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Post-acquisition integration: Managing cultural differences and employee resistance using integration controls[☆]



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ABSTRACT

The integration of acquisitions is often complicated by cultural differences between the acquiring and acquired firms. An important path through which cultural differences can impact acquisition performance is through employee resistance. We assemble detailed survey data to examine how acquiring firms' use of integration controls moderates the impact of employee resistance following from cultural differences on acquisition performance. Our findings confirm that cultural differences between acquirer and target are associated with initial employee resistance, which in turn depresses acquisition performance. Managers' use of integration controls moderates the effects of employee resistance on acquisition performance. Specifically, while use of task integration controls is positively associated with performance, it also amplifies the detrimental effects of resistance. In contrast, use of sociocultural integration controls helps to reduce these effects. Our findings thus indicate that in the presence of cultural differences, sociocultural integration gains importance to reduce initial employee resistance, which can enhance the effectiveness of subsequent task integration efforts.

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1. Introduction

There is a long history of discussion about whether and when acquisitions create value for acquiring firms (Haleblian, Devers, McNamara, Carpenter, & Davison, 2009). It has become increasingly clear that acquisition success depends, beyond the characteristics of the deal and the firms involved, on the planning and execution of the process of the acquisition and subsequent integration (Angwin & Meadows, 2015; Birkinshaw, Bresman, & Håkanson, 2000). An important challenge for a successful

integration is to overcome cultural differences between both firms (Ashkanasy & Holmes, 1995; Reus & Lamont, 2009; Teerikangas & Very, 2006). In this study, we propose that cultural differences between acquirer and target before the acquisition are a key source of employee resistance, which in turn affects acquisition performance. We also argue that integration controls implemented by management affect how initial employee resistance, originating from cultural differences, influences acquisition performance.

Prior literature shows that cultural differences between merging firms can lead to integration problems and suboptimal acquisition performance (Stahl & Voigt, 2008), and that managers often attribute poor performance to cultural differences (Eero Vaara, Junni, Sarala, Ehrnrooth, & Koveshnikov, 2014). However, the causal path between cultural differences and acquisition performance is a complex one and requires examination of process variables that follow from these differences and the actions that managers take. For example, Stahl and Voigt (2008) propose that cultural differences influence sociocultural integration (i.e. the creation of a shared identity and value system) and task integration (i.e., the realization of operational synergies) differently. However, the mechanics by which they do so remain unclear.

Another important factor emphasized in the acquisition

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literature is employee resistance accompanying organizational changes. Ford, Ford, and D'Amelio (2008) point out that resistance, much like cultural differences, is often used by managers as a catch-all excuse for low acquisition performance. Larsson and Finkelstein (1999) conclude that resistance is a strong determinant of acquisition performance. They suggest culture clashes between acquirer and target firm as an example of resistance but stop short of testing a relationship between cultural differences and employee resistance. Social identity theory (Hogg & Terry, 2000) predicts there will be a link between cultural differences and employee resistance: the more different employees from acquirer and target perceive each other to be, the less willing they will be to cooperate with one another and form a single entity. Burns and Scapens (2000) posit that employee resistance to change may have several sources. On the one hand, legitimate conflicts of interests or practical inability to cope with the change can cause resistance. On the other hand, 'mental allegiance to established ways of thinking' (Burns & Scapens, 2000, p. 17) may also result in change-inhibiting resistance. Similarly, Vaara and Tienari (2010) posit that resistance to merger integration can be a consequence of employees of both firms dissimilarly framing the same events in terms of their own background and culture.

The way change agents implement organizational change can significantly shape the impact of resistance (Birkinshaw et al., 2000). We theorize that managerial interventions in the integration process moderate the relation between initial employee resistance and acquisition performance. Stahl and Voigt (2008) argue that cultural differences put different demands on sociocultural integration and task integration. We suggest that these differences can be (partially) explained by employee resistance, which we theorize to mediate the relationship between cultural differences and acquisition performance. We hypothesize that managers' use of integration controls, which can focus on sociocultural or task aspects, differentially moderates the impact of initial employee resistance.

Task integration controls are used as a means to enhance acquisition performance by codifying processes and procedures, thereby guiding the integration process (Zollo & Singh, 2004). Careful use of such tools may therefore facilitate integration and the creation of synergies between the integrating organizations. However, in the face of initial resistance, two detrimental effects may occur. On the one hand, resistant employees are less likely to adhere to codified instructions, decreasing their effectiveness. Also, task integration controls codify changes in the firm which may be unwelcome to employees who are resistant to the integration process. This way, they are likely to make the source of resistance, i.e. the acquisition and subsequent integration, more visible and concrete, reinforcing the negative effects of employee resistance on performance.

Sociocultural integration controls, on the other hand, have a behavioral orientation and should help in mitigating the negative effects of initial resistance. These controls are implemented to increase interaction, facilitate communication and stimulate cooperation. In other words, they are aimed specifically at overcoming the sociocultural difficulties that may arise when integrating two organizations. Therefore, they should mitigate some of the negative effects of employee resistance on performance.

To test these expectations, we collected in-depth survey data from acquiring managers in 79 completed acquisitions. We ensured that the key decision maker responded in each case. While this precluded collecting a large sample of observations, using only deeply informed respondents with first-hand involvement enhances the accuracy of responses and the resulting data provide in-depth insight into the integration process. The findings from tests of our path model show that while cultural differences are often

regarded as a primary determinant of integration success (Vaara & Tienari, 2010), initial employee resistance as well as managers' use of integration controls are important in explaining acquisition performance. In our survey sample, cultural differences are positively associated with initial employee resistance, which, in turn, relates negatively to acquisition performance. The results support the prediction that the effect of initial employee resistance on acquisition performance depends on managers' use of integration controls. While task integration controls have a positive direct effect, they also amplify the negative effects of initial resistance. Sociocultural integration controls, on the other hand, help to alleviate these effects. We recognize that while common method bias and hindsight bias may be a concern with single survey studies, the moderating effects that we identify are unlikely to be artefacts of such biases (Evans, 1985; Siemsen, Roth, & Oliveira, 2010). We also followed up the survey study with a number of in-depth, semi-structured interviews with six highly experienced integration experts to obtain qualitative insights into the integration process. The follow-up interviews confirm the conceptual distinction between the two types of tools, and show they are used for different purposes: task integration controls to achieve integration and create synergies, and sociocultural integration controls to overcome employee resistance.

With these findings, we contribute to the literature by testing theory-based channels through which cultural differences between merging firms translate into acquisition performance. Importantly, the findings show that managerial interventions through the use of integration controls matter in explaining the performance effects of employee resistance deriving from cultural differences. We show that the effects of cultural differences and consequent employee resistance are neither straightforward nor unidirectional and require careful consideration by integration managers of the different integration controls they intend to employ. The results also suggest that in the presence of significant cultural differences, the use of sociocultural integration controls may be key in overcoming initial resistance and thereby increase the effectiveness of task integration controls. In line with Birkinshaw et al. (2000) this implies that the timing of the use and intensity of these controls may be particularly important for achieving effective integration. For practitioners, and particularly acquisition decision makers and integration managers, these findings also underscore the importance of understanding cultural differences with target firms, their behavioral consequences, and how different interventions may produce different outcomes.

The following section provides a review of prior literature and the development of the hypotheses of this study. Section 3 explains the research methodology, including the data collection process, model specification strategy and variable measurement. Section 4 reports the results of the estimation of the main models, while section 5 reports the results of additional analyses that ascertain the reliability of the results. Section 6 describes the insights obtained from subsequent qualitative interviews held with integration experts.

2. Literature review and hypotheses development

Fig. 1 shows the conceptual model developed and empirically tested in this paper. The figure shows how cultural differences between two merging firms influence employees' resistance to the integration at the target firm, which in turn influences acquisition performance. It further shows that integration controls used during the integration process, both task-related and sociocultural, can influence the impact of initial employee resistance on acquisition performance. These effects are described in more detail below. In developing the conceptual model and related hypotheses, we add

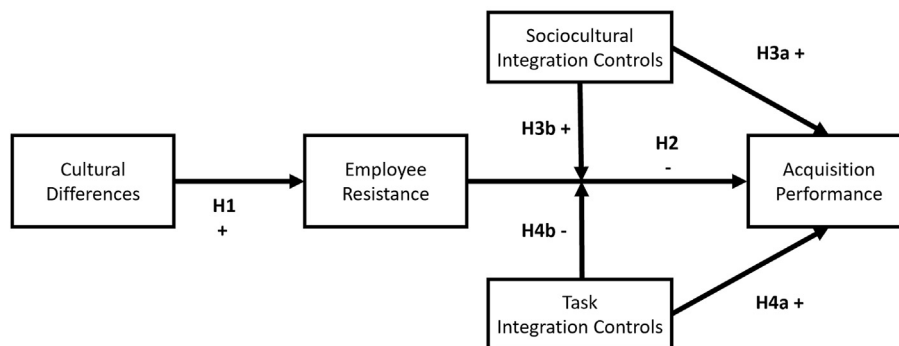


Fig. 1. Conceptual model.

qualitative insights from interviews we held with six acquisition experts, who are highly experienced consultants (collectively having been involved with hundreds of integration processes). These insights enable us to illustrate and provide intuition based on experiences in the field to the concepts and relationships hypothesized.

2.1. The influence of cultural differences on employee resistance

Cultural differences between firms are an often cited reason for difficulties in the integration of acquired firms (Cartwright & Schoenberg, 2006; Chatterjee, Lubatkin, Schweiger, & Weber, 1992; Stahl & Voigt, 2003; Steigenberger, 2016). Studies indicate that the scope for realizing synergies and positive returns from an acquisition may not only increase when both firms are strategically and operationally compatible, but also when their corporate cultures are compatible (e.g. Chatterjee et al., 1992; Stahl & Voigt, 2003). Cultural differences can increase the difficulty of integration, generating higher costs and less successful synergy extraction (Cartwright & Schoenberg, 2006; Steigenberger, 2016). One important potential consequence of such differences is resistance from employees of the acquired firm who can consider the group they become part of as different from their own (Empson, 2004; Vaara, Sarala, Stahl, & Björkman, 2012). Social identity theory proposes that employees who self-identify as part of a group are more negatively predisposed towards people who they classify as part of another group (or outgroup). As a result, they will be less willing to cooperate with them (Ullrich & van Dick, 2007). In cases where corporate cultures differ strongly, there is a clear delineation between both groups, and, at the start of the integration process, resistance can become salient. Cording, Christman, King, and Force (2008, p.750) describe resistance in acquisitions as involving “behaviors such as distrust, hostility and self-preservation, and an ‘us versus them’ antagonism,” closely resembling those behaviors towards the outgroup as predicted by social identity theory. Larsson and Finkelstein (1999) similarly describe resistant behavior in terms of the individual and collective opposition of employees to the combination and subsequent integration of the joining firms. As cultural differences also contribute to complicating communication between groups (Seeger & Hall, 2012), this can additionally promote uncertainty about the other group and the integration process. Previous research has identified uncertainty as a major driver of employee resistance (Karim, 2006; Meglio & Risberg, 2010). In each of our interviews with acquisition experts, cultural differences between firms were regarded as a critical issue, and two interviewees explicitly attributed employee resistance to cultural differences.

Cultural differences do not necessarily lead to negative outcomes only though, as different cultures can prove to be

complementary (Martin & Siehl, 1983) and, if managed well, may even provide learning opportunities. Yet, through the dynamics described above, greater cultural differences are more likely to generate initial resistance, before integration dynamics unfold. Ashkanasy and Holmes (1995) suggest that resistance is particularly important in the initial stages of a merger. The ways in which the integration is managed will influence the evolution of this resistance and its impacts over time. We thus expect greater initial resistance from employees at the acquired firm when cultural differences between the acquiring and acquired firm are greater.

H1. Cultural differences between an acquiring and acquired firm are positively associated with initial employee resistance.

2.2. The influence of employee resistance on acquisition performance

Based on Homburg and Bucerius (2006), we define ‘acquisition performance’ as the evolution of the merged firm’s financial and non-financial performance after the acquisition as compared to competitors. If initial employee resistance persists, it can adversely influence firm performance following an acquisition in several ways (Cording et al., 2008; Larsson & Finkelstein, 1999; Teerikangas & Very, 2006; Vaara, 2003). These include an unwillingness to implement the proposed integration plan, reluctance to co-operate with employees of the other merging organization, and other forms of reduced motivation to act in the interest of the combined organization. We thus expect a negative influence of initial employee resistance on the performance of the merged organization.

H2. Initial employee resistance is negatively associated with acquisition performance.

2.3. The moderating effect of integration controls

Integration is not an automatic process in which the antecedents, such as firm and deal characteristics, mechanically lead to outcomes. Cording et al. (2008, p.744) define integration as “managerial actions taken to combine two previously separate firms.” Thus, managerial interventions are a critical aspect of the integration process, or indeed of any deliberate organizational change. Key to the interventions by the managers of acquiring firms are the integration mechanisms or controls used to facilitate the integration and the realization of synergies (Birkinshaw et al., 2000; Jones, 1985; Teerikangas & Very, 2006). All six interviewed experts indicated that the negative effects of cultural differences and employee resistance could be mitigated if managed appropriately. We define integration controls as mechanisms or controls specifically implemented to facilitate post-acquisition integration. Constructing and implementing these integration controls is often

costly in terms of planning and organization, and so is archiving, structuring and distributing the relevant knowledge from the integrating organizations. This requires managers to make cost-benefit tradeoffs regarding the extent and types of integration controls used. These decisions partly depend on the planned degree of integration between both firms, as deeper integration may be associated with a greater need for integration controls; however, these two concepts are not the same. Integration controls concern the specific controls that managers use during integration rather than indicating the desired or realized level of integration.

Following a number of studies (Birkinshaw et al., 2000; Graebner, Heimeriks, Huy, & Vaara, 2017; Stahl & Voigt, 2003), we differentiate between sociocultural integration controls and task integration controls. Sociocultural integration controls are aimed at creating and improving interpersonal connections between employees of the integrating firms. These include, for example, cultural awareness efforts, targeted rotation of employees between departments and the creation of mixed teams (Birkinshaw et al., 2000). Task integration controls, on the other hand, focus on creating and implementing procedures to be used by the merged organization. They include mapping and modeling of products, projects, staff and finances, as well as manuals created to communicate new procedures and required knowledge (Zollo & Singh, 2004). Our interviews with acquisition experts confirm that these two categories are considered as distinct by practitioners, often handled by different functions or teams, with top management participating in the implementation of both.

The extent of use of integration controls logically depends on decisions by the management of the acquiring firm, potentially in collaboration with target management. The large variance in acquisition outcomes, combined with the tendency of management to attribute failure to cultural differences (Eero Vaara et al., 2014) suggests that integration decisions are often sub-optimal with respect to cultural differences and their consequent effects. The interviewed acquisition experts generally indicated that while pre-acquisition planning is important and increasingly gaining attention, most of the integration planning and execution is performed after the acquisition deal is closed and is often considered insufficient. As described below, we expect that considerable variance exists in the use of integration controls for given levels of cultural differences and initial employee resistance, and that acquisition outcomes will, at least partially, depend on this combination. We not only examine how managerial use of both types of controls influences acquisition performance directly, but particularly how they moderate the influence of initial employee resistance on acquisition performance.

2.4. Sociocultural integration controls

Sociocultural integration controls facilitate communication and interaction between employees of both organizations, and promote the sharing of information (Birkinshaw et al., 2000; Long, 2018). This is of particular importance when, at the outset of integration of the target firm, communication is constrained due to initial employee resistance. Sociocultural integration controls are designed to eliminate misconceptions and improve attitudes of employees towards each other.

Since sociocultural controls promote direct interaction between employees of the integrating organizations, they can enhance mutual awareness and help remove barriers to collaboration. This can directly contribute to enhancing acquisition performance, as there may always be some differences which sociocultural controls can help to overcome. Still, we expect that these benefits are most important when managers face integration difficulties due to initial employee resistance. Sociocultural integration controls can

constitute a substitute source of communication and interaction, compensating for what would naturally occur amongst less resistant employees. Furthermore, managers' use of these controls can signal a willingness to listen to employees' concerns, curtailing degenerative dialogue and oppositional attitudes (Thomas, Sargent, & Hardy, 2011). Ford et al. (2008) propose that managerial efforts to make sense of and give meaning to resistance can help overcome its negative effects. We therefore hypothesize sociocultural integration controls to contribute to performance in two ways: (1) by directly enhancing acquisition performance, and (2) by reducing the negative impact of initial resistance on performance.

H3a. The use of sociocultural integration controls is positively associated with acquisition performance.

H3b. The use of sociocultural integration controls weakens the negative effect of initial employee resistance on acquisition performance.

2.5. Task integration controls

Task integration controls aggregate and codify knowledge and procedures and communicate these to employees in both organizations (Zollo & Singh, 2004). Managers' use of task integration controls can influence acquisition performance in several ways. On the one hand, these controls support creating and disseminating instructions on new ways of working that can enhance performance by creating more effective and efficient processes (i.e., realizing potential synergies). They formalize the expected changes in the organization and thereby directly contribute to creating an integrated organization. However, as resistant employees are less willing to participate in implementing such changes (Birkinshaw et al., 2000; Teerikangas & Very, 2006), use of these controls in an environment of high resistance may work adversely and amplify the effects of initial resistance on performance. Employee resistance likely hampers the effective gathering and aggregation of information needed for these tools to effectively function. Resistant employees also are unlikely to willingly follow instructions that aim to implement unwelcome changes. For example, Bauer, King, and Matzler (2016) find that where cultural differences are greater, task integration progresses more slowly. We accordingly expect that managers' use of task integration controls will influence acquisition performance in different ways: (1) by contributing to enhanced process efficiency and effectiveness, and (2) by amplifying the negative impact of initial employee resistance on acquisition performance.

H4a. The use of task integration controls is positively associated with acquisition performance.

H4b. The use of task integration controls strengthens the negative effect of initial employee resistance on acquisition performance.

3. Methodology

3.1. Data sample

To assess the hypotheses and roles of integration controls, we conducted a survey study, followed up by interviews with acquisition experts. In-depth survey data were collected from key decision makers in Belgian and Dutch acquirers who engaged in an acquisition two to four years before the moment of data collection. The population for this study was drawn from the Zephyr database by Bureau Van Dijk, which contains a comprehensive set of publicly available information on M&A activities. We deliberately sampled past acquisitions to ensure availability and reliability of outcome

measures. The elapsed time period of at least two years between the acquisition and data collection also reasonably allows the integration process to be (at least largely) completed. This resulted in a list of 2681 acquisitions by 1871 unique acquirers. Only one acquisition per acquirer (the most recent) was withheld to exclude over-representing firm-specific effects and to avoid sending respondents multiple surveys.

Over the course of 10 weeks, structured telephone interviews were conducted to solicit participation and to identify key decision makers. During this process, 620 firms were excluded as unsuitable¹ and 792 refused to participate.² Of the 459 firms that agreed to participate, a key informant responsible for the acquisition was identified (typically the CEO, CFO or acquisition manager). Close involvement in the acquisition was a strict precondition that we imposed for informants to participate in order to ensure high reliability of survey responses. After the telephone conversation, the informant was personally sent a link to the online survey to be filled out for the acquisition identified. To increase the response rate, non-respondents were sent a reminder and received two additional telephone calls. In total, a sample of 93 responses was obtained representing a field response rate of 20.26% and an overall effective response rate of 7.43%. We excluded observations with missing data for our model variables and partial acquisitions not so labeled in the Zephyr database, leaving a sample of 79 acquisitions for analysis. Table 1 contains descriptive statistics for these respondents and acquisitions. Respondents reported an average tenure of 12.97 years at the acquiring firm. Respondents were asked to indicate the acquisition price, for which the average was €65.48 m. 16 acquirers in our sample were listed on a stock exchange; the other 63 acquirers were private companies. Two target firms were listed at the time of the acquisition, while all other targets in our sample were private firms.

3.2. Variable measurement

As described below, we build on prior studies to develop measurement instruments for the constructs of interest. In developing the questionnaire, we consulted four experienced acquisition consultants from three major consulting firms (which were different experts than the six experts interviewed after the survey was completed). These experts assessed the relevance and validity of our measurement items, and the wording of questions. They provided various suggestions for improving the measurement of a few variables, as discussed hereafter. Appendix 1 provides a summary of the construct measures. All constructs are estimated as latent variables using Partial Least Squares (PLS) estimation. PLS is a structural equation modeling technique considered suitable for modeling relationships between latent variables for smaller samples, such as the one in this study (Henseler & Chin, 2010; Hulland, 1999; Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016). The interaction terms in the model (i.e., of employee resistance with the use of sociocultural integration controls and with the use of task integration controls) are calculated as the products of the standardized

¹ Reasons for exclusion included that firms could not be reached (354; e.g., out of business, location change, incorrect telephone number), the acquirer was not a for-profit organization (118; e.g. a private person, governmental organization), decision rights were held by a foreign company (52), the acquirer belonged to the same group as other firms and had the same key informant (73), or the respondent indicated that the organization was not involved in the acquisition (23).

² A question from the telephone interview indicated that the main reasons for not participating were: no time (299), not interested (139), company policy is not to participate in surveys (144), key decision makers were on holiday or sick leave (71), key decision makers otherwise unavailable (76) and various other reasons (63; e.g., not sure who was responsible/involved).

Table 1
Respondent and sample statistics.

Respondent Statistics	Mean	Stdev	Min	Max	N
Respondent Tenure	12.970	8.556	1	38	76
Respondent Age	46.710	7.970	29	64	79
Respondent Position	Percentage	Count	Total		
CEO	27.848%	22			
CFO	34.177%	27			
Acquisition Manager	8.861%	7			
Other	29.114%	23	79		
Sample Statistics	Mean	Stdev	Min	Max	N
Reported Acquisition Price	€65.480 M	€146.195 M	€1	€650.000 M	56
Acquirer Listed	0.205	0.406	0	1	79
Target Listed	0.026	0.159	0	1	79
Assets Acquirer	€518.628 M	€2019.751 M	€60 840	€12 425 M	38
Assets Target	€53.974 M	€157.533 M	€6000	€845.909 M	36

latent variable scores from the full model that excludes interaction effects. We first describe each variable measure, and then provide an assessment of the quality of the measurement model. Table 2 reports all variables, as well as reliability measures and descriptive statistics for individual survey items.

3.3. Dependent variables

Acquisition Performance. The success of an acquisition and integration is hard to determine based on objective data. Financial results may only crystallize over time, and the financial performance of the acquirer may be influenced by many other issues. Non-financial objectives may be varied and difficult to measure. Papadakis and Thanos (2010) find that performance assessments by managers correlate positively and significantly with objective measures of performance such as the change in return on assets (ROA). We adopted a measure of Homburg and Bucerius (2006) about the merged firm's financial performance since the acquisition, and added a similar item regarding non-financial performance based on input by the experts. Responses were coded on a five-point Likert scale, from "greatly deteriorated" to "greatly improved." The two items correlate significantly ($r = 0.61$, $p = 0.000$) and load well on the *Acquisition Performance* latent variable (0.87 and 0.92 for financial and non-financial performance respectively).

The financial and non-financial performance items have means of 3.6 and 3.7 on a one-to-five point scale, and both show significant variation with lower evaluations occurring frequently. This indicates that respondents were not necessarily overly positive about acquisition performance. As a validity test, we hand-collected ROA data of acquiring firms in the years surrounding the acquisition from the Amadeus database of Bureau van Dijk. These data could be retrieved for 43 cases. To calculate the change in ROA after the acquisition, we subtracted the acquiring firm's average ROA in the two years prior to the acquisition from the average ROA of the merged firms in the two years following the acquisition. We disregard the year of the acquisition, as restructuring and financing of the acquisition might temporarily distort financial performance. Since the distribution of the resulting ROA Change is right-skewed, we report Spearman correlations here. The Spearman correlation between *Acquisition Performance* and ROA Change is 0.342 ($p = 0.012$), indicating that self-reported performance is positively associated with objectively measured performance change following the acquisition. We additionally correct the ROA change as calculated before for the median ROA change in the industry (2-digit NACE code), as calculated by the median ROA change for all

Table 2
Measurement model and descriptive statistics.

Variable name	Mean	Standard Deviation	Loading
Survey items			
Acquisition Performance (CA = 0.758, CR = 0.892, AVE = 0.805)			
Financial Performance (e.g. sales, earnings, costs)	3.608	0.996	0.871
Non-financial performance (e.g., quality, customer satisfaction, prestige)	3.684	0.809	0.920
Cultural Differences (CA = 0.785, CR = 0.903, AVE = 0.823, VIF = 1.447)			
The organizational cultures of both firms	3.532	1.108	0.901
Informal norms and values of both firms	3.114	1.240	0.913
Employee Resistance (CA = 0.870, CR = 0.912, AVE = 0.722, VIF = 1.269)			
Management resistance at the acquired firm	1.797	0.868	0.782
Personnel resistance at the acquired firm	2.000	0.920	0.905
Acquired firm's opposition to the integration process with the acquiring firm	1.949	0.918	0.889
Employees' negative dispositions in the two firms towards each other	1.734	0.918	0.817
Sociocultural Integration Controls (CA = 0.834, CR = 0.900, AVE = 0.750, VIF = 3.161)			
Mixed project teams	2.266	1.346	0.932
Personnel rotation	1.962	1.115	0.814
Cultural awareness program	1.899	1.128	0.845
Task Integration Controls (CA = 0.860, CR = 0.894, AVE = 0.590, VIF = 3.758)			
Integration manual (e.g., systems, operations)	1.203	1.254	0.837
Training manual (e.g., services, products)	1.835	1.170	0.872
Financial evaluation	3.886	1.086	0.549
Staffing models	2.203	1.192	0.826
Product mapping	2.405	1.325	0.658
Project management	2.734	1.248	0.800
Control Similarity (CA = 0.865, CR = 0.887, AVE = 0.400, VIF = 1.616)			
Administrative policies	2.380	1.233	0.470
Marketing decisions and procedures	2.342	1.011	0.661
R&D policies	2.367	0.976	0.757
Procedures for production decision	2.468	0.875	0.613
Procedures for major investments decisions	2.316	0.981	0.654
Performance measurement systems	2.380	0.924	0.594
Recruitment, reward and promotional policies	2.228	0.933	0.716
Key performance goals	2.747	1.126	0.550
IT systems	2.025	0.847	0.486
Strategic planning systems	2.367	0.963	0.727
Financial and budget control systems	2.278	0.905	0.646
Accounting and analysis procedures	2.392	0.926	0.678
Strategic Similarity (CA = 0.683, CR = 0.863, AVE = 0.759, VIF = 1.391)			
Key competitive strategies	2.886	1.085	0.881
Portfolio of businesses	3.165	1.103	0.861
Degree of Planned Integration (CA = 0.962, CR = 0.964, AVE = 0.612, VIF = 1.382)			
Administrative policies	3.987	1.235	0.682
Marketing decisions and procedures	3.975	1.209	0.730
R&D policies	3.861	1.298	0.637
Procedures for production decision	3.620	1.390	0.649
Procedures for investments decisions	4.190	1.087	0.619
Performance measurement systems	3.709	1.283	0.730
Recruitment, reward & promotional policies	3.620	1.314	0.775
Key performance goals	4.063	0.992	0.775
Portfolio of businesses	4.139	1.022	0.582
Key competitive strategies	4.316	0.968	0.573
IT systems	4.025	1.230	0.755
Strategic planning systems	4.076	1.141	0.660
Financial and budget control systems	4.215	1.129	0.741
Accounting and analysis procedures	4.152	1.156	0.700
Organizational culture	3.759	1.123	0.873
Informal norms and values	3.810	1.144	0.886
Informal communication and cooperation across all departments	3.823	1.107	0.883
Hostile (VIF = 1.263)			
Hostile	0.127	0.335	1.000
Acquisition Experience (VIF = 1.523)			
Acquisition Experience	8.623	9.523	1.000
Relative Size (VIF = 1.425)			
Relative Size (%)	45.920	104.733	1.000
Same Industry (VIF = 1.147)			
Same two-Digit NACE code	0.493	0.503	1.000
Prior Relation (VIF = 1.094)			
Prior Relation	0.278	0.451	1.000

This table reports descriptive statistics for all construct items in the PLS model. N = 79 for all items. For all multi-item constructs, Cronbach Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) are reported. The Variance Inflation Factor (VIF; based on an OLS estimation of the full model with Acquisition Performance as dependent variable and without interactions) is also reported for all independent variables to indicate the extent of multicollinearity.

European firms with the same 2-digit NACE in the Orbis database between those years. The Spearman correlation between *Acquisition Performance* and the industry-adjusted ROA Change is again positive and significant (0.323, $p = 0.017$).

3.4. Independent, mediating and moderating variables

Cultural Differences. To measure cultural differences between the acquiring and acquired firm, respondents were asked to indicate the degree of similarity before the acquisition (1 = “very dissimilar”; 5 = “very similar”) on two aspects: the organizational cultures of both firms, and the informal norms and values of both firms. This approach is similar to the one used by Capron, Mitchell, and Swaminathan (2001) to determine strategic similarity between merging firms. Since we aim to measure differences rather than similarities, the reverse of these two responses was used to estimate the reflective variable *Cultural Differences*. We follow the reasoning of Chatman and O'Reilly (2016) that cultural consensus, or the degree to which norms are shared, can be assessed separately from the content of those cultures. Our respondents should be well suited to make this assessment, as their position as key decision maker in the acquisition process should provide them with direct knowledge about the cultural differences between the firms involved.³

Employee Resistance. The initial resistance of employees of the acquired firm to the acquisition was measured using four reflective items (partly based on Birkinshaw et al. (2000) and using input from the four consulted acquisition experts) representing: opposition at the acquired firm towards the integration process, employee resistance at the acquired firm, management resistance at the acquired firm, and negative dispositions of employees of both firms towards each other. Respondents were asked to indicate to what extent (1 = “not at all”; 5 = “to a very great extent”) each form of resistance was present at the moment of the acquisition, to capture the initial extent of resistance.

Integration Controls. To measure managers' use of integration controls, respondents were asked to indicate to what extent (1 = “not used at all”; 5 = “extensively used”) nine integration control mechanisms or practices were used by the acquiring firm. Three of the items (based on Birkinshaw et al., 2000) capture the effort and attention awarded to sociocultural integration during the integration process and reflect the use of *Sociocultural Integration Controls* (i.e. the use of mixed project teams, personnel rotation, and cultural awareness programs). The other six items (based on items used by Zollo & Singh, 2004) capture the effort and attention awarded to task integration during the integration process. These *Task Integration Controls* include integration manuals for systems and operations, training manuals, financial evaluations, staffing models, product mapping, and project management.

3.5. Control variables

We control for several variables that can influence employee resistance, and acquisition performance. To control for potential difficulties in integrating both firms due to other reasons than cultural differences, we include measures of similarity of both firms' strategic orientation and control systems, as well as the

degree of planned integration. Strategic similarity can influence the way in which firms choose to integrate, and internal control changes, which may follow from differences between both firms, may make integration more difficult (Jones, 1985). Measurement of *Strategic Similarity* is based on Calori, Lubatkin, and Very (1994).⁴ Two items asked respondents about the degree of similarity (1 = “very dissimilar”; 5 = “very similar”) before the acquisition regarding their firms' portfolio of business and key competitive strategies.

Measurement of *Control Similarity* is also based on Calori et al. (1994) who captured similarity in formal control. Respondents were asked to rate the firms' similarity before the acquisition on twelve items. Eleven items were taken from Calori et al. (1994), and one item (regarding IT systems) was added following a recommendation of our expert panel.

The extent to which two firms are aimed to be integrated influences not only potential synergies, but also the difficulties that can be experienced in integrating the firms (Reus, Lamont, & Ellis, 2016). Based on Lubatkin, Calori, Very, and Veiga (1998), we asked respondents to rate 17 different aspects of the organizations on the extent to which they were intended to be integrated at the moment of acquisition (see Appendix 1). These reflective items capture the *Degree of Planned Integration*.

We also control for the mode of the acquisition, which can influence behavioral and performance outcomes: a hostile acquisition might elicit more resistance and integration difficulties. On the other hand, several studies show that hostile takeovers are more successful for a variety of reasons, such as greater target selection effort, stronger governance, and possibly weaker management at the target before the acquisition (Sudarsanam & Mahate, 2006; Tuch & O'Sullivan, 2007). In the indicator variable labeled *Hostile*, “0” indicates a negotiated acquisition and “1” a hostile takeover.

Prior research has shown that acquisition experience can influence acquisition outcomes (Haleblian & Finkelstein, 1999; Hayward, 2002). We therefore asked respondents to indicate how many acquisitions they had been involved with over the course of their careers (including the focal acquisition). Since we surveyed key decision makers in the acquisition process, this helps us capture the accumulated experience used in decision making. We chose to capture the key decision maker's experience instead of broader firm acquisition experience as decision makers may have gained valuable experience outside the firm, and turnover of key people can cause the value of firm acquisition experience to deteriorate. Some decision makers had experienced no previous acquisitions (six cases) or only one (nine cases), while others had experienced many more. Because of the skewed distribution, we use the natural logarithm of the item to capture *Acquisition Experience*. For interpretability, Table 2 reports the raw item scores rather than the natural logarithm.

The size of the target firm relative to the acquirer can also influence several aspects of integration. When the target firm is smaller, a greater power distance could exist and acculturation becomes more one-sided (Larsson & Lubatkin, 2001). We asked respondents about the size of the target firm relative to the acquiring firm in terms of number of employees, expressed as a percentage. The distribution indicates the presence of relatively small targets having only 1% of the number of employees of the acquirer up to much larger targets (700%, or seven times as many

³ We recognize that cultural differences and employee resistance are essentially group level constructs, and, ideally, representative group data would be obtained from involved employees from both firms at the outset of the acquisition. This, however, would be a daunting task. Some authors (e.g. Corritore, Goldberg, & Srivastava, 2020) also suggest using publicly available data to measure organizational culture. Many firms in our sample, and nearly all target firms, are unlisted, also making this approach infeasible.

⁴ Our factor analysis of the Calori et al. (1994) scale provides a similar factor structure for control system similarity and strategic similarity, except for one item (Key performance goals) which in our analysis loads significantly on the latter factor instead of the first. If we classify the item with the first factor instead of the second, results and inferences about our hypothesis tests are similar.

Table 3
Pearson correlation table.

	Acquisition Performance	Cultural Differences	Employee Resistance	Socio-cult. Integration Controls	Task Integration Controls	Control Similarity	Strategic Similarity	Degree of Planned Integration	Hostile Experience	Acquisition Experience	Relative Size	Same Industry
Cultural Differences	0.050											
Employee Resistance	-0.232	0.329										
Sociocultural Integration Controls	0.491	0.065	-0.094									
Task Integration Controls	0.472	0.099	-0.021	0.755								
Control Similarity	0.210	-0.334	-0.236	0.305	0.281							
Strategic Similarity	-0.103	-0.311	-0.235	0.012	0.055	0.332						
Degree of Planned Integration	0.036	-0.016	-0.083	0.186	0.305	0.004	0.144					
Hostile	-0.169	0.170	0.225	-0.181	-0.220	-0.101	-0.031	0.107				
Acquisition Experience	0.101	-0.078	-0.005	0.199	0.347	0.247	0.302	-0.089	-0.086			
Relative Size	0.292	-0.005	0.083	0.194	0.047	0.258	-0.013	0.001	0.127	-0.218		
Same Industry	-0.108	0.072	-0.013	-0.084	0.087	0.007	0.128	-0.080	-0.072	0.043	-0.188	
Prior Relation	0.121	-0.081	-0.075	0.099	0.011	0.111	-0.002	0.013	-0.152	-0.133	0.106	0.067

N = 79. Correlations greater than |0.186|, |0.222|, and |0.288| are significant at 0.10, 0.05 and 0.01, respectively (two-tailed).

employees), with the average target having 45.92% of the number of employees of the acquirer. Because of this skewed distribution, we use the natural logarithm of the percentage value to capture *Relative Size*. For interpretability, Table 2 reports the raw item scores rather than the natural logarithm.

We also control for the effects of cross-industry acquisitions, by including a *Same Industry* indicator variable, which equals “1” for those acquisitions where both firms share a 2-digit NACE code in Zephyr and “0” otherwise. Acquisitions in the same industry have been found to be more successful (King, Dalton, Daily, & Covin, 2004), although acquiring a firm from a different industry might provide different synergy potential.

Finally, merging firms might have had a relation prior to the acquisition that could influence the integration process (Harford, Schonlau, & Stanfield, 2019). We control for this by including a *Prior Relation* indicator variable, which equals “1” when respondents indicated that before the acquisition there was a prior relationship between acquirer and target and “0” otherwise.

3.6. Measurement model

We use PLS modeling to estimate the measurement model and to test hypotheses. We first assess the quality of the measurement model. Factor loadings and reliability measures of multi-item constructs are estimated based on the model without interactions (as described in Table 4) and are reported in Table 2. For reasons of item reliability, Hulland (1999) recommends dropping any items with loadings of less than 0.4 or 0.5. Only two item loadings are below 0.5, namely the similarity of administrative policies and the similarity of IT systems, with loadings on *Control Similarity* of 0.470 and 0.486 respectively. Since these loadings are above 0.4 and the items are based on an existing scale, we retain them in the analyses. Removing the items, however, does not change the later results or conclusions.

To assess the reliability of reflective constructs we follow Hulland (1999) and report Cronbach’s Alpha and the composite reliability measure developed by Fornell and Larcker (1981) (see Table 2). Both measures are above the benchmark value of 0.7 (Hulland, 1999) for all constructs except for *Strategic Similarity*, of which Cronbach alpha is just below (0.683). For all constructs, the square root of the average variance extracted is greater than the inter-construct correlations of those constructs. This indicates that all construct measures pass the Fornell and Larcker (1981) test for discriminant validity.

All model variables, except for the *Same Industry* control variable have been obtained through the survey instrument. To test for potential common method bias, we executed Harman’s single

factor test by conducting a principal axis factor analysis on all survey measures included in the full model. This results in 12 factors with an eigenvalue greater than one. The first factor explains only 22% of the total variance. These results indicate that common method bias does not pose a significant concern.⁵ In addition, we note that in tests of interaction effects, which are the primary interest of our analysis, common method bias is less of a concern (Speklé & Widener, 2018). Evans (1985) performed simulations to show that artificial interaction cannot be created through correlated variance due to method. Siemsen et al. (2010) show through closed-form analysis that interaction effects cannot be an artifact of common method bias, and instead that common method bias may deflate existing interaction effects. These findings suggest that common method bias would work against finding support for H3b and H4b and that any results found for the estimated interaction effects cannot be the result of common method bias.

For the *Same Industry* variable, obtained from the Zephyr database, the sample mean is 0.493 and does not differ significantly from the mean of all 2681 acquisitions (0.524) obtained from the Eikon database ($p = 0.585$). The logarithm of total assets is available from Zephyr for 42 of the acquirers and 40 of the targets in our sample. Neither of the means differ significantly from the population mean ($p = 0.304$ and $p = 0.675$ respectively). The total deal price is only available for 11 observations in the Zephyr database, but the mean of the logarithms also did not differ significantly between the sample and the population. This indicates a similar distribution of the sample acquisitions and all acquisitions in our original list.

4. Results

Table 3 reports Pearson correlations between the model variables, based on the extracted factor scores for each reflective latent variable using principal axis factoring. The correlation coefficients provide initial evidence that *Cultural Differences* are associated with *Employee Resistance* and that *Employee Resistance* is negatively associated with *Acquisition Performance*. The use of both types of integration controls is also well correlated with *Acquisition Performance*, and with each other, indicating they are often used together as part of the integration process. The correlations between the independent and control variables, together with the Variance Inflation Factor (VIF) scores reported in Table 2, raise no concerns

⁵ Conducting the same test with only the multi-item constructs provides 10 factors with an Eigenvalue greater than one, of which the first factor explains only 26% of the total variance.

Table 4
Structural models.

Dependent Variable	Model without interactions		Full model	
	Employee Resistance	Acquisition Performance	Employee Resistance	Acquisition Performance
Cultural Differences	0.201** (0.036)	0.074 (0.570) <i>0.012 (0.930)</i>	0.201** (0.032)	0.056 (0.659) <i>0.013 (0.922)</i>
Employee Resistance		-0.306*** (0.003)		-0.215** (0.036)
Sociocultural Integration Controls		0.030 (0.433)		-0.013 (0.473)
Task Integration Controls		0.420** (0.022)		0.394** (0.034)
Employee Resistance * Sociocultural Integration Controls				0.322* (0.075)
Employee Resistance * Task Integration Controls				-0.463** (0.025)
Control Similarity	-0.215 (0.120)	0.010 (0.950) <i>0.076 (0.614)</i>	-0.215 (0.111)	0.019 (0.904) <i>0.066 (0.661)</i>
Strategic Similarity	-0.067 (0.610)	-0.162 (0.184) <i>-0.141 (0.296)</i>	-0.067 (0.618)	-0.182 (0.140) <i>-0.168 (0.200)</i>
Degree of Planned Integration	-0.130 (0.471)	0.004 (0.981) <i>0.044 (0.830)</i>	-0.130 (0.473)	-0.018 (0.915) <i>0.010 (0.954)</i>
Hostile	0.211 (0.173)	-0.048 (0.632) <i>-0.113 (0.165)</i>	0.211 (0.167)	-0.043 (0.663) <i>-0.088 (0.281)</i>
Acquisition Experience	0.106 (0.353)	0.075 (0.515) <i>0.042 (0.717)</i>	0.106 (0.359)	0.078 (0.473) <i>0.055 (0.616)</i>
Relative Size	0.131 (0.357)	0.267** (0.020) <i>0.227* (0.063)</i>	0.131 (0.337)	0.236* (0.060) <i>0.207 (0.110)</i>
Same Industry	0.013 (0.908)	-0.085 (0.379) <i>-0.089 (0.364)</i>	0.013 (0.910)	-0.062 (0.541) <i>-0.064 (0.528)</i>
Prior Relation	0.001 (0.992)	0.071 (0.497) <i>0.071 (0.525)</i>	0.001 (0.992)	0.055 (0.607) <i>0.055 (0.622)</i>
Adjusted R ²	0.115	0.328	0.115	0.362

This table shows the path coefficients for the PLS model, followed by the p-values for bootstrapped t-test between brackets. N = 79 for each model. ***, ** and * indicate significance at p < 0.010, 0.050 and 0.100, respectively (one-tailed for hypothesized effects, which are denoted in bold, and two-tailed for all other effects). Total effects are reported underneath the path coefficients in italic.

about multicollinearity (max VIF 3.758).

To test hypotheses H1, H2, H3a and H4a we first estimate a PLS model in which *Employee Resistance* mediates the path between *Cultural Differences* and *Acquisition Performance*, without any interaction effects. The first two columns of Table 4 show the results of this first model and report the direct effect estimates as well as the total effect estimates (underneath the direct effect estimates). All p-values are calculated using a bias-corrected and accelerated bootstrapping procedure using 1000 subsamples.

In support of H1, the estimates show that *Cultural Differences* are positively associated with *Employee Resistance* (0.201, p = 0.036). *Employee Resistance* is, in turn, negatively associated with *Acquisition Performance* (-0.306, p = 0.003), supporting H2. The indirect path between *Cultural Differences* and *Acquisition Performance* is also negative (-0.062, p = 0.064, untabulated). These findings support the expectation that *Employee Resistance* acts as a mediator between *Cultural Differences* and *Acquisition Performance*. The total effect of *Cultural Differences* on *Acquisition Performance* is close to zero (0.012, p = 0.930), in part because of a countervailing positive direct effect (0.074, p = 0.570). Establishing mediation effects, however, does not require the presence of a consistent total effect (Hayes, 2009).

The model without interaction effects also includes the direct effects of integration controls. The effect of *Sociocultural Integration Controls* on *Acquisition Performance* is statistically insignificant (0.030, p = 0.433), providing no support for H3a. The use of *Task Integration Controls* has a positive direct effect on *Acquisition Performance* (0.420, p = 0.022). Consistent with H4a, this indicates that the use of task integration controls may contribute to enhancing acquisition performance.

The second set of columns in Table 4 report the results of the full model, in which we add interaction effects to test the moderation hypotheses H3b and H4b. Results show that the use of *Sociocultural Integration Controls* weakens the negative relation between *Employee Resistance* and *Acquisition Performance* (0.322, p = 0.075)

(H3b), while use of *Task Integration Controls* strengthens this relation (total effect -0.463, p = 0.025) (H4b). We conclude that *Sociocultural Integration Controls* may indeed be helpful in decreasing the negative effects of *Employee Resistance*. On the other hand, while guiding the integration process and supporting acquisition performance through codifying processes and procedures, the use of *Task Integration Controls* may have detrimental effects in the presence of *Employee Resistance*. Fig. 2 summarizes the estimated effects of the full model.

5. Additional analyses

In this section we discuss the results of five additional analyses. We perform these additional tests to provide support for our underlying assumptions (first additional analysis), and to examine whether our findings from the main models are robust to alternative measurements of key variables and model specifications (second to fifth additional analysis).

In the main models, we estimate a direct effect of *Employee Resistance* on *Acquisition Performance*. As we argue in the hypothesis development, several processes might underlie this effect, including motivational and information sharing issues. To test these assumed channels, we introduce a new latent variable in a first additional analysis. *Employee Motivation* is constructed from two (reversed) five-point Likert items: “personnel’s attitude towards the job deteriorated” and “personnel’s willingness to help others deteriorated.” It captures both motivation and communication, and is introduced in the model without interactions to mediate the effect of *Employee Resistance* on *Acquisition Performance*. Panel A of Table 5 reports the estimation results. The model estimates confirm that *Employee Resistance* is negatively related to *Employee Motivation* (-0.194, p = 0.030) and that *Employee Motivation* is positively related to *Acquisition Performance* (0.307, p = 0.007). In this analysis, the direct effect of *Employee Resistance* on *Acquisition Performance* remains (-0.230, p = 0.019), indicating partial mediation

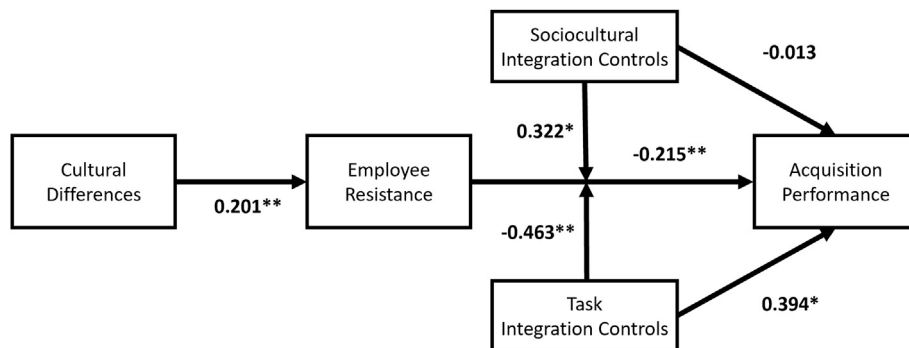


Fig. 2. Estimated effects.

Note: The positive interaction terms for Sociocultural Integration Controls indicate a weakening of the negative effects of Employee Resistance, while the negative interaction terms for Task Integration Controls indicate a strengthening of that effect.

through *Employee Motivation* (untabulated indirect effect -0.052 , $p = 0.081$). This suggests that employee resistance may also influence acquisition performance in other (unobserved) ways besides through motivation. Possibly, negative behavioral effects due to resistance such as turnover of key personnel or even undermining activities and sabotage may contribute to these effects.

One of the primary ways in which acquisitions can create value is through organizational learning. By transferring and creating knowledge between the merging firms, synergies can be created. Some authors point out that cultural differences may provide scope for organizational learning (Reus & Lamont, 2009; Stahl & Voigt, 2008), as such, learning opportunities are based on the differences in values and practices that do not exist to the same extent

between more similar firms. Yet, to achieve learning benefits, initial employee resistance needs to be overcome. These competing potential effects of cultural differences provide significant managerial challenges in guiding the integration process. As a second additional analysis, we substitute the *Acquisition Performance* variable for a newly created *Organizational Learning* variable. We use three reflective items to measure the extent to which organizational learning took place as a result of the acquisition. Respondents were asked to report the extent to which they agreed that (1 = “strongly disagree”; 5 = “strongly agree”), after the completion of the acquisition, (1) the acquirer succeeded in learning critical skills or capabilities (cf. Kale, Dyer, & Singh, 2002), (2) new joint systems and procedures were created that facilitated learning and

Table 5

Additional analyses.

Panel A: Model including Employee Motivation	Employee Resistance	Employee Motivation	Acquisition Performance
Cultural Differences	0.202** (0.031)	0.081 (0.464)	0.060 (0.627)
Employee Resistance		-0.194** (0.030)	-0.290*** (0.007)
Employee Motivation			0.307*** (0.007)
Sociocultural Integration Controls		0.237 (0.131)	-0.041 (0.406)
Task Integration Controls		0.255 (0.112)	0.294* (0.086)
Adjusted R ²	0.116	0.227	0.373
Panel B: Model including Organizational Learning	Employee Resistance		Organizational Learning
Cultural Differences	0.207** (0.038)		-0.163 (0.162) -0.167 (0.155)
Employee Resistance			-0.017 (0.437)
Sociocultural Integration Controls			0.250* (0.052)
Task Integration Controls			0.384* (0.056)
Employee Resistance * Sociocultural Integration Controls			0.221 (0.117)
Employee Resistance * Task Integration Controls			-0.303* (0.070)
Adjusted R ²		0.095	0.434
Panel C: Model without control variables	Employee Resistance		Acquisition Performance
Cultural Differences	0.338** (0.000)		-0.101 (0.332) -0.033 (0.385)
Employee Resistance			-0.209** (0.023)
Sociocultural Integration Controls			0.102 (0.537)
Task Integration Controls			0.316* (0.061)
Employee Resistance * Sociocultural Integration Controls			0.290* (0.053)
Employee Resistance * Task Integration Controls			-0.497*** (0.003)
Adjusted R ²		0.107	0.400

This table shows the path coefficients for the PLS model, followed by the p-values for bootstrapped t-test between brackets. N = 79 for each model. ***, ** and * indicate significance at $p < 0.010$, 0.050 and 0.100 , respectively (one-tailed for hypothesized effects, which are denoted in bold, and two-tailed for all other effects). Total effects are reported underneath the path coefficients in italic. Control variables, which are the same as for the main models in the first two panels, have been omitted. The last panel contains the full model without control variables.

innovation, and (3) a new common interpretative scheme was created through which new values, norms and structures emerged (items 2 and 3 are based on Granlund (2003)). The *Organizational Learning* construct correlates well with *Acquisition Performance* used as dependent variable (0.606, $p = 0.000$) in the main model. Panel B of Table 5 reports the results. Consistent with the main analysis, the main effects of task integration controls (0.384, $p = 0.056$) and sociocultural controls (0.250, $p = 0.052$) are positive. The interaction term between *Employee Resistance* and *Task Integration Controls* is negative (-0.303 , $p = 0.070$), indicating that task integration tools are less effective in promoting learning when employee resistance is high. Unlike the main results, the interaction effect between *Employee Resistance* and *Sociocultural Integration Controls* is no longer significant (0.221, $p = 0.117$). Overall, we conclude from these results that while cultural differences may provide learning opportunities, the chosen integration process is important to realize these opportunities.

The model estimated in the main analysis contains five variables of interest and eight control variables. As this may raise concerns about an over-specified model, given the modest size of the sample, we perform a third additional test in which we re-estimate the full main model reported in Table 4 without control variables. Panel C of Table 5 reports the results. All our conclusions and inferences remain the same.

Uncertainty resulting from job insecurity is often considered to be a reason for employee resistance (Ullrich & van Dick, 2007). To ensure our results are not driven by job uncertainty, we expanded the main model with an additional control variable comprised of one item, eliciting the importance of achieving cost synergies as objective of the acquisition. The untabulated results show that the inclusion of this variable does not change our inferences.

As final additional analysis, we test an alternative specification of *Employee Resistance*. In the main analyses, *Employee Resistance* is measured using four items, three of which focus on the acquired firm, which is where resistance may be strongest and most observable (see Appendix 1). However, our theory development does not relate solely to resistance in the acquired firm. To test whether our results hold when all employees are considered, we re-estimated the models using only the last item ("Employees' negative dispositions in the two firms towards each other") to measure *Employee Resistance*. Untabulated results show that all our conclusions and inferences remain the same, indicating it is not only resistance of employees of the target firm that drives the results.

6. Discussion

In this study, we elucidate part of the causal path from differences in organizational culture between an acquiring and target firm to acquisition performance. We identify employee resistance as an important process variable. Our results show that cultural differences between both firms relate to employee resistance, which itself relates negatively to firm performance after the acquisition. Both cultural differences and employee resistance have been described in prior literature as antecedents to acquisition performance, often in a negative way (Ford et al., 2008; Larsson & Finkelstein, 1999; Stahl & Voigt, 2008). In this study, we contribute to clarifying their relationship to each other and to post-acquisition performance. Cultural differences, which exist as a pre-integration deal characteristic, may give rise to employee resistance during the integration phase, which subsequently affects acquisition performance. Importantly, however, we find that the way in which initial employee resistance relates to performance outcomes

depends on the integration controls used by management. We find the use of integration controls to moderate the influence of employee resistance on post-acquisition performance. Whether this effect is positive or negative depends on the type of controls used.

Consistent with earlier studies (Birkinshaw et al., 2000; Graebner et al., 2017; Stahl & Voigt, 2003), our results show it is valuable to distinguish between sociocultural and task integration controls. A greater use of sociocultural integration controls, such as personnel rotation, mixed teams and cultural awareness programs, reduces the negative effects of initial employee resistance on acquisition performance. Task integration controls, such as planning, models and manuals, however, show the opposite effect: their use amplifies the negative impact of employee resistance on acquisition performance. This finding must be considered against the finding of a positive direct main effect of task integration controls on acquisition performance. Indeed, our interview observations also indicate that task integration controls are instrumental in achieving integration, even if they are less effective in contexts of high resistance. A good understanding of the pre-acquisition differences between both firms, with particular attention to organizational culture, followed by an appropriate formulation and implementation of integration controls therefore seems invaluable. Sociocultural integration controls may be used to moderate the effects of initial employee resistance to prevent negative effects, and the extent and timing (cf. Birkinshaw et al., 2000) of task integration controls could be planned accordingly.

We infer from our findings that cultural differences between firms can negatively impact acquisition performance by generating employee resistance. We propose that the moderating and mediating effect of the integration process that we examine may explain how similar levels of cultural differences and associated employee resistance may lead to different outcomes (Eero Vaara et al., 2012; Stahl & Voigt, 2008) depending on the chosen integration strategy. This builds on prior literature that distinguished between task and sociocultural integration results (e.g. Bauer et al., 2016; Birkinshaw et al., 2000) by examining specific management control practices used in the integration process, and describing how they interact with initial employee resistance that result from cultural differences. Still, a broader view of organizational similarities and differences, beyond overall organizational culture, is warranted. We hope that future research can further elucidate the different aspects of organizational differences that are least harmful in terms of employee resistance and provide most opportunities for synergy realization.

We contribute to the literature on the integration and performance effects of corporate acquisitions by describing and testing theory-based causal paths between cultural differences, employee resistance and acquisition performance. We conclude that while cultural differences can have a detrimental effect on the entire process of integration, managerial use of integration controls can influence these relations, for worse or for better. We hope that this study will motivate practitioners to evaluate the differences and similarities with target firms, as well as the behavioral consequences that may be expected, before embarking on an integration process. Appropriate planning and adoption of integration controls seems critical in these endeavors.

Our study is not without limitations. First, the sample size of the survey is relatively small. This is the consequence of a deliberate research design choice in which we favored response quality over quantity and surveyed only directly involved well-informed decision makers who could evaluate the acquisition process in full. The constraints this places on the type of respondent (who still had to

be present in the firm) as well as information required make it difficult to obtain a high response rate. We attempt to balance a smaller sample size against the detailed data collected to estimate a structural model of the integration process, complemented by in-depth interviews with industry experts. Secondly, our design may suffer from some survivorship bias. Firms which were particularly unsuccessful during their acquisition may no longer exist, at least not in their original form. More importantly, those managers responsible for the integration process may no longer be active in the firm. We would expect this second situation to be much more prevalent than the first, given that performance would have to be exceptionally bad for firms to disappear in such a short amount of time. From those firms contacted, 10% of key decision makers were not available for reasons other than holidays or sick leave. Considering normal turnover and other reasons for absence, we expect the effects of survivorship bias to be limited. Nevertheless, we must consider that our sample may insufficiently represent the most significantly underperforming integrations. A third limitation is the timing of the survey. All information was collected using a single survey a few years after the acquisition took place. This methodological decision may come with the risk of hindsight bias, where a manager's perception of cultural differences might, for example, be in part based on observed outcomes. The survey used was structured in such a way as to separate the questions about antecedent variables, process variables and outcome variables (as suggested by Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Furthermore, while such concerns may particularly relate to the linear effects between variables, respondents' perceived relationships between variables are less likely to include the moderating effects that we estimate, which form our main contribution. Inflation of linear relationships between variables cannot result in inflated interaction effects (Evans, 1985; Siemsen et al., 2010). Still, a research design involving several moments of data collection throughout the integration process may better enable to disentangle different stages of an acquisition and reduce the risk of hindsight bias. This may also allow for measuring both initial employee resistance and its extent after some time in the integration process and use of controls. Related to this, Birkinshaw et al. (2000) and Bauer et al. (2016) suggested that differentiated timing of sociocultural and task integration might benefit integration. In light of our findings, tackling resistance through sociocultural integration controls before intensively tackling task integration (or phasing this appropriately) might indeed be an effective strategy that future studies could address.

Data availability

The authors do not have permission to share data.

Appendix 1. Survey items used for construct measurement

Acquisition Performance

Please indicate how since the acquisition performance evolved (from a consolidated standpoint = acquiring firm and acquired firm together), as compared to the firm's main competitors:

- Financial performance (e.g., sales, earnings, costs)
- Non-financial performance (e.g., quality, customer satisfaction, prestige)

Cultural Differences (reversed scale)

Indicate for the following aspects the degree of similarity between the two firms before the acquisition:

- The organizational cultures of both firms
- Informal norms and values of both firms

Employee Resistance

Please indicate the extent to which resistance was present at the moment of the acquisition:

- Management resistance at the acquired firm
- Personnel resistance at the acquired firm
- Acquired firm's opposition to the integration process with the acquiring firm
- Employees' negative dispositions in the two firms towards each other

Sociocultural Integration Controls

Please indicate the extent to which the following acquisition tools/integration mechanisms were used by the acquiring firm at the time of the acquisition:

- Mixed project teams
- Personnel rotation
- Cultural Awareness Program

Task Integration Controls

Please indicate the extent to which the following acquisition tools/integration mechanisms were used by the acquiring firm at the time of the acquisition:

- Integration manual (e.g., systems, operations)
- Training manual (e.g., services, products)
- Financial evaluation
- Staffing models
- Product mapping
- Project management

Management Control Similarity

Indicate for the following aspects the degree of similarity between the two firms before the acquisition:

- Administrative policies
- Marketing decisions and procedures
- R&D policies
- Procedures for production decision
- Procedures for major investments decisions
- Performance measurement systems
- Recruitment, reward and promotional policies
- Key performance goals
- IT systems
- Strategic planning systems

- Financial and budget control systems
- Accounting and analysis procedures

Strategic Similarity

Indicate for the following aspects the degree of similarity between the two firms before the acquisition:

- Key competitive strategies
- Portfolio of businesses

Degree of Planned Integration

Please indicate the extent to which the following aspects were intended to be integrated at moment of acquisition:

- Administrative policies
- Marketing decisions and procedures
- R&D policies
- Procedures for production decision
- Procedures for investments decisions
- Performance measurement systems
- Recruitment, reward & promotional policies
- Key performance goals
- Portfolio of businesses
- Key competitive strategies
- IT systems
- Strategic planning systems
- Financial and budget control systems
- Accounting and analysis procedures
- Organizational culture
- Informal norms and values
- Informal communication and cooperation across all departments

Hostile

Indicate the 'mood' of the acquisition:

- Friendly: friendly bidder without a rival (0)
- Single hostile: hostile bidder without a rival (1)
- White knight: white knight bidder with a hostile rival (0)
- Multiple hostile: hostile bidder facing a white knight or another hostile bidder (1)

Acquisition Experience

Respondent: Total number of acquisitions you have been involved with (also for other firms).

Relative Size

Please make a rough estimate of the relative size (as a percentage) of the acquired firm compared to the acquiring firm just before the acquisition: (if the acquired firm was larger than the acquiring, provide a percentage larger than 100%)

- With regard to total employees

Prior Relation

Was there a prior relationship (e.g., strategic alliance, buyer-supplier relationship) between the acquirer and the acquired firm?

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