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Experience Schedules: Unpacking Experience Accumulation and Its Consequences

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Experience Schedules: Unpacking Experience Accumulation and Its Consequences

Abstract

Accumulated experience impacts organizational outcomes. Prior work suggests superior outcomes when firms follow a regular pattern of experience accumulation in which time is equally spaced between successive events. However, this prior work does not consider whether other regular patterns of experience accumulation exist and whether they matter. We examine two novel patterns of experience accumulation in the context of acquisitions: contracting practice in which time between acquisitions shrinks over time and expanding practice in which time between acquisitions increases over time. Moreover, we offer qualitative data from senior executives to provide intuition for our statistical results. Overall, our pattern of results reveals an expanding practice experience schedules may positively impact firm performance.

Key words: acquisitions; experience accumulation; expanding and contracting practice

1. Introduction

Organizational processes, such as acquisitions (Vermeulen and Barkema, 2001; Zollo and Singh, 2004), alliances (Ireland, Hitt and Vaidyanath, 2002), product development (Danneels, 2002), and country entry (Sapienza, Autio, George and Zahra, 2006; Zahra, Ireland and Hitt, 2000) are central to strategy. They are sets of activities that happen frequently over time and are a key means by which organizations generate innovations (Ahuja and Katila, 2004; Henderson and Clark, 1990), adapt to their environment (Brown and Eisenhardt, 1997; Karim and Mitchell, 2000), and achieve superior performance (Eisenhardt and Martin, 2000; Teece, Pisano and Shuen, 1997).

The organizational learning literature suggests that firms learn processes from accumulated experience (Argote, 1999a). Accumulated experience allows managers to draw inferences and gain insight into the outcomes of actions. In support of that argument, prior research provides evidence for a powerful link between accumulated experience and performance (for a review, see Barkema and Schijven, 2008). A key feature of the literature on experience is the element of time (Shi, Sun and Prescott, 2012: 165) or how firms schedule the accumulation of experience. A prevailing theme in this research is that regular experience schedules – in which process experience is accumulated in a regular temporal pattern – facilitate effective integration which may improve performance. Consistent with this logic, a number of empirical studies suggests that firms do not benefit when these processes follow each other too rapidly or too slowly (Brown and Eisenhardt, 1997; Gersick, 1994; Hayward, 2002; Kusewitt, 1985; Turner, Mitchell and Bettis, 2013).

Although prior work suggests superior outcomes when firms follow a regular experience schedule, it implicitly assumes a regular pattern of experience accumulation equally spaced in time. This assumption obscures the fact that firms may accumulate experience in other regular patterns not defined by equal intervals between events. For

example, firms can accumulate experience by progressively contracting or expanding the time between events which affect process integration. Yet, how such patterns ultimately influence outcomes remains unknown. Accordingly, missing from the extant literature is an empirically grounded understanding about the impact of experience schedules on organizational outcomes. This gap in knowledge is critical. Scholars have argued that the timing of experience shapes engagement with, and comprehension of, strategic phenomena (Zaheer, Albert and Zaheer, 1999). Accordingly, from a theoretical perspective, understanding additional temporal patterns of experience accumulation is essential to unpack the influence of time on key strategic processes (Brown and Eisenhardt, 1997; Gersick, 1994; Hayward, 2002; Kale and Singh, 2007; Laamanen and Keil, 2008; Turner et al., 2013; Vermeulen and Barkema, 2002). Moreover, from a practical perspective, if one temporal pattern for accumulating experience leads to better performance outcomes than another, there are obvious managerial implications for engaging with strategic processes.

We organize this paper around the following research question: *How do experience schedules impact organizational outcomes?* We define an experience schedule¹ as a patterned form of experience accumulation within firms and identify two novel patterns for experience accumulation: (1) *contracting practice* in which time between subsequent organizational processes systematically shrinks over time and (2) *expanding practice* in which time between subsequent organizational processes systematically increases over time. We draw on organizational learning theorizing, which includes experience accumulation and knowledge codification, to examine the manner in which contracting and expanding practice impact organizational performance.

¹ We use the term *experience schedule* to point out that executives have the discretion to decide whether and when to undertake an organizational process. This view is consistent with prior research (Doukas and Petmezas, 2007; Hayward, 2002; Laamanen and Keil, 2008) that firm managers exhibit intentionality and controllability of the organizational process.

We study these effects in the context of acquisitions conducted by serial acquirers for three main reasons. First, acquisitions are major strategic activities with significant implications for stakeholders (Haleblian, Devers, McNamara, Carpenter and Davison, 2009). Second, as highly visible and discrete events, acquisitions facilitate the objective and accurate measurement of their timing and performance outcomes (Haleblian and Finkelstein, 1999; McNamara, Haleblian and Dykes, 2008; Zollo, 2009). Finally, examining acquisitions across serial acquirers allows us to compare the performance implications of contracting and expanding practice with existing regular patterns of experience accumulation (Hayward, 2002; Laamanen and Keil, 2008).

Our study makes several contributions to existing research. First, we contribute to research on organizational learning and acquisition experience by uncovering two novel patterns of experience accumulation and their performance implications. Drawing on a sample of over 5,100 acquisitions completed by S&P 1500 firms over the 1992-2012 period, we find that expanding practice is positively perceived by investors. Second, we extend the literature on acquisition performance in which contrary to prevailing beliefs that equal spacing of acquisitions across time is an optimal way for conducting acquisitions, we theorize and provide evidence that expanding practice is a more beneficial and value-generating approach to conduct acquisitions. Finally, we add to the field of strategic management by beginning to uncover the “black box” or underlying mechanisms that link acquisition experience and acquisition outcomes. We also utilize qualitative data via in-depth interviews with senior executives in acquiring firms to gain knowledge of the causal factors that drive acquisition success.

2. Literature review and hypotheses development

The literature on learning from experience broadly focuses on understanding the

manner in which experience influences organizational outcomes (Ellis, Reus, Lamont and Ranft, 2011; Halebian and Finkelstein, 1999; Vermeulen and Barkema, 2001). Recent research centers on various factors and contingencies that influence the relationship between accumulated experience and performance. Scholars suggest that the type of transferred knowledge (Ellis et al., 2011; Reus, Lamont and Ellis, 2015), the relative experience between acquirers and targets (Cuypers, Cuypers and Martin, 2017), the existence of nested acquisitions within the target (Zorn, Sexton, Bhussar and Lamont, 2017), and the endogenous nature of experience (Anand, Mulotte and Ren, 2016) all influence the experience-performance relationship.

The specific temporal pattern in which such experience accumulates is a critical component for achieving positive outcomes (Shi et al., 2012) and much research suggests the benefits of equal time between events. As a result, scholars contend that an equally paced acquisition, country entry or product development experience will lead to positive outcomes (Brown and Eisenhardt, 1997; Gersick, 1994; Hayward, 2002; Laamanen and Keil, 2008; Turner et al., 2013; Vermeulen and Barkema, 2002). To illustrate, using a panel of 572 observations covering the country entry activities of 22 Dutch firms over 26 years, Vermeulen and Barkema (2002) discovered that the irregularity in movement abroad negatively moderated internationalization performance. Empirical work on product development (Brown and Eisenhardt, 1997; Gersick, 1994) and product launches (Turner et al., 2013) also finds support for the value of accumulating experience in equal temporal intervals. Gersick's (1994) study of product development, found that performance advantages resulted for firms that introduced regularly paced changes every 12 months, with "transitions pegged to midyear (summer) milestones" (p. 24). Building on this foundational work, Brown and Eisenhardt (1997) also found product development firms that introduced new products regularly every 12-24 months outperformed competing product development firms with more

varied product introduction intervals. Finally, in the context of acquisitions, Hayward (2002) found that those firms with six-to-twelve-month time intervals between their acquisitions were more likely to be perceived positively by markets.

However, prior research has overlooked the existence of other regular patterns by which experience may be accumulated within a firm. To fill this gap, we examine the existence of two novel patterns for experience accumulation in the context of acquisitions – contracting practice and expanding practice. More specifically, contracting practice consists of diminishing time intervals between successive acquisitions. An example of contracting practice is the following pattern of acquisition sequencing: Aetna Inc made three consecutive acquisitions on Aug. 20, 2004, May 13, 2005, and June 24, 2005. Expanding practice represents increasing time intervals between successive acquisitions. The following pattern of acquisition sequencing reflects expanding practice: Hormel Foods Corp completed three consecutive acquisitions on Jan. 31, 2005, Mar. 30, 2005, and Apr. 3, 2006.

In line with prior research on acquisition clustering and serial acquirers (Doukas and Petmezas, 2007; Laamanen and Keil, 2008), we utilized a 3-year window to examine the performance effects of contracting and expanding practice. This is in line with prior work that an extensive period between strategic actions can undermine performance (Brown and Eisenhardt, 1997; Gersick, 1994). Learning and experience often reside in individuals, and as experienced individuals exit the organization, relevant knowledge leaves with them (Hayward, 2002). Finally, this approach is consistent with the concept of learning decay and organizational forgetting (e.g., de Holan and Phillips, 2004; Easterby-Smith and Lyles, 2011) in which a significant amount of elapsed time between acquisitions limits the positive impact of experience.

To assess the performance implications of contracting and expanding practice, we utilize investor reactions to acquisition announcements. Consistent with signaling theory (for

review, see Connelly, Certo, Reutzel, DesJardine and Zhou, 2025), we argue that investors use observable characteristics that surround the acquisition to infer its value generating potential (Aalbers, McCarthy and Heimeriks, 2021; Campbell, Sirmon and Schijven, 2016). One such characteristic is acquisition sequencing or timing (Hayward, 2002; Laamanen and Keil, 2008) which conveys to the market the acquirer's ability to effectively learn from prior experiences and successfully integrate acquisitions. Below we present two competing hypotheses on the outcomes of contracting vs. expanding practice.

2.1. Contracting practice

Although never explicitly articulated in the literature, the use of contracting practice is consistent with organizational learning theory. Most research on organizational experience adopts a learning curve perspective (for review, see Argote, 1999a), which suggests evidence for contracting practice. The main idea behind the learning curve (also referred to as a progress or experience curve) is that organizations improve with experience. Research on the manufacturing process of automobiles (Levin, 2000), airplanes (Alchian, 1963), and trucks (Epple, Argote and Devadas, 1991) finds that as organizations produce more of a discrete product, the inputs – including the input of time – associated with production typically decrease. This decrease in inputs appears to imply positive outcomes associated with contracting practice.²

The key insight embedded in learning curve research – inputs associated with performing a task (e.g., time) decrease with experience – is overlooked in research that

² In an early organizational learning curve study, Wright (1936) found as more airplanes were produced, the amount of labor hours needed to produce a single plane decreased at a decreasing rate. Rapping (1965) analyzed shipbuilding productivity data for 15 emergency yards producing World War II Liberty vessels. He argued and provided evidence that as output of a particular vessel type increased, management would learn from past production activities and that labor hours per vessel would drop. This decreasing rate of time required to build a vessel represented an improvement in output per labor hour, which Rapping attributed to learning.

explores the manner in which firms may effectively space acquisitions over time. Hence, learning curve logic suggests evidence for contracting practice. As executives first gain experience with an acquisition, they take more time to become familiar with its discrete phases (e.g., transaction, due diligence, implementation) and the associated functions, work groups, and action-outcome relationships. However, as executives gain more experience with prior acquisitions, *ceteris paribus*, they should need less time before they undertake the subsequent acquisition given their increased understanding of the process. Along these lines, research on acquisitions programs shows within a firm's acquisitions there is an average reduction of more than 60 days from the time between the second and third acquisition as compared to the time between the first and second acquisition (Aktas, de Bodt and Roll, 2013). Ultimately, the learning curve effects should lead to better acquisition performance (Fowler and Schmidt, 1989; Hitt, Harrison, Ireland and Best, 1998).

Contracting practice might generate positive performance outcomes for several reasons. First, since experience tends to lead to learning that results in better and faster processes, contracting practice allows for increased deal momentum in which more deals are completed in less time, which facilitates faster expansion into areas for growth and profitability (Karim and Mitchell, 2000). Such a schedule may be especially important in technology-based acquisitions where short-term windows of opportunity exist (Graebner, 2004). Relatedly, given the “relative *scarcity* of potential desirable targets” in an industry, contracting practice allows a firm to preempt its rivals (Toxvaerd, 2008: 3). More deals completed in less time may also facilitate faster acquisition integration and expedite the capture of desired synergies (Puranam, Singh and Zollo, 2006).

Increased deal momentum that stems from contracting practice also may permit executives to attract and hire top talent. Employees more expert in assisting with the due diligence, transaction, and integration of acquisitions are attracted to organizations in which

increased activity allows for greater professional development over time from multiple deals (Bingham *et al.*, 2015). Similarly, with increasing acquisition activity that occurs within a shorter period of time employees working on acquisitions may be more enthusiastic than employees in organizations in which acquisitions are less frequent. This increased activity may lead to greater on the job learning that is also associated with retention, enthusiasm and morale on integration teams since team members are more consistently engaged in helping grow and add business to their firm's portfolio. Ultimately, more acquisitions in less time can facilitate the accumulation of greater organizational learning. By contrast, with decreased deal activity key employees with acquisition experience, skills, and knowledge may consider leaving the focal firm to pursue acquisitions or become involved with other activities that could lead to an under-utilization of gained acquisition experience.

Contracting practice may also facilitate the development of organizational knowledge via learning by doing (Egelman, Epple, Argote and Fuchs, 2017; Epple et al., 1991; Epple, Argote and Murphy, 1996). Contracting practice allows for an increasingly larger number of acquisitions in a given period. Such increased deal flow may clarify action-outcome relationships and refine understandings as executives come to better understand approaches to integration. Moreover, this improved understanding to select and execute acquisitions can then be formalized into codified rules and routines and other structures that help lead to acquisition success (Bingham, Heimeriks, Schijven and Gates, 2015; Zollo and Winter, 2002). By contrast, if acquisitions are distantly spaced, "very long intervals increase the likelihood that the inferences from the prior experiences are unavailable, inaccessible and inapplicable" (Hayward, 2002: 25). As a result, individuals may fail to codify a set of action steps since they foresee little organizational payoff (Winter and Szulanski, 2001). Contracting practice may therefore lead to better organizational learning and greater acquisition integration capabilities. As the market utilizes acquisition timing to infer acquiring firms'

ability to learn from prior acquisition experience (Hayward, 2002; Laamanen and Keil, 2008), we expect investors to reward acquirers using contracting practice.

Collectively, the above arguments on the benefits of contracting practice may result in positive market reactions associated with this temporal pattern of experience accumulation. Accordingly, we propose the following:

H1a. *Contracting practice will be positively related to market returns.*

2.2. Expanding practice

Expanding practice—an *increasing* time intervals between successive events—is another possible experience schedule grounded in learning theory that may lead to positive outcomes. Research on learning at the individual level demonstrates that when the window between events is expanding (rather than equally spaced) individuals perform better (Mumford, Costanza, Baughman, Threlfall and Fleishman, 1994). The notion of expanding practice has roots in the early work of Landauer and Bjork who were interested in how individuals learn over time (Landauer and Bjork, 1978). They argued that performing a repeated cognitive task in an equally paced fashion would lead to less-than-optimal results. Instead, they believed that gradually expanding the window of time between successive experiences would yield better outcomes. To test their hypothesis, in a knowledge retention task, Landauer and Bjork (1978) gave subjects a deck of cards that listed first and second names of individuals. In the expanding practice conditions, they were given first names and asked to recall the second names at 1, 4, and 10 intervening cards intervals. This contrasted with an equal interval condition of 5, 5, and 5 intervening cards. The results of the test demonstrated superior recall in the expanded practice condition.

Additional empirical studies attest to the effectiveness of expanding practice. Performance in cognitive activities such as math (Cornelius and Modigliani, 1985), spelling

(Smith and Rothkopf, 1984), and statistics (Mumford et al., 1994) improves at a higher rate when problems in the domain are given initially and then repeated later with increased spacing between the events. Moreover, work on expanding practice shows that the learning effects that result from increased spacing between successive events are robust across various timescales, such as seconds (e.g., Russo and Mammarella, 2002), days (e.g., Childers and Tomasello, 2002), and years (e.g., Bahrick, Bahrick, Bahrick and Bahrick, 1993). Although theory on expanding practice has been applied at the individual level, it may be relevant for firms because strategic decision making often occurs through top management teams, which are comprised of individual decision makers.³ Specifically, we argue that the most salient cognitions in understanding organizational responses are those formed at the organization's strategic apex or within its dominant coalition (e.g., Daft and Weick, 1984; Hayward and Hambrick, 1997). These individuals store and interpret information (e.g., Malhotra, Reus, Zhu and Roelofsen, 2018; Simon, 1991) that influences managerial actions (e.g., Barr, Stimpert and Huff, 1992; Lant, Milliken and Batra, 1992; Nadolska and Barkema, 2014) and leads to strategic change (e.g., Thomas, Clark and Gioia, 1993; Trichterborn, Zu Knyphausen-Aufseß and Schweizer, 2016). Thus, we contend that expanding practice may provide organizational benefits for several reasons. First, expanding practice may improve absorption of new knowledge. If top management teams initiate many acquisitions at a high pace they may not be able to effectively integrate and utilize the knowledge gained from these targets (Cohen and Levinthal, 1990). Prior research has identified this issue as "acquisition indigestion" which leads to negative performance effects (Kusewitt, 1985; Laamanen and Keil, 2008; Schriber and Degischer, 2020). Less time between acquisition events (i.e., contracting practice) increases the number of operational and strategic decisions

³ Our use of expanding practice is consistent with prior organizational research on time in which individual theories are applied to firms (Zaheer et al., 1999). More broadly, work in psychology has often provided examples of relevant temporal patterns for organizational scholars (Ancona and Chong, 1996).

executives need to make, which may affect firm performance negatively (Eisenhardt, 1989; Hambrick, Finkelstein and Mooney, 2005). Firms may then encounter time compression diseconomies (Dierickx and Cool, 1989), in which they cannot absorb the same amount of knowledge in one year that they can in three years (Vermeulen and Barkema, 2002). Information overload may occur such that the amount of information executives need to process exceeds their cognitive limits (Huber, 1991). Greater spacing of acquisition experience therefore reduces the likelihood of cognitive overload and indigestion problems by giving executives more time so they can learn better from experience (Levinthal and March, 1993). Accordingly, with more time in between deals, each deal is a greater priority, which can lead to more thoughtful decision making. These arguments are consistent with theoretical (Levinthal and March, 1981; Levitt and March, 1988) and empirical (Klarner and Raisch, 2013) work in strategic management that suggests advantages often ensue to firms that slow down (vs. speed up) learning.

Second, expanding practice may confer benefits of stability. Systematically increasing the time between acquisition events helps executives develop organizational structure, such as rules and routines, which are important for firm performance since they transfer collective understanding on the manner in which to engage in action throughout the organization (Klarner and Raisch, 2013). The codification of prior knowledge is essential for “supporting and facilitating the decision making and execution activities” of firm executives (Zollo, 2009: 898), helping them understand causal linkages and determinants of acquisition success (Zollo and Singh, 2004), which enables the development of acquisition capabilities (e.g., Eisenhardt and Martin, 2000; Teece et al., 1997). Yet while critical for organizational performance, rules, routines, and their codification need time to develop as firms are more likely to repeat actions only if they have experience with those actions and know their performance outcomes (March, 1981). If acquisitions quickly follow each other, executives may fail to transfer

individual insights into more formal firm structures. Hence, expanding practice creates periods of stability, which facilitates organizational level structure.

Finally, expanding practice may lead to better preparation and coordination of resources. A progressively slower pace of acquisition activity means executives are buying less over time, such that they can focus more on quality. Progressively more time between acquisitions also helps with coordination of effort. Executives can have more in-depth discussions among the various business functions involved in the integration, such as human resources, operations, health and safety, and finance. These discussions “reduce causal ambiguity regarding acquisition integration... and thus, enhance the effectiveness with which those actors... customize the acquirer’s codified integration practices to the specific deal at hand” (Heimeriks, Schijven and Gates, 2012: 704). Such coordination improves the likelihood of acquisition success (Bingham et al., 2015). Increasing time between acquisitions also helps executives in acquiring organizations coordinate with individuals in the target firm so that they are effectively assimilated and utilized – a key to capture anticipated synergies (Graebner, 2004). By contrast, with contracting practice acquisitions may happen quickly one after the other with acquiring firms not coordinating enough with the employees in the target firm. Consequently, synergies may be jeopardized because target firm employees may turnover before executives in the acquiring firm have time to fully assess target firm human resources and develop a retention strategy.

While increasing the time for preparation, coordination, and assimilation of a new target can inadvertently result in the acquiring firm missing on potential viable acquisition targets, the effective acquisition integration capabilities associated with expanding practice should be weighted more favorably by the market. Thus, these arguments would predict:

H1b. *Expanding practice will be positively related to market returns.*

3. Empirical design

Acquisitions are an appropriate context to study experience effects for several reasons. First, since each acquisition is a discrete event it can be analyzed in isolation as a single opportunity and/or as part of a larger set of experiences. Second, market responses to acquisition announcements exist for each acquisition, thereby permitting an assessment of perceived outcome potential. Finally, a discrete experience such as an acquisition is an appropriate, commonly used unit of analysis for the study of learning from experience (Hayward, 2002).

3.1. *Sample selection*

Our data covers the period between 1992 and 2012. We started with all S&P 1500 firms and then we collected acquisition data from the Securities Data Corporation (SDC) database in which we considered only “completed” acquisitions in which the acquirer exchanged cash or securities for stock or assets of the target firm (Haleblian and Finkelstein, 1999) and assumed majority ownership. In addition to acquisition data, we also gathered financial data through Compustat and market data from Eventus. Our final sample consists of 1,274 firms from 197 4-digit SIC industries. The average acquisition number per firm is 4.1. Since we lagged the independent and control variables by one year and imposed restrictions on creating the independent variable (see below), our final sample consists of 5,182 acquisitions.

3.2. *Dependent variable*

Market returns. We assessed the cumulative abnormal returns (CAR) of acquisitions conducted by the focal firm. To obtain abnormal market returns, we assessed the price change in the security of the focal firm around the period surrounding the event of the

acquisition. Next, we calculated the difference between observed and predicted return for the focal company's security. We relied on the following formula: $AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$. R_{it} and R_{mt} are the returns on security i and the market portfolio m for the period t ; α_i is a constant; and β_i is the beta of security i . Parameters α and β are assumed constant for the estimation period, which begins 295 days before the announcement date and ends 45 days before the announcement date. Abnormal returns were measured over a 5-day window (-2, +2). Utilizing an event-study methodology is consistent with prior research to assess the impact of acquisition experience on acquisition outcomes (Haleblian and Finkelstein, 1999; Hayward, 2002; Laamanen and Keil, 2008).

3.3. Independent and control variables

Practice. Drawing on research in psychology, which discusses practice in terms of the time elapsed across experimental trials (Storm, Bjork and Storm, 2010), we collected data on firms that completed at least three acquisitions to determine whether the time between acquisitions was expanding or contracting. To generate the practice variable, we examined firms conducting at least three consecutive acquisitions. Next, we calculated the skewness of elapsed time in days for each three consecutive within-firm acquisitions (i.e., skewness is estimated based on the elapsed time between the announcement date of the first acquisition and the announcement date of the second acquisition, and the elapsed time in days between the announcement date of the second acquisition and the announcement date of the third acquisition). Hence, since three consecutive acquisitions per firm were needed in order to calculate the skewness, values were not assigned to firms with two acquisitions or fewer.⁴

⁴ For example, if a firm conducted one acquisition for each of the years 1999, 2000, and 2002, the skewness value was estimated only for 2002, after three firm acquisitions were accumulated. If a firm conducted more than three acquisitions, we calculated skewness in sets for the firm. For example, if a firm engaged in acquisitions in 1999, 2000, 2001, and 2002, the skewness value was estimated for 2001 and 2002 through the use of a rolling window of three acquisitions.

Using three data points approach is consistent with prior work on practice in psychology (e.g., Storm et al., 2010). As discussed earlier, we limit the estimation of the practice variable to a three-year window.⁵ When assessing skewness, positive values indicate expanding practice, while negative values reflect contracting practice. Moreover, a positive and significant practice coefficient would indicate that expanding practice leads to stronger market returns. We offer concrete examples for both contracting practice and expanding practice. As an example of contracting practice, Aetna Inc undertook acquisitions on: August 20 2004, May 13 2005, and June 24 2005. The resulting negative skewness value (-1.61) indicates that Aetna Inc is utilizing a contracting practice approach. As an example of expanding practice, ADC Telecommunications Inc conducted acquisitions on: May 9 2005, July 21 2005, and October 22 2007. The resulting positive skewness value (1.69) indicates that ADC Inc applied an expanding practice approach.

Following prior research on acquisitions, we included several additional control variables. Since we calculate skewness for the practice variable (which represents a third moment estimation), we controlled for the *mean of elapsed time between acquisitions* (first moment estimation) and the *variance of elapsed time between acquisitions* (second moment estimation) for each set of three consecutive acquisitions per firm (e.g., Hayward, 2002; Laamanen and Keil, 2008). *Acquirer size* was calculated as the log of firm assets in the year preceding the focal acquisition (e.g., Hayward, 2002). *Free cash flow* was calculated as: (operating income – taxes – interest expense – depreciation – preferred dividend – common dividend)/equity (Haleblian, McNamara, Kolev and Dykes, 2012) in the year preceding the focal acquisition. *Level of diversification* was operationalized with the entropy measure (Jacquemin and Berry, 1979) in the year preceding the focal acquisition. *Prior performance* was operationalized as ROA (net income over assets) in the year preceding the focal

⁵ In robustness tests, we used a four-year and five-year window and obtained similar results.

acquisition (Iyer and Miller, 2008). *Acquisition experience* was calculated as the number of acquisitions executed in the previous five years (Schijven, Kolev and Haleblian, 2021). *Sales growth* was measured as the annual rate of change in firm sales in the year preceding the focal acquisition (e.g., Batt, 2002). *Relatedness* was operationalized as a dummy variable with a value of 1 if the acquirer and the target were in the same 2-digit SIC code; 0 otherwise. *Percent cash* was represented as the percentage of cash used to acquire a target (Travlos, 1987).⁶ We measured *relative size* as the ratio of the acquisition value to acquirer assets. *Industry munificence* was obtained by regressing industry sales on a year counter variable over each 5-year window. The regression coefficients obtained were divided by mean industry sales resulting in our industry munificence variable. We repeated this approach for each 4-digit SIC code industry measured in the year prior to the focal acquisition (Dess and Beard, 1984). *Industry dynamism* was calculated similarly to industry munificence – the standard errors of the same regression coefficients are divided by mean industry sales. To control for time effects we included *year dummy* variables (Certo and Semadeni, 2006).

Finally, due to outliers, we winsorized the following variables at the 99th percentile: market returns, prior performance, acquisition experience, sales growth, relative size, and industry dynamism (Kolev, Wiseman and Gomez-Mejia, 2014). We tested for multi-collinearity and found that the mean value of the Variance Inflation Factor was 2.94 in which no variable exceeded 10, which suggests multi-collinearity was not an issue in our models.

3.4. Estimation technique

Our sample is characterized as pooled cross-sectional data in which a focal firm may engage in multiple acquisitions over time. Pooling multiple acquisitions made by the same

⁶ Due to missing values for the cash variable, we conducted mean replacement (Gamache, McNamara, Mannor and Johnson, 2015). Results were the same when excluding this variable from the regressions.

firm violates the assumption of independent observations required for OLS regression, which results in serial correlation of the model's residuals. Accordingly, we used within-firm fixed-effects models with robust standard errors for the following two reasons. First, we are interested in the manner in which experience patterns develop over time within a firm and how these affect outcomes. Thus, we focus on within-firm variation, which is properly analyzed through fixed-effects regression (Eggers, 2012). Second, fixed-effects regression offers a conservative test of our model because it controls for unobserved heterogeneity across firms and addresses the probability that the error terms are correlated with the predictors (Greene, 2003). As a robustness check, we also conducted random-effects regression and obtained the same pattern of results.

3.5. *Qualitative data*

To supplement our quantitative findings, we used qualitative data to examine possible underlying logics and mechanisms for why and how practice can impact acquisition performance. Specifically, we conducted in-depth interviews with seventeen seasoned M&A experts holding top level positions in serial acquirers and industry leaders across different sectors, such as Chemicals, Oil & Gas, Software, and High-Tech contexts (details on the qualitative sample are provided in Table A in Appendix A). On average, our interviews lasted between 45 and 90 minutes each and involved discussion with the senior executives directly involved with acquisitions. These individuals included the following: VP M&A, VP M&A and Divestitures, M&A Director, Head of Global M&A, Strategic Planner M&A, Director Legal M&A, VP and Head of New Venture Integration, Director Corporate Strategy, and Senior Director M&A. All organizations are multinational market leaders in their respective industries and rely heavily on acquisitions to drive corporate growth and development. The transcripts covered a total of 18 hours of interviews and contain 172 (single-spaced) pages of interview

material drawn from semi-structured interview questions centered around acquisition sequences and the impact of timing. Since the focus of this study is on patterned forms of experience accumulation and how they matter, we first asked informants about timelines for recent acquisitions to assess patterns for experience accumulation. We then tried to understand the logic behind each temporal strategy for experience accumulation. These insights emerged during our interviews in which we asked executives to address the pros and cons of their temporal approach. We then compared and contrasted responses across informants and grouped them according to overarching themes. Our qualitative data thus helped us identify theoretical logics that we outline and integrate into the Discussion section below.

4. Hypotheses tests

Table 1 reports descriptive statistics and correlations. Table 2 presents the fixed-effects regression results. Model 1 includes control variables, several of which are significant including prior performance, percent cash, and relative size. These variables are often related to cumulative abnormal returns for acquisition announcements in prior studies.

 Insert Table 1 and Table 2 about here

Model 2 adds coefficients for the practice variable. We assess whether contracting time between acquisitions (contracting practice) or expanding time between acquisitions (expanding practice) leads to higher market returns for acquirers. We find that the coefficient is positive and significant ($p < 0.001$), which suggests that expanding practice leads to stronger market returns. Thus, H1b is supported. We estimated the magnitude of effects for the practice variable by calculating how much higher the market returns would be for a firm using expanding practice versus contracting practice. Given the average assets of an acquirer in our sample are \$9B and the coefficient of practice is 0.0022 and the standard deviation of

practice is 1.26, the difference in value for an acquirer relying on expanding practice (+1 standard deviation) versus contracting practice (-1 standard deviation) is about \$50M.

5. Robustness tests

We conducted several additional tests to examine the robustness of our findings. First, we utilized windows of different length – 1 day (0, +1), 3 days (-1, +1), 7 days (-3, +3), 11 days (-5, +5), and 21 days (-5, +15) – and obtained the same results as the ones reported in Table 2.

Second, we used alternative calculations of the practice variable. In particular, we estimated the elapsed time in days between the announcement dates of the first and second acquisitions (i.e., $time_1$). Then, we calculated the duration in days between the announcement dates of the second and third acquisitions (i.e., $time_2$). The resulting raw difference between the two times ($time_2 - time_1$) was used to estimate practice with positive values reflecting expanding practice and negative values reflecting contracting practice. We also used the difference ($time_2 - time_1$) to create a dummy variable with positive values equal to one and zero otherwise. Both of these alternative operationalizations of practice provided the same results (see Models 1 and 2 of Table B in Appendix A).

Third, the dependent variable market returns is only present for firms that had engaged in an acquisition; this “research design necessarily leads to collection of a nonrandom sample: firms undertaking acquisitions” (Certo, Busenbark, Woo and Semadeni, 2016: 2642). Firms that undertake acquisitions might be different from firms that do not acquire. For example, firms with extensive experience in acquiring other firms might be more likely to acquire than firms with limited or no such experience. As a result, we can have a potential problem of sample selection bias. To address this possibility, we used a Heckman two-stage procedure (Heckman, 1976). In the first stage, we used the whole population of

firms and estimated the probability of firms completing an acquisition. The dependent variable in the first-stage regression is *Acquisition dummy* (equal to one for cases when a firm undertook at least one acquisition per year and equal to zero otherwise). We regressed *Acquisition dummy* on the following variables, likely to predict acquisition likelihood, measured in the prior year: prior performance, firm size, diversification, free cash flow, industry munificence, industry dynamism, divestiture, and year dummies. From this regression, we obtained an inverse Mills ratio and used it as a control variable in the main regressions predicting market returns (the second-stage regressions) to “account for the potential biases that may result from nonrandomness” (Certo et al., 2016: 2644). When running the Heckman procedure, it is important to include at least one independent variable in the first-stage regression which is not included in the second-stage regression (Sartori, 2003). We used *Divestiture* (a dichotomous variable equal to one if the firm had engaged in at least one divestiture per year and equal to zero otherwise) as it is theoretically likely to affect whether a firm engages in an acquisition or not (the dependent variable in the first-stage regression). Consistent with a valid exclusion restriction, *Divestiture* was significantly correlated with *Acquisition dummy* in the first-stage regression but was unrelated to the ultimate dependent variable (market returns). Table B in Appendix A shows the main regression with the inverse Mills ratio as an additional control variable – it is not significant and our initial results remain the same (see Model 3).

Fourth, we addressed the possibility that the practice variable might be endogenous. For example, the decision to pursue expanding or contracting practice might not be randomly chosen by the firm and instead be driven by unobserved factors; as a result, the relationship between practice and market returns might be impacted by omitted variables. We addressed this concern by following recommendations in prior research (Chin, Hambrick and Treviño, 2013; Kolev and McNamara, 2022). We regressed the practice variable on the following

variables measured in the prior year: firm size, free cash flow, diversification, prior performance, acquisition experience, sales growth, industry munificence, industry dynamism, year dummies, corporate restructuring, and CEO shares. A necessary requirement for this regression is to identify appropriate instruments – that is, variables significantly related to practice but not significantly related to the ultimate dependent variable market returns (e.g., Hubbard, Christensen and Graffin, 2017; Quigley and Hambrick, 2012). We chose corporate restructuring (a dichotomous variable with values of one when the firm had engaged in at least one divestiture or acquisition in the prior year and zero otherwise) and CEO shares on the premise that they should predict practice. Consistent with these expectations, corporate restructuring and CEO shares were significantly related to practice but not significantly related to market returns. Next, we tested whether these instruments met the requirement of relevance and exogeneity. The F-statistic was significant ($F = 3.27, p < 0.05$), which confirms instrument relevance. The Sargan statistic was not significant ($p > 0.10$), which suggests instrument exogeneity (Bascle, 2008). Finally, we created an endogeneity control variable – the predicted values of practice – and used it as a control in the main regression model. This endogeneity control variable was not significant and did not change our results (see Model 4 of Table B in Appendix A).

6. Supplementary Analysis

Spurred by executive insights into the importance of expanding practice for accommodating increased deal complexity, we conducted a post-hoc analysis to examine whether acquisition complexity alters the relationship between expanding practice and

market returns.⁷ We compared large vs. small acquisitions⁸ and related vs. unrelated deals (based on 2-digit SIC codes). The coefficient of expanding practice was positive and significant *only* for large acquisitions and related acquisitions, which suggests that progressively expanding time between acquisitions across serial acquirers is particularly beneficial for the integration of more complex deals. These supplementary findings stress the contingent nature of expanding practice.

6. Discussion

Existing research on organizational experience highlights benefits from accumulating experience in a regular, symmetric pattern. We argue this focus on regular pacing may be artificially restrictive as it obscures asymmetric patterns of experience accumulation, which may be performance enhancing. Utilizing the context of acquisitions, prior work has assumed that symmetric time between acquisitions yields optimal performance (Hayward, 2002; Laamanen and Keil, 2008). However, looking at contracting and expanding practice, we examine time distribution asymmetry. Using quantitative data on over 5,100 acquisitions, we show that expanding practice, in which time between acquisitions is increasing, leads to better acquisition returns. Our qualitative data allows us to explore several potential mechanisms behind the positive relationship, which are discussed below.

6.1. *Mechanisms for the beneficial role of expanding practice*

Our theorizing, supported by qualitative data from executives, suggests that expanding practice leads to higher performance since it facilitates absorptive capacity (Cohen

⁷ We thank an anonymous reviewer for this suggestion.

⁸ We used target size of \$10 M in assets to distinguish between small and large acquisitions. As a robustness check, we also defined the bottom 20th, 25th, and 30th percentile of the sample based on target size as small acquisitions.

and Levinthal, 1990) by giving organizational members within the acquiring firm needed time for integration once the focal acquisition is complete. Absorptive capacity is a firm's ability to assimilate and apply valuable external knowledge (Zahra and George, 2002). For example, executives pointed to the value of absorptive capacity during integration and having enough resources to assimilate the prior deal. One senior leader stated, *“We had two acquisitions in May and then took more time before the next deal in October. The advantage of this sequence is that the market would perceive the company as being involved in integration activities for each of the deals, and so if you increase the timing between deals you will be perceived as being able to have enough resources internally to integrate to different companies and drive the synergies that are related to each of the deal.”* This quote suggests that progressively more time between deals over time improves integration by the assimilation and application of experience (Levinthal and March, 1993). Ultimately, then, expanding practice may facilitate absorptive capacity, which is associated with successful acquisition integration (for review, see Steigenberger, 2017)

Moreover, expanding practice appears to channel executive attention and resources on fewer focused opportunities (Ocasio, 1997) and acts as an important “bottom-up” attentional driver (Ocasio, 2011), which ensures that each deal receives greater priority to increase the probability of higher performance. Consistent with these arguments, one executive noted: *“If you spread [deals] over time, you have better time to focus on the acquisition.”* Another executive recalled, *“If you have fewer deals and more time in between, you can really focus on extracting the value out of that and it’s less of a strain on the running organization.”* Ultimately, these findings contribute to the literature on organizational learning by revealing a link between acquisition experience and timing. Our qualitative data suggest the non-intuitive insight that executives may not have to gain more experience to improve learning (Barkema and Schijven, 2008), but rather simply distribute the accumulation of experience in

way, such that time between learning events increases in the short term.

We also argued that expanding practice may confer benefits of stability by facilitating the development of routines and practices. Expanding practice allows executives time to encode prior experience, such that their insights and knowledge (about governance or other aspects of management) become formalized and implemented at a collective or firm level towards future acquisitions (Zollo, 2009; Zollo and Singh, 2004). A senior executive, discussing the advantages of expanding practice, highlighted how with increasing experience he and his team began to build documents, manuals and plans to help members involved in an acquisition leverage the past. He said, *“You clearly see there is some more in-depth preparation. For instance, you see improved cooperation between a deal person, an M&A person, and an integration person...”*. Expanding practice is also theorized to facilitate recalibration during acquisition integration which allows customizing existing codified practices to the specific acquisition at hand (Heimeriks et al., 2012). Our executives pointed at the role expanding practice plays in this process, particularly as it relates to governance. One leader commented, *“Your overall governance has to be recalibrated... there are all kinds of structures which now are out of alignment, so we deliberately, took more time after earlier acquisitions to bring that inline again with the remaining business activities.”* A second executive added, *“The learnings from the acquisitions that we did quickly together was the lack of clarity on governance, so who’s going to lead what?... if you have a bit more time in-between acquisitions I do believe that time to integrate it in itself will take less time”*. Taken together, our paper extends research on organizational routines. Our qualitative data identify expanding practice as a critical factor in shaping knowledge codification (e.g., Strobl, Bauer and Degischer, 2022) while also enables the creation of acquisition dynamic capabilities (e.g., Eisenhardt and Martin, 2000; Zollo and Winter, 2002) that help to utilize acquisition experiences in a subsequent acquisition (Heimeriks et al., 2012).

6.2. Additional mechanisms for the beneficial role of expanding practice

Through the interviews with executives we were able to identify additional possible mechanisms through which expanding practice has beneficial effects on acquisition performance. First, expanding practice also seems to propel performance since it helps firms pivot into higher growth markets. A fundamental premise in most learning research is that as organizations continue pursuing a specific course of action, they become better and better at it (Argote, 1999b) and more likely to repeat the action or reinforce its direction in the future (Chang, 1995; Mitchell, Shaver and Yeung, 1994). Changing the course of action has negative implications since it effectively starts firms back at the top of a new learning curve (Van de Ven and Polley, 1992). Our qualitative data, however, add increased theoretical texture by suggesting that more time between experiences (expanding practice) appeared to help firms by allowing them to increase search and “switch learning curves” – i.e., move from one type of experience to another, which allowed for a pivot into more attractive markets and opportunities. To illustrate, one executive stated, “[*We moved from doing acquisitions*] *two years apart to then three years apart...we were on an evolutionary path that we had of increasing our presence in fine chemicals and biotech... then we decided to shift our exposure, our M&A exposure more to the nutrition side... We needed the time to come to grips with what was possible in that field and what were good acquisitions there etc...*”. Another executive provided additional support for how expanding practice appears to help the firm pivot into higher growth markets. He said, “[*Over two to three years we bought also a couple of, a handful of companies, smaller companies to round out or round up this portfolio field. And then we took some more time and used an acquisition to enter a new market for us...*”. In sum, these comments point to additional breadth in market focus can be achieved with an expanding practice strategy, and likely more difficult to accomplish with decreasing time between acquisitions.

6.3. *Theoretical contributions*

At a higher level, we contribute to research in strategic management by adding insight into the relationship between speed and perceived performance. Speed, the rate at which firms engage in key activities (e.g., acquisitions, product development, country entries) is central to the field of strategic management (Gersick, 1994; Lieberman and Montgomery, 1988). The strategy literature relates moderate speed, as operationalized by pacing events in equal time intervals, with high performance (Brown and Eisenhardt, 1997; Hayward, 2002; Turner et al., 2013; Vermeulen and Barkema, 2002).

Our study, however, suggests a view in which executives should dynamically adjust the timing of speed, rather than use equal time intervals. Insights from our quantitative and qualitative data help shed light on the potential duality of time and the contingent nature of its impact. More specifically, they point to a richer conception of time and its relationship to process performance that extends beyond suggesting that frequent acquisitions (first moment estimation) with a low standard deviation of time between acquisition events (second moment estimation) is preferred by markets. Instead, our study adds value by indicating the important influence of acquisition experience skewness (third moment estimation) on market reactions. Thus, while the existing literature adds value by noting the relevance of regular timing for strategic processes such as acquisitions, country entries or new products, our study adds value by suggesting a novel view in which the temporal unfolding of process experience should move from less to more time. Firms with higher performing acquisitions are thus somewhat ambidextrous. They effectively mix less and more time, which allows executives to gain early benefits of efficiency in existing opportunities through thoughtful integration of what has occurred in the past while at the same time giving them flexibility to pursue the most attractive opportunities for the future through strategic investigation. In short, we attempt to set forth a richer conception of time and its impact on strategic phenomena.

Our study also speaks to the antecedents of absorptive capacity (Van Den Bosch, Van Wijk and Volberda, 2003; Volberda, Foss and Lyles, 2010). In particular, we show evidence that temporal spacing of acquisitions is critical for achieving superior performance outcomes. While amount of knowledge and experiences gained from prior acquisitions is essential for developing absorptive capacity (Cohen and Levinthal, 1990), firm executives need to properly time these experiences in order to achieve financial benefits. By progressively expanding time between acquisitions, firms can ensure effective digestion of new knowledge and experiences and their successful application during the integration of subsequent acquisitions (e.g., Barkema and Schijven, 2008).

Our interview data suggest that expanding practice gives executives increasingly more time to uncover the causal factors driving success in current markets and time to locate and transition to more attractive markets. Hence, expanding practice appears to improve the success of corporate growth by helping executives look both backward and forward – i.e., to see both how to exploit deals from the past as well as how to explore the future ahead. Expanding practice promotes backward looking by focusing attention and executing with increased precision and so permits exploitation. Yet, expanding practice promotes forward-looking by giving more time between deals to help executives plan for higher payoff opportunities in their strategic landscape and so permits exploration. Ultimately, this finding adds to the exploitation and exploration literature (Gupta, Smith and Shalley, 2006; Lavie, Stettner and Tushman, 2010) by showing how expanding practice can facilitate the balance between exploitation and exploration (March, 1991) which is necessary for organizational success.

6.4. Practical implications

Our paper offers practical implications for acquiring firms. A key implication of our findings is the need for executives to vigilantly manage the timing of experience, and not just its amount. Simply having prior experience is not sufficient for effective experience transfer to subsequent strategic events, such as acquisitions, country entries, or product launches. Executives need to be aware that expanding the timing between experiences is a sufficient condition that facilitates effective learning and beneficial performance outcomes.

Executives also need to effectively communicate the timing of acquisitions (or other strategic events). While investors and analysts may pay close attention to how acquisitions are spread over time (e.g., Aalbers et al., 2021; Laamanen and Keil, 2008), it is important for executives to emphasize and remind external stakeholders how and why expanding practice can facilitate more effective learning and acquisition integration.

Finally, our findings can be beneficial to boards of directors in their monitoring role. As acquisitions are directly tied to executive compensation (Haleblian et al., 2009), firm executives might be tempted to conduct multiple acquisitions within a short time period to gain personal benefits and enhance their own wealth. Yet, such an acquisition sequence is likely to be value decreasing prompting boards to intervene. In other words, boards can play an important oversight role by mandating progressively expanding time between acquisitions.

6.5. Limitations and future research directions

Utilizing quantitative data, we developed theoretical arguments on the mechanisms that underlie the relationship between expanding and contracting practice and acquisition performance. Yet, we did not measure these mechanisms directly. Our qualitative data suggests executive decision-making processes that drive experience schedules; however, such data can bring additional concerns, such as potential hindsight bias from executives or overestimating their independent level of control over acquisition scheduling. While we

relied on established methodological techniques to address endogeneity in executive decisions and applied an extensive list of control variables, we cannot fully rule out the impact of alternative explanations. For example, bandwagon effects, board interlocks, or industry conditions in the target's environment can play a role in the frequency and timing of acquisitions. We believe future research should examine such factors that might impact the effect of experience schedules. Even so, the use of both quantitative and qualitative data combines the benefits of empirical findings with executive insights.

We envision additional important directions for future research that could expand on our findings. As a next step, we recommend an exploration of the effect of expanding and contracting practice in other contexts. For example, we speculate that conducting alliances in a progressively increasing time can be beneficial for firms. Yet, since alliances involve two partners, it is important to examine how the match or mismatch between each partner's alliance temporal scheduling can facilitate or undermine the mutual success of the alliance. Furthermore, we encourage scholars to examine the antecedent conditions that drive the engagement in contracting or expanding practice. We posit that managerial motivation, firm capabilities, and resource constraints will play a key role in how firms approach the timing of acquisitions or other strategic events. Future work may explore how M&A functions enable a firm to cope with the challenges of contracting practice. In addition, more research may be needed to understand why firms in certain contexts, such as private equity, may be able to better handle contracting practice (e.g., Castellaneta and Zollo, 2015). Finally, it is important to examine moderating conditions that can affect the impact of expanding practice on performance. For example, we envision prior acquisition experience to strengthen the main relationship as it offers executives greater knowledge in managing the whole acquisition process. Relatedly, industry characteristics are likely to be potent moderators; we speculate that industry dynamism – because of the pressure and uncertainty it places on executives –

could weaken the main positive relationship by reducing the applicability of prior experiences across time.

7. Conclusion

We challenge prior work that suggests that firms gain superior outcomes when following a regular pattern of experience accumulation in which time is equally spaced between successive events. Instead, we proposed two novel asymmetric patterns of experience accumulation in the context of acquisitions: contracting practice in which time between acquisitions shrinks over time and expanding practice in which time between acquisitions increases over time. Our empirical findings, supplemented by qualitative data with senior executives, provide evidence that expanding practice generates positive performance outcomes.

CRedit authorship contribution statement

Christopher B. Bingham: Writing – original draft, Methodology – qualitative data, Formal analysis – qualitative data, Data curation – qualitative data, Conceptualization. **Kalin D. Kolev:** Writing – original draft, Writing – review & editing, Methodology – quantitative data, Formal analysis – quantitative data, Data curation – quantitative data, Conceptualization. **Jerayr (John) Haleblan:** Writing – original draft, Writing – review & editing, Conceptualization. **Koen Heimeriks:** Writing – review & editing, Data curation – qualitative data.

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Table 1

Means, standard deviations, and correlations.

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Market returns	0.005	0.07	1.00													
2. Mean of time between acquisitions	205.44	143.49	0.06	1.00												
3. Variance of time between acquisitions	21,182.92	39,218.94	0.03	0.63	1.00											
4. Acquirer size	6.97	1.95	-0.08	0.08	0.05	1.00										
5. Free cash flow	0.06	0.35	0.01	0.01	0.01	0.11	1.00									
6. Diversification	0.19	0.35	-0.00	0.12	0.05	0.34	0.07	1.00								
7. Prior performance	0.03	0.12	-0.02	0.02	-0.00	0.22	0.20	0.06	1.00							
8. Acquisition experience	2.90	4.27	-0.05	-0.17	-0.09	0.33	0.02	0.07	0.04	1.00						
9. Sales growth	0.48	0.86	-0.01	-0.18	-0.13	-0.23	0.00	-0.12	-0.09	-0.08	1.00					
10. Relatedness	0.51	0.50	0.01	0.11	0.07	-0.10	0.03	-0.04	-0.05	-0.12	0.00	1.00				
11. Percent cash	63.51	32.46	0.05	0.06	0.03	0.14	0.01	0.10	0.08	0.03	-0.11	-0.02	1.00			
12. Relative size	0.09	0.17	-0.03	0.08	0.02	-0.22	-0.04	-0.08	-0.06	-0.14	0.08	0.11	-0.24	1.00		
13. Munificence	0.10	0.10	0.00	-0.09	-0.05	-0.12	0.04	-0.06	-0.01	-0.02	0.16	0.10	-0.12	0.04	1.00	
14. Dynamism	0.03	0.02	0.02	0.03	0.03	-0.06	-0.04	0.13	-0.02	-0.02	0.04	-0.04	-0.01	-0.04	0.09	1.00
15. Practice	0.002	1.26	0.03	0.01	0.02	0.01	-0.00	0.00	-0.02	0.05	0.02	0.02	0.01	0.00	0.02	0.01

Notes. N = 5,182. All correlations larger in absolute value than 0.03 are significant at 0.05

Table 2

Fixed-effect regressions of experience schedules affecting market returns.

	Model 1		Model 2	
	Coeff	SE	Coeff	SE
Constant	0.056**	(0.021)	0.057**	(0.022)
Mean of time between acquisitions	0.000	(0.000)	0.000	(0.000)
Variance of time between acquisitions	0.000	(0.000)	0.000	(0.000)
Acquirer size	-0.006	(0.003)	-0.006	(0.003)
Free cash flow	0.005	(0.005)	0.004	(0.005)
Diversification	-0.003	(0.007)	-0.003	(0.007)
Prior performance	-0.039*	(0.020)	-0.038 ⁺	(0.020)
Acquisition experience	-0.001	(0.000)	-0.001 ⁺	(0.000)
Sales growth	-0.004	(0.002)	-0.004	(0.002)
Relatedness	-0.000	(0.003)	-0.000	(0.003)
Percent cash	0.000**	(0.000)	0.000**	(0.000)
Relative size	-0.027*	(0.011)	-0.027*	(0.011)
Munificence	0.022	(0.018)	0.021	(0.018)
Dynamism	-0.017	(0.076)	-0.021	(0.076)
Year dummies	Included		Included	
Practice			0.002**	(0.001)
N	5,182		5,182	
F	2.98***		2.92***	
R ²	0.030		0.032	

Notes. ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests reported)

Appendix A

Table A
Qualitative data information.

Interview #	Individual Code Name	Company Code Name	Industry	Title	Years M&A experience	No. of interviews	Total of interview hours
1	MG	PC	High-Tech	Sr. Director M&A	6	1	1.5
2	DS	PC	High-Tech	VP & Head of NVI	15	1	.75
3	HB	PC	High-Tech	VP M&A and Divestitures	30	1	.75
4	KE	PC	High-Tech	Sr. Director M&A	5	1	1.5
5	JN	PC	High-Tech	VP of M&A	20	1	1
6	MT	PC	High-Tech	Manager M&A dep	5	1	1
7	DM	PC	High-Tech	VP M&A	6	1	1
8	FH	AK	Chemicals	VP M&A	15	1	1
9	JM	AK	Chemicals	Dir. Corporate Strategy	16	1	1.5
10	JG	AK	Chemicals	VP M&A	12	1	1
11	BF	SH	Oil & Gas	M&A Director	11	1	1
12	AS	SH	Oil & Gas	Dir. Legal M&A	9	1	1
13	NB	SH	Oil & Gas	VP M&A	15	1	1
14	JB	SA	Software	Head of Global Legal	15	1	1
15	PK	SA	Software	Head of Global M&A	16	1	1
16	GB	SA	Software	VP Special Projects	8	1	1
17	RW	SA	Software	Strategic Planner M&A	4	1	1

Table B
Robustness tests.

	Model 1		Model 2		Model 3		Model 4	
	Coeff	SE	Coeff	SE	Coeff	SE	Coeff	SE
Constant	0.057**	(0.021)	0.054*	(0.022)	0.031	(0.032)	0.068**	(0.025)
Mean of time between acquisitions	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
Variance of time between acquisitions	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
Acquirer size	-0.006	(0.003)	0.000	(0.000)	-0.004	(0.004)	-0.006 ⁺	(0.003)
Free cash flow	0.004	(0.005)	-0.006	(0.003)	0.004	(0.005)	0.002	(0.006)
Diversification	-0.003	(0.007)	0.004	(0.005)	-0.003	(0.007)	-0.005	(0.007)
Prior performance	-0.038 ⁺	(0.020)	-0.004	(0.007)	-0.038 ⁺	(0.020)	-0.033	(0.020)
Acquisition experience	-0.001 ⁺	(0.000)	-0.038	(0.020)	-0.001 ⁺	(0.000)	-0.001 ⁺	(0.001)
Sales growth	-0.004	(0.002)	-0.001	(0.000)	-0.004	(0.002)	-0.004	(0.003)
Relatedness	-0.000	(0.003)	-0.004	(0.002)	-0.000	(0.003)	-0.000	(0.003)
Percent cash	0.000**	(0.000)	-0.000	(0.003)	0.000**	(0.000)	0.000**	(0.000)
Relative size	-0.027*	(0.011)	0.000**	(0.000)	-0.027*	(0.011)	-0.027*	(0.011)
Munificence	0.021	(0.018)	-0.027*	(0.011)	0.023	(0.018)	0.013	(0.021)
Dynamism	-0.021	(0.076)	0.020	(0.018)	-0.026	(0.076)	-0.048	(0.081)
Year dummies	Included		Included		Included		Included	
Inverse Mills ratio					0.010	(0.009)		
Endogeneity control							0.016	(0.018)
Practice as raw difference	0.000**	(0.000)						
Practice dummy			0.006**	(0.002)				
Practice					0.002**	(0.001)	0.002**	(0.001)
N	5,182		5,164		5,171		5,182	
F	3.01***		3.04***		2.88***		2.98***	
R ²	0.032		0.032		0.032		0.032	

Notes: ⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ (two-tailed tests reported)