			-0.00051 (0.944)	-0.00153 (0.840)		
Firm M&A Experience (= 1 if Has M&A in Last n Years)										-0.00082 (0.861)	-0.00090 (0.848)			0.00454 (0.417)	0.00450 (0.422)			-0.00018 (0.972)	-0.00023 (0.964)	
CEO M&A Experience (# Deals Before Firm / 100)	0.00363 (0.603)	-0.00697 (0.586)			0.00334 (0.632)	-0.00716 (0.580)			0.00336 (0.632)		0.00332 (0.636)		0.00332 (0.634)		0.00346 (0.622)		0.00333 (0.634)		0.00334 (0.633)	
CEO M&A Experience (# Deals Before Firm / 100) Squared		0.01953 (0.400)				0.02010 (0.385)														
CEO M&A Experience (# Deals Before Job / 100)			0.00277 (0.487)	0.00238 (0.822)			0.00226 (0.571)	0.00120 (0.914)		0.00169 (0.678)		0.00156 (0.686)		0.00199 (0.626)		0.00151 (0.696)		0.00185 (0.648)		0.00155 (0.687)
CEO M&A Experience (# Deals Before Job / 100) Squared				0.00053 (0.967)				0.00140 (0.920)												
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0303	0.0305	0.0303	0.0303	0.0297	0.0301	0.0297	0.0298	0.0297	0.0297	0.0297	0.0297	0.0297	0.0297	0.0300	0.0300	0.0297	0.0297	0.0297	0.0297
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

4. Selection of CDEs Based on Firms' Prior M&A Activity

Another plausible explanation for why certain firms choose certain CDEs is that firms want to change their M&A strategy, either as a result of recent operations, to follow the initiatives of new CEOs, to change their M&A processes due to bad performance outcomes in prior deals, or to set up a dedicated M&A function (if they didn't have one previously). I test for all of these alternative potential CDE-firm selection explanations in Table 4 below. The predicted inverted U-shaped relationship holds in all models.

Table 4. Testing Prior Firm M&A Activity as Potential Selection Mechanisms
DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Firms' Prior M&A Experience (before current CDE, before current year)						Firm Had M&A Impairment		Change in Corp Dev Func		
CDE M&A Experience	0.00925** (0.027)	0.01045** (0.012)	0.00894** (0.031)	0.00901** (0.030)	0.00914** (0.027)	0.00888** (0.034)	0.01081** (0.010)	0.01096** (0.009)	0.01077** (0.012)	0.01268** (0.004)	0.01064** (0.012)
CDE M&A Experience Squared	-0.00534* (0.053)	-0.00584** (0.036)	-0.00496* (0.067)	-0.00505* (0.064)	-0.00507* (0.061)	-0.00490* (0.074)	-0.00604** (0.028)	-0.00622** (0.024)	-0.00596** (0.031)	-0.00692** (0.011)	-0.00592** (0.033)
Firm M&A Experience: # of Neg. CARs Year Before CDE Joined	-0.00025 (0.227)										
Firm M&A Experience: # of Neg. CARs 2Yr Before CDE Joined		-0.00026 (0.106)									
Firm M&A Experience: Avg CAR Before Deal (Last 10 Deals)			0.07122 (0.268)								
Firm M&A Experience: Avg CAR Before Deal (Last 50 Deals)				0.06866 (0.640)							
Firm M&A Experience: Avg Recent Performance (Last 3 Year)					0.04375 (0.476)						
Firm M&A Experience: Avg Recent Performance (Last 5 Year)						0.04961 (0.470)					
Firm Has Prior M&A Impairment (Last 1 Year)							-0.00155 (0.653)				
Firm Has Prior M&A Impairment (Year before CDE Joined)								-0.00329 (0.239)			
Number of CDEs the Firm Had Before Current CDE									0.00033 (0.664)		
Current CDE is First CDE of the Firm										-0.00374 (0.194)	
First Year Corp Dev Function was Founded											0.00001 (0.947)
Firm M&A Experience							-0.00111 (0.291)	-0.00105 (0.312)	-0.00136 (0.181)	-0.00172* (0.097)	-0.00119 (0.222)
CEO M&A Experience	0.00335 (0.647)	0.00344 (0.638)	0.00365 (0.616)	0.00360 (0.621)	0.00385 (0.599)	0.00392 (0.595)	0.00408 (0.574)	0.00395 (0.579)	0.00362 (0.626)	0.00435 (0.542)	0.00386 (0.594)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0292	0.0295	0.0295	0.0290	0.0293	0.0293	0.0295	0.0297	0.0295	0.0302	0.0294
N	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

5. Results Driven by Outliers

Another potential concern is that the results are driven by extremely acquisitive companies or transactions occurring during turbulent macro-economic changes. To test for this empirical concern, I exclude the most frequent and largest acquirers one by one in the sample (Apple, Cisco, Google, IBM, Intel, Microsoft), as well as all deals that occurred during the dot-com bubble (pre-2001).

Table 5. Testing for Potential Bias with Subsample Analyses
DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)		
	Sub-Sample Analyses: Exclude Deals from ...						
	Apple	Cisco	Google	IBM	Intel	Microsoft	Dot-Com Bubble (1995-2000)
CDE M&A Experience	0.01072** (0.011)	0.01085** (0.012)	0.01338** (0.004)	0.00973** (0.043)	0.01051** (0.014)	0.01150** (0.006)	0.01073** (0.020)
CDE M&A Experience Squared	-0.00601** (0.030)	-0.00567** (0.033)	-0.00700** (0.019)	-0.00533* (0.080)	-0.00584** (0.036)	-0.00723** (0.003)	-0.00541** (0.035)
Firm M&A Experience	-0.00120 (0.253)	-0.00176 (0.119)	-0.00123 (0.239)	-0.00123 (0.236)	-0.00112 (0.275)	-0.00132 (0.195)	-0.00064 (0.520)
CEO M&A Experience	0.00382 (0.598)	0.00465 (0.509)	0.00290 (0.684)	0.00538 (0.464)	0.00269 (0.705)	0.00539 (0.455)	0.00686 (0.314)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0296	0.0312	0.0304	0.0299	0.0315	0.0306	0.0268
N	3605	3437	3443	3433	3487	3458	2906

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

6. Other Omitted Variable Concerns

Another potential concern is that the results are driven by certain omitted variables arising from target-related factors, including the availability of targets (which may bid up the price paid for a given transaction, influence new inorganic growth strategies, etc.), prior interactions between targets and acquirers (alliances, non-equity partnerships), and prior experience of the financial advisors with the target industry (acquirer's advisor may be driving the deal execution process instead of the CDE, or target's advisor may know about the target selection criteria of the CDE, etc.).

Table 6. Testing for Omitted Variables Bias Arising from Target-Related Factors
DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Target Industry M&A Activity Last Year				Acq. Fin. Advisors' Experience in Target Sector		Target Fin. Advisors' Experience in Target Sector		Prior Alliance btw Target and Acquirer
	SIC 4	SIC 4	SIC 3	SIC 3	SIC 4	SIC 3	SIC 4	SIC 3	
CDE M&A Experience	0.01069** (0.012)	0.01065** (0.011)	0.01038** (0.013)	0.01034** (0.012)	0.01058** (0.012)	0.00953** (0.024)	0.01066** (0.011)	0.01005** (0.015)	0.01041** (0.013)
CDE M&A Experience Squared	-0.00591** (0.034)	-0.00592** (0.033)	-0.00568** (0.035)	-0.00572** (0.034)	-0.00583** (0.035)	-0.00489* (0.077)	-0.00595** (0.032)	-0.00561** (0.037)	-0.00577** (0.038)
Firm M&A Experience	-0.00111 (0.277)	-0.00115 (0.260)	-0.00100 (0.320)	-0.00105 (0.294)	-0.00120 (0.242)	-0.00102 (0.317)	-0.00120 (0.238)	-0.00102 (0.301)	-0.00121 (0.233)
CEO M&A Experience	0.00361 (0.620)	0.00380 (0.598)	0.00349 (0.626)	0.00358 (0.616)	0.00399 (0.581)	0.00428 (0.548)	0.00385 (0.594)	0.00371 (0.600)	0.00384 (0.589)
Target Sector (SIC 4) Deal Activity (# Deals)	-0.00000 (0.369)								
Target Sector (SIC 4) Deal Activity (\$MM)		-0.00000 (0.418)							
Target Sector (SIC 3) Deal Activity (# Deals)			-0.00000 (0.186)						
Target Sector (SIC 3) Deal Activity (\$MM)				-0.00000 (0.140)					
Acquirer's FA Prior Exp in Target Sector (SIC 4)					-0.00033 (0.552)				
Acquirer's FA Prior Exp in Target Sector (SIC 3)						-0.00058* (0.084)			
Target's FA Prior Exp in Target Sector (SIC 4)							-0.00014 (0.575)		
Target's FA Prior Exp in Target Sector (SIC 3)								-0.00033* (0.062)	
Prior Alliances/Partnerships Between Target & Acquirer									0.00551 (0.549)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0297	0.0297	0.0303	0.0304	0.0296	0.0336	0.0295	0.0323	0.0297
N	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: *p<0.10 **p<0.05 ***p<0.01*

7. CDEs' Other Characteristics

While this paper focuses on prior M&A experience of CDEs, it is possible that CDEs' prior functional backgrounds and education also play a role in shaping different M&A outcomes. In Table 7, I test the relationship between CDEs' functional backgrounds (investment banking, law, consulting, investing), familiarity with technology, prior education in the sciences, MBA education, and foreign origin with M&A performance. I find that their coefficients are not statistically significant while the inverted U relationship holds in all models. In the future, I can further test this with other dimensions of the deal, such as the types of targets selected (which are likely to be shaped by CDEs' social capital and access to the start-up/VC community), whether the company engages financial advisors (we might expect that CDEs with investment banking experience may not necessarily need external advisors while those without may work with external banks as partners throughout the various M&A processes), and deal completion challenges (in which we might expect that CDEs who have a lot of experience closing deals, have failed to close deals, or have prior familiarity with the approval processes may bring these types of knowledge with them).

Table 7. Testing CDEs' Other Characteristics
DV = CAR [-1, +1]

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CDE M&A Experience	0.01120** (0.009)	0.01057** (0.012)	0.01044** (0.013)	0.01121** (0.008)	0.01208** (0.011)	0.01052** (0.014)	0.01092** (0.012)	0.01042** (0.013)	0.01178** (0.004)
CDE M&A Experience Squared	-0.00656** (0.021)	-0.00588** (0.035)	-0.00588** (0.034)	-0.00608** (0.028)	-0.00651** (0.026)	-0.00587** (0.035)	-0.00593** (0.033)	-0.00583** (0.036)	-0.00624** (0.018)
Firm M&A Experience	-0.00120 (0.237)	-0.00123 (0.256)	-0.00125 (0.225)	-0.00119 (0.243)	-0.00139 (0.181)	-0.00120 (0.231)	-0.00119 (0.236)	-0.00117 (0.250)	-0.00148 (0.165)
CEO M&A Experience	0.00182 (0.802)	0.00386 (0.594)	0.00457 (0.530)	0.00370 (0.604)	0.00473 (0.505)	0.00369 (0.608)	0.00480 (0.494)	0.00394 (0.589)	0.00325 (0.652)
CDE Had Investment Banking Experience	-0.00322 (0.109)								
CDE Had Legal Experience		0.00026 (0.914)							
CDE Had Consulting Experience			-0.00090 (0.687)						
CDE Had Investing / PE Experience				0.00197 (0.567)					
CDE Had Engineering Tech Experience					0.00241 (0.443)				
CDE Had Science Education						-0.00027 (0.892)			
CDE is from Abroad							0.00275 (0.312)		
CDE Had MBA								0.00075 (0.669)	
CDE Had Elite Education (Top 25 US Schools)									0.00330* (0.091)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0301	0.0294	0.0295	0.0296	0.0298	0.0294	0.0298	0.0295	0.0305
N	3638	3638	3638	3638	3638	3638	3638	3638	3638

*p-values in parentheses: * p<0.10 ** p<0.05 *** p<0.01*

8. Selection Based on Unobservable CDE Characteristics

Another plausible explanation that may bias the observed inverted U relationship is the potential for certain individual-specific characteristics that drive both the CDEs' prior experience levels and their selection by firms (e.g., their innate ability or quality). While I do not have enough data in my sample on CDE mobility across firms to fully test this, I illustrate results from firm and individual fixed effects models in Table 8. Note that in all other analyses, I measure CDEs' prior M&A experience as the total number of deals they have done prior to starting their current role *as CDE*, which does not allow me to conduct individual CDE-fixed effects analyses. To address this, I create new measures of CDEs' and CEOs' M&A experience as the rolling count of their total prior announced M&A deals until the focal year. Using these alternative measures and different individual and firm fixed

effects, Models (1) to (7) show that an increase in CDEs' prior M&A experience has important implications for M&A performance as the estimate on the linear term is still positive and statistically significant (except in the CEO only FE models), controlling for individual CDE-level, CEO-level and firm-level characteristics. While the estimates on the quadratic term are not statistically significant, these are likely due to the low power of the data (only 8% of observations fall on the right side of the inverted U curve). In the future, I plan to further test this with additional data on CDE mobility events for a larger sample.

Table 8. Fixed Effects Estimation Results

DV = CAR [-1, +1]

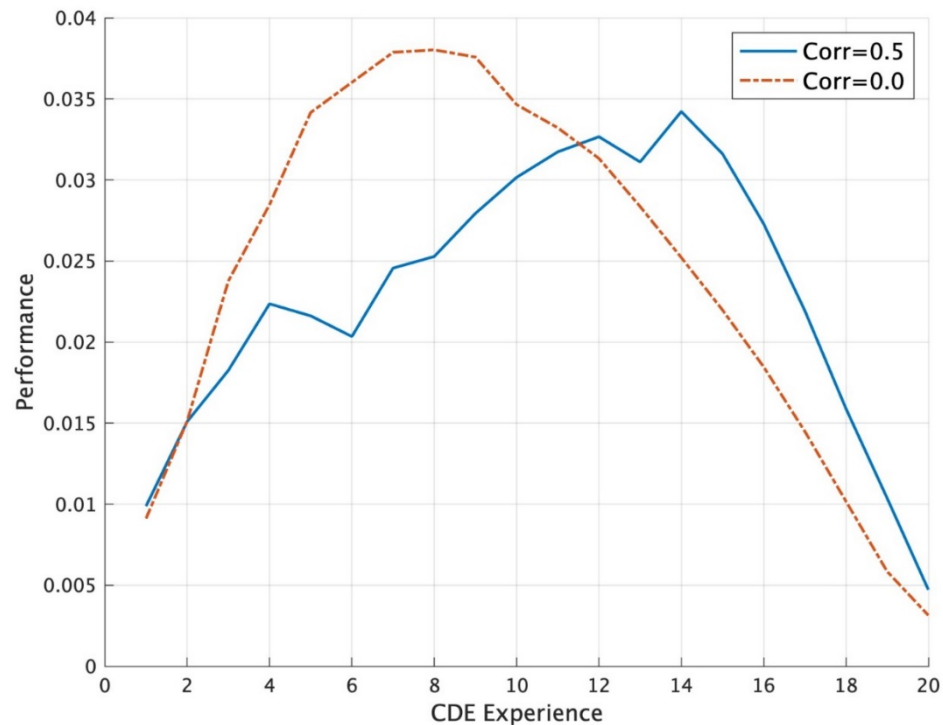
	(1)	(2)	(3)	(4)	(5)	(6)
	New Measure: CDE / CEO M&A Experience as Rolling Count Until Focal Year					
	Firm FEs	CEO FEs	Firm & CEO FEs	CDE FEs	Firm & CDE FEs	Firm, CEO & CDE FEs
CDE M&A Experience	0.01252** (0.042)	0.01002 (0.140)	0.00843 (0.186)	0.03698** (0.020)	0.04345** (0.005)	0.15620** (0.013)
CDE M&A Experience Squared	-0.00436 (0.215)	-0.00344 (0.360)	-0.00308 (0.378)	0.00187 (0.658)	-0.00103 (0.823)	-0.00226 (0.740)
CEO M&A Experience	-0.00097 (0.778)	-0.00894 (0.251)	-0.00373 (0.617)	-0.02672** (0.025)	-0.03235** (0.006)	-0.13444** (0.039)
Firm M&A Experience	-0.00591* (0.076)	-0.00433 (0.247)	-0.00094 (0.806)	-0.00524 (0.226)	-0.00751* (0.092)	-0.00398 (0.432)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year and Industry (SIC2) Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Robust Standard Errors Clustered by Acquirer	Yes	Yes	Yes	Yes	Yes	Yes
R2	0.0960	0.1505	0.1556	0.1409	0.1448	0.1858
N	3637	3613	3613	3624	3624	3610

*p-values in parentheses: * $p < 0.10$ ** $p < 0.05$ *** $p < 0.01$*

APPENDIX D. Simulation of Unobserved Selection Bias in CDE-Firm Pair

Model Assumptions:

- 1) CDEs are randomly assigned a quality type (good or bad).
- 2) There is an inverted U-shaped relationship between CDE Experience and Performance, where higher experience has higher mean and lower variance.
- 3) Firms will conduct a certain number of deals during each CDE appointment.
- 4) Correlation parameter: positive correlation between CDE's quality and the number of deals firms will do (where the good types are preferred when firms are planning to do more M&A)



Results from simulation model suggest that the inverted U relationship would still hold even if there were unobservable selection biases in firms' selection of CDEs—the inverted U would shift to the right as it would take longer for the good-type CDEs to climb the learning curve.

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