Mergers and acquisitions performance paradox: the mediating role of integration approach

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Abstract: Based on theory and case studies, the merger literature suggests that the implementation of integration approaches is important for effective post-merger integration. This hypothesis is tested with a relatively large sample by focusing on the fit of the integration approach to the synergy potential of the merged companies and the cultural differences between them. Findings suggest that the fit of the integration approach is positively related to integration effectiveness and mediates its relationship with synergy potential and cultural differences.

Keywords: mergers and acquisitions; culture differences; synergy; fit of integration approach; performance.


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1 Introduction  

For the past three decades, the management literature has been trying to explain the enduring paradox of the high failure rate of mergers and acquisitions (M&A) versus the growing activity and volume of M&A. Recent meta-analyses that examined the most studied variables (King et al., 2004; Stahl and Voight, 2008) did not provide clear answers for this paradox or for the high failure rate of M&A. Researchers indicated that the results concerning the predictors of M&A success are inconsistent and confusing. A possible answer to this paradox is that existing research on M&A provides limited and insufficient understanding of this important phenomenon, especially concerning the post-merger integration process. In other words, at the pre-merger stage top executives may perceive the M&A as a good step for corporate growth, but poorly implemented during the post-merger process.  

Few scholars have focused on specific problems such as integration approaches. Their studies focused on theoretical issues based on literature review (e.g. Nahavandi and Malekzadeh, 1988; Weber and Tarba, 2011; Weber et al., 2011d) or on case studies (Haspeslagh and Jemison, 1991; Schweizer, 2006) rather than on empirical systematic studies based on relatively large samples. Although these studies identified various integration approaches with different typologies, they maintained that the fit between the recommended integration approach and the approach actually implemented is crucial for both integration effectiveness and overall M&A performance. These claims have never been empirically tested, however, with any of the recommended integration approaches.
Furthermore, most of these typologies were suggested about 20 years ago and did not incorporate findings from the last two decades about possible important factors in the post-merger integration process, such as cultural differences.

This paper seeks to fill some of these gaps. The goal of the present study is to explore systematically, based on a relatively large sample, the vital but neglected role of the integration approach in the implementation of M&A. To this end, a theoretical framework has been developed to (a) suggest revised framework for integration approaches that incorporates empirical findings from the last two decades and (b) use the fit between the recommended and the actually implemented integration approach to better explain integration effectiveness. The findings of this study can guide future research towards more consistent findings on M&A success and help shape practices for achieving success.

1.1 The synergy assumption

The finance and strategy literature has focused primarily on pre-merger factors to determine the success of M&A. The implicit assumption in these studies is that the activities and actions of the acquiring firm during the pre-merger stage are the sole determinants of value. Accordingly, studies either observe how managers of the acquiring firm search for alternatives or probe the content of their strategies, paying less attention to implementation. For example, strategic theories, especially the concept of strategic fit, suggest that relatedness between the buying and the target firms determines the synergy potential, and as such is the key determinant of value creation. But the empirical evidence derived from the studies of M&A, which exhibit relatedness is mixed at best. More important, synergy potential was rarely measured in these studies. In other words, the presence of synergy potential was assumed based on the indications of relatedness vs. unrelatedness; it was not measured directly.

The finance literature suggests further that on average M&A do not add value to the acquiring firm and that more likely they are severely detrimental to long-term shareholder value. The results of a recent meta-analytical study on the effects of finance and strategy variables on M&A performance by King et al. (2004, p.197) led the authors to conclude that “researchers simply may not be looking at the ‘right’ set of variables as predictors of post-acquisition performance”.

Thus, an overarching theme of the present paper is that research utilising traditional finance and strategy variables that focus on the pre-merger stage can predict only the potential of integration effectiveness, based on the assumption that synergy is present and that management knows how to harness it. In reality, the failure to find a consistent relationship between the indicators of synergy based on relatedness and the M&A success may stem from an overemphasis on the pre-merger stage at the expense of the negotiation process (Weber et al., 2011) and post-merger stage, including the integration approach used during the processes of integration. With a few exceptions, the strategic and finance literature has not considered the possibility that in the management of a merger, the problematic interaction between the buying and the target firms (due to cultural differences) or low coordination and cooperation between managers (as a result of the culture clash following the merger) may play a key role in the M&A success. Indeed, the management of the post-merger stage and the integration process are crucial in determining the extent to which the synergy potential is realised. To date, only a limited number of management studies have focused on identifying the factors that can
contribute to the post-merger integration success. It is likely, therefore, that strategic fit interacts with other systematic variables in the integration process to produce robust performance results.

1.2 Inconsistent effects of culture clash on M&A performance

To explain the variance in M&A performance, scholars have used ‘cultural fit’ concepts that focused on the detrimental relationship between pre-merger cultural differences (both corporate and national) and post-merger integration effectiveness (for recent reviews, see among others, Björkman et al., 2007; Stahl and Voight, 2008; Weber et al., 2009). But as with strategic fit, the empirical evidence of the effects of cultural compatibility on M&A performance is mixed and confusing. On one hand, organisational cultural differences have been negatively associated with various accounting measures and with stock market value following domestic M&A (e.g. Datta, 1991; Chatterjee et al., 1992). Studies also found this negative effect under conditions of both low and high integration levels, when autonomy was removed from the acquired managers (Weber, 1996; Very et al., 1997; Lubatkin et al., 1999).

On the other hand, some studies have recently argued that cultural differences do not always have a negative impact on M&A performance. Indeed, some have shown that cultural differences can also have a positive effect on post-acquisition performance (Weber et al., 1996; Reus and Lamont, 2009). For example, Weber (1996) found a positive moderating effect of autonomy removal on financial performance. He associated this finding with better coordination between the two merging firms, which in turn enabled better synergy realisation. But synergy potential was not a variable in this as well as in most studies.

Several possible explanations exist for the lack of consistency that permeates recent studies on the relationship between cultural differences and M&A performance. For example, Teerikangas and Very (2006) focused on the sources of complexity underlying these relationships. Others suggested that different measures of performance (Zollo and Meier, 2008), ignoring negotiation process (Weber et al., 2011a), or micro- or macro-levels of analysis only, and either pre- or post-merger variables are not enough to find consistent relationships (Weber, 1996; Weber et al., 1996). Despite these criticisms, however, the study of cultural differences altogether ought not to be abandoned. Rather, the implication is that more elaboration is needed in the cultural analysis of the various processes and mechanisms involved. For instance, scholars have examined how ‘attractive’ one organisation is compared with another and the types of integration approach adopted by acquirers (Nahavandi and Malekzadeh, 1988). Veiga et al. (2000) examined changes in cultural compatibility and found that the best performances were in cases where pre-merger cultural incompatibility turned into cultural compatibility after the merger. Larsson and Lubatkin (2001) found that successful acculturation is possible even in conditions of significant cultural differences, as long as the acquiring firm invests in formal and informal social control strategies.

1.3 Post-acquisition integration effects on M&A performance

All value creation in M&A takes place after the acquisition, and it hinges on the combined firm’s ability to effectively integrate both firms’ operations. The term integration is used rather loosely in the literature, and few studies have attempted to define it directly (Schweiger and Goulet, 2000). But it is generally agreed that merging
Mergers and acquisitions performance paradox

Firms transfer capabilities, cut costs and achieve synergy by integrating management decision-making as well as departments and functions, such as marketing, inventory and others. Effective integration may produce positive overall M&A performance (Weber, 1996; Larsson and Finkelstein, 1999; Zollo and Meier, 2008).

In practice, integration is an interactive and gradual process in which individuals from the two organisations must learn to work together and cooperate. “Creating an atmosphere that can support it [the integration] is the real challenge” (Haspeslagh and Jemison, 1991, p.107). To achieve effective post-merger integration, the acquiring top management typically intervenes in the decision-making process of the acquired management team and imposes standards, rules, and expectations on it. The intended integration may negatively affect the commitment of the acquired top management to the acquiring team and its cooperation with it (Weber and Schweiger, 1992; Weber et al., 1996). Furthermore, the intervention of the acquiring top management team in the decision-making of the acquired management results in a loss of autonomy that elicits tensions and negative attitudes towards the merger. The result raises questions about the efforts invested in exploiting the synergy potential. Such efforts can cause human problems, destroy the synergy and compromise the success of the integration process.

There is a clear trade-off between levels of integration and exploited synergy. High levels of integration may be needed to exploit high levels of synergy, but a high level of integration may cause intense culture clash and human resource problems that can destroy the value of the acquired firm and increase costs to an extent that offsets the benefits expected from the merger. Moreover, in case of very high synergy potential, it is possible that even under the conditions of high cultural differences, which may destroy some of the synergy, M&A performance still increases. Thus, high cultural differences may be associated with improved M&A performance when the level of synergy is very high. This example may explain the conflicting findings about the relationship between relatedness or cultural differences and merger performance, when other variables are not controlled. For example, some studies found that integration is positively associated with performance (Weber, 1996; Larsson and Finkelstein, 1999), whereas others found integration to be non-significant to M&A performance (Datta, 1991; Morosini et al., 1998), and others yet found that performance was negatively related to integration (Calori et al., 1994; Lubatkin et al., 1999). For example, Lubatkin et al. (1999) found that the greater the level of integration (autonomy removal through the intervention of the acquiring top management in the decision-making process of the acquired top management), the greater the turnover of the acquired top managers. The turnover of these executives is viewed as a serious loss of valuable resources, which reduces the value of the acquired firm. And studies found that the greater the rate of turnover of top executives, the lower the performance of the acquiring firm (Hambrick and Cannella, 1993). A recent meta-analysis of the existing body of research (Stahl and Voigt, 2008) suggested that the relationship between cultural differences and post-acquisition performance is complex and that unidentified moderator variables may be obscuring the effect of cultural differences on the performance of the acquiring firm.

In sum, individually taken, the variables of cultural differences and synergy potential are not sufficient to explain M&A performance. Post-merger integration is a complex process that appears to need a better conceptualisation than the simple linear relationship suggested by the studies mentioned above. The following sections suggest using a combination of these two factors together with the concept of configurational fit to explain integration effectiveness.
2 Post-acquisition integration approaches

The combined firm’s choice of integration approach is one of the most critical decisions affecting the merger success (e.g. Haspeslagh and Jemison, 1991; Nahavandi and Malekzadeh, 1988). Integration approaches differ mainly in the emphasis placed on two crucial factors: synergy potential and implementation efforts necessary to realise them. Cultural differences, however, were not included in the above typologies of integration approaches. But based on findings of the last two decades, we argue that these implementation efforts depend also on the scope of cultural differences between the two firms engaged in M&A as well as on the choice of the level of integration. Recent studies have highlighted the differences in management practices (Ellis et al., 2003; Ellis, 2004) and cultural features (den Hartog and Verburg, 2004) between integration approaches.

In light of the above literature reviews and of the importance of cultural differences to integration effectiveness, we propose to revisit the framework for integration approaches. Figure 1 presents the recommended integration approaches affected by synergy potential and cultural differences. The proposed framework uses the terminology of Haspeslagh and Jemison for integration approaches because (a) it describes clearly the differences between these approaches, (b) it has received some recent empirical support (Ellis et al., 2003; Ellis, 2004) and (c) it has been widely used (Child et al., 2000; Graebner, 2004; Schweizer, 2006; Weber et al., 2011c).

Figure 1 Proposed matrix for post-acquisition integration approaches (see online version for colours)

The straightforward synergy potential dimension in the matrix parallels the dimension in other frameworks such as relatedness (Nahavandi and Malekzadeh, 1988) and need for strategic interdependence (Haspeslagh and Jemison, 1991). But the suggested framework uses the ‘cultural differences’ variable as the determinant of the recommended integration approach instead of the ‘need of autonomy’ (Haspeslagh and Jemison, 1991) or cultural attractiveness and multiculturalism (Nahavandi and Malekzadeh, 1988). Several reasons based on the literature review have led to this approach. First, since Haspeslagh and Jemison (1991) suggested this framework, empirical findings have clearly indicated the critical importance of the effects of culture clash on integration effectiveness (e.g. Datta, 1991; Cartwright and Cooper, 1992, 1993; Chatterjee et al., 1992; Weber, 1996; Weber and Pliskin, 1996), on international M&A (e.g. Datta and Puia, 1995; Lubatkin et al., 1998; Morosini et al., 1998) and on both (e.g. Weber et al., 1996).
Second, the need for autonomy of the acquired managers has not been measured directly in previous studies, but other measures were used that suggest its importance to M&A performance. The empirical findings are not clear, however. For example, Larsson and Finkelstein (1999) hypothesised about a positive relationship between level of integration and employee resistance. This hypothesis was not supported. And although some studies show that autonomy removal is positively related to performance (e.g. Weber, 1996), other studies point in the opposite direction (Calori et al., 1994; Weber et al., 1996) or have found no relationship (Datta, 1991).

Third, the extent of cultural differences reflects to some degree the need for autonomy. According to Nahavandi and Malekzadeh (1988), when considering the acquired managers’ preferences, the question is: how much do the members of the acquired firm want to preserve their own culture and organisational practices? The answer may depend on the degree of differences. It is difficult to believe that when cultural differences are extensive, acquired members willingly relinquish their culture and most of their organisational practices and completely give up their autonomy. Indeed, culture clash and employee resistance arise from the need to retain autonomy vis-à-vis a different culture. Weber et al. (1996) suggested that in international M&A, where cultural differences are clear, senior managers may regard themselves, and be perceived by others, as champions of the national culture they represent, which may stand against the national culture of the other party in the merger. In such cases of clear cultural differences, the need for autonomy is unmistakable. Thus, in certain cases, the dimension of cultural differences can serve as a proxy for the need for autonomy dimension, but at the same time it is much richer and represents a wider spectrum of situations, even if the need for autonomy turns out not to be a problem at all. Finally, Haspeslagh and Jemison (1991) acknowledged the importance of cultural differences when choosing an integration approach (p.145).

The integration approaches are absorption, preservation and symbiosis. Absorption implies a high level of integration and the lowest level of autonomy for the acquired management. It is recommended for achieving a high level of synergy when the level of cultural differences is low. Preservation implies the lowest level of integration and the highest level of autonomy for the acquired management. It is recommended for low synergy potential and high cultural differences. Symbiosis, with high levels of both synergy and cultural differences, implies a sophisticated level of integration to be considered in challenging situations (Haspeslagh and Jemison, 1991).

2.1 Hypotheses

2.1.1 Appropriate integration approach

Matrices that proposed integration approaches (Haspeslagh and Jemison, 1991) and modes of acculturation (Nahavandi and Malekzadeh, 1988) implied that there is a relationship between the selection of the appropriate integration approach and the integration effectiveness. By contrast, the framework presented here is based on a different set of factors and considerations and treats integration choices as ideal types to be applied in specific situations. Thus, a given integration approach, based on a fit between the recommended integration approach and the actual choice of integration approach being implemented, consistent with the characteristics of a specific M&A (synergy potential and cultural differences), can lead to higher integration effectiveness. Because cultural differences may be of critical importance to performance, the framework presented here takes them into consideration in the decision-making process that leads to
the choice of the best integration approach. Thus, the proposed framework includes both
synergy potential and cultural differences as major determinants of the recommended
integration approach for high integration effectiveness. This point of view combines the
pre- and the post-merger stages. It suggests that both cultural differences and synergy
potential should be considered as part of the choice of integration approach and that a fit
between the recommended and actual integration approach can lead to an effective
integration process.

No integration approach fits all. Managers must determine the best integration
approach that fits their specific M&A and leads to effective post-merger integration. The
choice of the appropriate integration approach based on synergy potential and cultural
differences should lead to effective integration of functions, capability transfer, etc. In
other words, if the acquiring top management actually implements the appropriate
integration approach, a fit emerges between the ‘right’ integration approach (according
the framework presented here) and the approach being implemented. This leads to the
following hypothesis:

H1: A fit between the appropriate integration approach, based on synergy potential and
cultural differences, and the actual integration approach implemented leads to higher
integration effectiveness than when no such fit exists.

2.1.2 Synergy

The objective of the integration process is to seize the synergy potential through transfer
of capabilities and resource sharing, leading to cost savings and increased revenue.
During the integration process, each task that aims to capture synergy can generate its
own performance and together produce high integration effectiveness. But if there are no
true synergies, the merger can yield only negligible benefits and low integration
effectiveness. Therefore, the higher the level of synergy potential, the higher the integration
effectiveness will be.

The reason for the conflicting results of previous studies may lie in the broad terms in
which relatedness and synergy have been defined, often using similarity and
complementarity synergies interchangeably or ignoring complementarity altogether
(Makri et al., 2010). Synergy can be achieved through ‘economies of sameness’ (Larsson
and Finkelstein, 1999), such as the accumulation of similar operations and technologies,
and through ‘economies of fitness’ that arise from different products, markets and
knowledge that enhance one another and create synergistic complementarities. Whereas
synergetic similarities arise from cutting costs of overlapping activities, the combination
of complementary capabilities cannot be easily duplicated by other firms, and it provides
M&A with outstanding potential for performance (Björkman et al., 2007; Makri et al., 2010).
The distinction between the two types of synergy leads to the following hypotheses:

H2a: The higher the synergistic similarities, the higher the integration effectiveness is.

H2b: The higher the synergistic complementarities, the higher the integration
effectiveness is.

2.1.3 The fit of integration approach as mediator

Although the synergy potential determines the level of performance that can be achieved
during the integration process, the ‘process perspective’ on M&A success suggests that
the realisation of synergies depends largely on the ability of the acquirer to manage the
Mergers and acquisitions performance paradox

post-merger integration process (Jemison and Sitkin, 1986; Haspeslagh and Jemison, 1991) and choose the appropriate integration approach. Therefore, only the fit between the selected integration approach and the appropriate integration approach, taking into account the specific level of synergy potential and problems of implementation due to cultural differences, can minimise the problems created by culture clash and harness the potential synergy. In other words, the fit of integration approach mediates the relationship between synergy potential and cultural differences and makes possible the achievement of synergy benefits during the integration process. Given different types of synergy, we hypothesise that:

\( H3a: \) The fit of integration approach mediates the relationship between synergistic similarities and integration effectiveness.

\( H3b: \) The fit of integration approach mediates the relationship between synergistic complementarities and integration effectiveness.

\( H3c: \) The fit of integration approach mediates the relationship between cultural differences and integration effectiveness.

3 Methodology

3.1 Sample

The sample of firms was drawn from an exhaustive list of mergers that took place during 2004–2006 obtained from the archive of the Israel Antitrust Authority. A sample of M&A was selected based on the following criteria: the acquiring company gained a controlling interest in the acquired firm, the mergers were related (i.e. from the same industry) and the names and addresses of the top managers affiliated with the acquiring companies immediately before the merger were available. Data were collected during 2007–2008. This sample included M&A with different integration approaches.

We focused on a sample of symbiotic mergers because the symbiotic integration approach is the most challenging one to implement (Haspeslagh and Jemison, 1991). The M&A characteristics leading to the recommendation to implement a symbiotic approach for the integration process are high synergy potential and high cultural differences. Managers in symbiotic M&A find themselves torn between the competing needs of preserving the culture of the acquired company and encouraging cooperation between managers from both companies to harness the synergy (Haspeslagh and Jemison, 1991). The high synergistic potential requires intense efforts and sophisticated processes of interaction and coordination (Weber and Tarba, 2010) to avoid the human resource problems resulting from cultural differences and to achieve high commitment and cooperation from both management teams (Weber, 1996; Weber et al., 1996; Lubatkin et al., 1999; Weber et al., 2011b). Therefore, the need to select the appropriate approach to achieve high integration effectiveness is more important in symbiotic M&A than in other types of M&A which require preservation or absorption integration approaches. For example, in an absorption M&A, the high synergy potential combined with relatively low implementation challenges due to low cultural differences can produce an effective integration even if the implementation process is not perfect. Similarly, in a preservation M&A with low synergy potential, the challenge of realising the synergy is reduced because cooperation and interaction are less important, and the costs involved in these
efforts are lower. Symbiotic M&A are, therefore, best suited for studying the effect of the
fit of integration approach on overall integration effectiveness. Therefore, symbiotic
M&A were identified from the sample of Israeli M&A, yielding a sample of 52 mergers.

Response rate for the large sample was 24%. Potential non-respondent biases were
checked by comparing respondent and non-respondent firms with respect to the time that
had elapsed since the date of the merger. This variable may affect the emotions and
objectivity of the managers and therefore their perceptions (Chatterjee et al., 1992;
Lubatkin et al., 1999). The t-test of mean differences was not significant, showing no
evidence of a non-respondent bias.

3.2 Questionnaire and procedure

Ideally, cultural differences are investigated before the merger, and the results are
compared with the data collected after the merger. It is very difficult, however, to gain
access to such data in large samples during the negotiation period, and it is also
inefficient because many negotiations do not result in M&A. This problem is compounded
by another difficulty associated with the measure of corporate culture. Many elements of
culture are unclear to its members because people take them for granted (Schein, 1985).
Dramatic events, such as M&A and contact with other cultures, however, make
differences salient (Louis, 1983), especially in conflict situations (Sales and Mirvis,
1984). Greenwood et al. (1994) pointed out that it may take months or years for the
acquired managers to form stable impressions about the compatibility of the merging
organisations’ culture. Therefore, retrospective data can be useful in studying the cultural
differences and attitudes of top managers. It has been observed that attitudinal and
behavioural data do not become less accurate over time, even after periods of ten years
(Gutek, 1978; Pettigrew, 1979; Finkelstein, 1992). Studies of this type, however, should
follow the recommendations of Huber and Power (1985) regarding the access to top
management and the use of retrospective data.

A second methodological difficulty has to do with how data on corporate cultural
differences and their outcomes are collected. Recently, several studies have used
questionnaires to measure perceived organisational culture (e.g. Hofstede et al., 1990;
Cartwright and Cooper, 1993) and perceived cultural differences in M&A (Chatterjee
et al., 1992; Weber et al., 1996; Lubatkin et al., 1999), and found them to have high
reliability and validity. Self-report questionnaires of perceived cultural differences that
can be used to reach large sample also have the additional advantage that people’s
behaviours and attitudes are determined by their perceptions rather than the ‘actual’ or
‘objective’ situation (Rench, 1990). Finally, perceptual outcomes, such as the effectiveness
of the integration process, are useful because they provide a direct connection to cultural
values (Earley and Singh, 1995).

All respondents were guaranteed anonymity (the only identification on the
questionnaires was the name of the acquiring company). The completed surveys were
returned directly to the authors. Because the unit of analysis was not the individual
manager but the merger management, responses were summed and averaged for each
variable to arrive at merger management means (see Enz, 1988). This procedure
permitted control for team size variations across firms. Similarly, the aggregation of
respondent perceptions to arrive at group scores resulted in findings that were less
distorted by individual biases (Schneider, 1988). Such distortion was further reduced by
the fact that top managers were asked to evaluate not their own perception of cultural
differences but that of the merger management. Moreover, multiple-respondent evaluations of each merger management made it possible to check reliability through a later calculation of consensus. Responses were aggregated only if a high level of consensus was demonstrated between the perceptions of top managers in each merger. Finally, to avoid problems of common method variance and create pseudo-relationships between variables by methodological and process artefacts, provisions were made against consistency and priming effects following the recommendation of Podsakoff et al. (2003). As explained in the following section, the most important variable, the fit of integration approach, was evaluated by a procedure that involves respondents only partially, and therefore pseudo-relationships are minimised.

3.3 Measures

3.3.1 Cultural differences

The instrument used by Chatterjee et al. (1992), Lubatkin et al. (1999), Weber et al. (1996) and Weber (1996) was employed to measure corporate culture differentials. Based on the assumption that relative phenomena are best suited for comparison, particularly in contrast situations (Louis, 1983), respondents were asked to indicate the degree of pre-merger similarity between the acquired and the acquiring top management on each item. Items were constructed to elicit responses about cultural differences on a five-point scale, ranging from ‘very similar’ to ‘very different’. Following a test for inter-rater reliability, described in the following sections, a cultural difference index was computed across seven dimensions, each consisting of three to five items, with a total of 29 items. The seven dimensions (and the number of items used to measure each) were innovation and action orientation (five items); risk-taking (five items); lateral integration (four items); top management contact (three items); autonomy and decision-making (five items); performance orientation (three items); and reward orientation (four items). Following the preliminary analysis described in the following sections, we collapsed the data into a single cultural difference index (Cronbach’s alpha = 0.97) by summing the scores for all 29 items and taking their average.

3.3.2 Synergy from similarities

Based on the concept of ‘economy of sameness’ (the synergy that can be achieved from accumulating similar operations) and its measurement (Larsson and Finkelstein, 1999), synergy from similarities was measured by 11 items about the similarity of various operational functions, such as marketing operations (geographic markets, customer groups and industries) and production operations (types of input, process and product).

3.3.3 Synergy from complementarities

Based on the concept of ‘economy of fitness’ (synergies that can be achieved by combining different but complementary operations) (Larsson and Finkelstein, 1999), synergy from complementarities was measured by 11 items about the complementarity of various operational functions, such as marketing operations (possible transfer of marketing capabilities to new markets and products) and complementarity of production operations (possible transfer of production capabilities).
3.3.4 Fit of integration approach

To determine whether the fit between the appropriate integration approach and the one actually implemented by management was present in the merger, both the recommended and the actual integration approaches were evaluated separately and compared. To evaluate the recommended integration approach, the values of corporate culture differences and synergy potential were classified into two categories, that is, two levels of dichotomy were determined for every variable: low and high. The cross-tabulation of the categories between the two variables created four groups, which made it possible to identify the integration approach that was recommended after completion of each individual M&A. Symbiotic M&A, with high cultural differences and high synergy potential, were selected for reasons explained earlier.

To identify the integration approach actually implemented by the M&A, managers were asked to choose the description of integration process from a list of descriptions of integration approaches used by Ellis (2004). The characteristics of integration approaches consistently described by Haspeslagh and Jemison (1991), Nahavandi and Malekzadeh (1988) and Marks and Mirvis (1998) served as the basis for developing the coding scheme in the list of integration approaches. They included descriptions of the primary motives for the current acquisition; the extent to which the combined firm would follow the operating procedures of the acquiring firm or seek to identify the best practices of both firms; whether any plans existed for restructuring and downsizing initiatives; and whether words such as assimilate, absorb, blend or retain were used in describing the process of integrating the operations of the two firms. Statistical analysis comparing these integration approaches significantly confirmed the presence of differences between them (Ellis, 2004). Note that these descriptions of the integration process do not use any evaluation of synergy potential or cultural differences to prevent creating any association between the two evaluations of the integration approach that may result from methodological and process artefacts. Evaluation of the fit produced 30 symbiotic mergers with a fit out of the 52 symbiotic mergers.

3.3.5 Integration effectiveness

The instrument used by Weber (1996) was employed to measure integration effectiveness. The effectiveness of the integration process measure was based on 12 questionnaire items that addressed effectiveness along with organisational dimensions, such as operations, production, marketing, research and development and personnel. The use of key informants to assess the effectiveness is common in organisational research, and the self-report measures provide respondents with an opportunity to incorporate implicitly economic and non-economic considerations (e.g. Dess, 1987). A five-point scale, ranging from ‘very ineffective’ (1) to ‘very effective’ (5), was used.

4 Results

Table 1 presents the means, standard deviations, reliabilities and inter-correlations of the seven dimensions of cultural difference measures based on the larger sample. Statistical analyses of the original sample showed that all the inter-correlations among the seven cultural difference dimensions are high (at least 0.33), significant ($p < 0.01$) and
internally consistent (Cronbach’s alpha ranging from a low of 0.70 to a high of 0.82). In keeping with the theory underlying the construction of the culture measures, the dimensions demonstrated discriminant validity (Cronbach’s alpha for each dimension was higher than the dimension’s correlations with all or most of the other six dimensions).

Table 1  Mean, standard deviation and Pearson correlations between dimensions of cultural differences and reliabilities

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<th>Dimension</th>
<th>Mean</th>
<th>S.D.</th>
<th>IAO</th>
<th>RA</th>
<th>LI</th>
<th>TMC</th>
<th>ADM</th>
<th>PO</th>
<th>RO</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAO</td>
<td>3.07</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RA</td>
<td>3.06</td>
<td>0.81</td>
<td>0.80</td>
<td>(0.81)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LI</td>
<td>2.86</td>
<td>0.88</td>
<td>0.56</td>
<td>0.53</td>
<td>(0.79)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TMC</td>
<td>3.04</td>
<td>0.95</td>
<td>0.51</td>
<td>0.57</td>
<td>0.65</td>
<td>(0.71)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADM</td>
<td>3.00</td>
<td>0.75</td>
<td>0.68</td>
<td>0.71</td>
<td>0.67</td>
<td>0.70</td>
<td>(0.73)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO</td>
<td>2.77</td>
<td>0.92</td>
<td>0.52</td>
<td>0.47</td>
<td>0.40</td>
<td>0.33</td>
<td>0.39</td>
<td>(0.73)</td>
<td></td>
</tr>
<tr>
<td>RO</td>
<td>2.62</td>
<td>0.80</td>
<td>0.56</td>
<td>0.56</td>
<td>0.49</td>
<td>0.42</td>
<td>0.49</td>
<td>0.69</td>
<td>(0.75)</td>
</tr>
</tbody>
</table>

The data also provide strong evidence of convergent validity, indicating, as expected, that the seven dimensions are part of the same general construct (Buchanan, 1974; Rosenthal and Rosnow, 1984). Although each dimension measures a unique aspect of the phenomenon, all the dimensions refer to the same content domain, making it possible to combine them all into a single index, a procedure for which prior research provides theoretical and statistical support (e.g. Buchanan, 1974; Porter et al., 1974; Chatterjee et al., 1992). The combined internal consistency of the single cultural difference index was high (Cronbach’s alpha = 0.94).

Table 2 presents the means, standard deviation, reliabilities and inter-correlations of the two synergy measures. Each construct demonstrates a high level of internal consistency (Cronbach’s alpha of 0.86 for synergistic similarities and 0.79 for synergistic complementarities). The inter-correlation between the two dimensions is low (r = 0.09) and non-significant, and therefore, as expected, these two constructs are different.

Table 2  Mean, standard deviation and Pearson correlations between dimensions of synergy potential and reliabilities

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>Synergy potential: similarities</th>
<th>Synergy potential: complementarities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synergy potential:</td>
<td>2.93</td>
<td>0.74</td>
<td>(0.86)</td>
<td></td>
</tr>
<tr>
<td>similarities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Synergy potential:</td>
<td>3.31</td>
<td>0.66</td>
<td>0.086</td>
<td>(0.79)</td>
</tr>
<tr>
<td>complementarities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows the means, standard deviations and inter-correlations of the key constructs of the study. The results confirm that cultural differences are significantly and negatively associated with integration effectiveness and lend partial support for the hypotheses of the study. Consistent with hypothesis H1, the fit is significantly and positively associated with integration effectiveness (r = 0.34; p < 0.05). Moreover, consistent with hypothesis H2a, synergistic similarities are positively associated with integration effectiveness (r = 0.34; p < 0.05). By contrast, no significant association was found between overall M&A performance and fit or between integration effectiveness and synergistic complementarities.
<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>Synergy potential: similarities</th>
<th>Synergy potential: complementarities</th>
<th>Organisational culture differences</th>
<th>Effectiveness of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synergy potential: similarities</td>
<td>2.93</td>
<td>0.74</td>
<td>0.028</td>
<td>(0.86)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Synergy potential: complementarities</td>
<td>3.31</td>
<td>0.66</td>
<td>0.141</td>
<td>0.086</td>
<td>(0.79)</td>
<td>–</td>
</tr>
<tr>
<td>Organisational Culture differences</td>
<td>3.18</td>
<td>0.47</td>
<td>0.055</td>
<td>–0.358***</td>
<td>0.103</td>
<td>(0.94)</td>
</tr>
<tr>
<td>Effectiveness of integration</td>
<td>3.45</td>
<td>0.71</td>
<td>0.344**</td>
<td>0.335**</td>
<td>0.222</td>
<td>–0.328**</td>
</tr>
</tbody>
</table>

Notes: **p < 0.05; ***p < 0.01.
Table 4 presents the regression results for synergy potential. The results confirm that synergistic similarities explain a significant variance in the integration effectiveness of the symbiotic approach in a manner consistent with theory and as predicted by hypothesis H2a. Again, hypothesis H2b, concerning the effects of synergistic complementarities, is not supported.

Table 4  Regression results of synergy components on effectiveness of integration

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent Variable</th>
<th>Effectiveness of integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Std. Err.</td>
</tr>
<tr>
<td>Intercept</td>
<td>1.869***</td>
<td>0.585</td>
</tr>
<tr>
<td>Synergy potential: similarities</td>
<td>0.319**</td>
<td>0.128</td>
</tr>
<tr>
<td>Synergy potential: complementarities</td>
<td>0.194</td>
<td>0.143</td>
</tr>
</tbody>
</table>

Model (N = 51)

F-statistic 4.229**

R² .150

Notes:  **p < 0.05; ***p < 0.01.

Most interesting are the results obtained for the mediation hypotheses. The present study is based on the implicit assumption that the effects of synergy and cultural differences on integration effectiveness are completely mediated by the fit of integration approach. To illustrate the principle involved, the complete mediation model has the form $X \rightarrow M \rightarrow Y$, where $X$ (here, synergy potential and cultural differences) is the antecedent, $M$ (here, fit of integration approach) is the mediator and $Y$ (here, integration effectiveness) is the consequence. The antecedent $X$ is expected to affect the consequence $Y$ only indirectly, through the mediator $M$. The indirect transmission of influence from $X$ to $Y$ via $M$ indicates that all of the effects of $X$ on $Y$ are transmitted through $M$. Therefore, the typical mediation model is based on the premises that (a) functions $M = f(X)$ and $Y = f(M)$ represent linear, additive and recursive (unidirectional) functions and (b) $M$ transmits all the influence of antecedent $X$ to consequence $Y$, implying that $X$ and $Y$ are indirectly related and that the relation between $X$ and $Y$ vanishes if $M$ is held constant (cf. Cook and Campbell, 1979; James et al., 1982; James and Brett, 1984). If the predictions of the complete mediation model are confirmed empirically, one may infer that the model has been corroborated and is useful in explaining how $X$ is related to $Y$ through the intervening mediator $M$ (James and Brett, 1984).

To test the theoretical model for complete mediation, we used the procedure described and illustrated by James and Brett (1984). This procedure is based on hierarchical regression analysis that checks whether the addition of the antecedent $X$ (here, synergy and organisational culture) has significantly contributed to the explanatory power of the equation, as indicated by the $R$-square when $M$ is held constant. The first step is to test whether cultural difference and synergy are related to integration effectiveness. Correlations and regression results indicated that cultural differences and synergistic similarities are related to integration effectiveness, whereas synergistic complementarities are not.
Therefore, to test whether the relationships of cultural differences and similarities were completely mediated by the fit of integration approach, these variables were added to the regression equation with the fit held constant. A non-significant increment in R-square due to the inclusion of the two antecedent variables would confirm the prediction that the fit of integration approach completely mediates the influence of cultural differences and synergistic similarities.

Table 5 presents the results of the regression analysis. The results show that the inclusion of synergy and organisational culture is not significant after the fit of integration approach was held constant in the equation. The results confirm hypotheses H3a and H3c that the fit of integration approach completely mediates the relationship between synergistic similarities and organisational culture on one hand and integration effectiveness on the other.

Table 5  Regression results of the fit of integration approach, synergy similarities and organisational culture on effectiveness of integration

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Dependent Variable Effectiveness of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta  Std. Err.</td>
</tr>
<tr>
<td>Intercept</td>
<td>3.751*** 0.844</td>
</tr>
<tr>
<td>Fit of integration approach</td>
<td>0.352*** 0.179</td>
</tr>
<tr>
<td>Synergy potential: similarities</td>
<td>0.230 0.126</td>
</tr>
<tr>
<td>Cultural differences</td>
<td>−0.265 0.199</td>
</tr>
</tbody>
</table>

Model (N = 51)

F-statistic 6.263***

R² 0.286

Note: ***p < 0.01.

5 Discussion and conclusions

The findings of the present study provide the first systematic evidence linking integration approach to integration effectiveness in M&A. Specifically, when management selects a symbiotic approach for the integration process, which fits the specific M&A situation (high level of synergy potential combined with high level of cultural differences), the integration is highly effective. If there is no fit between the selected and the appropriate integration approach, the integration process is not effective. The findings also highlight the importance of the integration approach as a mediator of the relationships between both synergy potential and organisational culture on one hand, and integration effectiveness on the other. Put differently, the positive effect of synergy potential and negative effect of cultural differences are completely transmitted through the appropriate integration approach to create high integration effectiveness. These findings suggest a direction in the quest for solving the long overdue paradox of M&A success. Consistent positive association between the synergy potential and M&A success can be found when the management of the acquiring company selects the appropriate integration approach. Finally, the findings are of practical importance because they show that managers who
choose the appropriate integration approach can seize the synergy potential and at the same time mitigate the negative effect of cultural differences. The implication is clear: the management of the acquiring firm must pay at least as much attention to the issues of integration approach to be implemented after the pre-merger search process, as they do to the issues of strategic and organisational fit.

Measuring M&A success based on integration effectiveness is an attempt to bring the dependent variable of interest closer to the phenomenon under investigation. Traditional accounting and financial measures of M&A performance are problematic especially when examining internal process of integration. Similarly, assessing the overall M&A potential based on similarities and complementarities is more direct than relying on standard industrial classification (SIC) codes or other classification schemes that cannot differentiate between the various sources of value creation. The positive significant relationship between synergistic similarities and integration effectiveness reported here provides some support for this perspective.

The findings concerning the synergy effects on integration effectiveness are also of interest in light of recent studies that focus on synergistic complementarities rather than synergistic similarities. Although complementarities showed positive effects (Kim and Finkelstein, 2009; Makri et al., 2010) and other studies found that synergistic benefits are more likely to produce abnormal returns when based on complementarities rather than on similarities (Harrison et al., 2001), the present study shows that similarities are essential for integration effectiveness, at least in M&A in which the symbiotic integration approach is the most appropriate one.

Selection of the integration approach is often cited as an essential element in M&A success (e.g. Nahavandi and Malekzadeh, 1988; Haspeslagh and Jemison, 1991; Graebner, 2004; Schweizer, 2006), but no study has examined statistically its importance in a relatively large-scale sample of M&A and in conjunction with cultural differences. The present study clearly shows that despite the negative effect of high cultural differences on M&A performance (Chatterjee et al., 1992; Weber, 1996) and of other detrimental effects during the post-merger integration process, such as top executive turnover (Lubatkin et al., 1999), it is possible to realise synergy potential if the management selects the appropriate integration approach that fits the characteristics of the merger. This finding is consistent with those of many previous studies (Weber et al., 1996; Larsson and Finkelstein, 1999; Schweizer, 2006; Weber and Tarba, 2010; Weber and Drori, 2011) and suggests that high synergy potential is not sufficient for M&A success; certain practices and structural changes must be undertaken to realise these synergies.

There are ample opportunities for further research following the findings and the theoretical framework presented here. For example, the present study warrants replication using an interdisciplinary approach, other forms of measurement (anthropological and other non-survey methods), expanded samples, sample containing other integration approaches (such as absorption) and unrelated as well as related mergers. Unrelated mergers may use a preservation mode of integration, and absorption mergers have different operational synergies and can be expected to show different synergistic similarities and complementarities. These types of M&A can be expected to show different types of contact between the combining management teams which may attenuate or accentuate the findings of the present study. Replication studies should also try to measure M&A performance with other constructs (Zollo and Meier, 2008) and management perceptions, over different time frames, to establish stronger causal links between the fit of integration
approach and overall M&A performance. Although access to such data may be difficult, any attempt at triangulation would be useful in supporting both the internal and the external validities of the present study.

Other research efforts could be directed towards understanding the fit of integration approach, degree of fit, its practices and its effect on other factors in the post-merger integration process, for example, how the degree of fit affects factors (observed in previous studies) such as the turnover of top executives (Lubatkin et al., 1999), intergroup conflict (Weber et al., 1996), drop in job commitment (Weber, 1996), identification with the merger (Rouzies, 2011) and the influence of leadership (Vasilaki, 2011).

6 Limitation of the study

It is possible to argue that the present findings are a statistical artefact because of the reliance of the study on the perceptions of managers. It is essential, however, that some variables be measured based on the response of the top managers who are most knowledgeable about the merger process. Therefore, we took precautionary measures in constructing the questionnaire to avoid consistency and priming effects and limit situations of common method variance (Podsakoff et al., 2003). Evaluation of the most important variable in the study, the fit of integration approach, was carried out by a process that relied only partially on direct involvement of the respondents to minimise pseudo-relationships between variables due to methodological and process artefacts. Furthermore, the results of validity and reliability tests are grounds for sufficient confidence in the measures employed in the present study. Finally, to reduce the personal involvement of respondents, the questions addressed the perceptions of the top management team and of the merger team in general rather than respondents’ own perceptions. The perceptions of individuals with moderate levels of emotional involvement are less likely to be distorted (Huber and Power, 1985), and the social desirability and consistency effects should be lower.

References


Mergers and acquisitions performance paradox


