

## **Navigating Challenging Contexts: Costs and Benefits of Codified Acquisition Experience**

### **Introduction**

Acquisition experience may help managers to improve acquisition processes in general, and acquisition integration in particular (Nikandrou and Papalexandris, 2007). However, a simple replication of previously accumulated experience seems insufficient (Schriber and Degischer, 2020), as managing acquisitions is not a simple repetition of frequent and homogeneous tasks (Zollo, 2009). Even though different acquisitions involve several similar sub-processes (Barkema and Schijven, 2008; Haspeslagh and Jemison, 1991; Trichterborn et al., 2016), research commonly highlights the complexity of acquisition integration as a key challenge in reaching acquisition goals (Angwin and Meadows, 2015; Birkinshaw et al., 2000).

In order to benefit from prior experience during acquisition processes, firms need to invest in deliberate learning mechanisms that result in generalizable task prescriptions (Chatterjee, 2009; Heimeriks, 2010) to create an explicit organizational memory (Oldroyd et al., 2019; Zollo, 2009; Zollo and Winter, 2002). Reflecting on experience fosters the identification of lessons learned (Levinthal and March, 1993) that can result in codified experience. Codified experience provides comprehensive guidance, offers prescribed tasks, and gives direction in complex situations, but it also may limit available options and it risks the misapplication of prior experience (Finkelstein and Haleblan, 2002; Heimeriks et al., 2012; Zollo, 2009). Consistent with this paradox, empirical evidence on the value of codified experience is equivocal (e.g., Heimeriks et al., 2012; King et al., 2020; Zollo, 2009), suggesting a need to consider contingent relationships (King et al., 2020; Puranam and Srikanth, 2007). Considering contingent relationships reflects that acquisition integration is not an enclosed and independent process, but rather it is embedded in multiple and varying contexts (Rouzies et al., 2019).

We examine manager reliance on codified experience in responding to varying contexts (Shi et al., 2012), and their joint effects on acquisition goal achievement (Cording et al., 2008). Specifically, we examine unique internal and surrounding industry contexts. For example, a specific internal integration context might result in productivity losses or less knowledge transfer between the involved firms due to turmoil disrupting inventors (Paruchuri et al., 2006; Ranft and Lord, 2002), or increased managerial turnover (Renneboog, 2000). Externally, industry rivals may take actions making firms involved in an acquisition lose market share after an acquisition, hindering the achievement of market expansion goals (Harding and Rouse, 2007).

In exploring the impact of context, our results demonstrate that internal turmoil has a direct and negative effect only on market expansion, but not on knowledge transfer; industry rivalry also does not have a direct effect on market expansion or knowledge transfer. However, firms applying codified experience *mitigate* the negative effect from industry rivalry on knowledge transfer and from internal turmoil on market expansion, while this experience *amplifies* the negative impact from industry rivalry on market expansion and from internal turmoil on knowledge transfer. Overall, our examination of a moderating effect of codified experience offers an opportunity to reconcile conflicting results between acquisition experience and outcomes (Barkema et al., 1996; Haleblan and Finkelstein, 1999; King et al., 2004, 2020; Schriber and Degischer, 2020; Zollo and Singh, 2004) by focusing on its applicability in different contexts and goals. Based on these findings, we provide three primary contributions to research.

First, we demonstrate the crucial role of contingencies for determining the effect of acquisition experience. Codified experience can help managers to navigate difficult contexts, as it allows the detection of cause-effect relationships to make linkages explicit, or it can provide direction, prescribe courses of action, and mitigate superstitious learning (Heimeriks, 2010; Zollo, 2009). Still, the reliance on codified experience also bears the risk of

misapplication and it can limit flexibility needed in varying contexts (Heimeriks et al., 2012). Moving ahead of a dichotomous view, our findings support contingency theory (Lawrence and Lorsch, 1967), and thereby broaden the understanding of the phenomenon by developing and empirically testing a logic explaining the circumstances where the application of codified experience is valuable or not (Finkelstein and Halebian, 2002; Teece, 1998; Zollo, 2009).

Second, our study answers calls for more research on the internal and external context of integration (Rouzies et al., 2019; Vester, 2002; Zollo and Meier, 2008). We connect internal and external acquisition goals of knowledge transfer and market expansion (Bertrand and Capron, 2015; Homburg and Bucerius, 2005, 2006; Ranft and Lord, 2002) along with internal and external conditions. Specifically, our findings suggest internal organizational structures may explain the varied applicability of codified acquisition experience. This answers to calls to contextualize acquisitions (King et al., 2016) and to develop an embedded perspective on acquisitions (Rouzies et al., 2019).

Third, we expand acquisition performance research. Most acquisition research aims to explain acquisition performance (King et al., 2004, 2020) using a variety of measurements (Zollo and Meier, 2008). Assessing performance is inherently challenging (March and Sutton, 1997). Still, most acquisition research uses stock market measures of performance (King et al., 2020) associated with “a quantum leap of faith in assuming that our measures relate to what the firm is seeking to achieve” (Richard et al., 2009, p. 725). We use measures at the level of managers to assess a combination of goal importance and goal-achievement for two goals (knowledge transfer and market expansion) identified as central in acquisition research that also require to some level of integration (Cording et al., 2008; Lee and Lieberman, 2009). Our approach answers identified needs for research using better and varied acquisition outcome measures (King et al., 2020; Zollo and Meier, 2008).

## **Theory and hypotheses**

Building on contingency theory (Lawrence and Lorsch, 1967), we argue that successful acquisition outcomes require joint consideration of internal and external contexts (Cording et al., 2008). Information asymmetry surrounding a target firm typically hinders effective integration (Coff, 1999; Graebner, 2009) that combined with uncertainty following an acquisition can negatively impact employee perceptions and behavior (e.g., Larsson and Finkelstein, 1999; Vaara, 2003). For example, internal threats can interfere with accomplishing acquisition goals (Capron et al., 1998; Cording et al., 2008). At the same time, while acquisitions can help firms respond to external change (Castellaneta and Conti, 2017; Heeley et al., 2006; Krishnan et al., 2004), the external environment continues to impede reaching acquisition goals (Cording et al., 2008; Keil et al., 2013; Lambkin and Muzellec, 2010; Rogan and Greve, 2015). The combined impact of internal and external contexts following an acquisition is that it makes integration more complex and difficult (e.g., Cording et al., 2008; King and Schriber, 2016).

We argue that theoretically developing the role that experience plays in managing integration is aided by considering acquisition goals, or “milestones that must be attained on the path to higher performance” that are closer to actual manager decisions (Cording et al., 2008, p. 745). Further, goal achievement reflects unique characteristics of acquisitions and makes them comparable.

While acquisitions can pursue different goals, we examine the importance and the outcomes of two goals that are important across industries (Haspeslagh and Jemison, 1991; Lee and Lieberman, 2009; Ranft and Lord, 2002) and that comprise relevant internal and external firm goals. Specifically, we examine: 1) knowledge transfer between the involved firms (Puranam and Srikanth, 2007; Ranft and Lord, 2002), and 2) market expansion (Bertrand and Capron, 2015; Homburg and Bucerius, 2005, 2006). Knowledge transfer between target and acquirer, and associated implications for acquisition integration is a consistent focus of

acquisition research (e.g., Ahammad et al., 2016; Choi and McNamara, 2018; Sarala et al., 2016; Vaara et al., 2012). Market expansion was identified early as a firm goal (Penrose, 1959) and it has been a focus of M&A research (Bertrand and Capron, 2015; Campbell et al., 2016; Homburg and Bucerius, 2005, 2006). As a result, we consider the importance of knowledge transfer and market expansion goals and their achievement in our logical development of the impact of context and in our analysis of the effects of codified experience. Further, as rivalry and internal turmoil are often confidential and the implications ambiguous, manager perceptions and interpretation of available information is invaluable (Graebner, 2004; King and Schriber, 2016).

Even though contextual challenges may impede the achievement of intermediary goals, acquisition managers can actively influence the integration process. For example, managers can engage in sensemaking and sensegiving to lower employee uncertainty and minimize internal challenges (Bilgili et al., 2017; Maitlis and Lawrence, 2007). Here, codified experience can provide guidance that helps managers to navigate challenging contexts while managing integration to provide resilience in handling disruptions (c.f. Stuart and Moore, 2017). Still, codification also comes with the disadvantage of limiting options and the risk of misapplying prior experience (Finkelstein and Haleblian, 2002; Heimeriks et al., 2012; Zollo, 2009). The codification of complex tasks is difficult (Karim and Mitchell, 2000), and identifying the contexts where the application of codified experience is relevant is even more challenging. For example, in cases of internal turmoil the application of codified experience might be beneficial for reaching market expansion goals, as it relies on clear and established guidelines to minimize customer disruptions. Meanwhile, by strictly following codified experience, managers may also limit flexibility needed in responding to employee concerns that can hinder knowledge transfer goals. Combined, this would result in a paradox where applying codified experience has positive and negative effects on intermediary goals. Moreover, we anticipate the effects vary depending on context, or they are contingent on specific circumstances. Below we argue that

in cases where guidance and direction are needed to achieve acquisition goals, the reliance on codified experience suppresses negative effects. At the same time, in cases where flexibility and pro-activeness are essential, a reliance on codification can foster negative effects. Anticipated relationships are summarized in Figure 1, and they are further developed in the following subsections.

----- Insert Figure 1 about here -----

### *Industry rivalry*

The degree of competitive rivalry is an important facet of a firm's environment. It influences firm actions and outcomes and it contributes to uncertainty on appropriate solutions (Derfus et al., 2008; Kilduff et al., 2010). While acquisitions are generally acknowledged to benefit the competitiveness of the involved firms, research has emphasized potential gains will be challenged by competitors (King and Schriber, 2016). Although efforts are typically made to keep acquisition negotiations secret, after announcement, the large resource investment, complex challenges, and the prolonged integration of acquisitions make acquiring firms especially vulnerable to competitive rivalry (Bauer et al., 2018; Clougherty and Duso, 2009; Cording et al., 2008; Kato and Schoenberg, 2012; Keil et al., 2013; King and Schriber, 2016; Rogan and Greve, 2015; Strobl et al., 2020). Further, while evidence suggests that acquisitions can also help non-merging rivals (Clougherty and Duso, 2009; Gaur et al., 2013), benefits to rival firms do not preclude them from trying to deny an acquirer's ability to achieve acquisition goals. We consider how manager perceptions of industry rivalry impact knowledge transfer and market expansion outcomes, and we assume mainly negative impacts. This is consistent with competitor retaliation lowering performance, and specifically that acquiring firms are vulnerable to competitor retaliation during integration (Kato and Schoenberg, 2012; Keil et al., 2013; King and Schriber, 2016). For example, Meyer (2008) concludes that the best time to attack a competitor is when they are involved in an acquisition.

*Knowledge transfer.* The ability to transfer knowledge is a fundamental part of competition (Zander and Kogut, 1995), making knowledge transfer between acquirer and target a significant aspect of the benefits expected from acquisitions (Puranam and Srikanth, 2007; Ranft and Lord, 2002). Still, achieving knowledge transfer requires exchange and coordination between acquired and acquiring firms (Cording et al., 2008), and knowledge transfer activities are vulnerable to industry rivalry for multiple reasons. Even though managers might get used to competition and retaliation (Smith et al., 1991), the necessary managerial effort during integration to achieve knowledge transfer may exceed available managerial capacity (Lamont et al., 2019). Second, competitor retaliation can directly influence retention of employees and customers following an acquisition (Kato and Schoenberg, 2012; Rao and Drazin, 2002) to hamper knowledge transfer. For example, employees of combining firms often get job offers from competitors following an acquisition announcement (Brown et al., 2003), and associated turnover results in a loss of social capital that was the source of value in an acquisition (Bilgili et al., 2017; Ranft and Lord, 2002). Third, competitor responses can simply have the objective of creating ambiguity (Stalk, 2006) to delay, distort, or otherwise hamper integration efforts. For example, rival firms to an acquirer can increase research and development (R&D) with less risk due to acquirer distraction, and any resulting innovation can make knowledge from a target firm less valuable (Valentini, 2016). The combined implication is that rivalry surrounding an acquisition can complicate knowledge transfer. Therefore, we predict:

**Hypothesis 1.** *Industry rivalry negatively influences knowledge transfer in acquisitions.*

*Market expansion.* Achieving market expansion goals depends on successful organizational integration (Cordings et al., 2008) that makes an acquirer vulnerable to industry rivalry (King and Schriber, 2016). Specifically, market expansion requires the coordination of downstream activities, such as cross-selling, marketing, branding, or sales forces (Capron and Hulland, 1999; Vermeulen and Barkema, 2001). Achieving this likely is threatened by an internal focus in the combining firms (Cording et al., 2008; Kato and Schoenberg, 2012),

limited managerial capacity (Lamont et al., 2019), and competitor actions to poach key employees (Kato and Schoenberg, 2012), create ambiguity (Stalk, 2006) or launch new R&D efforts (Valentini, 2016). In addition, increased competitive overlap and resource dependence weakens customer relationships following an acquisition (Rogan, 2014; Rogan and Greve, 2015). Rivals can attempt to win over customers during integration (Kato and Schoenberg, 2014), especially as customers sometimes feel abandoned when the acquiring firm turns attention inwards (Öberg, 2014). For example, industry rivals can take actions, such as lowering prices, that result in a loss of market share for combining firms (Harding and Rouse, 2007; Kato and Schoenberg, 2012; Meyer, 2008) with to two-thirds of acquiring firms losing market share (Harding and Rouse, 2007). Overall, competitor retaliation negatively impacts market expansion following an acquisition, and we predict:

**Hypothesis 2.** *Industry rivalry negatively influences market expansion in acquisitions.*

#### *Internal turmoil*

In general, turmoil limits the ability of firms to plan and achieve needed coordination (Hatum and Pettigrew, 2004). For acquisitions, integration drives organizational turmoil from layoffs and cost-cutting measures that increase employee anxiety (Meglio et al., 2015). An acquisition contributes to lower employee job satisfaction, and increased employee resistance and turnover (Daniels and Hollifield, 2002; Larsson and Finkelstein, 1999; Leong et al., 1996). Integration changes and coordination requirements can make needed coordination more difficult following an acquisition (Lamont et al., 2019; Maitlis, 2005; Stensaker et al., 2008). Next, we develop how internal turmoil impacts knowledge transfer and market expansion goals.

*Knowledge Transfer.* Acquisitions absorb managerial attention and they contribute to a short-term focus on financial versus strategic controls that can hinder knowledge transfer (Hitt et al., 1996; Puranam et al., 2003). For example, following an acquisition, acquirer R&D spending typically falls and this can signal integration challenges (Higgins and Rodriguez, 2006; Szücs, 2014). Knowledge transfer depends on trust and knowledge sharing routines to



access complementary employee skills (Sarala et al., 2016), and needed conditions for knowledge transfer typically suffer under internal conflict and turmoil following acquisitions (Ahammad et al., 2016). Internal turmoil after an acquisition contributes to lower innovative performance in terms of both quantity and quality (Kapoor and Lim, 2007; Paruchuri et al., 2006), suggesting it hampers knowledge transfer. Specifically, conflict and internal turmoil contribute to misunderstandings and lead to the loss of desired capabilities (Ranft and Lord, 2002). For example, Ernst and Vitt (2000) find that one third of key inventors change employers following an acquisition, leading to a loss of valuable knowledge. Therefore, we predict:

**Hypothesis 3.** *Internal turmoil negatively influences knowledge transfer in acquisitions.*

*Market expansion.* We also anticipate a negative effect of internal turmoil on market expansion. Internal turmoil absorbs managerial attention (Cording et al., 2008; Lamont et al., 2019), reducing the ability of managers to address customer uncertainty (Homburg and Bucerius, 2006; Öberg, 2014). Additionally, direct relationships to customers might be affected by internal turmoil, as acquisitions involve serious and sometimes unexpected changes for customers (Havila and Salmi, 2000; Rogan, 2014; Rogan and Greve, 2015). Even when serious problems are avoided, acquisitions can still disrupt informal social relationships with customers (Anderson et al., 2001; Bocconcelli et al., 2006; Öberg et al., 2007). For example, internal turmoil results in poorly coordinated customer service (Angwin, 2004; Kato and Schoenberg, 2014), and acquisitions lower customer retention and market share (Harding and Rouse, 2007; Homburg and Bucerius, 2005; Zollo and Meier, 2008). Consequently, we predict:

**Hypothesis 4.** *Internal turmoil negatively influences market expansion in acquisitions.*

*Moderating effects of codified experience*

One potential way to reduce the negative impacts of industry rivalry and internal turmoil during integration involves codifying experience (Garud et al., 2011). Experience from prior acquisitions “can accumulate in both explicit forms, such as manuals, blueprints, information systems, and implicit forms, such as human memory” (Zollo and Singh, 2004, p. 1238).

Experience accumulation and codification offers benefits (Echajari and Thomas, 2015; Haleblan et al., 2006) by creating an organization memory (Huber, 1991; Zollo, 2009). While Zollo and Singh (2004) found no significant effect of experience accumulation, they find a significant positive effect of experience codification on acquisition performance.

Codified experience can help managers to extract cause-effect relationships to better deal with complexity (Heimeriks, 2010; Zollo, 2009). For example, associated routines foster the reflection of past decisions and processes (Zollo and Winter, 2002), disclose hidden assumptions (Heimeriks, 2010; Zollo, 2009), and strengthen knowledge sharing within a firm (Bingham et al., 2015; Zollo, 2009). Codified experience in the form of reports, manuals, and tools aid managers dealing with uncertainty (Huber, 1991; Zollo, 2009), and it can facilitate implementation of changes necessary for knowledge transfer more effectively and efficiently (Nikandrou and Papalexandris, 2007). For example, standard ‘industry recipes’ guide and frame manager decision-making (Spender, 1989) helping to reduce inherent complexity. This might reduce manager attention on integration related tasks and free-up managerial capacity to focus on competitor moves and industry monitoring.

Additionally, codified experiences reduce ambiguity as decisions become transparent, which can reduce political behavior (Vaara, 2003). This is important as political behavior triggers employee uncertainty and dissatisfaction (Ferris and Kacmar, 1992; Monin et al., 2013) making it easy for competitors to poach employees of combining firms (Brown et al., 2003; Feldman and Spratt, 1999). Moreover, codified experiences might allow managers to better identify key employees and to offer retention packages that can reduce employee turnover (Brown et al., 2003) and lost social capital that often constitutes the anticipated source of value from an acquisition (Bilgili et al., 2017; Ranft and Lord, 2002). Lastly, managers might be able to execute acquisitions more efficiently and effectively when experience is codified. This results in less acquirer distraction and can free up resources for

other activities such as R&D to keep pace with rival firms increased R&D activities (Valentini, 2016). Thus, we predict:

**Hypothesis 5a.** *Codified experience mitigates the negative effect of industry rivalry on knowledge transfer in acquisitions.*

Even though the blueprint created by the codification of experience provides clear guidelines, a simple one-to-one translation from one situation to another might not be appropriate (Zollo, 2009). For example, Bocconcelli and colleagues (2006) find that increased standardization and formalization can negatively impact existing customer relationships following an acquisition that offers opportunities for rivals. Coordination of downstream activities is complex, as it relies on the reactions of multiple stakeholders, including: rivals, customers and suppliers (King and Schriber, 2016). While codified experiences foster efficiency and effectiveness internally during integration, the successful coordination of downstream activities to achieve market expansion goals requires the sensing and seizing of opportunities, or a greater level of autonomy and flexibility (Alvarez et al. 2013). The application of blueprints might even weaken customer relationships (Rogan, 2014; Rogan and Greve, 2015) and make customers feel abandoned (Öberg, 2014). For example, Quaker Oats acquired Gaines to increase its market share, but it subsequently lost any increase in market share over the next three years (Krüger and Müller-Stewens, 1994). Therefore, we predict:

**Hypothesis 5b.** *Codified experience augments the negative effect between industry rivalry and market expansion in acquisitions.*

While acquisitions enable the transfer of otherwise non-marketable resources (James, 2002) and codification facilitates knowledge transfer (Cummings and Teng, 2003), target firm managers have better knowledge of acquired resources and how they can be used in a combined firm (Graebner, 2004). This means that codified experience by an acquirer is unable to account for intricacies of socially constructed knowledge in a target firm, reflecting that integration planning remains inherently incomplete (Bauer et al., 2015). Even though codified experience

helps managers in executing effective and efficient integration, it can also reduce the range of needed measures for facilitating knowledge transfer. Standardization, an inherent part of codified experiences, favors short-term gains over strategic knowledge transfer goals (Hitt et al., 1996; Puranam et al., 2003). Additionally, as knowledge transfer requires trust, knowledge-sharing routines, and access to complementary employee skills (Sarala et al., 2016), it ultimately rests on humans. As human capital is a key differentiator among firms (Swart and Kinnie, 2003), its individual nature provides a clear barrier to simple replication in codified experience (Lippman and Rumelt, 1982; Teece, 1998). For example, Bauer, King and Matzler find that: “the human aspect of each acquisition is likely unique and limits applying experience to later acquisitions” (2016, p. 153). As a result, codification may negatively impact knowledge transfer by limiting the variety of responses to internal challenges. Despite the reduced ambiguity and increased transparency, the strict application of codified experience can disrupt employees and aggravate the challenges of learning and applying tacit knowledge in new contexts or a combined organization (Nonaka, 1994; Ranft and Lord, 2002). The risk is that valuable knowledge will be lost when employees leave following an acquisition (Graebner, 2004; Ranft and Lord, 2000; Smith, 2001). Therefore, we predict:

**Hypothesis 5c.** *Codified experience augments the negative relationship between internal turmoil and knowledge transfer in acquisitions.*

As internal turmoil increases coordination costs and harms social relationships, including those with customers (Bocconcelli et al., 2006; Cording et al., 2008; Kato and Schoenberg, 2014; Rogan and Greve, 2015), we argue that codified experience can support the effective and efficient redeployment of resources for market development (e.g., Capron et al., 1998; Capron and Hlland, 1999; King et al., 2008). Codified experience may play a central role in upholding organizational routines under internal turmoil. For example, by providing clear guidelines, market expansion can be more effective and disruptions of social relationships to customers minimized. Additionally, codified experiences might allow acquirers to identify

key employees, offer retention packages, and reduce the negative effects of internal turmoil by retaining key social capital (Bilgili et al., 2017; Ranft and Lord, 2002) necessary to maintain and grow downstream activities. Industrial marketing literature on supplier customer relationships suggests that guidelines can help to proactively respond to changes (Flint et al., 1997) and improve customer profitability effects (Venkatesan and Kumar, 2004). Additionally, codified experience can help managers to coordinate customer relationships despite internal turmoil and to effectively address customer uncertainty. Further, prior experience codification can likely make that process easier in subsequent acquisitions (e.g., Haleblan and Finkelstein, 1999). Thus, we propose:

**Hypothesis 5d.** *Codified experience mitigates the negative relationship of internal turmoil on market expansion in acquisitions.*

## **Methods**

We used a mail and internet survey to collect primary data capturing manager perceptions to test the proposed relationships, as secondary data lacks the depth of information needed for examining integration (Zaheer et al., 2013). For sample construction, we used the Zephyr database provided by Bureau von Dijk. In order to make included acquisitions comparable (Moschieri and Campa, 2009), we constrained our sample with regards to acquirer size, region, and time period. First, we selected acquirers with an operating revenue of less than one billion Euros, as we wanted to observe the effect of one acquisition, which might be rather difficult in larger multinational enterprises. Additionally, restricting the firm size increased the likelihood to identify a person responsible for the acquisition (Kumar et al., 1993). Second, we restricted our sample to acquirers from Austria, Germany and Switzerland, hence the German-speaking part of central Europe. With this regional focus we intended to mitigate cultural and institutional biases (Weigelt and Sarkar, 2012). For example, German-speaking countries have comparable labor laws that make restructuring more difficult (Capron and Guillén, 2009). Third, the timeframe was set from June 2012 to January 2014 for three reasons: 1) performance

improvement takes three to five years after deal closing (Ellis et al., 2009; Homburg and Bucerius, 2005); 2) the short length of time in between deal completion and data collection reduces the risk of retrospective bias (Reus and Lamont, 2009); and 3) the likelihood that managers are still available is increased (Bauer et al., 2016). Chief Executive Officers, Chief Financial Officers and other top-level managers responsible for M&A and strategy were chosen as key respondents, since they are considered to be most-knowledgeable on our topic (Ellis et al., 2009). Even though we would have preferred to ask multiple respondents per firm, the high rank in the organizational hierarchy of the surveyed persons made it untenable to request more than one individual (Homburg and Bucerius, 2006), as well as turnover limiting the inclusion of target firm managers.

In February 2015, a two-stage pretest with M&A experts from academia and practice was conducted to improve the structure, wording and scales (Bryman and Bell, 2011; Dillman, 1991), leading to minor changes (e.g., some examples were added and some formulations were simplified). In the first stage, we invited participants to “think aloud” ask questions, and make recommendations. In the second stage, we tested the updated questionnaire without any face-to-face contact, and we asked participants to comment in the end. Based on the positive feedback, the questionnaire was sent out to 448 managers by mail, including a cover letter providing a short overview of the research project (Saunders et al., 2012) and results of a study on M&A that was conducted in 2014 by the authors to increase the motivation to respond, as well as a return envelope. In some cases, the survey was forwarded to a person considered to be better informed (Datta and Grant, 1990). Three weeks after sending out the postal items, we made follow-up telephone calls. To increase response rates, we offered the respondents the opportunity to answer the questionnaire over the phone or online (Bryman and Bell, 2011; Saunders et al., 2012). In the end, we received 115 completed questionnaires, displaying to a response rate of more than 25 percent consistent with prior research collecting primary data in acquisitions (Homburg and Bucerius, 2005, 2006). Our sample size compares favorably to

existing M&A research depending on surveys published in leading management journals (e.g., Capron and Pistre, 2002; Capron and Shen, 2007; Saxton and Dollinger, 2004).

### *Measurement development*

For measurement development, we relied on already existing scales where available and developed new scales for perceptions of industry rivalry and internal turmoil. For the latter two constructs, we applied a multi-stage approach aiming at the development of items that reflect the main components but have unique attributes (Churchill and Peter, 1984). First, we defined the constructs, collected, and summarized previous conceptualization and assessment attempts. Second, based on this work we iteratively collected a comprehensive item pool to capture all potentially relevant content (Clark and Watson, 1995). This list was then discussed and refined with researchers and managers with heterogeneous backgrounds aiming to improve the clarity and to reduce redundancies. Next, we tested our scales in the previously described pretest. A detailed description of our scales can be found in the Appendix A.

*Industry rivalry* was assessed with four indicators on a seven-point Likert scale. We asked the managers to rate the competitive pressure, price competition, competitive agitation, and differences among competitors regarding price and quality.

*Internal turmoil* was assessed with three indicators on a seven-point Likert scale indicating whether the integration negatively affected the daily operations, managerial absorption by integration, or increased turnover of employees.

*Goal achievement* used the indicators developed by Cording and colleagues (2008) that were partially modified or extended. To reflect on the various acquisitions and their differences (Bower, 2001), we: 1) assessed the importance of the goals and 2), their achievement. The goal importance scale ranged from 1-7 and the goal achievement scale from -3 to 3. The multiplication of each indicators importance and achievement allowed us to calculate importance-weighted measures.

*Knowledge transfer goal achievement* used three indicators for importance and the same indicators for achievement. In addition to the items used by Cording and colleagues (2008), we added one item capturing the knowledge transfer from target to acquirer.

*Market expansion goal achievement* was assessed with three indicators capturing the expansion to new customers and/or geographic markets, market share growth, and cross-selling (Cording et al., 2008).

*Codified experience* was assessed with three indicators developed by Dhanaraj, Lyles, Steensma and Tihanyi (2004) on a seven-point Likert scale. Even though this scale was originally developed for a joint venture context, only minor modifications were necessary to achieve a fit for the acquisition context.

*Controls.* As other variables might impact our research model, we implemented three categories of control variables. First, we controlled for the industry by assessing the average acquirer and target industry growth in the three years preceding the described acquisition. This is important as industry growth determines acquisition behavior and integration approaches (Bauer et al., 2017). Second, we controlled for acquiring firm characteristics. Here, we controlled for firm size in terms of annual sales and for prior acquisition experience in terms of the number of prior acquisitions in five years preceding the described one. Both controls are indicators for well-developed structures and acquisition processes. Third, we control for acquisition specific characteristics to control for the relative size of the target firm compared to the acquirer in terms of annual sales, and the degree of structural integration. Relative size is an important indicator as larger targets are difficult to integrate and might trigger in-group or out-group biases (Dao et al., 2017), while smaller ones may receive less managerial attention. Structural integration is important as it might disrupt inventors and lead to productivity losses (Paruchuri et al., 2006; Puranam et al., 2009).



### *Assessing external and internal validity*

We tested our sample for potential late or non-response bias, and we find no significant differences between the answers of early and late respondents. Additionally, we find no significant differences regarding relative size and annual sales of our sample compared to a random sample of our basic population. Therefore, we assume that late or non-response bias does not constitute a threat to our sample's reliability (Armstrong and Overton, 1977). As different methods for data collection can influence the responses of individuals (Podsakoff et al., 2003), we compared the surveys filled out via internet, mail and telephone using a non-parametric Kruskal-Wallis test. Again, the analysis revealed no significant differences, leading us to the expectation that the data collection method does not distort our data.

### *Common method bias*

Due to our single informant research design, relying on one source per acquirer and at a single point in time, common method bias might be a serious issue for our data (Podsakoff et al., 2013; Podsakoff et al., 2003). Although Spector (2006) refers to common method bias as an "urban legend", we implemented several a-priori and post-priori measures to mitigate and to control for method variance.

*A-priori.* We focused on top managers and the area of conflict of respondents' cognitive abilities and the difficulty of the task, and this likely limits concerns about non-differentiated answers (Krosnick, 1999) or a general tendency to agree (Baumgartner and Steenkamp, 2001). As the willingness to participate in surveys correlates with the accuracy of answers (Podsakoff et al., 2012), we assume the managers in our sample are busy but were interested in the topic of the study or that satisficing and stylistic answers are less likely (Krosnick, 1999). Further, since we guarantee anonymity in our survey and acquisition failure is quite common, we assume that respondents providing socially desirable answers is less likely (Podsakoff et al., 2012). We also applied latent variable measurement and separated the constructs in the survey to minimize

context effects (Weijters et al., 2009). Lastly, our measurement development process intended to avoid ambiguous and unclear formulations that trigger biases (Doty and Glick, 1998).

*Post-hoc.* We first applied Harman's single factor test, which revealed no serious concerns (Podsakoff and Organ, 1986). Harman's single factor test has been criticized, so we applied another approach recommended by Podsakoff and colleagues (2003) and Williams, Edwards and Vandenberg (2003). Following the guidelines for PLS analyses developed by Liang, Saraf, Hu, and Xue (2007), we compared the variance caused by the substantive constructs with the method variance. The ratio of substantive factor and method factor is 81.8 to 1, suggesting that common method bias is not a serious issue for our data (see Appendix B).

## **Results**

Table 1 displays the descriptive statistics of our data for the relative size of the target company in terms of annual sales compared to the acquirer, the number of previous acquisitions in five years preceding the analyzed one, annual sales of the combined entity, industry growth of the acquirer and the industry growth of the target. The values reflect our population, so we assume that sampling bias is not a serious issue for our data. For example, most firms in our sample are growing 1 to 5 percent, and this is consistent with approximately the 2 percent average growth in the EU during our survey timeframe. Additionally, over half of the surveyed firms have annual sales below 250 million Euro and this is consistent with the importance of small to medium enterprises (SME) in the EU.

----- Insert Table 1 about here -----

### *Analytical approach*

For assessing our proposed relationships, we applied a variance-based structural equation modelling (SEM) approach with the software SmartPLS (Ringle et al., 2005) instead of using a covariance-based approach for several reasons. First, a variance-based approach is more suitable for complex models (Hair et al., 2011). Second, this approach provides reliable estimates in cases of exploratory research (Sarstedt et al., 2011). Third, even though recently

criticized (Rönkkö and Evermann, 2013), variance-based estimations are appropriate for smaller sample sizes (Hair et al., 2011, 2013; Henseler et al., 2014). Lastly, variance-based approaches aim to explain the variance of the dependent variables. This fits well with our research intention, as we want to explain how industry rivalry and internal turmoil influence acquisition goal achievement with the moderating effect of codified experience. For analyzing the relationships between our variables, we applied the path-weighting scheme (Hair et al., 2013; Henseler et al., 2009). For assessing the significance of the relationships, we applied the bootstrapping procedure with 5,000 iterations (Hair et al., 2011) allowing for individual sign changes (Hair et al., 2012; Henseler et al., 2009).

#### *Assessing the measurement models and the structural model*

Before testing our proposed relationships, we first examined the reliability and validity of our measurement models and second, the structural model as suggested by Hulland (1999). Our constructs are operationalized as reflective measures, as the indicators co-vary (Jarvis et al., 2003). Consequently, we calculated composite reliability (CR) and the average variance extracted (AVE) to assess the reliability of our measures. We chose CR instead of Cronbach's Alpha for the assessment of our scales as it takes differences in factor loadings into account (Nunnally, 1978) and thus, appears to be superior (Henseler et al., 2009; Werts et al., 1974). Values of above 0.7 are seen as satisfactory at early stages of research while values below 0.6 indicate no reliability (Henseler et al., 2009; Hulland, 1999; Nunnally and Bernstein, 1994). Our variables are reliable and valid, as all CR values exceed the recommended threshold of 0.7 (range between 0.742 and 0.898) and the AVE values are all greater than 0.5 (range between 0.511 and 0.746). Additionally, we analyzed the factor loadings that all exceed the threshold of 0.707 apart from two items of internal turmoil (0.514 and 0.567). Due to the exploratory character of our research, the sufficiency of CR and AVE, and the values not undercutting the lower threshold of 0.4, we decided to keep the indicators in the measure (Hulland, 1999). Still,

low loadings made us delete one item of our knowledge transfer goal achievement scale and one of our market expansion goal achievement scale.

Discriminant validity was assessed with three different tests. First, we compared the correlations of our variables with the square roots of the corresponding AVE values according to Fornell and Larcker (1981). As the square roots of the AVE values exceed the values of the correlations of the constructs, the Fornell-Larcker criterion is fulfilled. Second, we assessed discriminant validity on indicator level with cross-loadings (Henseler et al., 2009; Hulland, 1999). The results provide discriminant validity on indicator level. Third, we assessed the heterotrait-monotrait ratio (HTMT). With a value of 0.364 our greatest value is far below the recommended threshold of 0.85 (Clark and Watson, 1995; Henseler et al., 2015). Combining the results of the three tests, we conclude that discriminant validity is established, see Appendix C and D for details.

Figure 2 displays the results of our PLS analysis. The  $R^2$  values of knowledge transfer (0.252) and market expansion (0.353) indicate that our research model can explain a substantial amount of variance. The Stone Geisser's  $Q^2$  values of the dependent variables suggest that our model has predictive relevance (Geisser, 1975; Henseler et al., 2009; Stone, 1974), as our values are 0.001 for knowledge transfer and 0.092 for market expansion. Compared to covariance-based SEM approaches, PLS only offers a limited variety of model fit measures. We calculated the standardized root mean square residual (SRMR) which value is 0.075 and thus, below the threshold of 0.08 (Hu and Bentler, 1999). This indicates a sufficient model fit.

----- Insert Figure 2 about here -----

### *Hypotheses testing*

In addition to reporting the path coefficients for our proposed hypotheses, we also report the effect size  $f^2$  (Hair et al., 2012; Henseler et al., 2009) to show the contribution of an independent variable in explaining variance ( $R^2$ ) of a dependent variable, and the corresponding p-values derived from the bootstrapping procedure.

We do not find empirical evidence for H1 that suggested a negative, direct effect of industry rivalry on knowledge transfer goal achievement. Neither do we find support for H2, or a negative, direct effect of industry rivalry on market expansion goal achievement. We also do not find support for H3 that suggested a negative, direct impact of internal turmoil on knowledge transfer goal achievement. However, we find support for the direct, negative effect of internal turmoil on market expansion goal achievement (H4). The path is negative ( $\beta = 0.221$ ) and significant ( $p = 0.008$ ) while the effect size ( $f^2 = 0.069$ ) indicates a moderate to strong effect. The largely insignificant results for the direct effects suggest that, while both external and internal effects may trigger uncertainty, there may be a contingency affecting these relationships (King et al., 2020). Thus, we shift our focus to the interaction effects of codified experience.

Prior to assessing interaction effects, we standardized the variables (Aiken and West, 1991) and chose the product indicator option that uses all possible pair combinations of predictor and moderator variables. As predicted, we find a positive interaction for codified experience and industry rivalry (H5a), indicating that codified experience is most valuable for achieving knowledge transfer goals in competitive markets ( $\beta = 0.324$ ;  $p = 0.001$ ;  $f^2 = 0.116$ ). Simultaneously, we also confirm H5b that predicts a negative interaction of codified experience on the relationship of industry rivalry on market expansion goal achievement. The moderator has a significant and negative effect ( $\beta = -0.201$ ;  $p = 0.015$ ;  $f^2 = 0.050$ ). In cases of internal turmoil, codification has, as predicted in H5c, also a negative effect ( $\beta = -0.216$ ;  $p = 0.014$ ;  $f^2 = 0.049$ ) suggesting that applying codified experience does not pay off in addressing internal turmoil effects on knowledge transfer. Meanwhile, in cases of internal turmoil, codified experience has a significant and positive interaction effect ( $\beta = 0.276$ ;  $p = 0.007$ ;  $f^2 = 0.099$ ) on market expansion, as predicted in H5d. Please see Figure 3 to aid interpretation of the interaction effects.

----- Insert Figure 3 about here -----

The control variables have some impact on our model. Interestingly, we find a positive effect of accumulated acquisition experience in terms of prior acquisitions on knowledge transfer goal achievement ( $\beta = 0.248$ ;  $p = 0.005$ ). This suggests that next to deliberate learning mechanisms other learning approaches might be relevant. We also find that the acquirer and target firms' industry growth positively influence market expansion goal achievement ( $\beta = 0.162$ ;  $p = 0.068$ ;  $\beta = 0.134$ ,  $p = 0.099$ ). However, it is only the industry growth of the target that fosters knowledge transfer ( $\beta = 0.228$ ;  $p = 0.017$ ). Other controls, such as firm size in terms of annual sales, relative size, or structural integration, do not have a significant impact on either knowledge transfer or market expansion.

## **Discussion**

While acquisition goals involving knowledge transfer and market expansion often remain unrealized due to inherent uncertainty on how to achieve them, research generally focuses on integration processes at the expense of an acquisition's internal and external context (e.g., Bauer et al., 2015; Rouzies et al., 2019; Vester, 2002). We draw on contingency theory (Lawrence and Lorsch, 1967) to develop how success on acquisition outcomes requires joint consideration of internal and external contexts (Cording et al., 2008). Further, we develop how managerial attempts to mitigate internal and external contextual effects have differential effects on achieving knowledge transfer and market expansion goals. Simply considering direct effects and explicit efforts to accumulate acquisition experience is not sufficient. Instead, our findings reveal that codified experience is only rewarded in specific contexts. Our findings support an argument that considering acquisitions either from an external (e.g., rivalry effects on market expansions) or internal point of view (e.g., internal turmoil effects on knowledge transfer) is insufficient, and that internal and external aspects need simultaneous consideration. We next develop how this is relevant for research and management practice.

### *Research implications*

While acquisition research emphasizes the risks of internal turmoil (Ranft and Lord, 2002), increasing attention is given to external events, such as competitors poaching customers during acquisition integration (Kato and Schoenberg, 2014). We find only internal turmoil was directly and negatively related to challenges in realizing market expansion, while other direct effects from internal turmoil and industry rivalry on knowledge transfer and market expansion remain insignificant. Our findings suggest that improved understanding of whether acquisitions are likely to reach important strategic goals requires joint consideration of internal and external aspects of an acquisition (Bauer et al., 2018), in turn supporting a contingency perspective on acquisitions and acquisition integration (King et al., 2020).

Considering codification of prior experience entails managerial effort, effects for codification depend on whether the source of dynamism and the goal is external or internal, presenting a paradox. Counterintuitively, codified experience is not useful when the contextual challenge and the goal are both either internal or external, but codification is useful when challenge and goal are on different sides of the organizational boundary. Specifically, codified experience amplifies the negative impact from external rivalry on market expansion and that from internal turmoil on knowledge transfer, largely realized between the involved firms (Ranft and Lord, 2002). However, codified experience helps to reduce the negative effects of industry rivalry on knowledge transfer, as well as the negative impact of internal turmoil on reaching market goals (Homburg and Bucerius, 2005). We argue that the explanation for observed patterns rests in organizational structures, and specifically the level of developed functional knowledge and coordination.

Responsibility for handling internal turmoil regarding employees, and reporting structures usually falls on HR and accounting departments. In contrast, external turmoil relating to markets is more closely related to sales and marketing staff. While codified experience increases rigidity in *established* responsibilities (e.g., marketing staff for realizing market

expansion synergies), it also provides guidance for acting *outside* of normal responsibilities. For instance, relying on standard operating procedures, templates, checklists and other forms of codified knowledge (Zollo and Singh, 2004) make sales and marketing departments and others rely on specified knowledge to behave predictably and rigidly, making the achievement of market expansion under industry rivalry less likely. By the same token, the normal routines of HR departments and others responsible for knowledge transfer arguably become insufficiently flexible and less able to apply their skills in handling unexpected events, such as internal turmoil. This echoes insights that formal integration efforts may be insufficiently flexible (Bauer et al., 2017; Öberg, 2014).

However, to be useful, codified knowledge can provide important support for managers to act outside of regular responsibilities (e.g., HR supporting market expansion; sales and marketing staff supporting knowledge transfer). For instance, it is possible that the templates and routines that restrict employees within their normal responsibilities under challenging conditions can assist in cross-functional communicating and coordination. This relates to and extends research suggesting that acquisition experience may be too rigid and inflexible to adjust to the idiosyncrasies of a particular target (Heimeriks et al., 2016). Our findings advance this insight to suggest there are structural limits to the applicability of experience within acquisitions.

Prior studies have pointed to the role of dedicated M&A departments for acquisition experience (Trichterborn et al., 2016). While codified experience and routinized behavior may operate as a repository for how to act (Zollo and Winter, 2002), or a ‘handrail’ to hang on to that works in times of internal turmoil, experience supports integration flexibility and the ability to adjust to upcoming events (Schriber et al., 2019). However, insufficiently considering context creates risks from overemphasizing simple effects from learning theory (Cormier and Hagman, 2014; Ellis et al., 2011). While acquisition research is heavily concerned with how involved firms coordinate and integrate (e.g., Larsson and Finkelstein, 1999; Zaheer et al.,



2013), our study provides initial empirical support that coordinating acquisition experience may play an underestimated role. Specifically, it is important to consider where in the organization experience is accumulated and applied (Schriber and Degischer, 2020).

Lastly, our findings suggest that performance variation between acquisitions drawing on codified experience can be explained by paying more attention to acquisition goals (e.g., market expansion) and the source of dynamism (e.g., internal turmoil or industry rivalry). As a result, our findings help reducing some of the contradictory findings regarding the role of experience in acquisitions (King et al., 2020; Schriber and Degischer, 2020). Additionally, the assessment of goal achievement makes acquisitions comparable with each other, as it combines goal importance scores with goal achievement scores (Cording et al., 2008).

#### *Managerial implications*

A clear managerial implication is the importance of understanding the circumstances when strict adherence to corporate policies may be counterproductive. Specifically, indiscriminate application of prior experience can negatively impact situations where social or other contextual factors require flexibility. As a result, firms need to develop managers with broad experience necessary to: 1) identify common patterns and extract lessons learned for acquisition integration, and 2) recognize when circumstances require more tailored or flexible responses. The latter is necessary as each acquisition differs from each other (Bower, 2001), but greater experience may allow tailoring corporate policy to different circumstances appropriately (Haleblian and Finkelstein, 1999).

A related implication is that situations with unique relationships with employees or customers require a greater variety of actions to address uncertainty stemming from internal and external sources, respectively. With customers, uncertainty injected by competitor rivalry towards market expansion when relationships between acquirer and customer have not been fully developed. With employees, uncertainty mainly results from internal turmoil that drives employee dissatisfaction that hinders the transfer of socially embedded knowledge (Ranft and

Lord, 2002). Our findings also suggest that moves by competitors, customers, and suppliers to reduce acquisition goals (King and Schriber, 2016; Uhlenbruck et al., 2017) can actually be facilitated and made more effective when an acquirer has a known playbook following standard procedures.

#### *Limitations and future research*

Our study has several limitations offering opportunities for additional research. First, we apply a survey design research capturing the perceptions of a single key informant. Even though we implemented a priori and post hoc measures to mitigate and to control for common method bias, we cannot fully exclude this issue. Further, key informant bias might be an issue for our data. Nonetheless, the descriptive results of our data reflect the real situations of the investigated economy, suggesting our results are not dramatically biased. Additionally, while within accepted norms, our sample size is small and insignificant relationships may become significant with a larger sample. Second, we restricted our sample to the German-speaking countries to mitigate cultural and translation issues. Our results might differ in other regions of the world, as labor protections are strong in these countries, and this may lower employee uncertainty and internal turmoil. Third, the acquiring firm size restriction might exclude well-established acquirers with highly specified codified experience and M&A departments. This restriction fits well to the SME dominated economic region in central Europe and it provided an ability to focus on a single acquisition. However, larger firms may have more acquisition experience and specialization where tacit and codified experience interact. Further, larger firms would enable collecting additional information on public firms, such as objective measures of performance. While additional research is needed on the role of explicit versus tacit experience, acquisitions are rare events and contribute to managerial turnover (Krug and Shill, 2008; Zollo, 2009) and this may explain an increased importance of codifying acquisition experience (Zollo and Singh, 2004).

In closing, we hope our findings stimulate further research on acquisition experience that results in helpful managerial advice, as even minor improvements in acquisition integration and performance could have dramatic effects. Our findings suggest that codified experience constitutes a ‘double-edged sword’ in relation to acquisition goals of knowledge transfer and market expansion after accounting for internal turmoil and industry rivalry. While research finds that acquisition experience is either positive (i.e., Haleblan and Finkelstein, 1999) or negative (i.e., Uhlenbruck et al., 2006), our findings are consistent with contingency theory (Lawrence and Lorsch, 1967). The implication is profound, as accounting for context, reconciles conflicting research that contributes to indeterminate research results for acquisition experience (King et al., 2020).

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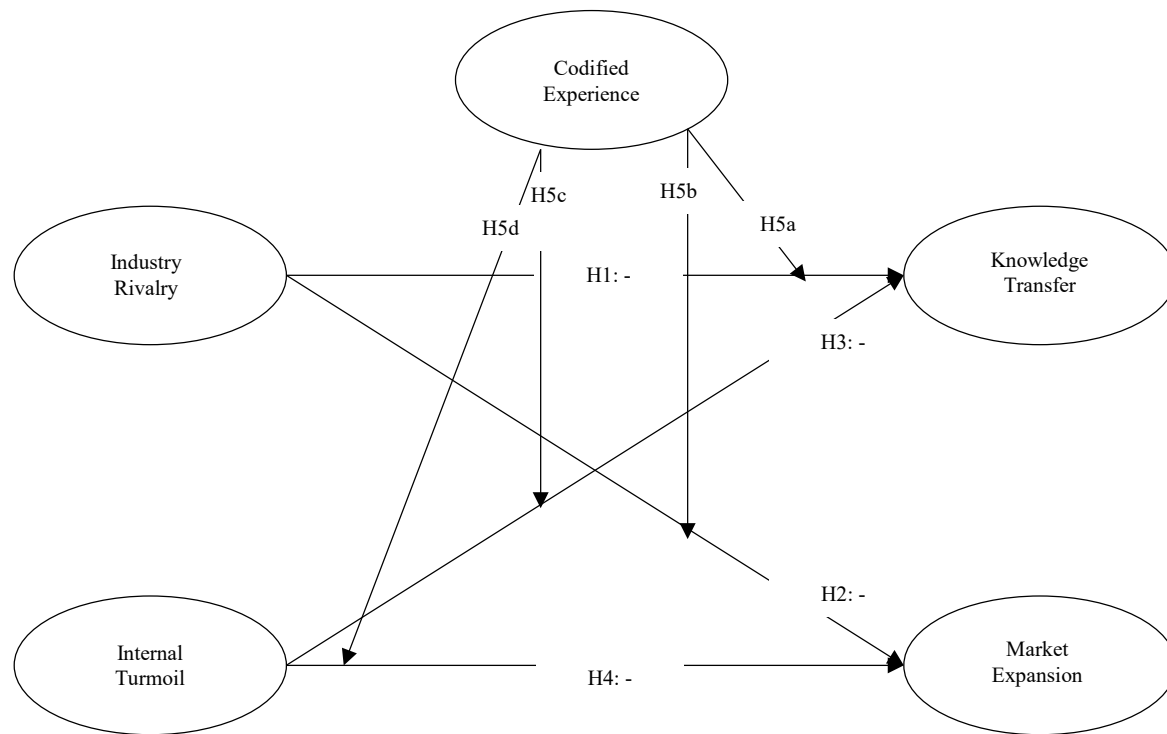
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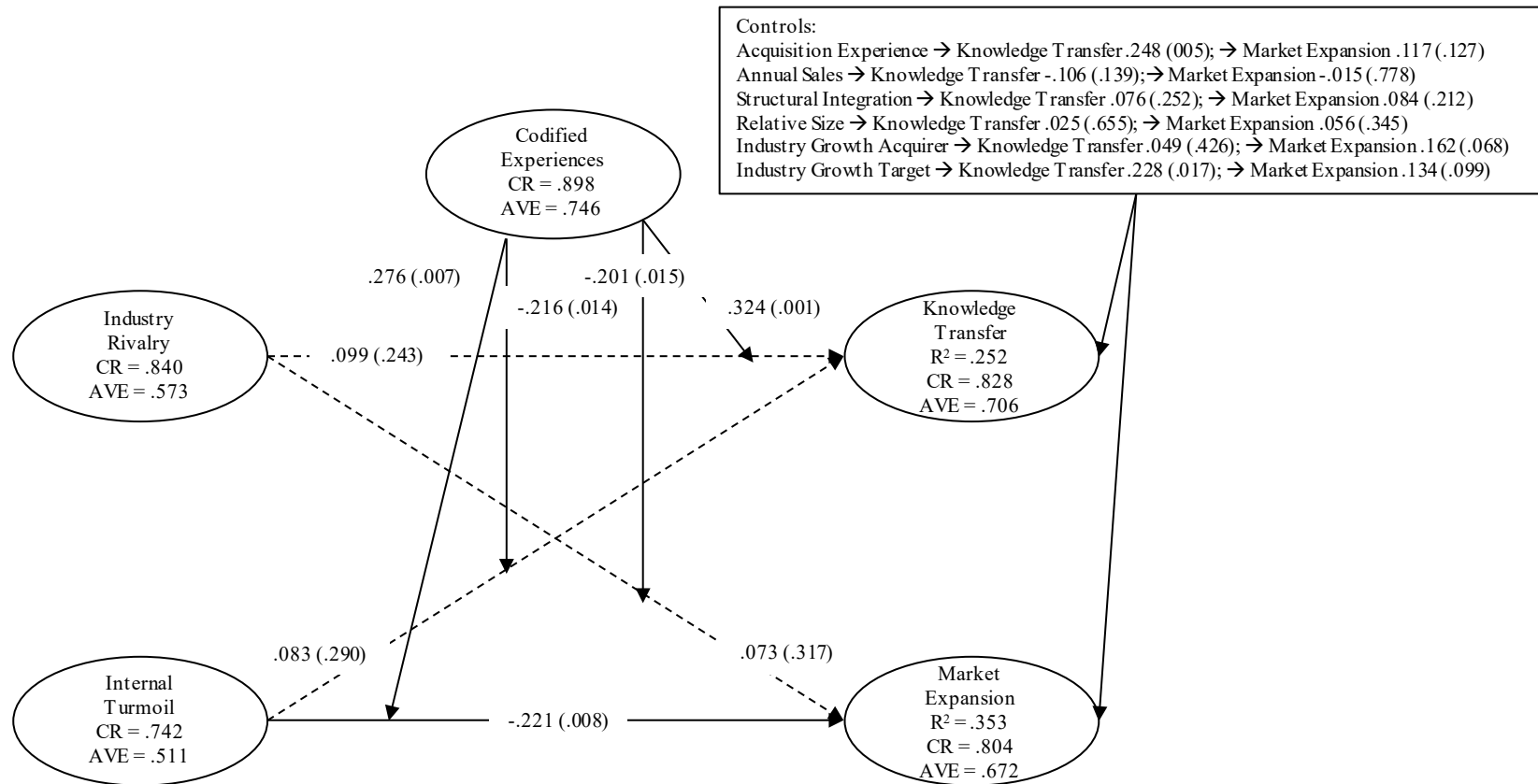
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**Table 1.** Sample descriptive statistics

Relative Size	in %	Prior Acquisitions	in %	Annual Sales	in %	Industry Growth Acquirer	in %	Industry Growth Target	in %
< 25 %	48.2	none	19.3	< 25 mill. €	14.9	< - 15%	1.8	< - 15%	3.5
25 % to 50 %	22.8	1 - 2	31.6	25 - 49 mill. €	9.6	- 15% to - 5%	0.9	- 15% to - 5%	1.8
51 % to 75 %	8	3 - 4	23.7	50 - 99 mill. €	15.8	- 4% to +/-0%	14	- 4% to +/-0%	14
76 % to 100 %	14.9	5 - 6	7	100 - 249 mill. €	15	1 % to 5 %	50.9	1 % to 5 %	42.1
> 100 %	6.1	7 - 8	4.4	250 - 499 mill. €	17.5	6 % to 10 %	28.1	6 % to 10 %	24.6
		> 8	14	500 - 1,000 mill. €	12.3	11 % to 20 %	4.3	11 % to 20 %	10.5
					> 1,000 mill. €	14.9			21 % to 30 %
								> 30 %	2.6



**Figure 1.** Conceptual model



**Figure 2.** Analytic results



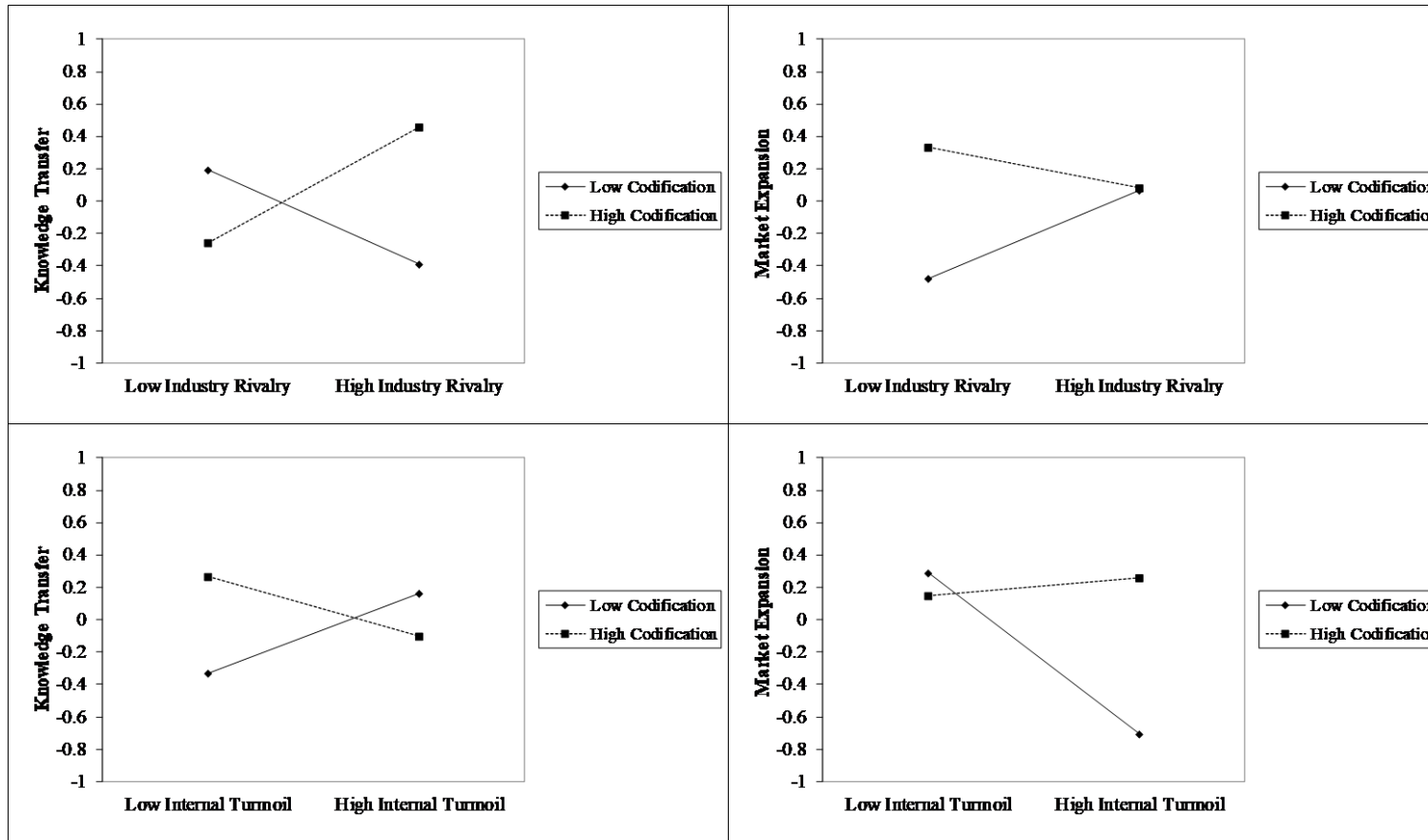


Figure 3. Interaction effects (H5a, b, c, and d clockwise)

## Appendix A. Psychometric properties of the scales

<b>Construct</b>	<b>Indicator</b>	<b>Loadings</b>	<b>Composite Reliability</b>	<b>Average Variance Extracted</b>
Industry Rivalry			0.840	0.573
<i>In our industry...</i>	... there is strong stress of competition	0.808		
<i>(1, "I do not agree at all"; 7, "I fully agree")</i>	... price competition is a hallmark	0.588		
	... competitive moves happen nearly daily	0.740		
	... there are only minor differences in price and quality	0.864		
Internal Turmoil			0.742	0.511
<i>(1, "I do not agree at all"; 7, "I fully agree")</i>	Integration negatively impacted our daily business	0.514		
	Managers were absorbed by integration	0.567		
	Employee turnover increased	0.973		
Codification			0.898	0.746
<i>Regarding acquisitions, we have...</i>	... written down knowledge about the M&A process (checklists, manuals,...)	0.874		
<i>(1, "I do not agree at all"; 7, "I fully agree")</i>	... process and technical manuals (e.g. for system adaptations, integration manuals, training manuals)	0.900		
	... written down experiences of applied management techniques	0.816		
Market Expansion	<i>Was assessed as the multiplication of the goal achievement score (to what extent were the objectives achieved, assessed from -3, "not at all"; +3, "above target" and the goal importance score (hoe important were the following objectives for the acquisition, assessed from 1, "not important"; 7, "very important").</i>		0.804	0.672
	Expansion into new customer and/or geographic market segments	0.814		
	Market share growth	0.826		

Knowledge Transfer	<i>Was assessed as the multiplication of the goal achievement score (to what extent were the objectives achieved, assessed from -3, "not at all"; +3, "above target" and the goal importance score (hoe important were the following objectives for the acquisition, assessed from 1, "not important"; 7, "very important").</i>		0.828	0.706
	Transfer of knowledge from the acquirer to the target	0.86		
	Transfer of knowledge from the target to the acquirer	0.82		
<b>Controls</b>				
Prior Acquisitions	How many acquisitions has your firm conducted in the five years preceding the described acquisition?	s.i.		
Annual Sales	Please indicate the (current) annual sales of your company after the acquisition.	s.i.		
Structural Integration	To which extent was the organizational structure changed (1, "not at all"; 7, "completely changed")?	s.i.		
Relative Size	Please indicate the annual sales of the target in comparison to the acquirer in the last year prior the acquisition.	s.i.		
Industry Growth Acquirer	Please indicate the average industry growth three years prior the acquisition.	s.i.		
Industry Growth Target	Please indicate the average industry growth three years prior the acquisition.	s.i.		

*s.i. = single item*

## Appendix B. Common method bias

Construct	Indicator	Substantive Factor			Method Factor Loading		
		R1	p-value	R1 <sup>2</sup>	R2	p-value	R2 <sup>2</sup>
Internal Turmoil	IT_1	0.817	0.000	0.667	-0.081	0.216	0.007
	IT_2	0.826	0.000	0.682	0.095	0.081	0.009
	IT_3	0.718	0.000	0.516	-0.026	0.554	0.001
Industry Rivalry	IR_1	0.73	0.000	0.533	0.138	0.161	0.019
	IR_2	0.821	0.000	0.674	-0.061	0.457	0.004
	IR_3	0.856	0.000	0.733	-0.12	0.118	0.014
	IR_4	0.7	0.000	0.490	0.035	0.604	0.001
Codification	Cod_1	0.836	0.000	0.699	-0.002	0.978	0.000
	Cod_2	0.841	0.000	0.707	0.076	0.152	0.006
	Cod_3	0.928	0.000	0.861	-0.079	0.301	0.006
Knowledge Transfer	KT_1	0.821	0.000	0.674	0.063	0.198	0.004
	KT_2	0.861	0.000	0.741	-0.065	0.215	0.004
Market Expansion	ME_1	0.753	0.000	0.567	0.14	0.084	0.020
	ME_2	0.887	0.000	0.787	-0.14	0.107	0.020
Average				0.667			0.008
Ratio				1	81.807		

### Appendix C. Discriminant validity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Annual Sales	<i>I</i>										
(2) Codification Industry Growth	0.327	<i>0.864</i>									
(3) Acquirer	-0.027	0.048	<i>I</i>								
(4) Industry Growth Target	0.178	0.154	0.329	<i>I</i>							
(5) Industry Rivalry	-0.029	0.304	0.204	-0.056	<i>0.757</i>						
(6) Internal Turmoil	-0.007	-0.051	0.006	-0.019	0.053	<i>0.715</i>					
(7) Knowledge Transfer	0.061	0.226	0.108	0.25	0.063	0.056	<i>0.84</i>				
(8) Market Expansion	0.121	0.274	0.238	0.275	0.216	-0.208	0.194	<i>0.82</i>			
(9) Prior Acquisitions	0.349	0.369	-0.017	0.148	-0.044	0.001	0.256	0.221	<i>I</i>		
(10) Relative Size	0.032	0.008	-0.019	0.155	0.112	0.102	0.022	0.117	0.055	<i>I</i>	
(11) Structural Integration	-0.008	0.172	0.067	0.08	0.29	0.2	0.108	0.142	0.017	0.016	<i>I</i>

**Appendix D.** Fornell Larcker criterion (numbers in italic are the square root of AVE)

		1	2	3	4	5	6	7	8	9	10	11
1	Annual Sales	<i>1</i>	0.327	-0.027	0.178	-0.029	-0.007	0.061	0.121	0.349	0.032	-0.008
2_1	Codification_1	0.359	<i>0.874</i>	0.044	0.169	0.171	-0.084	0.189	0.302	0.384	0.003	0.15
2_2	Codification_2	0.290	<i>0.900</i>	0.03	0.129	0.354	-0.030	0.232	0.233	0.294	0.002	0.148
2_3	Codification_3	0.145	<i>0.816</i>	0.058	0.082	0.283	0.003	0.152	0.135	0.254	0.021	0.155
	Industry Growth											
3	Acquirer	-0.027	0.048	<i>1</i>	0.329	0.204	0.006	0.108	0.238	-0.017	-0.019	0.067
4	Industry Growth Target	0.178	0.154	0.329	<i>1</i>	-0.056	-0.019	0.25	0.275	0.148	0.155	0.08
5_1	Industry Rivalry_1	0.026	0.218	0.096	-0.061	<i>0.808</i>	0.094	0.03	0.191	0.026	0.057	0.226
5_2	Industry Rivalry_2	-0.043	0.139	0.152	-0.165	<i>0.588</i>	0.072	-0.045	0.05	0.039	0.016	0.325
5_3	Industry Rivalry_3	-0.026	0.158	0.251	-0.023	<i>0.74</i>	0.145	0.15	0.052	-0.058	0.049	0.142
5_4	Industry Rivalry_4	-0.06	0.319	0.189	-0.021	<i>0.864</i>	-0.045	0.043	0.228	-0.09	0.146	0.263
6_1	Internal Turmoil_1	0.025	0.021	-0.049	-0.06	0.047	<i>0.514</i>	-0.044	-0.05	0.045	-0.004	0.171
6_2	Internal Turmoil_2	0.086	0.049	0.196	0.052	0.178	<i>0.567</i>	-0.059	-0.058	0.037	0.008	0.126
6_3	Internal Turmoil_3	-0.027	-0.07	-0.02	-0.021	0.023	<i>0.973</i>	0.081	-0.222	-0.012	0.117	0.182
7_1	Knowledge Transfer_1	0.034	0.242	0.121	0.214	0.132	0.008	<i>0.86</i>	0.138	0.195	-0.032	0.118
7_2	Knowledge Transfer_2	0.071	0.131	0.056	0.206	-0.035	0.09	<i>0.82</i>	0.191	0.238	0.076	0.06
8_1	Market Expansion_1	0.154	0.279	0.181	0.226	0.256	-0.14	0.219	<i>0.814</i>	0.127	0.071	0.199
8_2	Market Expansion_2	0.046	0.172	0.209	0.226	0.100	-0.200	0.101	<i>0.826</i>	0.235	0.12	0.036
9	Acquisition Experience	0.349	0.369	-0.017	0.148	-0.044	0.001	0.256	0.221	<i>1</i>	0.055	0.017
10	Relative Size	0.032	0.008	-0.019	0.155	0.112	0.102	0.022	0.117	0.055	<i>1</i>	0.016
11	Structural Integration	-0.008	0.172	0.067	0.080	0.290	0.200	0.108	0.142	0.017	0.016	<i>1</i>