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Cultural differences, social conflict and knowledge transfer

The Impact of National and Organizational Cultural Differences on Social Conflict and Knowledge Transfer in International Acquisitions: A Causal Model and an Empirical Test

Key words: acquisition, merger, integration, culture, social conflict, knowledge transfer

The Impact of National and Organizational Cultural Differences on Social Conflict and Knowledge Transfer in International Acquisitions: A Causal Model and an Empirical Test

Prior research has generated mixed findings concerning the impact of cultural differences on the outcomes of post-acquisition processes in international mergers and acquisitions. To explain these contradictory findings, we examine the interplay between national and organizational cultural differences and distinguish the mechanisms through which they affect the key post-acquisition integration outcomes of social conflict and knowledge transfer. We develop a structural equation model to test the hypothesized effects on a sample of 123 international acquisitions carried out by Finnish corporations. The analysis shows that whilst organizational cultural differences result in increased social conflict, national cultural differences have a negative impact. As hypothesized, both national and organizational cultural differences have a positive effect on knowledge transfer. Furthermore, social conflict has a significant negative impact on knowledge transfer.

The Impact of National and Organizational Cultural Differences on Social Conflict and Knowledge Transfer in International Acquisitions: A Causal Model and an Empirical Test

Cultural differences have received considerable attention by scholars trying to understand the integration processes in international acquisitions. National and organizational cultural differences have been used to explain the frequent problems, disappointments, and failures encountered during the integration process (Stahl and Mendenhall, 2005). Several studies have provided support for the idea that organizational (Chatterjee, Lubatkin, Schweiger and Weber, 1992; Datta, 1991; Lubatkin, Calori, Very and Veiga, 1998; Weber, 1996) or national (Datta and Puia, 1995; Krug and Hegarty, 1997; Olie, 1994; Schoenberg, 2004; Weber, Shenkar and Raveh., 1996) cultural differences contribute to poor performance. However, it has also been argued that cultural differences may serve as sources of value creation, and there is some empirical evidence that they may in fact improve post-acquisition performance (Larsson and Risberg, 1998; Morosini, Shane and Singh, 1998). Other studies have criticized simplistic cultural analyses because they tend to rely on problematic measures of cultural distance (Kirkman, Lowe and Gibson, 2006; Shenkar, 2001), or fail to include relevant mediating or moderating variables (Björkman, Stahl and Vaara, 2007; Stahl and Voigt, 2005; Teerikangas and Very, 2006). Still others have suggested that rather than focusing on cultural difference *per se*, one should examine post-acquisition acculturation (Elsass and Veiga, 1994; Larsson and Lubatkin, 2001; Nahavandi and Malekzadeh, 1988) or sensemaking (Vaara, 2003) processes.

We argue in this paper that one of the reasons for these contradictory views and mixed empirical findings is that most existing analyses have treated the integration process as a 'black box' without singling out the processes and mechanisms through which various kinds of cultural difference affect post-acquisition process dynamics (see also King, Dalton, Daily and Covin, 2004; Shimizu, Hitt, Vaidyanath and Pisano, 2004). Distinguishing such mechanisms is, however, needed if

we want to better understand the complex and potentially contradictory effects of cultural differences on the key post-acquisition integration process outcomes of social conflicts and knowledge transfer. Social conflicts have commonly been seen as a source of acquisition failures (Cartwright and Cooper, 1992; Empson, 2001) and knowledge transfer between the acquiring and acquired units a crucial determinant of the ultimate success of an acquisition (Haspeslagh and Jemison, 1991; Capron, Dussage and Mitchell, 1998; Bresman, Birkinshaw and Nobel, 1999).

To partially fill this gap, we examine mechanisms through which national and organizational cultural differences may impact post-acquisition dynamics. First, we suggest that national and organizational cultural differences tend to increase social conflict and thus have a negative impact on post-acquisition processes. Second, we argue that at the same time, cultural differences constitute potential complementary resources that can be exploited through knowledge transfer between the acquiring and acquired organizations. We further propose that social conflict has a negative impact on knowledge transfer and that the mechanisms through which cultural differences affect acquisition process outcomes are influenced by the integration approach taken, as manifested in the degree of operational integration.

The remainder of the paper is structured as follows. After a brief overview of the previous research, we develop our model and specify the causal relationships between the key variables. We then proceed to test the model on a sample of 123 international acquisitions carried out by Finnish corporations using data on national cultural differences from the GLOBE study (House, Hanges, Javidan, Dorfman and Gupta, 2004) and perceptual measures of organizational cultural differences and post-acquisition integration outcomes. Most interestingly, the structural equation analysis shows that while organizational cultural differences have a positive effect on social conflict, national cultural differences have a negative impact. As hypothesized, both national and organizational cultural differences have a positive effect on knowledge transfer. Furthermore, social conflict has a

significant negative impact on knowledge transfer. We conclude the paper with a discussion of the implications of the findings, the overall contribution of this analysis, and suggestions for future research.

THE ROLE OF CULTURAL DIFFERENCES IN INTERNATIONAL ACQUISITIONS

A review of prior research

While there were some early exceptions (Davis, 1968), researchers did not systematically examine mergers and acquisitions from cultural perspectives until the mid-1980s. By this time, the problems and disappointments in mergers and acquisitions had shown that new perspectives were needed to understand the dynamics of post-acquisition integration. This triggered a wave of studies adopting a process perspective on mergers and acquisitions (Haspeslagh and Jemison, 1991; Hunt, 1990; Jemison and Sitkin, 1986). By this time, cultural analyses had become increasingly popular and legitimate in organization and management studies (Hofstede, 1980; Peters and Waterman, 1982; Pettigrew, 1979), paving the way for their adoption in the acquisition context as well (Altendorf, 1986; Shrivastava, 1986; Walter, 1985). Subsequently, there has been a proliferation of acquisition studies focusing on ‘cultural clashes’ between merger parties (Buono, Bowditch and Lewis, 1985; Chatterjee *et al.*, 1992; Datta, 1991; Elsass and Veiga, 1994; Larsson, 1993; Marks and Mirvis, 1986; Sales and Mirvis, 1984; Weber, 1996; Weber and Schweiger, 1992). In international settings, drawing on Hofstede’s (1980, 1991) and Trompenaars’ (1993) work, researchers have focused on national cultural differences (Calori, Lubatkin and Very, 1994; Gertsen, Soderberg and Torp, 1998; Lubatkin *et al.*, 1998; Larsson and Lubatkin, 2001; Morosini and Singh, 1994; Olie, 1994; Very, Lubatkin, Calori and Veiga, 1997; Weber *et al.*, 1996). However, rather surprisingly, studies of cross-border mergers and acquisitions have rarely included both national and organizational cultural factors in the same analyses (for an exception, see Weber *et al.*, 1996).

Much of the existing research has focused on the cultural distance between the acquiring and the acquired organizations. This perspective builds on realist conceptions of organizational (Schein 1985) and national cultural differences (Hofstede, 1980; 1991; Ghemawat, 2001). Accordingly, these analyses rest on the idea that the cultural differences measured between the combining organizations form a critical determinant of the subsequent integration process (Cartwright and Cooper, 1992, 1993; David and Singh, 1994; Morosini and Singh, 1994). Most of these studies have considered cultural differences to be the cause of integration problems. For example, Chatterjee *et al.* (1992), Datta (1991), and Weber (1996) found a negative relationship between organizational cultural differences and post-acquisition performance. In international settings, scholars have argued and reported some supporting evidence that acquisitions of firms from culturally closer nations lead to better outcomes than those from more distant national cultures (Datta and Puia, 1995; Weber *et al.*, 1996; Krug and Hegarty, 1997; Schoenberg 2004).

While most of these models assume that cultural differences pose significant barriers to achieving integration benefits, it has also been suggested that cultural differences can be a source of capability development and value creation (Morosini *et al.*, 1998). For example, Krishnan, Miller and Judge (1997) showed that the existence of complementary top management teams in the acquiring and acquired firm – that is, teams where members represent different functions – tends to be associated positively with post-acquisition performance. Larsson and Risberg (1998) found in their study that international acquisitions outperformed domestic ones, possibly because they tend to be associated with greater cultural awareness. In addition, Morosini *et al.* (1998) found that specific kinds of national cultural differences may in fact improve overall acquisition performance.

Such analyses have, however, been criticized lately. The use of simplistic ‘national cultural distance’ measures has been seen as inadequate (Harzing, 2004; Kirkman *et al.*, 2006; Shenkar, 2001), in part because most studies have relied on data collected by Hofstede (1980) several decades ago.

Moreover, it has been argued that many analyses have not given sufficient attention to other factors at play or to the context-specific features (Teerikangas and Very, 2006; Stahl and Voigt, 2005). While these criticisms should be taken seriously, they do not in our view mean that one should abandon the study of cultural differences altogether. Rather, the implication is that we need more elaborate analyses of the various processes and mechanisms involved.

It is therefore important to link this research stream with cultural approaches that concentrate on the dynamics of the integration processes. Drawing on anthropological research (Berry 1980), several studies have examined the acculturation process following a merger or an acquisition (Elsass and Veiga, 1994; Larsson and Lubatkin, 2001; Mirvis and Sales, 1990; Nahavandi and Malekzadeh, 1988; Sales and Mirvis, 1984). Scholars have, for example, examined how attractive the other organization is considered and what kind of integration approach is taken by the acquirer (Nahavandi and Malekzadeh, 1988). Veiga, Lubatkin, Calori and Very (2000) analyzed changes in cultural compatibility and found that post-merger performance was highest in cases where pre-merger cultural incompatibility turned into cultural compatibility after the merger – and lowest in cases where cultural compatibility turned into incompatibility. Larsson and Lubatkin (2001) pointed out that successful acculturation is possible even in conditions of significant cultural differences if the acquirer invests in formal and informal control.

Furthermore, drawing on constructionist perspectives on culture (Martin, 1992), some researchers have focused on the ‘constructed’ nature of cultural differences (Gertsen *et al.*, 1998; Kleppstø, 2005; Riad, 2005). From this perspective, the point is not to examine ‘objective’ cultural differences but rather to focus on subjective interpretations and how they link with sensemaking and organizational action. One reading of these studies is that they cast doubt on any ‘essentialist’ analysis of cultural differences. However, another interpretation is that these analyses indicate that the ways in which cultural differences impact integration process dynamics are complex and closely

related to identity-building, sensemaking, and social conflict (Gertsen *et al.*, 1998, Kleppestø, 2005). Recent analyses have indeed illustrated how post-acquisition cultural sensemaking involves national cultural stereotypes (Vaara, 2003) and nationalism (Vaara, Tienari, Piekkari and Säntti, 2005) that have a significant impact on the social dynamics in post-acquisition integration.

While the theoretical perspectives and empirical studies reviewed above have greatly increased our knowledge of the post-acquisition integration process, the fact remains that there is considerable ambiguity concerning the effects that cultural differences have on post-acquisition outcomes. In brief, most scholars assume that national and organizational cultural differences have a negative impact on post-acquisition performance. Some argue for a positive relationship, others suggest that pre-acquisition cultural differences *per se* are unlikely to have performance effects and instead focus more on process factors, while there are still others who question any ‘essentialist’ analysis of cultural differences. In our view, one key reason for this ambiguity is that we lack integrative models specifying the distinctive, possibly contradictory effects that both national and organizational cultural differences may have on post-acquisition integration performance. As a step in this direction, we will in the following outline a model that distinguishes specific mechanisms through which organizational and national cultural differences influence social conflict and knowledge transfers between the merging organizations.

National and organizational cultural differences as antecedents of social conflict and knowledge transfer

Culture has been conceptualized in a variety of ways in the management and organization literature. This is the case both with organizational (Hatch, 1993; Martin, Forst and O’Neill, 2006; Schein, 1985) and national cultures (Hofstede, 1980; Kirkman *et al.*, 2006; House *et al.*, 2004). In this paper, we adopt a ‘configurational’ perspective according to which multinational corporations (MNCs) are cultural systems where beliefs, values and practices form specific configurations in

particular parts of the corporation (Björkman *et al.*, 2007). This conceptualization of culture is consistent with Schein's (1985) widely used model that distinguishes three levels of culture: artifacts (visible, tangible, audible results of activity grounded in values and assumptions), values (social principles, philosophies, goals and standards considered to have intrinsic worth), and basic assumptions (taken-for-granted beliefs concerning reality and human nature). It also coheres with Hofstede's (1980) ideas about underlying worldviews that are manifested in a 'collective programming of the mind' as well as the multi-level concept of culture adopted by the GLOBE research program (House *et al.*, 2004). However, we emphasize that MNCs and units within them involve various cultural facets and divisions, the relevance of which depends on the situation at hand. In international acquisitions, national and organizational cultures are particularly central – but obviously not the only – cultural aspects. Accordingly, merging units can be seen as specific organizational configurations embedded in their particular national contexts.

In international acquisitions, the cultural differences – national and organizational – can create problems or lead to value creation. The starting point of our analysis is to assume that organizational cultural differences are at least to some extent embedded in the national cultural differences. However, while this relationship is crucial, the role of national cultural differences in post-acquisition integration should not be reduced to the effects on organizational cultural differences. On the contrary, it is important to outline a model that would allow us to distinguish the specific effects of national and organizational cultural differences on post-acquisition integration while controlling for their interplay.

In the following, we will focus on social conflict and knowledge transfer. Social conflict is conceptualized as inter-group tensions ranging from different opinions to mistrust and open conflict, thus covering several dimensions of organizational conflicts (Jehn, 1997). This view has its roots in both the literature on social identity building (Ashforth and Mael, 1989; Hogg and Terry,

2000; Tajfel and Turner, 1979) and in analyses of organizational cultures (Martin *et al.*, 2006; Sackmann, 1992). A central argument in both literatures is that people tend to associate similarity concerning beliefs and values with attractiveness and trustworthiness. This is the case whether these differences are ‘real’ or more stereotypical conceptions that do not necessarily correspond to organizational reality. This association often results in the development of in-group versus out-group bias and subsequent cooperation problems and more or less overt conflicts. Consistent with this reasoning, research on organizational trust has shown that trust in a person or group tends to be greater when the two are culturally similar (McAllister, 1995; Sitkin and Roth, 1993). In an international acquisition, where two organizations with different cultures are combined, in-group versus out-group biases are likely to be accentuated (Elsass and Veiga, 1994; Gaertner, Bachman, Dovidio and Banker, 2001; Terry, 2001; van Knippenberg and van Leeuwen, 2001; Kleppestø, 2005). Therefore, we propose the following hypothesis:

HYPOTHESIS 1A. *The greater the national cultural differences between the acquiring and the acquired firms, the higher the degree of social conflict.*

As post-merger or post-acquisition organizational decision-making processes often deal with issues of fundamental importance for the actors involved, organizational divisions tend to strengthen and lead to covert or overt political struggles between the people representing the two organizational sides (Cartwright and Cooper, 1992; Sales and Mirvis, 1984; Schweiger and Goulet, 2000; Vaara, 2003). Social conflicts are likely to emerge in settings of significant organizational cultural differences. In our view this may be a primary explanation for the frequent findings reporting a negative effect of organizational cultural differences on post-acquisition performance (Chatterjee *et al.*, 1992; Datta, 1991). This leads us to propose the following:

HYPOTHESIS 1B. *The greater the organizational cultural differences between the acquiring and acquired firms, the higher the degree of social conflict.*

Cultural differences can also be linked to value creation. One of the most central value creation mechanisms in acquisitions is knowledge transfer (Haspeslagh and Jemison, 1991; Bresman, Birkinshaw and Nobel, 1999). According to Haspeslagh and Jemison (1991), the *raison d'être* of related-business acquisitions is to improve the competitive position of one or both of the firms by the transfer of complementary capabilities between them. Such knowledge transfer may involve transfer of knowledge from the acquirer to the acquired company, but it can also involve a transfer where the specific knowledge or capabilities of the acquired organization are used in particular parts of the acquiring corporation. In this paper, we conceptualize knowledge transfer as the process through which various types of knowledge, capabilities or skills originally residing in one organization are beneficially utilized in the other. Hence, following the perspective taken in most studies in this area (Bresman *et al.*, 1999; Zander, 1991), knowledge transfer here means successful knowledge transfer. Knowledge transfer can include many things ranging from specific resource deployment to more active development of specific capabilities on the basis of knowledge transfer (Bresman *et al.*, 1999; Haspeslagh and Jemison, 1991).¹

Cultural differences are *potential* sources of *complementary knowledge and capabilities*. These differences can thus be seen as part of the complementary combination potential in mergers and acquisitions. Larsson and Finkelstein (1999) call these benefits 'economies of fitness' to distinguish them from the more traditional 'economies of sameness' (accumulating similar operations). This complementary knowledge can be rooted in the cultural and institutional context of the organizations (Bresman *et al.*, 1999; Morosini *et al.*, 1998). For example, Morosini, *et al.* (1998) argue that a greater national cultural distance makes it more likely that the target firm will have knowledge and capabilities that are different from the acquirer's own set; *ceteris paribus* complementarities are more likely to exist. This is also in line with contemporary theorizing about the MNC, which focuses

¹ Our perspective is thus broad, although one could arguably make a distinction between 'knowledge transfer' and 'knowledge creation' (e.g., Grant 1996, Szulanski 1996, Zander and Kogut, 1995).

on how the corporation through its differentiated international operations can get access to diverse and complementary knowledge that can transferred and recombined more efficiently internally than through the market (Kogut and Zander, 1993). Thus, the complementary potential that resides in the different national cultures can provide possibilities for knowledge transfers and value creating in post-acquisition integration processes. We assume that this complementary potential will have a stronger impact on the propensity to transfer knowledge during the integration process than the possible increase in barriers to transferring knowledge – or ‘stickiness’ (Szulanski, 1996) – when the cultural distance between the parties increase (Cho and Lee, 2004). In other words, the higher potential for complementary knowledge associated with a greater national cultural distance between the acquirer and acquired units is likely to have a more significant impact on knowledge transfers than the possible increase in stickiness. This leads us to hypothesize that:

HYPOTHESIS 2A. The greater the national cultural differences between the acquiring and the acquired firms, the higher the level of knowledge transfer.

However, specific organizational cultural differences can also be the sources of knowledge transfer (Bresman *et al.*, 1999; Capron, Dussage and Mitchell, 1998; Ranft and Lord, 2002). According to this logic, the greater differences in organizational practices (e.g., in sales & marketing, production, R&D, or general management) provide more possibilities for transfer of knowledge than situations where organizations with very similar practices are combined. Therefore, we hypothesize that:

HYPOTHESIS 2B. The greater the organizational differences in between the acquiring and the acquired firms, the higher the level of knowledge transfer.

The mediating role of operational integration

Various integration frameworks have been offered in the mergers and acquisitions literature (Birkinshaw, Bresman and Håkanson, 2000; Haspeslagh and Jemison, 1991; Hunt, 1990; Marks and Mirvis, 1998; Nahavandi and Malekzadeh, 1988; Pablo, 1994; Pitkethly, Faulkner and Child, 2003; Shrivastava, 1986). These frameworks propose different integration approaches that vary in the attempted level of integration. Post-acquisition integration levels for different companies, divisions, or subunit can range from total autonomy to total absorption. Related acquisitions usually involve some degree of operational integration – what Shrivastava (1986) labels procedural and physical integration – as gauged by the extent to which the acquirer standardizes work procedures and systems, and removes overlapping operations.

We expect knowledge transfer to increase with the level of operational integration. First, during the process of operational integration, there will be extensive opportunities for people from the two organizations to interact and thus detect opportunities for transfers and recombinations of the different sets of knowledge residing in the two units (Ranft and Lord 2002). Second, the more the two units develop standardized procedures and practices, the easier it will be for the receiving unit to see the value and acquire the knowledge residing in the other organization, assimilate it to its own unit, and transform and exploit it in its own operations (Gupta and Govindarajan 2000, Zollo and Singh 2004). This suggests that:

HYPOTHESIS 3. The higher the level of operational integration, the higher the level of knowledge transfer.

However, operational integration may also lead to social conflict. First, the decisions and actions concerning standardization and integration of structures and processes are often interpreted as a threat to or a disregard of the culture and identity of the focal organization (Buono and Bowditch, 1989, Cartwright and Cooper, 1992, 1993; Olie, 1994). Second, a loss of autonomy is a key concern for the people in acquired organizations (Haspeslagh and Jemison, 1991; Nahavandi

and Malekzadeh 1988). In the worst cases, these concerns are reflected in high levels of employee resistance (Larsson and Finkelstein, 1999) or management turnover (Hambrick and Cannella, 1993). While Marks and Mirvis (1986: 41) described these kinds of overall problems as the “merger syndrome,” Datta and Grant (1990: 32) specifically talked about the “conquering army syndrome.” In summary, and while in certain takeover situations autonomy may not be so important and people in the acquired organization may sometimes favour ‘hands-on’ approaches by the acquirer (Haspeslagh and Jemison, 1991; Nahavandi and Malekzadeh, 1988), and a high level of operational integration in the long run might help reduce uncertainty, tight post-acquisition operational integration is likely to be associated with more social conflict during the integration process. The foregoing discussion suggests the following hypothesis:

HYPOTHESIS 4. *The higher the level of operational integration, the higher the level of social conflict.*

Cultural differences can also affect operational integration efforts. One can assume that in situations characterized by greater cultural differences, there is a special need to invest in operational integration. This is because more efforts are required to integrate the organizations, especially to reap benefits coming from knowledge transfer or other forms of synergy. Further, the larger the cultural distance between the units, the more difficult it will be for the top management of the acquirer to control and coordinate the operations of the acquired unit (Roth and O’Donnell, 1996). Hence, one would anticipate more operational integration efforts in cases of national or organizational differences. One might also argue that in situations characterized by large cultural distance, managers would sometimes refrain from drastic measures precisely because of the anticipated problems related to social conflict. We, however, expect that the need for integration constituted by cultural differences would outweigh such tendencies. Therefore, we hypothesize that on average greater cultural differences would lead to more operational integration efforts:

HYPOTHESIS 5a. *The greater the national cultural differences, the higher the level of operational integration.*

HYPOTHESIS 5b. *The greater the organizational cultural differences, the higher the level of operational integration.*

The impact of social conflict on knowledge transfer

While we have argued that social conflict and knowledge transfer are conceptually distinct, they are not independent of one another. Knowledge transfer takes place only if individuals are prepared to share and exchange knowledge (Gupta and Govindarajan, 2000; Szulanski, 1996). A number of studies indicate that social cohesion is an important predictor of resource sharing and transfer across units within multinational corporations (Bartlett and Ghoshal, 1989; Hedlund, 1986; Nahapiet and Ghoshal, 1998; Schultz, 2003; Szulanski, 1996).

In the context of acquisitions, the importance of social integration for knowledge transfer is especially salient. On the one hand, knowledge transfer requires constant open-minded social interaction, which rests on a sense of social cohesion and trust (Bresman *et al.*, 1999, Haspeslagh and Jemison, 1991). As Bresman *et al.* (1999: 442) noted in their study of knowledge transfer following international acquisitions, “individuals will only participate willingly in knowledge exchange once they share a sense of identity or belonging with their colleagues.” On the other hand, mistrust, conflicting views, and organizational politics can be seen as major obstacles for such efforts (Empson, 2001; Vaara, 2003). For example, Empson (2001) has illustrated how fears of exploitation (being used and losing one’s own culture and identity) and contamination (being changed in ways that threaten one’s culture and identity) impede successful post-acquisition knowledge transfer. Therefore, we hypothesize:

HYPOTHESIS 6. *The greater the level of social conflict, the lower the level of knowledge transfer.*

The hypotheses are summarized in Figure 1.

Insert Figure 1 here

EMPIRICAL ANALYSIS

Sample and procedures

In this paper, we analyze foreign acquisitions carried out by Finnish corporations. The data are based on the national cultural difference scores of the GLOBE project (House *et al.*, 2004) and our database on Finnish corporate acquisitions. This database consists of data collected through three mail surveys, the first covering the period of 1993-1996, the second survey the period of 1997-2000, and the third survey the period of 2001-2004. The surveys were carried out in 1997, 2001, and 2005, in each case 1-3 years after the acquisition had taken place. This time lag after the acquisition was chosen so as to allow for sufficient but not too long a time to have passed since the acquisition to examine the integration process outcomes in a meaningful way (Haspeslagh and Jemison 1991). The average time lag was 1.35 years between the time of the acquisition and the data collection. We combined the data to one data set there are no theoretical reasons to believe that the explanatory mechanisms would differ across the three surveys.

The sample companies were selected using data provided by the Finnish *Talouselämä* magazine's database on acquisitions carried out by Finnish firms. The following four criteria were used in the selection of the acquisition cases. First, the acquirer had to be a Finland-based company, excluding acquisitions made by Finnish subsidiaries. Secondly, management buy-outs and purely financial acquisitions were excluded because these cases usually do not involve a real integration process of two companies. Thirdly, the Finnish acquiring party had to have a holding in excess of 50%. Fourthly, the acquired company's turnover had to exceed FIM 20 million (EUR 3.4 million) so that the study would be able to concentrate on more significant acquisitions. The average size of the acquired companies was EUR 99.3 million.

The data gathering process was similar in all three survey rounds. First, cover letters were sent to the CEOs of the acquiring companies to inform them about the research project. Then, the CEO or another top executive was contacted and asked to name key decision makers from both the acquiring and acquired firms. This procedure helped to identify the right respondents from both the acquiring and acquired companies, ranging from 1 to 5 persons. Finally, the questionnaire was sent to the identified respondents or the survey was completed by a phone interview. It should be emphasized that we focused on ensuring that actual key-decision makers involved in acquisition integration responded to the questions rather than trying to maximize the number of responses. 24% of the responses were from the CEOs, 69% from other members of the top management team (including vice presidents and CFOs) and the remaining 7% were members of the board of directors.

To check for face validity, the questionnaire was pre-tested on a group of academics and managers and necessary changes were made. We also took several provisions to avoid pseudo-relationships between variables and to minimize common method effects. For example, to overcome priming and consistency effects (Pfeffer and Selznick, 1977), questions were distributed in the questionnaire, and other questions, not relevant to this analysis, were inserted between the questions used in this study. We found no evidence of common method bias related to our measures, since no single factor accounted for the majority of the covariance among the measures (Podsakoff, MacKenzie, Lee and Podsakoff, 2003).

The average response rate in the surveys was 25%, comparing well with the response rates in previous studies (e.g., Datta 1991, Morosini *et al.*, 1998) taking into account the confidential nature of acquisitions and busy schedules of top managers. The three surveys resulted in a total number of 123 foreign acquisitions. On average, we received 1.86 answers per acquisition resulting in a database of 220 answers. Of the answers, 71% were received from the acquirer side and 29% from the

acquired firm side and 57 answers were received from acquisitions in Sweden, 35 from Germany, 18 from Switzerland, 18 from the USA, 14 from Estonia, 14 from Poland, 11 from Great Britain, 10 from Norway, 9 from Canada, 6 from France, 5 from Denmark, 5 from South Africa, 4 from Belgium, 3 from the Netherlands, 3 from Russia, 2 from Hungary, 2 from Italy and 1 answer each from Australia, Austria, Brasilia, China, Columbia, South Korea, Lithuania and Romania. Unfortunately, Estonia, Belgium, Lithuania and Latvia do not have GLOBE scores.

Measures

Table 1 reports the variable means, standard deviations and correlation coefficients between the variables used in the study. With the exception of the measure for national cultural differences and control variables, the constructs were based on the respondents' answers on multiple item seven-point Likert-type scale questions.

Insert Table 1 here

National cultural differences. We measured national cultural distance by using the GLOBE practices scores (House *et al.*, 2004). National cultural distance measures utilizing Hofstede's (1980) scores have been widely criticized (Harzing, 2004; Shenkar, 2001). This is why the GLOBE project attempted to create elaborate and reliable national cultural differences scores. As opposed to Hofstede's four dimensions (uncertainty avoidance, power distance, individualism) and later fifth dimension (long-term orientation), the GLOBE scores have nine cultural dimensions: assertiveness, institutional collectivism, in-group collectivism, future orientation, gender egalitarianism, humane orientation, performance orientation, power distance, and uncertainty avoidance. The GLOBE study reports national scores on both organizational practices and values (House *et al.*, 2004). We used the practices scores because they indicate actual rather than ideal

differences between countries.² In the absence of existing theorizing that would help us conclude which cultural are particularly relevant for social conflicts and knowledge transfer, we used the nine dimensions of GLOBE practices score to build an index of national cultural differences using the technique developed by Kogut and Singh (1988) that was used by Morosini *et al.* (1998) (who used Hofstede's data). Our index of national cultural differences represented the aggregate national cultural distance between the acquirer and the acquiree:

$$CD_j = \sum_{i=1}^9 \left\{ (I_{ij} - I_{if})^2 \right\} / 9$$

where:

- CD_j : the cultural difference for the j :th country
- I_{ij} : Globe score for i :th cultural dimension and j :th country
- F : indicates Finland

By using GLOBE scores from a source external to the sample we avoided the problem of common method variance caused by the same individuals answering questions about national culture in the same way as they answer questions about social conflict or knowledge transfer. In addition, we could thus deal with retrospective rationalizing concerning national cultural differences (Golden, 1992; Huber and Power, 1985). A further strength of using the GLOBE measures is that the data collected for the GLOBE study overlaps with the time period covered in our research.

Organizational cultural differences. Following the example of previous studies (Chatterjee *et al.*, 1992; Lubatkin *et al.*, 1999; Weber, 1996; Weber *et al.*, 1996), we used direct questions concerning the perceived cultural differences that existed before the acquisition as reported by top managers. According to Chatterjee *et al.* (1992), assessing perceptions of cultural differences rather than examining the more tangible and objective outcomes of culture such as reward structures or

² The statistical tests further supported this choice by showing that practices scores measuring actual differences correlated more strongly with post-acquisition integration outcomes than value scores measuring ideal differences.

mission statements is advantageous because perceptions are likely to be better predictors of behaviour. Elsass and Veiga (1994) also suggest that perceived cultural differences are important because the more dissimilar the out-groups are perceived to be, the more strongly the negative feelings in-group members are likely to hold.

We asked managers to describe the extent of cultural differences across key organizational functions. These included management and control, sales and marketing, production, research and development, and finance. In addition, we asked managers to describe differences in company values in general and differences in the values of key decision makers. This approach involved managers retrospectively evaluating the organizational cultural differences prior to the acquisition between the acquiring and the acquired firms. It can be argued that the differences should be measured at the time the acquisition is completed. However, gaining access to the firms at that time is extremely difficult. We also maintain that managers are able to reasonably recall the pre-acquisition situations because acquisitions have the affect of sharpening rather than dulling memory. Furthermore, learning about actual organizational cultural differences as opposed to stereotypical assumptions takes time, which suggests that the assessment should take place after real experiences of the integration efforts. In the questionnaire, we included a set of questions about cultural differences at the time of the survey to control whether managers were able to distinguish between cultural differences at the time of the acquisition and at the time of the survey. When we compared answers to the questions of cultural differences prior to the acquisition and cultural differences at the time of the survey, we found significant differences. Therefore, we have reason to believe that managers were able to distinguish between prior organizational cultural differences and current organizational cultural differences.

Operational integration. Adapting the items used in previous studies (Krishnan and Park, 2003; Larsson and Lubatkin, 2001; Lubatkin *et al.*, 1998; Morosini and Singh, 1994; Weber *et al.*,

1996), our operational integration construct is based on targeted questions measuring the level of operational integration activities. The respondents were asked about the extent to which (i) overlappings between the units had been eliminated, (ii) there was a tendency to standardize practices, and (iii) integration decisions were aimed at the realization of synergy, e.g., through cost reduction.

Social conflict. In accordance with studies on social identity building (van Knippenberg and van Leeuwen, 2001; Pratt, 2001; Terry, 2001) social conflict was measured by four questions on inter-group tensions covering different dimensions of organizational conflicts (Jehn, 1997). We constructed this composite measure of social conflict from the respondents' answers to questions concerning the extent of different opinions, cooperation problems, conflicts, and mistrust between the merger partners.

Knowledge transfer. In the operationalization of knowledge transfer construct, we followed the example of previous studies on organizational knowledge transfer in general (Zander, 1991) and in acquisitions in particular (Bresman *et al.*, 1999; Capron *et al.*, 1998). Our knowledge transfer construct was measured by five questions concerning the extent to which knowledge transfer had resulted in benefits across the following organizational functions: management and control, sales and marketing, production, research and development, and finance.

Control variables

Size. Following previous studies (e.g. Halebian and Finkelstein, 1999; Kusewitt, 1985; Larsson and Finkelstein, 1999; Morosini *et al.*, 1998), we controlled for the size of the acquisition. We measured this as the turnover by the acquired company at the time of acquisition using external data from the database of the financial magazine *Talouselämä*.

Time elapsed. Time elapsed since acquisition could impact the outcome of acquisitions and the perceptions of the respondents (Greenwood, Hinings and Brown, 1994; Very *et al.*, 1997).

Bresman *et al.* (1999) found empirical evidence that knowledge transfer in acquisitions was positively related to time elapsed since acquisition. Given that our data were collected from 1 to 3 years after acquisition, we controlled for the possible temporal variance by recording the age of the merger as the number of years (1, 2, or 3) which transpired from the time of the merger to the time that we received the completed questionnaire (Very *et al.*, 1997). We used external data from the database of the financial magazine *Talouselämä*.

Industry type. Among others, Morosini *et al.* (1998) suggest that industry type might impact post-acquisition integration due to differences reported in the preference of acquisitions as an entry mode (Kogut & Singh, 1998). We controlled for sectoral effects by using a dummy variable to indicate whether the acquisition was in service industry (1= service industry, 0=others) using external data from the database of the financial magazine *Talouselämä*.

Respondent. As our sample included responses from both the acquiring and the acquiring firms side, we controlled the respondent status by using a dummy variable (1=acquiring firm, 0=acquired firm).

Structural equation analysis

We tested our propositions using structural equation modelling (Byrne 2001). Before entering the variables into the model, we adjusted the data to assure homoscedasticity by weighting each observation by the constant $1/\sqrt{n}$, which guaranteed the equality of variance between single and multiple response cases.³ In addition, we standardized all variables.

³ Typically, researchers have used the mean scores of multiple respondents to represent an acquisition or a top management team in an acquisition. However, for the purposes of structural equation modelling, the use

We used the AMOS 7.0 program with covariance matrix as input and maximum likelihood as estimation method⁴ and followed the two-stage procedure recommended by Anderson and Gerbing (1988). The first stage involved estimating the measurement model using confirmatory factor analysis in order to test whether the constructs exhibited sufficient unidimensionality, validity and reliability. The second stage identified the structural model and tested the hypothesized relationships between the constructs. We used maximum likelihood estimation.

Results of the measurement model

Tables 2 and 3 summarize the results of the measurement model. Overall, the measurement model performed well with comparative fit index (CFI) at 0.922, DELTA 2 index at 0.923, TLI at 0.893, and RMSEA at 0.083. We examined the estimated loadings and their significance levels. The loadings for all measurements beta were significant at $p < 0.001$ level.

of mean scores for multiple response cases is problematic because mean scores lead to an unequal variance between the cases that have a single respondent compared with those that have multiple respondents. Therefore, in order to fulfill the assumption of homoscedasity, i.e. the equality of variance, we weighted each observation by a constant $1/\sqrt{n}$.

The constant is derived from a basic variance formula, $\text{var}(ax) = a^2 \times \text{var}(x)$. By using this formula, we can show that the constant for which the variance of mean is equal to the variance of a single observation (e.g. $\text{var}(\sqrt{n} \times \bar{x}) = \text{var}(x)$), is \sqrt{n} . Multiplying the mean by the constant \sqrt{n} equals multiplying each case by the constant $1/\sqrt{n}$ as shown below:

$$\text{var}(\sqrt{n} \times \bar{x}) = \text{var}\left(\sqrt{n} \times \frac{\sum x}{n}\right) = \text{var}\left(\frac{1}{\sqrt{n}} \times \sum x\right) = \text{var}\left(\frac{1}{\sqrt{n}} \times x_1 + \frac{1}{\sqrt{n}} \times x_2 \dots\right)$$

(Hair, Anderson, Tatham and Black, 1998; Sanders and Smidt, 2000).

⁴ In the presence of incomplete data, ML estimation offers several advantages over both the listwise and pairwise deletion approaches (Arbuckle, 1996; Byrne, 2001). For example, when the unobserved values are missing completely at random, listwise estimates are consistent, but not efficient, whereas ML estimates are both consistent and efficient. Also, when the unobserved values are only missing at random, both listwise and pairwise estimates can be biased but ML estimates are asymptotically unbiased. In addition, ML estimation produces standard error estimates and provides a method for testing hypotheses, unlike pairwise estimation. Finally, when missing values are nonignorable, all procedures can yield biased results but compared with listwise and pairwise deletion approaches, ML estimates exhibit the least bias (Little and Rubin, 1989). For a discussion on ML estimation, see Arbuckle (1996).

Insert Table 2 and Table 3 here

While there is no simple overall yardstick to evaluate the measurement model, there are useful indicators (Boomsma, 2000; Hu and Bentler, 1999; Marsh, Hau and Wen, 2004). Shook, Ketchen, Hult and Kachmar (2004) recommend calculating composite reliability, which draws on the standardized loadings and measurement error for each item. According to Fornell and Larcker (1981), 0.70 is an acceptable minimum level for composite reliability, with each indicator reliability above 0.50. In our model, composite reliabilities ranged from 0.87 to 0.95 with indicator reliabilities above 0.50, which suggested good reliability for our measures. Another test for convergent validity is average variance. Shook *et al.* (2004) suggest that convergent validity is achieved when the average variance extracted is above 50%. The average variances in our model ranged from 69% to 73%, which suggested good convergent validity. We tested discriminant validity by conducting pairwise tests of all theoretically related constructs (Anderson, 1987). The pairwise tests showed that confirmatory factor analysis model representing two measures with two factors fit the data significantly better than a one-factor model, which supported the discriminant validity of the model. Overall, the results indicated that our constructs were adequate to proceed to the second stage of structural equation modeling.

Results of the structural model

Table 4 presents the standardized parameter coefficients and their Z-statistics for the hypothesized path model.

Insert Table 4 here

Hypothesis 1a suggested that national cultural differences are positively associated with social conflict. The relationship was significant but – interestingly enough – in the opposite direction than hypothesized as indicated by a negative and statistically significant beta estimate ($b = -0.27, p <$

0.001). In other words, national cultural differences were associated with less rather than more social conflicts between the parties. Hypothesis 1b proposed that organizational cultural differences are associated with greater level of social conflict. The results offered clear support for this hypothesis, indicated by a significant beta estimate ($b = 0.96, p < 0.001$). Hypothesis 2a, suggesting a positive relationship between national cultural differences and knowledge transfer, was supported by the data ($b = 0.16, p < 0.01$). The hypothesized positive relationship between the organizational cultural differences and knowledge transfer was also supported by the data ($b = 0.53, p < 0.001$), rendering support to hypothesis 2b.

In hypothesis 3, we proposed that the greater the operational integration, the higher the level of social conflict. The results indicate no empirical support for this hypothesis ($b = -0.07$, non significant). According to hypothesis 4, the greater the level of operational integration the higher the level of knowledge transfer between the acquiring and acquired units. The standardized parameter estimate was positive and highly significant ($b = 0.44, p < 0.001$), therefore supporting hypothesis 4. Hypothesis 5a proposed that the greater the national cultural differences, the higher the level of operational integration. We found only weak support for this hypothesis ($b = 0.13, p < 0.10$). In a similar vein, hypothesis 5b suggested that the greater the level of organizational cultural differences, the higher the level of operational integration. The results offered strong support for hypothesis 5b ($b = 0.75, p < 0.001$). Finally, we found clear support for hypothesis 6, which suggested that the greater the level of social conflict, the lower the level of knowledge transfer ($b = -0.27, p < 0.001$).

We controlled for the relationship between national cultural differences and organizational cultural differences. The model suggested that a strong relationship existed between national cultural differences and organizational cultural differences ($b = 0.69, p < 0.001$). The results concerning specific control variables suggested that time elapsed since the acquisition was positively related to knowledge transfer ($b = 0.07, p < 0.10$). We also controlled for the effect of size of the acquired

firm, service industry and respondent status (whether the respondent represented the acquiring or the acquired firm side) on knowledge transfer, but none of the relationships were statistically significant.

Our hypotheses tested linear relationships. However, it has been argued (Björkman *et al.*, 2007) that the effects of cultural differences might be positive for mid-range values while negative for upper-range values. Therefore, we conducted additional regression analyses that included both first order and second order terms of national and organizational cultural differences. None of the second order terms were significant when either social conflict or knowledge transfer was used as a dependent variable. This suggested that no curvilinear effects were present concerning hypotheses 1a, 1b, 2a and 2b.

DISCUSSION

While existing research on mergers and acquisitions has pointed to the key role that cultural differences play in post-acquisition integration, these studies have produced mixed results as to the relationship between national and organizational cultural differences and post-acquisition outcomes (Chatterjee *et al.*, 1992; Datta, 1991; Krishnan *et al.*, 1997; Lubatkin *et al.*, 1999; Morosini *et al.*, 1998; Veiga *et al.*, 2000; Weber, 1996; Weber *et al.*, 1996). To partially explain these contradictory findings, we developed and empirically tested a model which specifies which mechanisms through national and organizational cultural differences affect post-acquisition dynamics. Figure 2 below summarizes the findings.

Insert Figure 2 here

We hypothesized that cultural differences tend to increase social conflict. Our results show that while organizational cultural differences increase social conflict, national cultural differences tend to reduce such conflict. This negative relationship was unexpected, but it may be explained by

the fact that we included organizational cultural differences in our model. We think that concrete organizational cultural differences in specific beliefs, values and practices are often linked with actual conflicts of interests (related to standardization, overlapping operations, etc.) and divergent views on what should be the integration strategy (concerning overlapping operations, layoffs, etc.). Such differences can be seen as root causes of social conflict, and this may help to explain why numerous studies have reported a negative relationship between cultural differences and post-acquisition performance (Chatterjee *et al.*, 1992; Datta, 1991; Lubatkin *et al.*, 1999; Weber, 1996; Weber *et al.*, 1996). This effect of organizational cultural differences does not in itself explain why national cultural differences would alleviate conflicts as seems to be the case in our data. However, it is likely that people pay more attention to and make special efforts to address cultural differences when these are apparent as is the case with apparent national cultural differences. In this way, a large national cultural distance between the acquirer and the acquired units may actually help in preparing for and dealing with potential conflict situations. This view is consistent with studies pointing to a 'Psychic Distance Paradox' (O'Grady and Lane, 1996) in international business.

We also hypothesized that cultural differences would have a positive impact on knowledge transfer by providing potential combinatory synergies as well as learning opportunities. Here we found strong evidence for the positive impact of both national and organizational cultural differences on knowledge transfer. These results support the view that concrete potential for complementarity residing in organizational beliefs, values and practices seem to drive knowledge transfer in post-acquisition settings. Furthermore, the different national contexts – reflected in national cultural differences – can provide special learning opportunities *per se*. This is indeed what theories on international or cross-cultural management indicate. In all, we believe that these are two key mechanisms behind the results of those studies reporting a positive effect of cultural differences on post-acquisition performance (Larsson and Risberg, 1998; Morosini *et al.*, 1998). The fact that the

added complementarities were of greater importance for knowledge transfer than the potential stickiness (Szulanski, 1996) that may be associated with knowledge transfer between culturally distant units (Cho and Lee, 2004), is also an important finding.

We further examined operational integration, hypothesizing that the degree of operational integration has a positive effect on knowledge transfer but also increases social conflict. Our results show that operational integration has a strong positive impact on knowledge transfer, suggesting that at least a moderate level of integration is a prerequisite for realizing synergies in related acquisitions, which is consistent with the previous analyses (Haspeslagh and Jemison, 1991). In contrast, the hypothesis that operational integration tends to increase social conflict was not supported. One possible explanation for this is that without clear-cut decisions, many of the organizational conflicts can remain unresolved and continue to undermine social cohesion. For example, it has been observed that hesitation in approaching integration and lack of decisive action can generate suspicion and mistrust after corporate takeovers (Buono and Bowditch, 1989; Haspeslagh and Jemison, 1991). Also, a laissez-faire approach is not able to resolve fundamental conflicts of interest and can instead reinforce internal politics (Vaara, 2003).

This study also analyzed the relationship between national and organizational cultural differences and operational integration. Our data provides clear support for the view that organizational cultural differences have a strong impact on operational integration. This is probably an effect of the need to invest more in integration in situations where there are clear differences in organizational beliefs, values, or practices. When interpreting these findings, one should bear in mind that our sample consists of related acquisitions. Many such acquisitions are motivated by potential synergy gains the realization of which does require integration efforts. The fact that we only received marginal support for the impact of national cultural differences on integration is actually not surprising. This is because – once again – concrete organizational cultural differences

may be the most obvious causes for integration efforts, while the impact of national cultural differences may be more ambiguous. Further, the greater geographical distance that is often associated with large national cultural differences may make integration efforts difficult.

Finally, we hypothesized that social conflict would have an adverse effect on knowledge transfer. This was clearly supported by our data, implying that a positive atmosphere is beneficial and often even necessary for effective transfer of knowledge. When we consider this finding in the context of the dual effects of operational integration discussed above, we indeed have a clear illustration of the complexities related to knowledge transfer during post-acquisition integration.

CONCLUSION

In our view, this analysis makes four contributions to the literature on cultural differences in mergers and acquisitions. First, the primary contribution of this analysis is that it singles out specific mechanisms through which cultural differences impact post-acquisition integration outcomes. To our knowledge, this is the first empirically grounded model that disentangles and clarifies the way in which national and organizational cultural differences affect social conflict and knowledge transfer. By so doing, this analysis helps to explain some of the contradictory findings in previous research (Chatterjee *et al.*, 1992; Datta, 1991; Lubatkin *et al.*, 1999; Krishnan *et al.*, 1997; Morosini *et al.*, 1998; Shimizu *et al.*, 2004; Veiga *et al.*, 2000; Weber, 1996; Weber *et al.*, 1996).

Second, consistent with our configurational perspective on cultural differences, we have examined the interplay between national and organizational differences. While there are undoubtedly other important cultural facets, our analysis is still one of a very few that distinguish between these two factors and their inter-linked effects (see also Weber *et al.*, 1996). Most interestingly, the effects of national and organizational cultural differences seem to be different, at least in the case of their impact on social conflict. Our interpretation is that specific organizational cultural differences are

often the root causes of conflict, while national cultural differences may actually help in conflict situations. Although these results might be related to the specific data that we have according to which the foreign acquisitions of Finnish corporations are driven by knowledge transfer and other kinds of synergy, we nevertheless believe that one would also find similar patterns in other contexts. Regardless of the specific findings, pointing to the different effects of national and organizational cultural differences is also important *per se*, as it shows that national and organizational factors should not simply be lumped together, as is often done in research and in practice. We hope that our analysis will provide impetus for future studies on more fine-grained distinctions such as industrial and professional cultural differences.

Third, to our knowledge, this is the first post-acquisition integration study that builds on the GLOBE project data (House *et al.*, 2004). Our analysis shows that the GLOBE measures can help to explain phenomena such as social conflict and knowledge transfer. This is important in terms of the applicability of the GLOBE project data, but it is especially significant given the wide criticism that use of Hofstede's or Trompenaars' measures has received in international business literature (Kirkman *et al.*, 2006). Obviously, the GLOBE national level data can at best only provide partial and proximal explanations, but they do seem to provide one fruitful way to move forward in analyses of cultural differences in the M&A context.

Fourth, by indicating that social conflict has an adverse effect on knowledge transfer, this study helps us understand the inherent complexities related to knowledge transfer during post-acquisition integration. In this sense, our analysis complements the previous analyses on post-acquisition knowledge transfer (Bresman *et al.*, 1999, Haspeslagh and Jemison, 1991). Moreover, by highlighting the adverse effects of social conflict, it also adds to the more general discussions around knowledge and capability transfer (Kostova, 1999; Ranft and Lord, 2002; Szulanski, 1996, 2000).

While our study advances our knowledge of the role of cultural differences in post-acquisition integration, some limitations of this research need to be noted. First, like any structural equation model, ours encompasses only a limited number of causal mechanisms. Second, our data set consists of Finnish corporate acquisitions and is thereby related to the specific characteristics of this setting. While these results are likely to make sense in other contexts as well, it would be interesting to compare the findings with samples from other countries. Third, the data are partly based on the perceptions of the key decision-makers. While this is a common and widely accepted approach, it also inevitably involves some methodological concerns. Most importantly, the relationships between the variables that come from the survey may be affected by retrospective recall or post-hoc constructions (Golden, 1992; Miller, Cardinal and Glick, 1997; Shadish, Cook and Campbell, 2002). However, it should be noted that this concern is not related to national cultural differences and that in the case of organizational cultural differences the singling out of specific mechanisms should alleviate some of the problems. Based on previous studies, one could assume that people would be likely to associate organizational cultural differences with problems such as social conflict, but not with knowledge transfer or other forms of synergy (e.g., Vaara 2002). Yet, our findings indicate strong relationships in both cases. It should also be emphasized that our statistical tests showed no signs of common method bias problems. Fourth, this study has measured key decision-makers' views. They are arguably the people who should have the best overall picture of the integration processes. However, this focus on the top levels of hierarchy also means that their perspectives are likely to differ, for example, from those of the operating staff.

Our study clarifies some of the essential mechanisms linking cultural differences with overall post-acquisition success. Nonetheless, a variety of issues need closer scrutiny in future studies. As discussed above, there is an apparent need for further analyses disentangling and clarifying the role and relationships of the various factors that are often considered under the broad umbrella of

‘cultural differences.’ This should include an analysis of curvilinear effects. For example, the effects on social conflict can be much more complex than our model of linear causality assumes. There is also a need to better understand how factors other than operational integration mediate the impact of cultural variables on either social conflict or knowledge transfer, and there may be other processes and mechanisms than social conflict and knowledge transfer through which cultural difference impact the ultimate performance of the combined units. There are also likely to be various socio-psychological tendencies related to cultural differences, social conflict, and perceived success that should be given attention in future studies. For example, performance might be cognitively associated with cultural differences as experiences of success may reduce the importance of cultural differences while failures could make the people involved over-emphasize them.

In conclusion, in this paper we have taken a critical view on simplistic analyses of cultural differences in post-acquisition integration. However, unlike some others, we do not believe that we have come to a dead end with this stream of research. Rather, we believe that there is a need to go further by singling out specific processes and mechanisms and to be prepared for surprising and contradictory findings stemming from particular contexts. We are dealing with a complex phenomenon that is likely to keep scholars occupied for many years to come.

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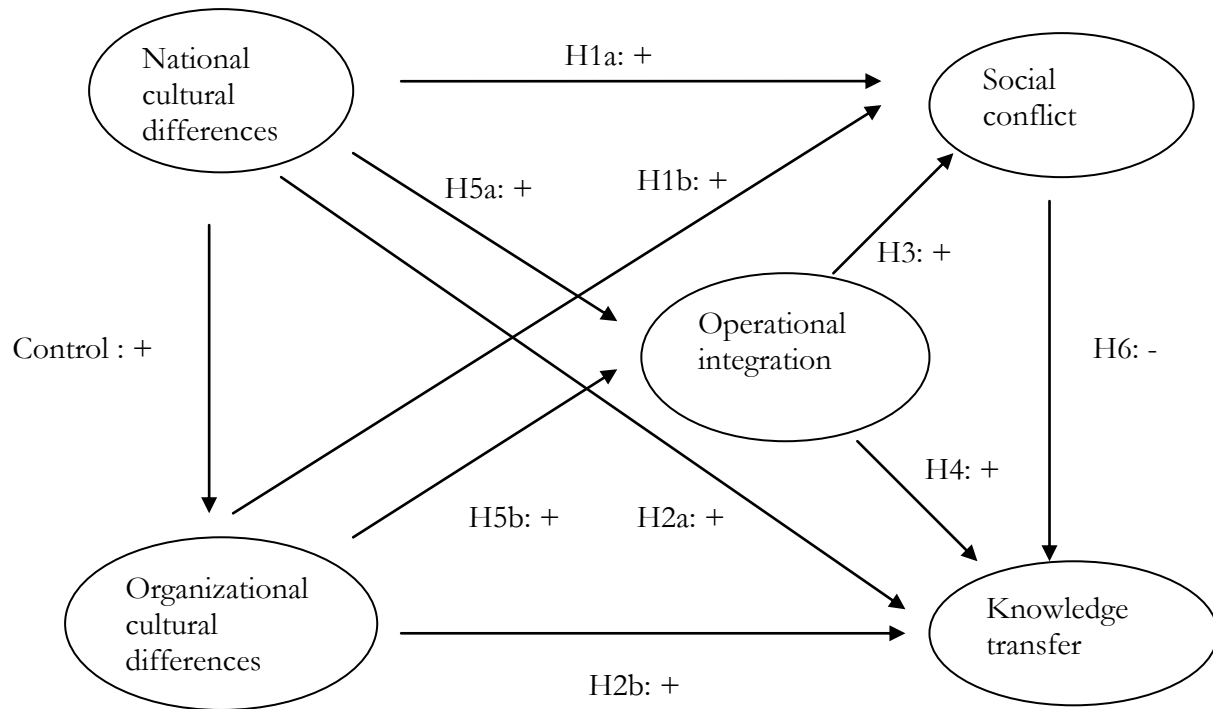


Figure 1 Proposed model

Table 1 Means, standard deviations, and correlations for the latent variables in the model

Variable	mean	s.d.	1	2	3	4	5	6	7	8	9
1 Knowledge transfer in management & control	4.62	1.51	1								
2 Knowledge transfer in sales & marketing	4.19	1.54	0.52***	1							
3 Knowledge transfer in production	4.01	1.78	0.42***	0.42***	1						
4 Knowledge transfer in R&D	4.18	1.64	0.32***	0.38***	0.60***	1					
5 Knowledge transfer in finance	4.58	1.74	0.57***	0.41***	0.36***	0.42***	1				
6 Different opinions	4.37	1.47	-0.19**	-0.19**	-0.17+	-0.18**	-0.18**	1			
7 Cooperation problems	3.96	1.57	-0.23**	-0.13+	-0.9	-0.17+	-0.10	0.77***	1		
8 Conflicts	3.21	1.64	-0.25***	-0.18**	-0.10	-0.17+	-0.09	0.62***	0.72***	1	
9 Mistrust between the employees	3.29	1.66	-0.22**	-0.15+	-0.1	-0.12	-0.11	0.55***	0.61***	0.70***	1
10 Cultural differences in management & control	5.58	1.07	0.02	0.10	0.04	0.01	-0.03	0.32***	0.27***	0.18**	0.16+
11 Cultural differences in sales & marketing	5.07	1.26	0.08	0.06	0.21**	0.07	0.01	0.24***	0.22**	0.16+	0.23**
12 Cultural differences in production	4.59	1.46	0.09	-0.00	0.18**	0.08	0.03	0.18+	0.1	0.08	0.21**
13 Cultural differences in R&D	4.61	1.46	-0.03	0.03	0.15+	0.08	0.03	0.16+	0.18+	0.14+	0.20**
14 Cultural differences in finance	4.69	1.49	0.14+	0.18**	0.07	0.02	0.27***	0.09	0.08	0.04	0.04
15 Cultural differences in company values in general	4.80	1.32	0.06	0.14+	0.15+	0.05	0.07	0.27***	0.25***	0.19**	0.19**
16 Cultural differences in values of key decision makers	4.93	1.21	0.06	0.22**	0.17+	0.08	0.15+	0.30***	0.29***	0.23**	0.12+
17 Elimination of overlappings	3.83	1.75	0.13+	0.17+	0.16+	0.22**	0.16+	-0.00	-0.06	0.06	0.07
18 Standardization of practices	4.79	1.27	0.17+	0.28***	0.26***	0.13+	0.16+	-0.02	-0.01	0.04	-0.04
19 Decisions based on maximization of synergies	4.71	1.35	0.09	0.17+	0.23**	0.16+	0.06	0.01	0.1	-0.02	0.04
20 National cultural differences	0.49	0.15	0.14+	0.26***	0.31***	0.17+	0.15+	-0.15+	-0.15+	-0.19**	-0.11
21 Size of the acquired firm (millions of EUR)	99.34	229.89	0.04	-0.12+	-0.07	-0.06	-0.10	0.13	-0.01	-0.03	-0.09
22 Time elapsed	1.35	1.04	0.08	0.03	0.04	0.13+	0.03	-0.10	-0.02	-0.10	-0.11
23 Service industry	0.01	0.12	0.09	-0.02	-0.05	-0.04	0.03	0.11	0.05	0.03	0.02
24 Respondent status (acquirer vs. acquired)	0.29	0.46	-0.09	-0.21**	-0.10	-0.06	-0.10	-0.13+	-0.16*	-0.03	-0.01

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$, two-tailed tests

Cultural differences, social conflict and knowledge transfer

Variable	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 Knowledge transfer in management & control														
2 Knowledge transfer in sales & marketing														
3 Knowledge transfer in production														
4 Knowledge transfer in R&D														
5 Knowledge transfer in finance														
6 Different opinions														
7 Cooperation problems														
8 Conflicts														
9 Mistrust between the employees														
10 Cultural differences in management & control	1													
11 Cultural differences in sales & marketing	0.37***	1												
12 Cultural differences in production	0.36***	0.37***	1											
13 Cultural differences in R&D	0.39***	0.31***	0.54***	1										
14 Cultural differences in finance	0.35***	0.26***	0.23***	0.30***	1									
15 Cultural differences in company values in general	0.48***	0.31***	0.32***	0.33***	0.37***	1								
16 Cultural differences in values of key decision makers	0.49***	0.23**	0.19**	0.22**	0.24***	0.22**	1							
17 Elimination of overlappings	-0.07	-0.01	-0.01	0.08	0.04	0.1	0.07	1						
18 Standardization of practices	0.01	0.1	0.02	0.18**	0.16+	0.18**	0.20**	0.42***	1					
19 Decisions based on maximization of synergies	0.06	0.03	0.02	0.1	0.07	0.1	0.13+	0.33***	0.34***	1				
20 National cultural differences	0.05	0.14	0.04	0.08	0.16+	0.08	0.09	-0.06	0.11	-0.06	1			
21 Size of the acquired firm	0.08	-0.05	-0.06	-0.01	-0.03	-0.16+	-0.08	0.02	-0.14*	0.05	-0.01	1		
22 Time elapsed	-0.08	0.03	0.04	-0.15*	-0.07	0.03	0.02	-0.03	-0.05	0.07	0.03	-0.21**	1	
23 Service industry	0.10	0.02	-0.05	-0.03	-0.06	-0.01	0.03	-0.01	-0.01	-0.03	-0.05	-0.04	-0.03	1
24 Respondent status (acquirer vs. acquired)	-0.21**	-0.09	-0.08	-0.09	-0.13+	-0.19**	-0.20**	0.13+	-0.05	-0.20**	-0.06	0.06	-0.03	-0.08

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$, two-tailed tests

Table 2 Results of the measurement model

Construct	Measurement item	Unstandardized beta coefficient	Z-statistic	Standardized regression weight	Indicator reliability	Error variance
Organizational cultural differences	Management and control	1.00		0.95	0.90	0.10
	Sales and marketing	0.89***	21.37	0.86	0.74	0.26
	Production	0.80***	16.78	0.79	0.62	0.38
	Research and development	0.80***	16.45	0.78	0.61	0.39
	Finance	0.91***	18.13	0.81	0.66	0.34
	Company values in general	0.91***	23.36	0.89	0.79	0.21
	Values of key decision makers	0.89***	24.02	0.89	0.79	0.21
Operational integration	Elimination of overlappings	1.00		0.73	0.53	0.47
	Standardization of practices	1.18***	12.97	0.90	0.81	0.19
	Decisions based on maximization of synergies	1.13***	12.46	0.86	0.74	0.26
Social conflict	Different opinions	1.00		0.91	0.83	0.17
	Cooperation problems	1.02***	22.32	0.93	0.86	0.14
	Conflicts	0.83***	16.46	0.81	0.66	0.34
	Mistrust between the employees	0.79***	14.06	0.74	0.55	0.45
Knowledge transfer	Management and control	1.00		0.88	0.77	0.23
	Sales and marketing	0.96***	18.17	0.87	0.76	0.24
	Production	0.89***	14.68	0.78	0.61	0.39
	Research and development	0.85***	14.79	0.78	0.61	0.39
	Finance	1.06***	17.56	0.85	0.72	0.28

***p <0.001

Table 3 Construct validity and reliability

Construct	Composite reliability	Average variance
Organizational cultural differences	0.95	0.73
Operational integration	0.87	0.69
Social conflict	0.91	0.72
Knowledge transfer	0.92	0.69

Table 4 Results of the structural model

Hypothesis	Description of path	Hypothesized direction	Unstandardized beta coefficient	Z-statistic
H1a	National cultural differences -> Social conflict	+	-0.27***	-3.33
H1b	Organizational cultural differences -> Social conflict	+	0.96***	7.57
H2a	National cultural differences -> Knowledge transfer	+	0.16**	2.63
H2b	Organizational cultural differences -> Knowledge transfer	+	0.53***	4.55
H3	Operational integration -> Social conflict	+	-0.07	-0.55
H4	Operational integration -> Knowledge transfer	+	0.44***	4.58
H5a	National cultural differences -> Operational integration	+	0.13+	1.96
H5b	Organizational cultural differences -> Operational integration	+	0.75***	9.05
H6	Social conflict -> Knowledge transfer	-	-0.27***	-4.22
Control	National cultural differences -> Organizational cultural differences		0.71***	13.46
Control	Size of the acquired firm -> Knowledge transfer		-0.04	-1.15
Control	Time elapsed -> Knowledge transfer		0.07+	1.93
Control	Service industry -> Knowledge transfer		0.05	1.38
Control	Respondent status (acquirer vs. acquired) -> Knowledge transfer		-0.03	-0.91

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.10$

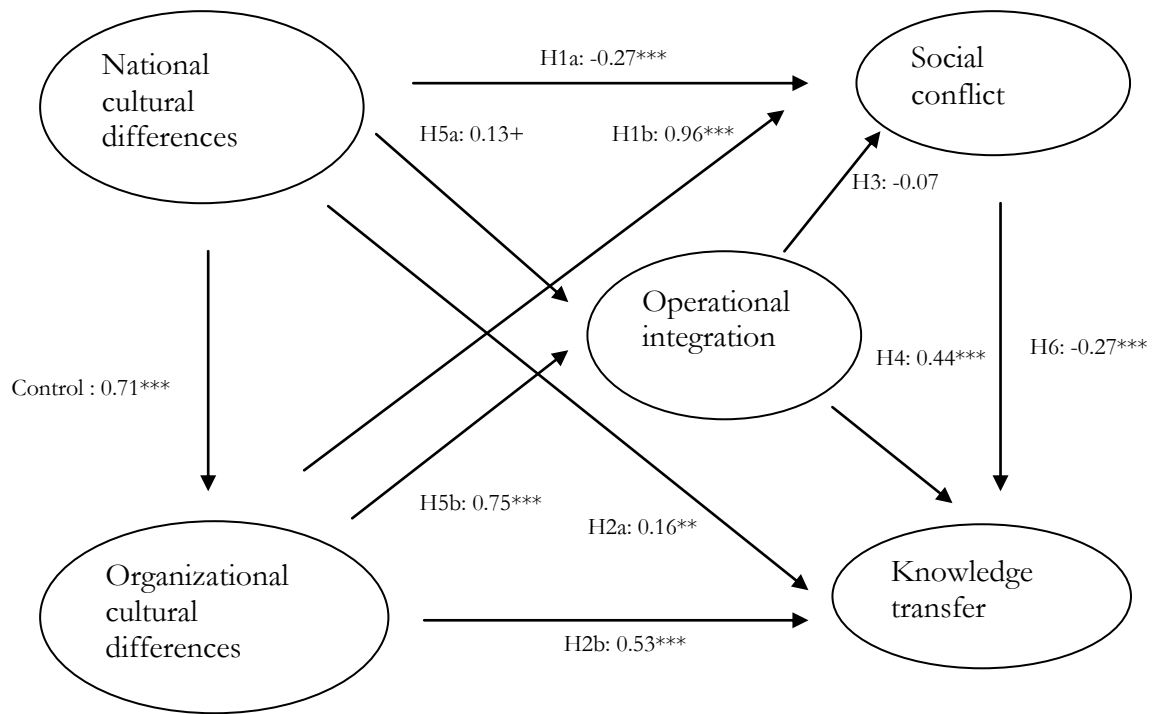


Figure 2 Illustration of results⁵

⁵ This is a simplified version of the actual model. It does not show error terms, or the indicator variables of the latent constructs or the control variables. We added an error term to each of the endogenous variables to account for the variance that was not explained by the observed exogenous variables. To enable model identification, the error coefficients were fixed to unity. Parameters are standardized maximum likelihood parameter estimates. Ovals illustrate latent variables.