Contextualizing Speed and Cross-border Acquisition Performance: 
Labor Market Flexibility and Efficiency Effects

While cross-border acquisitions have become common, our knowledge and understanding of this phenomenon remains fragmented (Shimizu, Hitt, Vaidyanath, & Pisano, 2004; Weber & Fried, 2011). As the value and the volume of international transactions continue to grow (Cartwright, 2005; Lakshman, 2011), most cross-border acquisitions are not successful (Shimizu et al., 2004). In general, acquisition success rates remain low with failure rates ranging from 40 to as high as 90 percent (Bagchi & Rao, 1992; Christensen et al., 2011; Homburg & Bucerius, 2006). Additionally, despite decades of research (Haspeslagh & Jemison, 1991; Birkinshaw, Bresman, & Hakanson, 2000; Bauer & Matzler, 2014), a meta-analysis has found the most common acquisition research variables have no consistent and significant effects in explaining acquisition performance (King, Dalton, Daily & Covin, 2004). As a result, the mechanisms influencing value destruction or creation remain unclear (Ellis, Reus, & Lamont, 2009), and represent a puzzle for both academics and practitioners (Meglio & Risberg, 2010; Weber, Tarba, & Bachar, 2011). For cross-border acquisitions, Wu and colleagues (2016) suggest theory does not fully predict the impact of host country institutions on internationalization performance, because the institutional environments of host and parent firms interact.

An interaction between combining firms and their different institutional environments points to the importance of integration on acquisition performance (e.g., Angwin, 2004; Angwin & Maedows, 2015; Appelbaum, Gandell, Yortis, Proper, & Jobin, 2000; Homburg & Bucerius, 2006; Schlaepfer, et al., 2008; Weber & Tarba, 2013), including integration speed (Bauer, King, & Matzler, 2016; Meglio, King, & Risberg, 2015, 2017). This reflects the recognition that “all value creation takes place in post-merger integration” (Haspeslagh & Jemison, 1991, p. 132). In this paper, we follow Larsson and Finkelstein’s (1999, p. 6) conceptualization of integration as “the degree of interaction and coordination between the
two firms involved in a merger or acquisition”. In addition to determining integration depth, or the amount of coordination (Steigenberger, 2016), managers confront integration planning and its execution (Jemison & Sitkin, 1986). While integration levels are often largely dictated by strategic fit (Capron, Dussauge & Mitchell, 1998), managers have discretion on speed of integration (Homburg & Bucerius, 2005, 2006; Bauer & Matzler, 2014). Integrating too slow risks not realizing benefits (Cording et al., 2008). At the same time, integrating too fast risks socio-cultural turmoil, including: resistance, in-group and out-group biases, and loss of key employees (Meglio, King & Risberg, 2015; Puranam, Singh & Chaudhuri, 2009; Paruchuri, Nerkar & Hambrick, 2006; Weber, Tarba & Reichel, 2009).

Research examining integration speed in acquisitions tends to focus on the firm level and examines the relationship of speed of integration and acquisition performance (e.g. Angwin, 2004; Homburg & Bucerius, 2006; Bauer, King & Matzler, 2016; Uzelac, Bauer, Matzler & Waschak, 2016) or internal reorganization (Cording, Christman & King, 2008). While research has examined cultural differences in cross-border acquisitions, there is less research on institutional differences (Alimov, 2015; Chacar et al., 2010; Choi et al., 2016) and little to no research has examined the impact of institutional differences on integration speed. An exception involves recent research on integration approaches from emerging economies. For example, Liu and Woywode (2013) find Chinese acquirers of companies in German speaking countries apply a light integration approach which confirmed earlier results that Asian acquirers tend to integrate acquisitions slowly (Cogman & Tan, 2010). Consequently, research continues to call for examining the impact of different institutional contexts in cross-border acquisitions (Buckley et al., 2016; Meyer et al., 2009; Xing, Liu, Tarba & Cooper, 2016; Zheng, Wei, Zhang & Yang, 2016).

A country’s institutional environment reflects “the set of all relevant institutions that have been established over time” (Kostova & Roth, 2002, p. 180), or the “rules of the game” (North, 1990). Research suggests that country effects on firm performance can be as powerful
as industry effects (Makino, Isobe, & Chan, 2004), making the examination of institutional contexts an important line of inquiry in cross-border acquisition research (Ferreira, Santos, de Almeida & Reis, 2014; Stucchi, 2012). For example, institutional differences across countries influence entry mode decisions (Meschi et al., 2016; Slangen & Tulder, 2009; Meyer et al., 2009), and innovation performance (Wu et al., 2016). Beyond traditional differences in country institutions, research in economics suggests that labor factor market conditions (Botero et al., 2004; Siegel & Larson, 2009), including labor protections preventing dismissal of workers, influences a country’s employment (Breen, 2005; Neumark & Wascher, 2005). Factor conditions reflect “formal and informal rules governing the labor market” (Siegel & Larson, 2009, p. 1527). This makes labor market factor conditions relevant to cross-border acquisitions, as a consistent motive behind acquisitions is to improve efficiency from reducing personnel. For example, country contexts that provide greater employee protection may decrease the fear and uncertainty of employees following an acquisition (Homburg & Bucerius, 2006), and different labor market factor conditions can drive higher transactions costs (e.g., Hoskisson et al., 2012).

In our study, we make multiple contributions to theory by developing and testing the impact of the labor market factor conditions on integration processes. First, our study answers calls to examine the business environment surrounding acquisitions (Teerikangas & Joseph, 2012; King & Schriber, 2016) and across different institutional settings (Paustian-Underdahl et al., 2017). With the notable exception of Capron and Guillén (2009), the impact of labor market conditions on integration decisions and acquisition performance remains largely unexamined in developed economies, and we find labor market differences matter for acquisition outcomes. Second, we address one of the most important managerial choices in acquisitions, that of integration speed (Bauer & Matzler, 2014). We develop how the institutional characteristics moderate central relationships in acquisition research and can resolve conflicting results in integration research. In our examination of the institutional
effects of labor market flexibility and efficiency, we find that they do not have direct effects on acquisition performance. Instead, labor market factor conditions moderate the relationship of human and functional integration speed on acquisition performance. This underscores the need for managers and researchers to consider how elements of an institutional environment change established experience or anticipated relationships. Third, our study contributes to new institutional economics research on acquisitions. While this research field has pointed to discrepancies in the institutional setting in acquisitions involving developing and developed countries (e.g. Lebedev et al., 2015), our research begins to outline how institutions offer a fruitful starting point for understanding acquisition performance also in acquisitions involving developed countries.

**THEORY AND HYPOTHESES DEVELOPMENT**

New institutional economics (NIE) examines the role of institutions in developed economies on economic growth (Faundez, 2016). As defined by Douglas North, an architect of NIE, institutions are the “rules of the game” in society that constrain human interaction (North, 1990). For cross-border acquisitions, the “rules” in one society often differ from another, and manager decisions are constrained by the institutional environment (Meyer & Peng, 2016). However, acquisition research has focused more on issues internal to combining firms, in spite of observations that integration decisions are not always “the buying companies´ free choice” (Bauer, 2016, p. 343). For example, managers have limited choice on the environmental or tax regulations applying to an acquisition. Additionally, firms also contend with variance in labor laws. Specifically, firms conducting cross-border acquisitions can struggle to realize cost efficiencies in countries with strong employment protection laws (Belenzon & Tsolmon, 2016). For example, some integration efforts generally accepted in one culture may contradict basic cultural assumptions in another (e.g. Cooke & Huang, 2011). This is also consistent with calls to consider additional aspects of national institutional differences (Stenard & Sauermann, 2016).
The impact of different labor market characteristics on the pace of integration needs examination, as the labor market influences the ability of an acquirer to implement changes in personnel (Schneper & Guillén, 2004). The importance of the institutional context derives from the fact that it sets the frame for integration processes and outcomes (Alimov, 2015), and employee participation differs between legal environments to impact what can be achieved during integration (Aguilera & Dencker, 2004). Legal regulations set boundaries, even though multinational firms develop capabilities in dealing with institutions that are transferable (Carney et al., 2016). Limited transferability from institutions and capabilities displaying path dependency (e.g., Findez, 2016) likely has an impact on choices for the speed of integration in cross-border acquisitions.

Theory identifies speed of integration as central to acquisition outcomes. However, research provides conflicting results regarding the relationship between integration speed and acquisition performance. On the one hand, slower integration can foster trust building and on the other hand faster integration can minimize instability and enable realizing improvements faster (Angwin, 2004; Buono & Bowditch, 2003; Birkimshaw, Bresman, & Hakanson, 2000). We anticipate beginning to reconcile these divergent expectations is aided by separately examining human and functional integration speed. These separate constructs relate to different decisions that often involve trade-offs where progress on one dimension can come at the expense of the other (Haspeslagh & Jemison, 1991). Further, adjusting speed of human and task integration separately has been found to positively influence acquisition performance (Bauer, King, & Matzler, 2016; Birkimshaw et al., 2000; Schweizer, 2005; Gates & Very, 2003). The combined implication from acquisition research is that managing integration and its speed is an important, but an insufficient condition for improving acquisition performance. Further improvement in performance and our understanding of its antecedents likely also needs to consider differences in the institutional context. Each of these concepts and their interactions are developed in the following subsections.
Human Integration Speed

Employees balance commitment to an organization with an organization’s observed commitment to people (Ahammad, Glaister, Weber & Tarba, 2012), and human integration provides evidence of an acquiring firm’s commitment to employees. Human integration involves processes aimed at reducing uncertainty and establishing mutual understanding and trust between employees of combining organizations, as well as a shared identity in a new organization (Birkinshaw et al., 2000). During an acquisition, employees face unclear job prospects, increased workload, changes in work processes, reporting relationships and status, and role ambiguity driving a need to communicate with employees (Ullrich & van Dick, 2007). These concerns relate to research consistently showing human integration is important to acquisition performance, as human integration enhances willingness to share knowledge, interact, and cooperate with employees from the other firm (Larsson & Finkelstein, 1999).

Research has also begun to consider the speed of human and functional integration in improving acquisition performance. Early human integration, involving efforts to learn about the other firm’s culture, can lead to more benevolent attitudes that are associated with synergy realization (Schweiger & Goulet, 2005). Additionally, efforts to integrate cultures can mitigate negative influences from cultural differences (Teerikangas & Very, 2006). Quicker human integration also minimizes instability in the organization (Angwin, 2004) and helps managers maintain integration momentum (Graebner, 2004; Gates & Very, 2003). Therefore, we propose:

\emph{Hypothesis 1a: Higher human integration speed is associated with higher acquisition performance.}

Still, there are arguments for high human integration speed resulting in negative acquisition performance. Fast human integration can counteract intentions of creating a mutual learning environment for the employees of both entities (Buono & Bowditch, 2003). This may have greater importance in cross-border acquisitions where trust building requires
time to set a foundation for success (Bijlsma-Frankeema, 2004; Liu, & Woywode, 2013; Schweiger & Goulet, 2005). As a result, fast human integration may also be detrimental for increased acquisition performance. For example, slow integration requires less effort of employees (Homburg & Bucerius, 2006), and it can mitigate communication problems that are common during cross-border acquisitions (Lee et al., 2014). Consequently, we offer a competing hypothesis that:

Hypothesis 1b: Higher human integration speed is associated with lower acquisition performance.

**Functional Integration Speed**

While integration of functional areas can be a source for coordination problems, conflicts and organizational resistance (Cooke, 2006; Shrivastava, 1986), its aim is minimizing coordination problems and creating operational synergies. There are strong arguments for rapid functional integration based on realizing the benefits of an acquisition sooner (Sirower, 1997). Faster integration is associated with quicker returns on investment, greater effects of early actions, and the faster combination of resources (Angwin, 2004; Homburg & Bucerius, 2006; Morag & Barakonyi, 2009). For example, even a one-month delay in realizing cost savings can significantly reduce the net present value of an acquisition (Chanmugan, et al., 2005). Therefore, we propose:

Hypothesis 2a: Higher functional integration speed is associated with higher acquisition performance.

Meanwhile, there are also strong arguments in favor of more deliberate functional integration. For example, coordination inevitably involves direct costs to achieve interoperability, modify organizational interfaces, and train employees on updated processes and responsibilities. While such costs likely occur regardless of integration speed, integrating faster is consistent with employee learning and adjustment can lead to organizational breakdowns and higher employee turnover (Hambrick & Cannella, 1993). Further, the introduction and distribution of new responsibilities in an organization takes time
(Birkinshaw, Bresman, & Hakanson, 2000). As a result, fast functional integration increases the risk of insufficient preparation that contributes to misunderstanding. For example, functional integration disrupts established processes and routines (Paruchuri, Nerkar & Hambrick, 2006; Vester, 2002) and this can lead to employee resistance and lower performance (Cooke & Huang, 2011; Larsson & Finkelstein, 1999). Faster integration also limits understanding tacit target processes (Schweizer & Patzelt, 2012; Weber, Shenkar & Raveh, 1996). For example, faster integration leaves less time to understand what processes can be modified without driving knowledge transfer losses (Puranam, Singh & Chaudhuri, 2009). Therefore, we propose:

_Hypothesis 2b: Higher functional integration speed is associated with lower acquisition performance._

**Labor Market Factor Conditions**

The institutional environment likely modifies integration decisions in cross-border acquisitions (Ang, Benischke, & Doh, 2015; Capron & Guillén, 2009; Collings, Scullion & Morley, 2007; Mellahi & Collings, 2009; Zhu, Xia, & Makino, 2015). To account for contextual differences, research has investigated effects of institutional distance between the host and the target country (Hitt et al., 2004) to find that institutional distance influences the likelihood of acquisition completion (Dikova, Sahib, & van Witteloostuijn, 2010) and subsequent success (Zhu, Xia, & Makino, 2015). While research recognizes the legal framework of employee protections influences personnel decisions or limits the actions of managers can make following an acquisition (Khan, Soundararajan, Wood, & Ahammad, 2017; Siegel & Larsson, 2009), research has not examined the impact of different labor market factor conditions.

In considering labor market factor conditions, we focus on the flexibility and efficiency of labor markets that are critical to allocating workers effectively and providing incentives for employees to give their best effort (Chacar, et al., 2010). At the national level,
lower unemployment relies on flexibility, or the ability of labor markets to shift workers from one economic activity to another rapidly and at low cost (Mortensen & Pissarides, 1994). In turn, efficient labor markets provide clear incentives for employees, and promote meritocracy and diversity in the workplace (Greig, 2008). The combined effect of labor market flexibility and efficiency can make a country more attractive to businesses or trigger acquisition activity (Alimov, 2015), particularly cross-border acquisitions that facilitate the redistribution of workers and entering new markets. Next, we separately develop contingent impacts of labor flexibility and efficiency on the relationship between acquisition integration and performance.

**Labor market flexibility.** Integrating firms following an acquisition generally involves the elimination of redundant resources, including jobs and employees (DiPrete, 1993). In some acquisitions, the main purpose is to reduce the overall workforce to lower costs, making employee termination an integral part of the value creation (Siegel & Simons, 2010). Still, the institutional environment of a target firm influences implementation of acquisition integration and capable acquirers consider this in advance. For example, Teva Pharmaceutical Industries delayed an acquisition of a Hungarian firm for five years over the acceptance of lay-offs (Brueller et al., 2016). Greater labor market flexibility reduces efforts and costs for acquirers to change workforce, facilitates introducing non-permanent labor contracts and a greater freedom in firm operations (Anner & Caraway, 2010). For countries with tightly regulated labor markets, employee turnover is more difficult and this can lower acquisition performance (Debroux, 1996) due to higher costs than markets with labor market flexibility that allow more rapid employment changes (Anner & Caraway, 2010).

For human integration, we anticipate high labor market flexibility will positively moderate its impact on acquisition performance as cross-border acquisitions in more flexible labor market environments allow capturing more value potential (Alimov, 2015). In flexible labor markets, employees are adept at making adoptions that can facilitate performing acquisition integration quickly. For example, research consistently supports strategic
flexibility being related to higher performance (Brozovic, 2016). This relates to workers in flexible contexts being more open to performing different tasks (Sarala, Junni, Cooper & Tarba, 2016). Still, workers often make specific investments in firms to learn work processes that have limited value in other firms (Piketty, 2014), and this can contribute to worker commitment to an organization despite changes. Therefore, we propose:

Hypothesis 3a: Labor market flexibility positively moderates the path from human integration on acquisition performance.

For functional integration, flexibility can hurt coordination from increased variance in employee behavior that reduces interoperability (Sarala, Junni, Cooper & Tarba, 2016). For example, organizational knowledge is embedded in routines that are disrupted by acquisitions (Paruchuri et al., 2006). Labor market flexibility may also drive undesired employee turnover from employees leaving an organization, and high employee turnover following an acquisition negatively impacts acquisition outcomes (Eckardt, Skaggs & Youndt, 2014; Walsh, 1988). To compound problems from employee turnover, managers often overestimate workforce reductions possible after an acquisition (Krishnan, Hitt & Park, 2007), contributing to the inadvertent destruction of sought capabilities (Lord & Ranft, 2000). Therefore, we propose:

Hypothesis 3b: Labor market flexibility negatively moderates the path from functional integration speed on acquisition performance.

Labor market efficiency. An efficient labor market is characterized by property rights, free markets, and competition (Piketty, 2014), and this provides performance incentives and upward mobility. This results in higher productivity, because the best talent is attracted and retained. For example, performance-related pay has been found to improve labor market flexibility (Laezar, 1999). Consequently, labor market efficiency influences human resource management (Mellahi & Collings, 2009). The transfer of employee skills across industries explains both labor flows and corporate diversification (Neffke & Henning, 2013), or it
provides insight into possible cross-border acquisitions motives (Lebedev et al., 2015). For example, acquisitions can provide a method of gaining needed employees and skills (Mayer & Kenney, 2004).

For markets with higher labor market efficiency, or developed employee incentive and advancement systems (Greig, 2008), we anticipate access and transferability of employees and needed skills will be higher. This suggests that labor market efficiency will have beneficial effects on both human and functional integration speed. This relates to employees in efficient labor markets being more open to change due to perceptions of greater overall opportunity. When markets lack labor market efficiency (e.g. in transparency of competences), there will be less opportunity. For example, Cooke (2006) concludes foreign direct investment into mainland China is difficult due to low transparency. Therefore, we propose:

*Hypothesis 4a: Labor market efficiency negatively moderates the relation of human integration speed and acquisition performance.*

*Hypothesis 4b: Labor market efficiency positively moderates the relation of functional integration speed and acquisition performance.*

**METHODOLOGY**

**Sample**

For testing our proposed hypotheses, we used a multi-method design combining two data sources. First, a survey investigated organizational variables. Primary data provided greater detail for investigating acquisition integration than is available from secondary data (Zaheer et al., 2013). Second, we used secondary data to assess the labor market factor conditions. This enabled complementing key-informant information most knowledgeable about strategic and organizational issues (Ellis et al., 2009) with archival information on national labor market differences. It also has advantages in avoiding common method bias and allowing us to lag the measurement of constructs.
The survey was conducted in early 2016. Our survey instrument was developed in early 2016 and tested by a two-step pretest conducted with practitioners and academics with acquisition experience in February (Churchill, 1995). For the structure and the design, we followed the advices of Dillman et al. (Dillman, 2000; Dillman, Smyth, & Christian, 2009). Based on the results of the pretest, we made minor modifications. To improve clarity, we added some examples to specific items and reformulated two questions to improve readability. In late February, we sent out the questionnaires together with a personalized cover letter, an executive summary of the last year’s study, and a separate sheet, where respondents could add their contact details in case they were interested in the results of the study at hand. Key executives from the acquiring firms were selected as respondents because they tend to be most knowledgeable about the requested issues (Datta, 1991; Homburg & Bucerius, 2006). We would have preferred to interview executives from acquiring and target firms, but managerial turnover precluded including target executives. After sending out the questionnaires via mail, we started with follow-up phone calls two weeks later. In sum, we gathered 203 completed questionnaires from CEO’s, CFO’s or other top managers, where 107 were returned from the German-speaking countries, 96 from Scandinavian countries and two others. Our response rate (about 12%) is due to the length of our survey instrument and the requested issues sufficient and in line with other acquisition research (Homburg & Bucerius, 2005).

For sample construction, we implemented temporal, regional, industry, and firm size restrictions. We focused on transactions that took place between January 2009 and December 2013 with buyers from the German speaking countries from central Europe (Germany, Austria, Switzerland, and South Tyrol), as well as from the Scandinavian countries. The selection of time period also helps to guarantee that the integration process was already finished or in a final stage (Homburg & Bucerius, 2005) and to minimize the risks of a potential recollection bias (Ellis, Reus, & Lamont, 2009; Krishnan et al., 2007). The
geographical restrictions were driven by four reasons. First, mid-sized firms with a longstanding entrepreneurial tradition and international trading history, play an important role for both regions (for Scandinavia e.g. Holmund, Kock & Vanyushyn, 2007; for German-speaking countries e.g. De Massis, Audretsch, Uhlner & Kammerlander, 2017). Second, the countries in these regions can be described as industrial nations where the industries we investigate play a dominant role. Third, the macroeconomic development, an important antecedent for investing abroad (Giovanni, 2005), is comparable across the investigated countries. Finally, Europe, while providing a rather similar institutional setting under the European Union, displays variance in labor market regulations between nations (Botero et al., 2004).

We also focused on more traditional and labor-intense industries (e.g. machinery engineering) with long industry life-cycles for three reasons. First, in labor-intense industries at least some integration is necessary to eliminate redundant resources and to transfer and share resources (Birkinshaw et al., 2000). Second, structural changes require rather stable conditions (Bauer, Dao, Matzler & Tarba, 2017) and the investigated industries can be described as mature. Third, acquisition motives differ among industries (Teusler, 2008) and restricting industry avoids dilution of examined effects. For example, we deleted private equity as well as financial service or insurance firms. To make a specific acquisition observable, we also limited the acquirer size to 500 million Euros annual sales prior the acquisition. The relevant acquirers from the German-speaking countries and their corresponding acquisitions were identified with the ZEPHYR database from Bureau von Dijk. For the Scandinavian countries, we used a comprehensive database from a consulting firm located in Stockholm. In total, we identified 1737 acquirers that met our sample requirements.

Measures

For measurement development, we used already tested scales that were modified to fit the context of our study. The major advantages of this approach are: 1) the scales are already
empirically tested and have proven to be reliable, and 2) it makes our results comparable to other studies.

**Acquisition Performance** The measurement of performance is a widely-discussed topic in acquisition research (Cording, Christmann, & Weigelt, 2010; Meglio & Risberg, 2011). Stock market and accounting based measures have inherent problems (King, Dalton, Daily, & Covin, 2004), and they are also difficult to compare across different countries (Weetman & Gray, 1991). Therefore, we used managerial perceptions of performance, and empirical evidence indicates that managerial ratings highly correlate with objective performance measures (Datta, 1991). Acquisition success was assessed with the measurement model developed by Becker (2005), which consists of an objective (Alpha: .811) and a subjective (Alpha: .832) dimension that are each assessed with four items. For measuring performance, both dimensions were aggregated (Alpha: .786). As an indicator for the reliability of our scale, we compared the success and failure rates of our study with those regularly reported. We found no major differences as only 9.4% of all acquirers display an outstanding performance and this is comparable to Christensen and colleagues (2011). Thus, we conclude that our measure of performance is not biased.

**Speed of Integration** Speed of integration is usually assessed as duration of integration lasting from deal closing until the desired degree of integration is reached (Cording et al., 2008; Homburg & Bucerius, 2005; 2006). However, the degree of integration can have an enormous impact on the length of integration, and differences make the comparison across firms of traditional measures of integration speed problematic. For example, an integration time of 12 months could be either slow or fast, depending on the degree of change. If the target is granted autonomy, then 12 months would be rather slow when compared to a firm fully integrating a target in 12 months. To make the firm acquisition integration comparable, we applied a relative measure (Carbonell, Rodriguez-Escudero & Pujari, 2009) for speed of integration as suggested by Bauer, King and Matzler (2016). Relative approaches are rather
new in acquisition research, but they are common in new product development literature (e.g., Goktan & Miles, 2011; Akgün & Lynn, 2002; Kessler & Bierly, 2002). We set the duration of integration in relation to the degree of change with the following formula:

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\text{Relative speed} = \frac{\text{Degree of change}}{\text{Scale points of duration of integration} \times \text{Duration of Integration}}
\]

The scales were operationalized with 7 point Likert scales, ranging from 1 = “no changes at all” to 7 = “major changes” for the degree of change and from 1 = “longer than 24 months” to 7 = “less than seven months” for the duration of integration. The relative speed scale ranges from 0.143 indicating only minor changes over a period exceeding 24 months after deal closing to 7, indicating major changes in less than seven months.

Human integration speed was assessed with three items for the degree of change based on the measure developed by Cording and colleagues (Cording, Christman, & King, 2008). The scale is reliable with Cronbach’s Alpha exceeding the recommended threshold of 0.7 (Alpha: .782). The duration of human integration was assessed with a single item. For measuring functional integration, we applied the measure developed by Zaheer and colleagues (2013) with four items. As the duration of integration could significantly vary for different functions, we assessed the duration of integration with the same items as the degree of functional changes. Based on the degree of change and the duration of integration, we compounded the relative measure of speed (Alpha: .722) as suggested by Bauer, King & Matzler (2016).

**Labor Market Flexibility and Efficiency** For assessing labor market flexibility and efficiency, we used data from the World Economic Forum’s (WEF) Global Competitiveness Index and compounded the differences of buyer and the target country scores. Consequently, a higher score indicates relatively more flexible or efficient labor markets in the target country compared to the buyer country while a negative value indicates less flexibility or efficiency in the labor market of the target firm.
Labor market flexibility is assessed by five indicators, namely the cooperation in labor-employer relationships, the flexibility of wage determination, hiring and firing practices, redundancy costs and weeks of salary, and the effect of taxation on incentives to work. The assessment of the efficiency of the labor market consists of five indicators, pay and productivity, reliance on professional management, the countries capacity to retain talents, the countries capacity to attract talents, and the ratio of woman and men in labor force. Both, labor market flexibility and efficiency data were aggregated.

**Control Variables** We included control variables commonly used in acquisition research. First, *relative size* strongly affects the acquirers’ ability to reorganize a target firm, as smaller targets are easier to absorb compared to larger ones (Cording et al., 2008) and larger targets receive greater managerial attention (Calipha, Tarba, & Brock, 2010). Second, *annual sales* indicate acquisition routines in larger firms that can impact the ability to reorganize the target (Barkema & Schijven, 2008). Third, the number or prior acquisitions is an indicator for *acquisition experience*, and we asked respondents for the amount of previous acquisitions in the five years prior to focal acquisition identified in the questionnaire. Different types of acquisitions affect the degree of integration and the corresponding managerial measures, as conglomerate acquisitions require less structural managerial integration efforts, leading to our fourth control, *transaction type*. Fifth, even though the terms merger and acquisitions are often used interchangeably, they are distinct legal concepts and we control for it using a dummy variable, *merger acquisition*. There is empirical evidence that firm growth strongly impacts organizational behavior (Bauer & Matzler, 2014; Bauer, Dao, Matzler, & Tarba, 2017). As a result, our sixth and seventh controls measure *industry growth* and firm *average growth* rates. Growth rates were single item measures and aggregated to a mean growth rate before and after an acquisition. The external environment impacts organizations (Kostova, 1999; Lord & Ranft, 2000; Scott & Davis, 2007), and acquisitions expose firms to different competitive forces. Competition surrounding acquisitions has recently received increased
attention (King & Schriber, 2016; Keil, Laamanen & McGrath, 2013), so our eighth control measures differences in *competition intensity* for an acquirer and target country. While prior controls were survey measures, competition intensity was assessed with secondary data from the WEF global competitiveness index. A detailed description of the scales and the psychometric properties can be found in the Appendix.

**ANALYSIS AND RESULTS**

**Assessing Sample Bias**

To assess potential non-or late response bias, we conducted additional analyses. First, we compared early and late respondents of our sample and found no significant differences. Second, we compared our data at hand with a random sample from the basic population regarding annual sales and relative size (Zaheer, Castaner, & Sounder, 2013). Again, we find no statistically significant differences between our gathered primary data and the secondary data. Both results indicate that non-or late response bias is not a serious concern for our data (Armstrong & Overton, 1977).

Additionally, primary data from surveys risks the potential for common method bias for our data (Podsakoff et al., 2012; Podsakoff et al., 2003). Even though some scholars assume common method variance to be an “urban legend” (Spector, 2006), we implemented several measures in our research process to mitigate method variance and conducted some post-hoc tests to identify a potential common method bias problem. First, we guaranteed respondents’ anonymity and confidentiality (Podsakoff et al., 2003). Second, we separated the variables in our questionnaire to avoid proximity effects that could affect our data (Podsakoff, 2012). Third, our latent variables were not similar in content. Fourth, all constructs were measured with multiple items (Harrison, et al., 1996). Fifth, labor market efficiency and flexibility were collected from archival data.
We also conducted Harman’s single factor test to get an initial indication of common method bias post-hoc (Podsakoff & Organ, 1986). The results of an exploratory factor analysis display 8 discrete factors with an Eigenvalue greater than 1, and a single factor only explained 18.67 percent of variance. This result indicates no serious concerns (Podsakoff & Organ, 1986; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Further, we applied factor analysis to investigate discriminant validity between our constructs (Zaheer et al., 2013). This is important as human and functional integration speed could belong to a greater concept of integration speed, as previous research usually assesses speed of integration with a single item (e.g. Cording et al., 2008). The results of our analysis show two discrete concepts. Together, a priori measures and post-hoc analysis suggest that common method bias is not a serious concern for our data.

**Descriptive data**

Table 1 shows the descriptive statistics of our data. The majority of deals involve a target less than half the size of an acquirer (relative size). Additionally, most deals are horizontal, or they involve firms in related industries. Acquired targets were also generally growing in sales, but combined firms were still relatively small with the majority having less than 100 million Euro in annual sales. In Table 2, we display the location of the acquiring and target firms, and many of the deals involve cross-border acquisitions with domestic acquisitions more common in Germany and Sweden. Additionally, few of the acquisitions include developing counties, but the distribution of acquiring and target countries are comparable to official statistics. Consequently, sampling bias does not appear to be a serious limitation for our study

--- Insert Table 1 about here ---

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**Evaluation of the Hypotheses**

For assessing our hypothesis, we used OLS regressions, as it accommodates interval scales. For the analysis of the moderating effects, we followed the advices of Baron and Kenny
(1986) to standardize variables before calculating the interaction terms (Irwin & McCelland, 2001). We first analyzed the correlations of our indicators and constructs for potential multicollinearity problems, see Table 3. All correlations are below the suggested threshold of 0.8 (Gujarati, 1995). However, there is a high correlation between labor market flexibility and efficiency ($r = 0.701$). We also analyzed the variance inflation factor (VIF) for each regression model. The VIF’s range between 1.057 and 4.033 and thus, are below the recommended threshold of 10 (Tabachnick & Fidell, 2012). Again, the results suggest no multicollinearity problems. Our sample also shows a positive correlation between transaction type and performance, and this is consistent with conglomerate acquisitions performing better in our sample. Additionally, performance is better for the acquisition of growing targets. Interestingly, a correlation between the acquirer size in terms of annual sales and the acquisition experience (.383; p<.01) exists, and this is consistent with firm size being an indicator of acquisition activity. Consistent with Hypothesis 2a, functional integration is also correlated with acquisition performance.

--- Insert Table 3 about here ---

Table 4 reports the results of the regression analysis. We report standardized regression coefficients, F-Values as well as the adjusted $R^2$ values, and our explanation of observed variance is consistent with other acquisition research (e.g., Sirower, 1997, p.158). In model 1, we investigate the effects of the control variables, and the adjusted $R^2$ indicates that the control variables explain only 5.2% of the variance of our dependent variable. In model 2, we implemented the direct effects of human and functional integration speed. We find no significant effect from human integration speed on performance, and neither Hypothesis 1a nor 1b is supported. For functional integration speed, we find a significant and positive effect indicating that fast functional integration increases acquisition performance, supporting Hypothesis H2a. As a result, we cannot support the alternative hypothesis (H2b) that indicated a negative performance effect. In model 3, we add the direct effects of the moderating
variables. Only labor market flexibility has a negative direct performance effect ($\beta=-.175; \ p<.1$).

--- Insert Table 4 about here ---

In model 4, we implement the four interaction terms. Both direct effects, as suggested in H1 and H2, remain equal compared to models 2 and 3 with regards to significance and direction. While human integration speed is still insignificant, functional integration speed remains positive and significant ($\beta=.137; \ p<.1$). The interaction effects are significant and show diverging directions as indicated by H3 and H4. Specifically, H3a indicated a positive moderating effect of labor market flexibility on the human integration speed performance relationship. We find support for the theoretical relationship, as well as for the more complex performance relationships of human integration speed. Slow human integration is beneficial in cases of a rigid labor market and fast integration is beneficial for high labor market flexibility ($\beta=.188; \ p<.1$). This supports Hypothesis H3a and the effects are displayed in Figure 1. Further, we find a negative moderating effect of labor market flexibility on the relationship of functional integration speed on acquisition performance ($\beta=-.213; \ p<.05$), supporting Hypothesis H3b. The performance effects between high and low labor market flexibility do not differ in cases of slow functional integration speed. However, Figure 2 shows that highly flexible labor markets negatively and less flexible labor markets positively impact the functional integration speed performance relationship. These results suggest that labor market factor conditions influence the impact of human and task integration on acquisition performance.

--- Insert Figure 1 about here ---

--- Insert Figure 2 about here ---

For Hypotheses H4a and H4b, we find significant moderating relationships. Hypothesis H4a indicated a negative moderating effect of labor market efficiency on the relationship of human integration speed on acquisition performance. Our empirical results
indicate a negative interaction ($\beta=-.318; p<.01$). Figure 3 shows that slow human integration speed is more beneficial in efficient labor markets, and fast human integration speed has a positive impact in less efficient labor markets. For Hypotheses H4b, we find the opposite effect for functional integration speed ($\beta=.361; p<.01$). As Figure 4 confirms, the beneficial effects of fast functional integration speed require efficient labor markets, and there is no benefit of when labor markets are inefficient.

--- Insert Figure 3 about here ---

--- Insert Figure 4 about here ---

**Supplemental analysis and Robustness Tests**

We performed supplemental analysis to test the robustness of our results. First, acquisition motives might impact integration approaches (Lebedev et al., 2015). For example, there is evidence that integration may destroy value in high-technology acquisitions (Puranam et al., 2009; Paruchuri et al., 2006), but provide benefits in other industries (e.g. Cording et al., 2008). While our focus on traditional industries should limit motives, as evidenced by a high proportion of horizontal acquisitions, we tested whether our effects are robust across acquisition motives (e.g. market-share, new product development, product-portfolio), operational aims (e.g. staff retention, headcount-reduction, customer retention), and financial aims (e.g. annual sales, operating income, cost savings). Each construct was assessed with a single item on a 7 point Likert scale ranging from 1= “not important” to 7= “very important”, as controls to our regression model. The results show that strategic ($\beta = 0.150; p = 0.029$) and financial ($\beta = 0.267; p = 0.000$) motives impact acquisition performance, while operational aims do not. However, our proposed interaction-effects do not change with regards to either direction or significance (H3a: $\beta = 0.182; p = 0.058$; H3b: $\beta = -0.236; p = 0.008$; H4a: $\beta = -0.236; p = 0.020$; H4b: $\beta = 0.362; p = 0.003$). Additionally, we tested whether integration approaches are affected by acquisition motives. We find that strategic motives correlate with faster human integration speed and that strategic and operational motives correlate with faster
functional integration speed. A relationship between functional integration and operational motives in acquisitions has face validity, as functional integration would be required to achieve operational motives.

Second, geographical and cultural distance might impact the chosen integration approach (Dow & Larimo, 2011), as well as our research model. Consequently, we examined acquiring and target countries into the German-speaking, Scandinavian, other European, and countries outside Europe. Based on a parametric test, we find no significant differences between the subgroups and integration speed. We also transformed our country variables in two dummy variables to determine whether the acquirer and the target share a common cultural background in terms of sharing an official language or whether they belong to the same geographical region (Rossi & Volpin, 2004). Again, we find no statistical differences regarding integration speed for either direction or significance.

As we have used a broad variety of control variables to avoid concerns regarding omitted variables bias, model-overfitting might be a serious concern (Zaheer et al., 2013). As a consequence, we calculated extended (with acquisition aims, language, and geographic dummy) and reduced models (without controls). Both, the extended, as well as the reduced models, provide consistent results, suggesting our findings are not artifacts of model specification.

**DISCUSSION**

Against a background where existing acquisition research largely applies an internal focus on combining firms (Teerikangas & Joseph, 2012), we agree with Wu and colleagues (2016) that research needs to consider institutional contexts. Our research answers to calls to examine the institutional environment (Ferreira, et al., 2014; Hutzchenreuter, Kleindienst, & Lange, 2015) and contingent effects of labor market factor conditions (Buckley et al., 2016; Siegel & Larson, 2009). As a result, we complement earlier research on the constraining nature of the institutional environment (Capron & Guillén, 2009). Further, our results confirm expectations
of new institutional economics (North, 1990) that institutions in developed economies impact economic growth. We contribute to this line of research by confirming institutional setting of host and parent firm countries interact in realizing opportunities from acquisitions. Specifically, our results show different direct effects for human and functional integration speed with an insignificant direct effect for human integration speed and a positive direct effect of functional integration speed on acquisition performance without considering institutional context. This can be partially explained by our focus on manufacturing industries where operational integration plays a major role.

We also find the impact of human and task integration speed is moderated by labor market factor conditions. Our results supporting the impact of human integration speed is positively moderated by labor market flexibility and negatively moderated by labor market efficiency. Consistent with expectations human integration speed becomes positive when paired with property rights, free markets, and competition typical of high labor market flexibility. However, the interaction of human integration speed and labor market efficiency is opposite of what was expected, and it lowers acquisition performance. Understanding the relationship between human integration speed and labor market efficiency represents an opportunity for future research. For functional integration speed, a slower pace of integration benefits performance when a host country has high labor market flexibility. However, this may be offset under conditions of labor market efficiency that amplifies the positive effect of functional integration speed on acquisition performance. Further, faster human integration under conditions of labor market flexibility may facilitate functional integration and improved acquisition performance. In discussing implications of our findings, we separately highlight research and managerial implications.

**Research implications**
Extant acquisition theory suffers from lack of attention to the environment surrounding acquisitions (Teerikangas & Joseph, 2012; King & Schriber, 2016). The majority of research on integration speed focuses on characteristics internal to combining firms (e.g., Angwin, 2004; Bauer, King & Matzler, 2016; Cording et al., 2008; Homburg & Bucerius, 2006), unlikely to sufficiently explain acquisition performance especially when combining firms from different environments. While prior research largely assumes that cultural distance is symmetrical between countries (Weber, Tarba & Reichel, 2009), we find integration decisions and their outcomes will vary between two countries depending on where a target and acquirer are located. Further, most research on cross-border acquisitions has examined cultural differences versus more fine-grained institutional differences. In a review, Lebedev and colleagues (2015) conclude that the quality of institutions is important for cross-border acquisition performance. We complement and extend this research by examining whether institutional differences involving labor market efficiency and flexibility also impact cross-border acquisition decisions and performance.

Second, extant acquisition research acknowledges integration speed as one of the most important levers of acquiring managers, however often either disregards interaction with institutional contexts (e.g. Homburg & Bucerius, 2006), and offers conflicting findings on speed. Our focus on the institutional environment can reconcile conflicting findings regarding the benefits (e.g., Chanmugan, et al., 2005; Cording et al., 2008; Morag & Barakonyi, 2009) and drawbacks (Meglio et al., 2015; Puranam et al., 2009; Weber et al., 2009) of integration speed. We find that the interaction of integration decisions and institutional conditions significantly impact acquisition performance. Specifically, labor market efficiency and flexibility largely impacts acquisition performance through a moderating impact on human and task integration speed. This confirms the importance of labor market flexibility and efficiency as an important part of a nation’s institutional environment (Whang, Hong, Kafouros & Wright, 2012). Our results suggest tighter labor regulations lead to more
organizational effort and reorganization costs, but they also reinforce the importance of human and functional integration speed. Further, faster human integration can mitigate limits of tighter labor markets. However, contrary to theory, the interaction between human integration speed and labor market efficiency had a negative opposite effect and underscores the need for continued research. Importantly, we find that it is not only the absolute value of differences, but the direction of the differences that matter (Hutzschenreuter, Kleindienst, & Lange, 2016).

Third, our study also adds to new institutional economics (North, 1990) by showing how it offers a fruitful starting point for understanding acquisition performance. Prior research has begun to elaborate the effects of institutions on acquisitions involving developing countries (Hoskisson et al., 2013; Lebedev et al., 2015). While institutional differences may be the starkest in acquisitions involving developing and developed countries, we demonstrate they matter also in between developed countries. Thus, we extend and develop this research by further strengthening the relation between acquisitions and opportunities and threats from institutional context differences. Specifically, we show how institutions interact with acquisition choices to shape acquisition outcomes also in developed countries.

Managerial implications

Our results also have important implications for managers. First, integration speed can be a decisive success-factor in acquisitions. Nonetheless, the positive effect of functional integration speed should not automatically lead to the conclusion that managers should speed up the integration of organizational functions. Managers should set integration speed with consideration of an acquisition’s context. In cases of a highly flexible labor market, key employees could easily leave the organization when changes are too disruptive. Thus, human resource management should focus on retaining these employees (Zhang, Ahammad, Tarba, Cooper, Glaister & Wang, 2015). Still, it is likely more important that a market displays labor market efficiency where managers need to be more concerned with functional integration
speed. This underscores that acquisition integration is a multidimensional construct and that managers need to consider the interplay between human and functional integration speed.

**Limitations and Research Opportunities**

Our study has several limitations worth noting, including our application of retrospective primary data to measure acquisition performance. This relates to concerns about the decreasing capacity of recollection and overly positive assessments by managers (Ellis, Reus & Lamont, 2009; Golden, 1992). However, we attempt to mitigate this concern by focusing on more recent acquisitions. Research also supports that managerial assessment of firm performance is consistent with objective measures of performance (Richard et al., 2009).

Further, managerial assessment is often the only available option and has the advantage of managers being able to consider multiple dimensions of performance (Papadakis & Thanos, 2010). Still, examining the impact of labor market flexibility and efficiency on acquisition integration with objective performance measures to triangulate our results represents an opportunity for future research. A related limitation derives from a smaller sample size, though the significance of our observed effects could become even stronger in a larger sample. Regardless, our sample has the advantage of considering respondents from multiple countries, and our response rate is consistent with other primary data research on acquisitions (Bauer & Matzler, 2014; Homburg & Bucerius, 2006).

Additional changes in research design also represent opportunities. For example, future research should repeat this study to build cumulative knowledge in the field of integration and institutions (Bettis, Ethiraj, Gambardella, Helfat & Mitchell, 2016; Lewin, Chiu, Fey, Levine, McDermott, Murmann, & Tsang, 2016). Additionally, the majority of cross-border acquisition research focuses on developed country acquirers (Lebedev et al., 2015), and, while we do not find differences for acquisitions involving developing economies, there continues to be a need to examine acquisition activity by emerging market firms (Liu & Vrontis, 2017; Collison, Brennan, & Rios-Morales, 2017) and their interaction with
institutions (e.g. protection of firm founders) or corporate governance (Young et al., 2008), as there is an increased trend of acquisitions by firms in emerging markets (Liu & Deng, 2014; Xing, Liu, Tarba & Cooper, 2016; Xing, Liu, Tarba, & Cooper, 2017). Further, while we complement our primary data with secondary data on labor market characteristics, research in this area could benefit a longitudinal design would be preferable (Ellis, Reus, & Lamont, 2009; Zollo & Meier, 2008). Our measure of acquisition experience also focuses on general experience, and it would be useful to investigate prior acquisition experience in a target firm’s country (e.g., Andersson & Svensson, 1994), as well as a target firm’s experience (e.g., Cuypers, Cuypers, & Martin, 2016). Still, alternate research designs represent an opportunity for future research.

Overall, our findings reinforce Hutzschenreuter and colleagues (2016) suggestion that future research also consider additional aspects of institutional environment beyond labor market efficiency and flexibility (e.g., Liou, Chao & Ellstrand, 2017; Sternard & Sauermann, 2016). Research is also needed on the microfoundations of cross-border acquisitions, particularly considerations of the impacts on people and how they react (e.g., Liu et al., 2017). Still, most research on acquisition integration takes an internal focus, and we find an interaction between internal and external conditions better explains cross-border acquisition performance.


Table 1: Descriptive Statistics

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<th>Relative size</th>
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<th>Branch growth</th>
<th>%</th>
<th>Annual sales of consolidated business in €</th>
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<td>4.4</td>
<td>&lt; 25 million</td>
<td>29.6</td>
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<td>22.2</td>
<td>-15% to -5%</td>
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<td>25-49 million</td>
<td>17.7</td>
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<td>-5% to +/-0%</td>
<td>14.8</td>
<td>50-99 million</td>
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<td>+/-0% to 5%</td>
<td>40.4</td>
<td>250-499 million</td>
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<td>&gt; 100%</td>
<td>9.4</td>
<td>5% to 10%</td>
<td>18.7</td>
<td>500-1,000 million</td>
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<td>&gt; 1,000 million</td>
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Type of transaction

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Table 2: Acquirer and Target Countries

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Table 3: Correlations among Variables

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<td>-0.045</td>
<td>0.072</td>
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<tr>
<td>Functional Integration Speed</td>
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<td>-0.142*</td>
<td>0.007</td>
<td>0.054</td>
<td>0.079</td>
<td>-0.029</td>
<td>-0.062</td>
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<td>0.073</td>
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<td>0.021</td>
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<td>0.126</td>
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+ p<.1; * p<.05; ** p<.01; two-tailed tests
Table 4: Regression Analysis

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<th>Performance</th>
<th>Model 1</th>
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<th>Model 3</th>
<th>Model 4</th>
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<tr>
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+ p<.1; * p<.05; ** p<.01; two-tailed tests
Figure 1: The moderating impact of labor market flexibility on the human integration speed performance relationship
Figure 2: The moderating impact of labor market flexibility on the functional integration speed performance relationship
Figure 3: The moderating impact of labor market efficiency on the human integration speed performance relationship
Figure 4: The moderating impact of labor market efficiency on the functional integration speed performance relationship