Organizational Resilience in Acquisition Integration

Abstract: Resilience has received increasing attention in organizational research; however, it has remained understudied in the context of acquisitions. This is surprising given acquisitions involve challenging events that would benefit from a consideration of organizational resilience. We outline how flexibility and redundancy, as dimensions of organizational resilience, influence acquisition outcomes. We find flexibility can lower negative impacts of competitor retaliation and employee resistance during acquisition integration, but this depends on a decentralized approach to managing integration. Additionally, it appears developing organizational resilience depends on acquisition experience.

INTRODUCTION

In times of turbulent change and unexpected disruptions, firm success and survival strongly depend on an organization's ability to deal with vulnerabilities and threats (Hitt, Keats & DeMarie, 1998). This makes the handling of unforeseen events and risks an important predictor of firm performance (Rudolph and Repenning, 2002), and acquisitions are more complex and ambiguous than other aspects of firm operations (Barkema & Schijven, 2008). As a result, acquisition success strongly depends on a firm's ability to manage the acquisition integration with important stakeholders (Bettanazzi & Zollo, 2017; Haspeslagh & Jemison, 1991; Rogan & Greve, 2014). In the current paper, we examine how organizational resilience influence acquisition integration outcomes with respect to employees and competitors.

While employees are consistently depicted in acquisition research as the cause of integration problems (Brueller, Carmeli & Markman, 2018), there is untapped potential in studying organization level capabilities, such as resilience. Acquisition integration involves combining two separate and sometimes previously competing firms in a complex process prone to setbacks. Integration planning is difficult, as it displays uncertainty (Cording, Christmann & King, 2008), unpredictability (Vaara, 2003), and serendipity (Graebner, 2004). The stress, anxiety, and resistance emanating from employees lead to disruptive and unpredictable events (Gates & Very, 2003; Weber & Fried, 2011a), as do external events such

as competitor retaliation (King & Schriber, 2016). Handling unexpected events relates to organizational resilience (Vogus & Sutcliffe, 2007), or the ability of individuals, groups, and organizations to "respond quicker, recover faster, or develop more unusual ways of doing business" (Linnenluecke, 2015, p. 2). Despite its potential, resilience has received little attention in acquisition research. However, resilience offers the potential to shed new light on key acquisition challenges, such as deciding the level of centralization or autonomy during integration (Bauer & Matzler, 2014; Haspeslagh & Jemison, 1991; Zaheer, Castener & Souder, 2013). In particular, we see potential in combining theories on integration (Haspeslagh & Jemison, 1991) with a psychology perspective that considers organizations as having reserves for handling unexpected turbulence.

We examine dimensions of resilience and their impact on acquisition integration. Acquisitions are complex organizational events with enduring, disappointing outcomes (King et al., 2004). We expect key integration decisions influence the ability to handle unexpected events (Greenwood & Miller, 2010) on the possibilities facing decision-makers in acquisitions. In particular, we theorize the locus of decision-making impacts resilience. We combine this with psychology research on resilience to improve theory for integration decisions impacting acquisition performance.

We believe our paper offers several contributions. First, our study establishes the use of resilience in the context of acquisitions. Resilience, rooted in psychology research, is identified as a key strategic capability and, complementing prior individual-level foci, we elaborate a multilevel approach to resilience to explain the ability to manage setbacks during acquisition integration, thus answering calls for more research combining different organizational levels (Aguinis et al., 2011; Kossek & Perrigino, 2016). Second and in line with a micro-foundations approach, we reveal part of the complexity underpinning organizational resilience. Specifically, we identify flexibility as a key dimension underpinning

resilience in integration processes that is empirically validated, in risky, turbulent and disruptive environments. Third, this allows us to sketch the processes that may enhance the development of resilience. Specifically, our findings suggest that the ability to handle surprising challenges during integration may benefit from investing in resilience, compared to experiential learning.

THEORY AND HYPOTHESES

In general, resilience can be thought of as "an ability to recover from or adjust easily to misfortune or change" (Merriam-Webster, 2018), and the concept receives substantial research attention within the fields of psychology (e.g. Fredrickson, 2001; Powley, 2009) and management (e.g. Bhamra, Dani & Burnard, 2011; Hamel & Valikangas, 2003). In psychology, resilience has often been conceptualized in complementary ways (Kossek & Perrigino, 2016), including as an individual trait (Contrada, 1989), a capacity that can change through training (Zalta et al., 2018), or the process by which resilience allows individuals to respond to risks (Fraser, Galinsky & Richman, 1999). Organizational resilience depends on fundamental organizing decisions, such as established access to resources (Kitching, Smallbone & Xheneti, 2009) and human involvement in organizations (Keong & Mei, 2010). Still, these conceptual levels are intertwined, and "[r]esilience is therefore related to both the individual and organizational responses to turbulence and discontinuities" (Bhamra et al., 2011: 5376). Yet, the connection between these levels remain insufficiently addressed in research on large-scale organizational change, such as acquisitions.

Although individual resilience clearly is dependent on non-work conditions (e.g. Greenhaus & Powell, 2006), organizations take center stage in acquisition performance research. Organizational resilience has been investigated as organizational responses to threats, such as accidents, disruptions or crises, or as an explanation for business model adaptation (Hamel & Valikangas, 2003). Resilience also enables absorbing stress that arises

from challenges, and it aids becoming stronger following an event (Sutcliffe & Vogus, 2003). This implies resilience also has great potential to explain organizational performance in other circumstances, such as acquisitions and integration decisions (Cooper, Liu & Tarba, 2014). Drawing on these complementary lenses, we view resilience as an organizational capacity evolving over time that can influence acquisition outcomes particularly during integration (e.g., Brueller, Carmeli & Drori, 2014; Heimeriks, Schijven & Gates, 2012). The dimensions that comprise organizational resilience also relate to other concepts. Perhaps most notably, dynamic capabilities and ambidexterity theory develop how to analytically separate capability dimensions (Helfat et al., 2007) and manage them in separate organizational structures (Tushman & O'Reilly, 1996). Complementing these concepts, resilience, provides a framework with untapped potential for explaining how firms manage internal challenges during integration.

For acquisitions, we suggest resilience relates to an acquiring firm's ability to manage integration (Newmeyer, Swaminathan & Hulland, 2016) that determines acquisition performance (e.g., Haspeslagh & Jemison, 1991). The need for resilience is compounded by integration taking several years to complete (e.g., Lubatkin et al., 2001) and a need to respond to internal events (Weber & Camerer, 2003; Weber & Tarba, 2010; Weber, Tarba & Bachar, 2011), such as cultural clashes (Weber & Fried, 2011b; Weber, Tarba, & Bachar, 2012). Research also increasingly recognizes external dynamism as a challenge due to competitive reactions aimed at surprising and disrupting acquirers (Keil, Laamanen & McGrath, 2013; King & Schriber, 2016; Schriber, 2016). While research has suggested individual outcomes involve adaptive performance and risk taking (Kossek & Perrigino, 2016), a better understanding of organizational resilience as an ability to respond quicker or to recover faster (Sutcliffe & Vogus, 2003) can provide insights into how firms effectively manage integration (cf. Carmeli & Markman, 2011).

Importantly, resilience is not only a result of the individuals composing an organization. Firms can proactively manage unexpected events, and we examine organizational dimensions of resilience and associated integration outcomes. Specifically, we consider flexibility and redundancy as underlying resilience (Barnett & Pratt, 2000). Flexibility relates to an ability to adjust interdependencies and respond to disruptive events (Sanchez, 1995; Shin, Taylor & Seo, 2012; Wright & Snell, 1998) that may be associated with greater consultation in decision making (Ammeter et al., 2002). At an individual level, resilience has been associated to risk-taking, in turn a driver of an ability to find novel connections or entrepreneurial behavior (Jenkins, Wiklund & Brundin, 2014; Kossek & Perrigino, 2016) and acquisition integration (Bauer, King & Matzler, 2016).

Meanwhile, redundancy comes from slack, or overlapping resources, that include social and information resources that guides decisions (Linnenluecke, 2015). This is consistent with research on resilience, where high resilience is associated with redundancy or the perception of individuals (Hobfoll et al., 2018). This relates to social relations, or "those objects, personal characteristics, conditions, or energies that are valued by the individual" (Hobfoll, 1989, p. 516) that help to explain the context where individuals may enact resilience. Importantly, this may differ across organizations. For example, a firm may use a dedicated department to oversee an acquisition to improve acquisition performance (e.g., Trichterborn, zu Knyphausen-Aufsess & Schweizer, 2016), or codify experience to mitigate superstitious learning (Zollo, 2009).

While resilience can be achieved by developing redundancy or increasing flexibility to reduce the likelihood of disruption (Barnett & Pratt, 2000; Keong & Mei, 2010), relations may not be straightforward as they require different resource commitments. In line with research on capabilities, we argue that resilience is the ability "to allocate and co-ordinate resources" (Liu & Huang, 2018, p. 48). For instance, slack resources, such as more middle

managers involved in integration induces costs (Bourgeois, 1985), and excessive flexibility can lead to overreacting to minor internal or external changes to cause delays (Sirower, 1997). These circumstances can contribute to employee uncertainty and resistance that is associated with lower acquisition performance (Bauer, King & Matzler, 2016). Moreover, relations between flexibility and redundancy may be complex. For instance, while involvement of multiple managers across several acquisitions increases managerial redundancy (Laamanen & Keil, 2008), dispersing decision-making can reduce transparency in the organization and hamper entrepreneurial behavior associated with flexibility (Bauer, Schriber, King & Uzelac, 2016), resulting in managers having to balance efficiency and flexibility (Hitt et al., 1998).

We expect a resilient organization will be better able to adapt integration plans to mitigate the negative effects of unpredictable challenges, and the impact of flexibility and redundancy will depend on the context (e.g., Ellis, Reus & Lamont, 2011). For example, research suggests the applicability of informal or formal coordination mechanisms may depend on an industry's life-cycle (Bauer et al., 2017), as a defining characteristic of industry life-cycle relates to the level of technological change (e.g., Anderson & Tushman, 1990). We develop how technology turbulence moderates the role of resilience in acquisitions with anticipated relationships shown in Figure 1 developed in the following subsections.

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Impact of Processes on Resilience

The two elements of resilience, flexibility and redundancy, likely relate to whether responsibility for acquisition integration is centralized with an M&A department or decentralized across different departments.

Centralized approach. Improved and simplified decision-making results from a centralized approach where authority rests with a few individuals (Wong, Ormiston, & Tetlock, 2011). Several benefits can be expected from having a centralized acquisition

approach with a dedicated M&A department, and they are largely associated with redundancy of cognitive resources. For example, a dedicated department can facilitate organizational change during integration by providing additional resources to reduce the vulnerability of operational managers becoming overwhelmed by integration demands (e.g., Hambrick, Finkelstein & Mooney, 2005). Concentrating acquisition assignments to one dedicated unit increases repetition (Zollo & Singh, 2004) and codification (Trichterborn et al., 2016). As such, a centralized approach with a dedicated M&A function provides process experience and know-how to support business units or corporate management (Trichterborn et al., 2016), and it can help to allocate resources efficiently (Liu & Huang, 2018). Formalization fosters deliberate decision-making from standardized procedures (Cyert & March, 1963) that can avoid mistakes and relieve middle-managers otherwise often overburdened with integration work. This is important as cognitive energy is identified as resource influencing resilience (Kossek & Perrigino, 2016). However, centralization may also restrict creative, proactive behavior by hampering the customization of routines (Ellis et al., 2011). As a result, centralization facilitates redundancy, but it can also limit flexibility to develop creative responses to emerging problems (Heimeriks et al., 2012. Therefore, we predict:

Hypothesis 1a. Acquisition integration centralization reduces flexibility.

Hypothesis 1b. Acquisition integration centralization increases redundancy.

Decentralized approach. The decentralization of responsibility for acquisition integration to various functional departments can have benefits that are largely associated with flexibility. For example, flexibility is more common with more organic organization structures displaying greater abilities to adjust interdependencies, as leeway is needed to pursue new, untested ideas for adjusting to change (Monin et al., 2013). Involving multiple managers in different departments can build a firm's overall ability for acquisition integration (Lamont et al., 2018), and it may allow middle managers to exhibit a sense of ownership that

motivates them to execute their integration related tasks (Wong et al., 2011). The preceding logic is consistent with research finding middle managers are important to the success of acquisition integration (Larsson & Finkelstein, 1999), as they display less lock-in that allows greater flexibility in identifying options (Barringer & Bluedorn, 1999). As experts of their corresponding functions, middle managers may make better use of information (Zábojnik, 2002), but the involvement of more people in managing integration likely slows it down (Wong et al., 2011), and it hinders codification of experience (Zollo, 2009). Additionally, when faced with a dilemma, managers often further slow decision making (Simon, 1957) and focus more on familiar, local operations (Perry & Herd, 2004). Therefore, we predict:

Hypothesis 2a. Acquisition integration decentralization increases flexibility.

Hypothesis 2b. Acquisition integration decentralization reduces redundancy.

Impact of Resilience on Acquisition Outcomes

Two sources of acquisition dynamism are employee resistance to integration and competitor retaliation (e.g., Keil et al., 2013). For example, resistance to an acquisition creates problems, in turn an important explanation to acquisition failure (Larsson & Finkelstein, 1999). Integration problems can contribute to an internal focus that makes firms vulnerable to competitor retaliation (Cording et al., 2008; Keil et al., 2013) which is in line with two thirds of firms losing market share after an acquisition (Harding & Rouse, 2007). While data on retaliatory behavior is difficult to obtain (Otero-Neira & Varela-Gonzalex, 2005), evidence suggests rival firms target disgruntled employees experiencing an acquisition with job offers in as little as five days (Brown, Clancy & Scholer, 2003). The effect of both of these conditions can likely be mitigated by firms that have resilience, or adjusting integration to respond to changing conditions (e.g., Levitas & Chi, 2010).

Flexibility. When firms encounter unexpected circumstances, responses inconsistent with firm routines are often required (Zahra et al., 2006). While one approach to dealing with

uncertainty is to deny it, it can also represent an opportunity to take advantage of ambiguity (Risberg, 2001). For example, interpretations of ambiguity can be shaped (Sillince, Jarzbkowski & Shaw, 2012) or used to foster creativity by avoiding a standard view of reality (Eisenberg, 1984). Further, ambiguity grants latitude to accommodate multiple interpretations that can limit resistance (Gioia, Nag & Corley, 2012). Ambiguity for middle managers during an acquisition (Correia, Cunha & Scholten, 2013) may explain their importance to the success of acquisition integration (Larsson & Finkelstein, 1999) comes from greater creativity in confronting integration challenges. Therefore, we predict:

Hypothesis 3a. Flexibility during integration reduces organizational resistance.

Hypothesis 3b. Flexibility during integration reduces competitor retaliation.

Redundancy. Acquisition integration typically involves extending acquirer routines to a target firm that is initially unfamiliar with them (Reagans, Argote & Brooks, 2005). This can be disruptive to target firms and employees and contribute to resistance and productivity losses (Larsson & Finkelstein, 1999; Paruchuri, Nerkar & Hambrick, 2006) from changing employee organizational identity and coordination (Clark et al., 2010). However, established processes that increase the reliability of organizational actions can have positive effects, and for acquisitions it may be best to stick with established acquirer routines (Brueller et al., 2014). Integration routines such as checklists free cognitive capacity of integrating managers thus contributing to redundancy and are associated with increased integration success (Heimeriks et al., 2012). Routines involve both structure and agency, suggesting benefits resulting from people interpreting them as they are implemented (Brueller et al., 2014). Additionally, set routines can enable faster responses to challenges, and rapid change during acquisition integration can minimize uncertainty and prevent resistance (Amis, Slack & Hinings, 2004) to suggest acquirer routines can mitigate resistance. At the same time, internal challenges associated with acquisition integration have led to recognition that this is the ‘best

time' for competitors to retaliate against an acquirer (King & Schriber, 2016). Fundamentally, competitive retaliation depends on competitor awareness (Chen, Su & Tsai, 2007). Accordingly, routinized, easily anticipated responses will likely encourage competitors to increase and vary retaliation to compound an acquirer's integration challenges (Uhlenbruck et al., 2016). Therefore, we predict:

Hypothesis 4a. Redundancy during integration reduces organizational resistance.

Hypothesis 4b. Redundancy during integration increases competitor retaliation.

Moderator: Technology Turbulence

Research increasingly recognizes that acquisitions are not isolated from their environment (e.g. Capron & Guillén, 2009). For example, how firms adapt to technology change is an important area of research (Kahl & Grodal, 2016), and one way firms adapt is by acquiring technology through acquisitions (Almor, Tarba & Margalit, 2014). Therefore, the nature of technology likely influences firm resilience during integration. Specifically, Schilling and Steensma (2002: 388) define technology as a "body of knowledge, tools and techniques (know-how) derived from both science and practical experience that is used in the development, design, production, and application of products, processes, systems and services." As a result, a body of knowledge around technology evolves path-dependently into a culture and associated cognitive frames (e.g., Patel & King, 2016; Thrane, Blaaberg & Moller, 2010).

The creation of technology sub-cultures has implications for both organizational resistance and competitor retaliation. For organizational resistance, technology similarity or overlap in combining firms can facilitate knowledge transfer by providing a common language (Patel & King, 2016). Further, a disruption from technology change alters social interactions that overshadows organizational change or even drives members to be open to it (King, Covin & Hegarty, 2003). From the standpoint of competitors, the tacit knowledge

surrounding and associated uncertainty from technology change can make acquisitions less transparent (Lou, 2005). Further, due technology uncertainty and unknown effects of actions competitors may limit retaliation. Therefore, we predict:

Hypothesis 5a. Technology turbulence positively moderates the relationship between flexibility and organizational resistance, or further reduces organizational resistance.

Hypothesis 5b. Technology turbulence positively moderates the relationship between flexibility and competitor retaliation, or further reduces competitor retaliation.

Hypothesis 5c. Technology turbulence positively moderates the relationship between redundancy and organizational resistance, or further reduces organizational resistance.

Hypothesis 5d. Technology turbulence positively moderates the relationship between redundancy and competitor retaliation, or further reduces competitor retaliation.

METHODS

While acquisition integration is where value creation takes place (Haspeslagh & Jemison, 1991), most integration information, including internal employee and external competitor reactions, is only available from managers (Gates & Very, 2003). As a result, we focus on a managerial survey to gather information about integration decisions and outcomes, and we conducted primary data research with mail and internet survey methodology in Spring 2016 with firms identified using the M&A database Zephyr from Bureau von Dijk.

In constructing our sample, we restricted the timeframe, regions, industries, and acquirer size. First, we restricted the time period on acquisitions that took place between January 2009 and December 2013. This restriction balances completion of acquisition integration that generally ranges from three to five years (Homburg & Bucerius, 2005) with the need to enable recollection decreases and avoid retrospective bias (Ellis, Reus & Lamont, 2009) and to identify respondents (Krug & Hegarty, 1997). Second, to avoid cultural biases

and to mitigate translation related problems (Moschieri & Campa, 2009), we focused on the German-speaking part of Europe (Germany, Austria, and Switzerland). Third, we limited our sample to industries with longer lifecycles (e.g. machinery engineering, steel manufacturers) to observe strategic change across industries. Additionally, these industries are very important for the economies of the German-speaking countries and face challenges. Fourth, we focused on small and mid-sized companies that drive a major share of acquisition volume in Europe (Jansen, 2008). Additionally, this restriction addresses concerns that formalization and rigidity highly correlates with firm size (Marsh & Mannari, 1981) to better investigate resilience and direct impacts of an acquisition. In total, we identified 737 acquirers that meet our sample criteria.

While reliance on key informants has some limitations (Kumar, Stern & Anderson, 1993), we chose top executives and M&A managers, when firms had a dedicated M&A department, as respondents because they are most knowledgeable about the relevant strategic and organizational topics (Homburg & Bucerius, 2006). Due to turnover associated with manager positions following an acquisition, we were not able to collect information from multiple respondents. Additionally, the reliance on key informants is in line with prior acquisition research (Bauer & Matzler, 2014; Bauer, Dao, Matzler and Tarba, 2017; Homburg & Bucerius, 2005, 2006).

For the questionnaire design and structure, we followed the recommendations of Dillmann, Smyth and Christian (2009). Before sending out the survey, we conducted a two-step pretest with academics and practitioners with experience in the field of M&A in February 2016 (Churchill, 1995). After minor modifications (e.g. reformulation of some questions and adding examples), we mailed out of the survey with an executive summary of a prior study's results to display the managerial value of our research. Two weeks after the initial mailing, follow-up phone calls were made resulting in 111 completed questionnaires. Our response

rate (15.1 percent) is in line with other M&A survey research involving executives (Bauer & Matzler, 2014; Homburg & Bucerius, 2005, 2006; Zaheer et al., 2013).

To test for a potential non- or late response bias, we accompanied two different analyses. First, the comparison of early and late respondents and second, the check of our gathered data against a random sample of our basic population with regards to annual sales and relative size (Zaheer et al., 2013) showed no statistically significant differences. As a consequence, we assume that non- or late response bias is not a serious issue for our data (Armstrong & Overton, 1977). The following table shows the sample description. In detail we show relative size of target and acquiring firm, annual sales, industry growth, the type of transaction and the average experience.

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

Measures

Instead of developing new measures, we largely relied on existing scales that have proven to be reliable with minor modifications to meet our research content. A detailed description of the scales can be found in the appendix.

Organizational responsibilities. To identify the responsibilities for acquisition integration, we asked the respondents to rate, who is responsible for executing and coordinating the acquisition integration process on a seven point Likert scale ranging from 1=not involved at all to 7=fully involved. While a centralized approach is characterized by a dedicated M&A department in combination with consultants, a decentralized approach is defined as a combination of top management in combination with various departments.

Flexibility. The first dimension of resilience, flexibility was assessed with six items modified from the entrepreneurial capacity scale developed by Linan and Chen (2009). The main modification concerned the frame of the questions, as we added an acquisition

integration context. Each item was assessed on a seven-point Likert scale ranging from 1=not at all to 7=completely agree.

Redundancy. The second dimension of resilience, redundancy indicates some kind of back up plans like managerial checklists or records of proven tools that represents explicit knowledge. Redundancy was assessed with three items deriving from Dhanaraj, Lyles, Steensma and Tihanyi (2004). Each item was assessed on a seven point Likert scale ranging from 1=not at all to 7=completely agree.

Technological turbulence. Technological turbulence was assessed with four indicators originally developed by Zhou and Wu (2010). The questions aimed to identify whether an industry is faced with rapidly changing technological conditions or not. The four items were assessed on a seven point Likert scale.

Resistance. Change resistance was assessed with five indicators deriving from Giangreco and Peccei (2005). As resistance mainly occurs at the target side, the questions where about the employees of the target. Again we used a seven point Likert scale ranging from 1=not at all to 7=completely agree.

Negative effects of retaliation. Retaliation is a newly developed scale. For scale development, we relied on extant literature and several discussions with managers. We asked respondents if competitor reactions negatively impacted the acquisition, product development, market, and technology goals on a seven point Likert scale.

Controls. As other variables could have serious impact on our research model, we implemented several control variables. Acquisition experience can be seen as an indicator for well-established acquisition routines and thus impact flexibility and redundancy (Trichterborn et al., 2016). Relative size is an indicator for managerial efforts necessary to integrate (Cording et al., 2008). Further, integrating larger targets might cause stronger resistance due to in-group and out-group biases. Industry growth is also an important contingency factor for

the value of applied integration mechanisms (Bauer et al., 2017). As acquisition experience, annual sales can be seen as an indicator for established acquisition routines. Furthermore, increased annual sales indicate increased inertia and bureaucracy.

ANALYSIS AND RESULTS

To test the proposed hypotheses, we applied structural equation modeling with a variance-based approach with SmartPLS instead of a covariance-based approach for several reasons. First, PLS is a prediction-oriented approach and highly suitable for research displaying an explorative character (Hair, Ringle & Sarstedt, 2012) compared to covariance based approaches that focus on model fit (Barroso, Cepede-Carrión & Roldán, 2010). Second, PLS SEM is superior to covariance based approaches when dealing with complex models (Haenlein & Kaplan, 2004) and third, it is applicable with smaller sample sizes (Hair, Ringle, Sarstedt & Mena, 2012; Henseler et al., 2014). Fourth, it is an established method in the field of M&A research dealing with primary data (e.g. Bauer & Matzler, 2014; Junni, Sarala, Tarba & Weber, 2015). Significance testing in PLS is based on the bootstrapping procedure and we base our calculations on 5.000 bootstrap runs (Hair, et al., 2012) and chose the sign change option individual changes (Henseler, Ringle & Sinkovics, 2009). We used the software package SmartPLS 3.2.4 (Ringle, Wende & Becker, 2015).

Common method bias

Having used a cross-sectional primary data key informant research approach with survey methodology, there is a potential risk of common method bias in our data due to a consistency motif and social desirability of the respondents (Podsakoff and Organ, 1986; Podsakoff, MacKenzie & Podsakoff., 2003; Podsakoff et al., 2012). To mitigate and control common method bias, we implemented a-priori measures and tested post-priori the potential for common method bias. To mitigate effects caused by a consistency motif and social desirability, we separated the latent variables in our questionnaire to disrupt response patterns

and to minimize proximity effects (Podsakoff et al., 2012). A second device was to assess the relevant constructs that could create social desirability with multiple items (Harrison, McLaughlin & Coalter, 1996). To investigate if common method bias is a concern in our data, we employed Harman´s single factor test with a principal component factor analysis (Podsakoff & Organ, 1986). The results show 10 distinct factors with a single factor explaining 16.63 % of the variance. Thus, we have reason to believe that common method bias is not a serious issue for our data.

Assessing the measurement models

For analyzing our data, we followed the recommendations of Hulland (1999) and Henseler and colleagues (2012) and employed a two-step approach. First, we investigated the reliability and validity of the measurement models. The factor loadings should exceed a value of 0.707. Even though five of our loadings are below this threshold, we follow the recommendation of Hulland (1999) and kept the items in our measures. We argue that we are at an early stage of research and the indicators still exceed the proposed threshold value of 0.4 (with the lowest loading being 0.497) (Hulland, 1999). For investigating construct reliability, we relied on composite reliability (CR), which can be seen as an alternative to Cronbach´s Alpha (α) (which is additionally reported). For construct validity we assessed the average variance extracted (AVE). The analysis revealed, apart from our construct decentralized approach (AVE = .486), no issues regarding construct reliability as all quality criteria are above the recommended thresholds (AVE = .515 - .696; CR = .854 - .869; α = .784 - .808) (Bagozzi & Yi, 1988). A detailed description of the scales and the psychometric properties can be found in the appendix.

Discriminant validity was assessed on construct level with the Fornell-Larcker criterion (Fornell & Larcker, 1981) and on indicator level with cross loadings. Table 2 displays the latent variable correlations and the square root of the AVE in italics on the

diagonal. None of the correlations exceeds the corresponding square root of the AVE. The analysis of the cross loadings reveals no concerns, as all indicators display higher loadings with their corresponding constructs than with others (for details please see appendix 2). As a consequence, discriminant validity is established.

Assessing the structural model

As the constructs are reliable and valid and discriminant validity is given, we tested our proposed hypotheses in a second step. To test for a potential multi-collinearity problem, we calculated the variance inflation factors (VIF) for our research model. All VIF´s range between 1.020 and 1.358 and thus, are far below the recommended threshold of 10 (O´Brien, 2007). Further, our research model can explain 31.6 percent of organizational resistance and 31.9 percent of negative effects of retaliation. In Table 3, we report the path-coefficients, p-values, t-statistics, and effect sizes (f^2).

----- Insert Table 3 about here -----

We find strong statistical support for hypotheses H1a that flexibility is lower when acquisition integration is centralized (ß = -.360; p = .000). For hypotheses H1b, we do not find a relationship between centralization of acquisition integration and redundancy. We do find partial support for hypotheses 2, dealing with the effects on flexibility and redundancy of a decentralized approach to acquisition integration. For H2a, we find that a decentralized approach strongly increases flexibility (ß = .244; p = .014), but it has no significant effect on redundancy (H2b; ß = -.006; p = 930). The impact of flexibility is significant for both organizational resistance (H3a) and for competitor retaliation (H3b), as flexibility is associated with lower resistance (ß = -.433; p = .000) and competitor retaliation (ß = -.310; p = .001). However, we find no support for the effects proposed in hypotheses 4. Redundancy does not appear to have a significant direct relationship with either organizational resistance

or competitor retaliation. Figure 2 summarizes the results of the evaluation of the structural equation model.

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

To test for the moderating effects of technology turbulence, we calculated the interaction effects based on standardized values and we find significant effects for all four proposed relationships. A direct effect of technological turbulence is insignificant on organizational resistance, but it is significant and positive for competitive retaliation (ß = .301; p = .006). For H5a, we find empirical support that technology turbulence positively moderates the impact of flexibility on organizational resistance (ß = .242; p = .006). In cases of high technological turbulence, flexible integration management triggers organizational resistance, but it is more appropriate under low turbulence (see Figure 3). Similarly, we find a positive and significant effect for H5c (ß = .168; p = .047), indicating that technological turbulence positively moderates the redundancy and organizational resistance relationship. Figure 3 graphically displays the moderating effects for H5a and H5c.

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For H5b and H5d, we find empirical support for moderating effects of technology turbulence on competitor retaliation. While high technological turbulence in general creates more retaliation (ß = .301; p = .006), a more nuanced picture emerges after investigating an interaction. For H5b, we find support that that technology turbulence positively moderates the impact of flexibility on competitor retaliation (ß = .277, p = .001), or flexibility is associated with negative effects of retaliation in high technology turbulence. We also find support for H5d (ß = .186; p = .047), or technology turbulence also positively moderates the impact of redundancy on competitor retaliation. Figure 4 shows the moderating effects related to H5b and H5d.

----- Insert Figure 4 about here -----

Included control variables also impact our research model. Interestingly, acquisition experience positively impacts both flexibility (ß = .236; p = .013) and redundancy (ß = .320; p = .000). This indicates that resilience requires acquisition experience to develop redundancy and flexibility, and this finding is consistent with capability development. For relative size, we find a negative effect on redundancy (ß = -.139; p = .095), or larger targets absorb more slack. Further, we find a negative effect of firm size in terms of annual sales on flexibility (ß = -.243; p = .013). This is in line with other research indicating that larger firms display inertia and are less flexible (Matzler, Uzelac & Bauer, 2014).

DISCUSSION

Acquisitions enable adjusting to change (King, Bauer & Schriber, 2018); however, unexpected change during the integration can limit firms' ability to benefit from acquisitions. Resilience sets successful acquirers apart by enabling quicker adjustment with less effort to surprising change in internal and external conditions. While a central predictor of acquisition performance in dynamic environments, resilience has received limited attention in acquisition research. Our findings reveal complex underpinnings of integration resilience that raise new questions for research and implications for management practice.

Research Implications

Rooted in psychology research, resilience has received increasing attention also in research streams; however, it has remained understudied in the context of acquisitions. This has made potentially important insights untapped, as acquisition involve unforeseen and often challenging events that would benefit from a consideration of organizational resilience. Initial endeavors to introduce the concept have demonstrated that resilience may impact a firm's ability to successfully integrate acquisition targets (Brueller et al., 2014; Heimeriks et al., 2012; Newmeyer et al., 2016). While psychology research has demonstrated resilience at individual and team levels leads to improved performance, such as reduced conflict, and

improved cooperation and satisfaction (West, Patera, & Carsten, 2009), similar findings are observed at an organizational level (Ollier-Malaterre, 2010). Combining insights from both levels, our study answers to calls for multiple level research on resilience (Aguinis et al., 2011; Kossek & Perrigino, 2016), and it demonstrates resilience as an important concept for explaining the ability of acquiring firms to manage setbacks during integration, including strains from cooperating with persons with significantly different basic assumptions (Weber et al., 2011). In a wider context, this implies resilience offers a much-needed tool for explaining variation in acquisition outcomes where integration has been highlighted as the central challenge (King et al., 2004).

At a general level, our findings support micro-foundations research concerned with identifying antecedents and mechanisms underpinning key concepts in acquisitions (Angwin, Paroutis & Connell, 2015; Cooper et al., 2017; Liu et al., 2017). Our study also reveals complex relations underpinning resilience. On the one hand, we find that a centralized approach to acquisition integration does not increase redundancy, but it strongly reduces flexibility (Bock, Opsahl, George & Gann, 2012). On the other hand, decentralization increases flexibility, but it does not significantly impact redundancy. While this might indicate an insufficient codification among studied firms, the centralization of responsibility does reduce the number of managers involved in the integration process. This adds important insights to research focusing on resilience in higher echelons (Carmeli, Friedman & Tishler, 2013) by suggesting flexibility may actually be hampered without inducements to support change at lower hierarchical layers (Shin et al., 2012).

Interestingly, the degree that resilience permits organizations to adjust to new conditions depends more on flexibility than redundancy. Flexibility enables adjusting integration processes to organizational resistance (Larsson & Finkelstein, 1999) and competitor retaliation (King & Schriber, 2016). In contrast, our data do not support an

influence of redundancy on organizational resistance and competitor retaliation. Even if firms may benefit from prior acquisition experience (Haleblian & Finkelstein, 1999) and codification to reduce the risk of superstitious learning (Zollo, 2009), past experience is subject to boundary conditions (Ellis et al., 2011). This may relate to acquisitions being unique events that drive significant managerial sensemaking (e.g., Chreim, & Tafaghod, 2012) that may benefit from ambiguity (e.g., Risberg, 2001; Xing & Liu, 2015), and to resilience to change also involving emotions (Kiefer, 2005) that are absent from our model and most management research (cf. Huy, 2012).

Our findings also illuminate processes on how firms adjust to unexpected events during integration. Our data suggest experience from past acquisitions is central in explaining resilience, in turn suggesting that resilience is a capability that requires deliberate development (e.g., Brueller et al., 2014; Heimeriks et al., 2012) with separate dimensions involving flexibility and redundancy. Flexibility has been described as a persistent characteristic or capacity of firms to apply resources to new uses or altering the use of resources to adapt (Sanchez, 1995; Linnenluecke, 2015; Liu & Huang, 2018; Wright & Snell, 1998). Further, flexibility is consistently associated with higher performance (Brozovic, 2018). Meanwhile, redundancy comes from economizing with cognitive capacity (Cyert & March, 1963) and proficiency, or a capability enabling reliable performance. While its effects thus partly overlap with the concepts of dynamic capabilities (Helfat et al., 2007) and ambidexterity (Junni, Sarala, Liu & Cooper, 2015; Meglio, King & Risberg, 2015), introducing the concept of resilience helps resolve tensions in research struggling to clearly point to positive or negative effects from prior acquisition experience (Barkema & Schijven, 2008). These findings relate to insights that personal inter-organizational ties can enhance resilience (Brueller, Brueller, Brueller & Carmeli, in print). Specifically, the ability to adjust interdependencies and increase greater consultation in decision-making might be more

important than the ability to learn from past actions for explaining how firms respond to and recover from setbacks (Linnenluecke, 2015).

Managerial Implications

Considering resilience can increase the ability of firms to benefit from acquisitions. Although resilience may not avoid the impact of socio-cultural turbulence or competitor retaliation, it can reduce its impact, especially in technologically dynamic markets. Managers are advised to nurture flexibility through enhancing abilities to adjust interdependencies and allow for greater consultation in decision-making. As such, we hold that resilience is distinct from resources, but resilience helps to allocate and coordinate resources (Liu & Huang, 2018). While research on the experience-performance relation remains contradictory (Barkema & Schijven, 2008), our research suggests reconsidering how typically scarce managerial resources are best invested to prepare for future acquisitions. As such, we hold that resilience is distinct from resources, but resilience helps to allocate and coordinate resources (Liu & Huang, 2018). Internal and external turbulence are often difficult to predict during integration, so efforts to codify past experience (Heimeriks et al., 2012) may be better invested in resilience as it helps firms recover from inevitable setbacks during acquisition integration. Concisely, firms need to balance conflicting demands and allocate their resources in an ambidextrous way to develop resilience.

Limitations and Future Research

Having used a primary data research approach with survey design methodology, our results are faced with several limitations. First, having used retrospective accounts, the capacity of recollection might affect the answers in a positive assessment (Ellis et al., 2009). As the positive assessment effect is triggered by time, we focused on relatively recent points in time. Further, acquisitions are rare strategic events (Zollo, 2009) and in combination with the relatively small firm size of our sample, we believe that recollection bias is not a serious

concern. Second, even if we implemented a priori measures and post priori tests, we cannot fully exclude common method bias. Thus, future research should search for different respondents for dependent and independent variables. Third, relying on key informant research designs conditions the risk for key informant bias (Kumar et al., 1993). Even though we found no statistical differences between middle managers (head of M&A departments or firm functions) and top managers, we cannot fully exclude differences exist for these groups in managing acquisitions. Fourth, our cross-sectional research design is not able to account for changes during integration (Meglio & Risberg, 2010), and a longitudinal research design would offer additional insights (Zollo & Meier, 2008). Nonetheless, conducting longitudinal primary data research in the field of M&A is nearly impossible due to managerial turnover and the willingness of managers to participate. Our context developed organizational resilience under the demanding conditions of acquisition integration in a German-speaking sample that may display greater cultural homogeneity. The importance of organizational resilience may vary in other circumstances and samples. While this may limit the generalizability of our findings, it represents an opportunity to validate our findings with other organizational level phenomenon and samples. As we employed borrowed measures and modified them to our context, future research could develop broader constructs that capture the major components of resilience with various items that have a common core but unique attributes.

In closing, we show that the components of resilience (i.e., flexibility and redundancy) in acquisitions are dependent on firm approaches to centralization or decentralization of integration. We also show flexibility can lower negative impacts of competitor retaliation and employee resistance during acquisition integration. We find that flexibility requires a decentralized approach, and that a centralized approach reduces flexible integration management. Interestingly, we find no effect on redundancy, but the effects of redundancy are

moderated by technology turbulence. The impacts of flexibility are also contingent on technology turbulence. Overall, our findings support the need for acquiring firm managers to pay close attention to acquisition integration and that success may depend on prior experience, as well as consideration of factors internal and external to combining firms.

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