

ORGANIZATIONAL FIT AND ACQUISITION PERFORMANCE: EFFECTS OF POST-ACQUISITION INTEGRATION

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Based on 173 acquisitions in the U.S. manufacturing industry, this study examines the impact of organizational differences between acquiring and acquired firms on post-acquisition performance. The findings indicate that differences in top management styles have a negative impact on performance in acquisitions characterized by both high and low levels of post-acquisition integration. However, no such relationship was observed between differences in the reward and evaluation systems and post-acquisition performance in either the high or low integration subgroups. Implications of the findings, along with directions for future research, have been discussed in the concluding section of this paper.

Mergers and acquisitions have been a fact of organizational life in the U.S., with corporations investing billions of dollars each year in such ventures. In 1989 alone more than 3400 such transactions were completed, involving a total value in excess of \$230 billion (*Mergers and Acquisitions*, 1990). Many senior executives also believe that the pace of merger and acquisition activity is unlikely to slow down considerably in the 1990s despite proposed anti-merger bills in Congress (*Mergers and Acquisitions*, 1987). The continuing popularity of mergers and acquisitions is probably a reflection of the widespread belief among managers that acquisitions provide a quicker and seemingly easier route to achieving growth and diversification objectives. Paradoxically, studies by Porter (1987) and Young (1981) suggest that acquisitions have a high failure rate—nearly half of all acquisitions are rated as being unsatisfactory by managers of acquiring firms. Additional support is available in a study by Ravenscraft and Scherer (1989). They found that the profitability of target firms, on an average, actually declines after an acquisition, suggesting that implementation difficulties prob-

ably play a critical role in determining the eventual performance of an acquisition.

Given the strategic and financial implications of acquisitions, it is not surprising that the performance of acquisitions and the variation therein has figured prominently in business research. Prior research in strategic management (e.g. Chatterjee, 1986; Lubatkin, 1987; Salter and Weinhold, 1979; Seth, 1990; Shelton, 1988; Singh and Montgomery, 1987) has generally focused on the role of 'strategic fit' and synergistic benefits as determinants of acquisition performance. On the other hand, issues of 'organizational fit' have received considerably less attention—the existing literature is limited, fragmented and anecdotal (Buono and Bowditch, 1989; Davis, 1968; Leighton and Tod, 1969; Marks, 1982; Sales and Mirvis, 1984).

'Organizational fit', which influences the ease with which two organizations can be assimilated after an acquisition, can be assessed along a number of dimensions. However, the two areas often mentioned as being particularly important from the perspective of post-acquisition integration are differences in 'management styles'

(Callahan, 1986; Davis, 1968; Diven, 1984; Seed, 1974), and, in 'organizational systems', particularly the 'reward and evaluation system' (Diven, 1984; Ferracone, 1987; Hayes, 1979; Magnet, 1984). This paper seeks to examine the relationship between such differences and post-acquisition performance, and also to identify whether the relationship in each case depends on the extent of post-acquisition integration.

The paper is structured as follows: first, the literature on acquisition performance and the importance of organizational fit in terms of management styles and reward and evaluation systems is discussed. Also presented in the following section are the hypotheses tested in this study. Next, the research method used is described, including the selection of the sample, the operationalization of the variables, and the data collection procedure. Third, the results of the statistical analysis are presented and, following that, in the concluding section, the findings and their implications have been discussed.

REVIEW OF RELATED LITERATURE AND RESEARCH HYPOTHESES

The following paragraphs provide a brief overview of the literature on acquisition performance, the importance and influence of organizational differences (in terms of management styles and reward and evaluation systems), and the role of post-acquisition integration in influencing the relationship between organizational fit and performance.

Acquisition performance

The topic of acquisition performance has been at the forefront of academic research in the areas of financial economics, industrial organization, and strategic management. A recent meta-analytic review (Datta, Narayanan, and Pinches, 1990) identified over 40 studies on acquisition performance using the event-study methodology, with most studies originating in the area of financial economics. Most finance studies have examined performance from the perspective of gains accruing to bidding and target firm shareholders as a result of acquisition announcements (see Jarrell, Brickley, and Netter, 1988; Jensen and Ruback, 1983 for excellent narrative

reviews of the literature). The contribution of this body of research has undoubtedly been significant; however, the studies have provided only limited insights into factors that influence acquisition performance, or have explained why nearly half of all acquisitions fail to fulfill prior expectations. Generally speaking, studies here have focused on the relationship between issues related to the market for corporate control, especially its competitiveness (e.g. mode of payment, type of transaction, and number of bidders) and shareholder gains. Issues of strategic organizational fit do not feature in these studies.

Recent studies in strategic management have, however, examined the performance implications of 'strategic fit' or relatedness. Basing their arguments on the diversification literature and also on the literature in industrial organization, researchers such as Salter and Weinhold (1979) and Lubatkin (1983) have argued that related acquisitions should exhibit superior performance. Compared to unrelated acquisitions, related acquisitions provide greater synergistic benefits arising out of economies of scale and scope. In addition, possibilities of transferring core skills across involved firms are also associated with such acquisitions. Accordingly, empirical studies by Chatterjee (1986), Lubatkin (1987), Seth (1990), Shelton (1988), and Singh and Montgomery (1987) have sought to test the hypothesis that 'strategic fit' is positively related to value creation in acquisitions. Their findings, however, have not always been consistent with expectations. Lubatkin (1987), for example, observed that, contrary to what he had hypothesized, horizontal acquisitions did not outperform vertical or conglomerate acquisitions. Similarly, Chatterjee's (1986) study indicates that gains to target firm shareholders in unrelated acquisitions were significantly higher than those in related, non-horizontal acquisitions. Also, in a more recent study, Seth (1990) found that there were no significant differences in the overall value creation (combined for the bidding and target firm) between related and unrelated acquisitions. On the other hand, Singh and Montgomery's (1987) research provides some support for the relatedness hypothesis. They found that while gains to the acquiring firm shareholders in both related and unrelated acquisitions were not significantly different from zero, those to the target firm shareholders were higher in related

acquisitions. Additional support has been provided by Shelton (1988), whose study findings suggest that acquisitions which permit bidders access to new but related markets create the most value for shareholders.

The considerable diversity in the findings of the above studies provides strong support to Jemison and Sitkin's (1986) contention that strategic fit, while important, is not a sufficient condition for superior acquisition performance. In other words, while relatedness indicates that potential synergistic benefits may be present, it will result in superior acquisition performance only if synergies can eventually be realized through effective post-acquisition integration. As discussed later, that might not be the case if organizational impediments thwart effective implementation.

Post-acquisition integration

The need for post-acquisition integration of operations in an acquisition is primarily bounded by its objectives. An acquisition might form a part of a strategy of related diversification and, therefore, be expected to provide synergistic benefits. Such benefits could be in the form of operating efficiencies and economies of scale requiring high levels of integration as might be feasible in related acquisitions (Porter, 1985; Salter and Weinhold, 1979). Alternatively, an acquisition could be of an unrelated business, motivated by a desire to improve one's price-earnings ratio or sales growth, and involve little or no integration or sharing of resources (Shrivastava, 1986).

The primary objective in post-acquisition integration of operations is to make more effective use of existing capabilities. Merging firms can reduce unit costs in production, inventory holding, marketing, advertising, and distribution integrating similar departments and functions (Howell, 1970; Rappaport, 1987). However, while, in theory, integration should result in benefits, in reality the picture can be very different. Impediments associated with the integration of operations can result in the acquiring firm being unable to manage the integration of the target firm effectively (Haspeslagh and Jemison, 1987). This is especially true when organizational incompatibilities exist in areas such as management styles, reward and evaluation systems, organi-

zational structures, or organizational cultures: incompatibilities which may negate the potential benefits associated with an acquisition (Lubatkin, 1983; Marks, 1982). In the following paragraphs we discuss the importance of organizational fit as a determinant of post-acquisition performance, and also present the hypotheses examined in this study.

Organizational fit

Differences in management styles

An important element of 'organizational fit' in acquisitions is the extent of compatibility in the styles of the acquiring and acquired firm management. Management style has been described as an element of the managerial or the subjective culture of an organization (Bhagat and McQuaid, 1982; Sathe, 1985). It has been conceptualized in the organizations literature (e.g. Covin and Slevin, 1988; Khandwalla, 1977; Miller, 1987) as comprising a number of factors, including the management group's attitude towards risk, their decision-making approach, and preferred control and communication patterns.

Management styles are unique to organizations and may differ considerably across firms—for example, management groups may have very different risk-taking propensities. It is, therefore, not unusual to find that policies and procedures which seem to be reckless and extremely 'risky' to one management group appear to another group to be justifiable approaches (Davis, 1968; Freedman, 1985). Similarly, one management group's tolerance for change may be much greater than another. Top management groups might also differ in their approach to decision-making. As pointed out by Mintzberg (1973), while some management teams rely almost exclusively on common sense, gut feelings, and 'rules of thumb', others emphasize formalized strategic planning systems, market research, and various management science techniques. In addition, differences can also exist in management groups' beliefs on the desired level of 'flexibility' (Burns and Stalker, 1961). For example, one group may believe in loose, informal controls and open channels of communication, while another might stress greater operating control, highly structured channels of communication, and adherence to well-defined job descriptions. Similarly, there

might be significant differences in terms of another critical aspect of management style, i.e. 'participation', or the extent to which they encourage subordinate 'participation' in decision-making (Vroom and Yetton, 1973).

The influence of management styles on organizational performance has been examined in recent strategic management literature (Covin and Slevin, 1988; Kerr, 1982; Leontiades, 1982; Miller, 1987). An acquisition has the effect of bringing together the management groups of two organizations, with styles which might be similar, or alternatively, very different. Significant differences can contribute to, what Bueno, Bowditch, and Lewis (1985) call, 'cultural ambiguity', a situation characterized by uncertainties concerning whose style or culture will dominate. Generally, the acquiring firm management end up imposing their own style on the management at the acquired firm and, as Hirsch and Andrews (1983) note, this can result in a loss of identity among acquired firm management. This outcome is one of increased anxiety, distrust, and conflict, culminating in a 'merger standstill,' with declining productivity and poor post-acquisition performance (Ivancevich, Schweiger, and Power, 1987).

In summary, one can argue that while compatibility in management styles facilitates post-acquisition assimilation, major differences in management styles and philosophies can prove to be serious impediments to the achievement of acquisition success (Davis, 1968). As hypothesized by Bueno and Bowditch (1989: 134), differences in management styles may be a major reason why mergers and acquisitions often fail to achieve the level of performance predicted by precombination feasibility studies. Additional support is available in the form of case studies (Callahan, 1986; Lipton, 1982; Rappaport, 1982), which suggest that differences in management thinking and values are important contributors to post-acquisition problems. Thus:

Hypothesis 1: There will be a negative relationship between differences in the management styles of the acquiring and acquired firms and post-acquisition performance.

The extent to which differences in management styles impact acquisition performance is likely to vary depending on the level of interaction required among the two management groups in

the post-acquisition management of the combined entity. Consequently, the potential for conflict due to differences in styles is likely to be the highest in acquisitions followed by considerable operational integration (Marks, 1982), given that such acquisitions invariably involve much higher levels of managerial interaction. Also, the cooperation required to manage the integration process might be very difficult to obtain if major differences in management styles exist. Not only are conflicts likely to be more and, therefore, to be less likely to be resolved, it also becomes more difficult to coordinate and control the integration of post-acquisition operations. As argued by Davis (1968: 93), 'the likelihood of conflict because of differences in managerial business styles becomes greater in proportion to the extent that the operations of the two companies are expected to reinforce one another.'

Since integration of operations makes the coexistence of two different styles virtually infeasible, it inevitably raises the issue of whose style will dominate (generally it is the style of the acquiring firm that prevails). Ensuing conflicts, in turn, tend to reduce the probability that the two management groups will effectively work together towards achieving the goals of the acquisition. On the other hand, as argued by Hayes (1979), organizations with very different management styles can work effectively together after an acquisition if the interaction is limited, as in situations of low post-acquisition integration. The above arguments lead to the following hypotheses:

Hypothesis 2: In acquisitions characterized by high post-acquisition integration, there will be a negative relationship between differences in management styles and post-acquisition performance.

Hypothesis 3: In acquisitions characterized by low post-acquisition integration, differences in management styles will not be related to post-acquisition performance.

Differences in reward and evaluation systems

The reward and evaluation system is widely regarded as one of the most important components of the organizational form (Galbraith, 1977; Kerr, 1982; Murthy and Salter, 1973; Napier and Smith, 1987). Such systems (which

define the terms of exchange between individuals and the organization) do vary significantly across organizations, based on factors such as market or industry characteristics and the strategy that the firm chooses to adopt (Balkin and Gomez-Mejia, 1990; Govindarajan and Fisher, 1990; Kerr, 1985; Lorsch and Allen, 1973; Pitts, 1974; Salter, 1973). For example, Lorsch and Allen (1973) found significant differences in the criteria used to evaluate managerial performance across samples of vertically integrated and conglomerate organizations. Diversified conglomerates in their study placed more emphasis on the 'end-result' criteria in rewarding managers while integrated firms typically used a combination of end and intermediate results. Pitts (1974) had found variations in the reward and evaluation systems between firms which were acquisitive diversifiers and those which diversified through internal expansion. Similarly, Kerr's (1985) data suggest that the process by which a firm's diversification strategy had been achieved has a major influence on the design of the reward system.

In addition, the literature on strategy implementation suggests that implementation effectiveness and, hence, performance is significantly influenced by the choice of control systems. For example, recent research by Govindarajan and Gupta (1985) highlights the importance of a fit between strategy and control systems in achieving superior performance. Given that a critical component of control systems is the reward and evaluation system, one can reasonably expect that the choice of the reward system during the assimilation process is an important determinant of post-acquisition performance. Certainly, similarities in reward and evaluation systems allow for easier integration of systems; significant differences between the acquiring and acquired firms, on the other hand, can be an important impediment to acquisition implementation (Diven, 1984).

Differences in reward and evaluations systems exist along a number of factors. These include factors related to the evaluation criteria, such as the time period over which the process is focused, indices used to measure performance, and the type of performance indicator used in the evaluation process. In addition to the evaluation criteria, the form and administration of compensation can be important. The system of bonuses and incentives may differ significantly across

firms. Thus, managers accustomed to highly leveraged performance bonus (common in many entrepreneurial companies) might find it difficult to adjust to a more bureaucratic mode, if required, after an acquisition and vice-versa (Hayes, 1979). As Ferracone (1987) observes, even in acquisitions where marked differences in reward and evaluation systems are not always there, there are often enough dissimilarities to generate considerable conflicts.

With reward and evaluation systems representing an important vehicle in reinforcing organizational culture (Kerr and Slocum, 1987), changes made to the existing system (or the imposition of a new system) after an acquisition are likely to elicit strong reactions. Even speculations on how the system may be altered are sufficient to cause significant anxieties and conflicts, and to lead to unsatisfactory post-acquisition performance. The issue of dysfunctional imposition of the acquiring firm's systems on the acquired firm and its implication for acquisition performance has also been addressed by Jemison and Sitkin (1986). According to them, such imposition can be viewed as the outcome of two forces, namely, defensiveness and arrogance. The former stems from unfamiliarity with the acquired firm's procedures while the latter is generally the outcome of an erroneous belief among acquiring firm management that their systems (including reward and evaluation systems) are superior to those in the acquired entity and should, therefore, be adopted uniformly after the acquisition. The outcome can be detrimental—while a system might have been appropriate and successful in the acquiring firm, it may not be so for the acquired entity. These arguments lead to the next hypothesis:

Hypothesis 4: There will be a negative relationship between differences in the reward and evaluation systems of the acquiring and acquired firms and post-acquisition performance.

Again, the impact of differences in reward and evaluation systems on performance is likely to be more pronounced if post-acquisition plans require substantial integration of operations. In such cases, retention of major differences in reward systems in the post-acquisition phase can create a major morale problem among managers with a perceived inferior system. It then becomes

necessary to address and resolve existing differences and bring about uniformity in the reward and evaluation structure, even if it means significant additional expenditure. Therefore, one can hypothesize that, in acquisitions involving high levels of integration, differences in the reward and evaluation systems of the acquiring and acquired firms will have a significant negative impact on post-acquisition performance. On the other hand, if the acquired firm is kept as an autonomous entity and its operations are not integrated with the acquiring firm after the acquisition, it might even be feasible to let the two organizations retain their own systems. Ferracone (1987) provides an example of such an acquisition—one involving a large industrial firm that acquired a leading financial services organization. The acquiring firm management saw the acquired business remaining distinct and autonomous, and were able to adopt a compensation system for the acquired firm which was very different from their own. Thus, in cases where post-acquisition integration is low, differences will probably not have a major impact on acquisition performance. Given the above arguments, the next set of hypotheses examined in this study was as follows:

Hypothesis 5: Differences in the reward and evaluation systems across the acquiring and acquired firms will be negatively related to post-acquisition performance in acquisitions characterized by high levels of post-acquisition integration.

Hypothesis 6: Differences in the reward and evaluation systems across the acquiring and acquired firms will not be related to post-acquisition performance in acquisitions characterized by low levels of post-acquisition integration.

METHODOLOGY

Sample

The study's sample consists of acquisitions valued at \$1 million or more in the U.S. manufacturing and mining sectors during the period January 1980–March 1984. The starting point was a list of all acquisitions featured in the acquisition rosters in the quarterly issues of *Mergers and*

Acquisitions. All partial acquisitions, and also acquisitions by firms who were themselves acquired by 1986, were subsequently excluded from the sample. Moreover, to allow for a minimum assimilation period of 2 years the sample was restricted only to those acquisitions which were completed by March 1984. This screening procedure resulted in a starting sample of 703 acquisitions.

The initial mailing of the questionnaires in May 1986, a follow-up letter, and a second mailing of questionnaires in July resulted in a total of 191 responses. Of the 191 acquisitions, 42 were completed in 1980, 39 in 1981, 38 in 1982, 50 in 1983, and 22 in 1984. The 191 returns represent a response rate of 27 percent, which can be considered satisfactory taking into consideration the fact that the performance of acquisitions is generally viewed by most companies as an extremely sensitive topic. However, complete data on all the variables in this study were available in 173 of the 191 acquisitions.

Potential respondents in the survey were senior executives in acquiring firms—they were identified by comparing the most recent list of senior executives in the acquiring firm with that in the year of the acquisition (using *Moody's Industrial Manuals*). This procedure enabled us to ensure that the executive to whom the questionnaire was mailed was with the acquiring firm at the time of the acquisition and would, therefore, be knowledgeable about the acquisition. In a few cases the executive to whom the questionnaire was sent forwarded it to another person in the organization who, he felt, was more knowledgeable about the particular acquisition. Also, to minimize 'survivor bias', respondents were specifically requested to complete the questionnaire even if the acquired firm had been subsequently divested (as long as it had been with the acquiring firm for a period of at least 2 years). In all, of the 191 responses received, 52 were to questionnaires which had been sent to the CEO of the acquiring firm, in 66 cases it was to the President and in 59 cases to a Senior or Executive Vice-President of the firm. The rest (14) were received from Vice-Presidents. Of those who did not participate, 120 (17.5 percent of the sample) provided their reasons for not doing so, citing reasons such as 'time pressures', 'company policy against participating in surveys', and, quite frequently, 'data confidentiality.'

Measures

Differences in management style

Differences in management style were measured using an adapted version of instrument developed by Khandwalla (1977). The scale comprised 17 items for measuring differences in the risk-taking propensity of the management groups, extent of participation encouraged in decision-making, approach to decision-making, and emphasis placed on formality (see Appendix for questionnaire items). Respondents were asked to indicate the extent of perceived differences in management styles between the acquiring and acquired firm management along each of these items using a five-point Likert-type scale (1 = very similar, 5 = very different). The Cronbach- α value for the scale was 0.92, providing strong evidence of the reliability of the scale and high inter-item correlation. Principal-components factor analysis with varimax rotation on the items extracted a single factor. An aggregate measure of 'differences in management style' was calculated by averaging the scores on all the items in the questionnaire (Koberg, 1987). In a separate question, respondents had also been asked to provide their perception of the aggregate or 'overall' difference in the management styles between their and the acquired firm. This measure was highly correlated with the calculated composite score ($r = 0.82$, $p < 0.001$), indicating response consistency.

Differences in reward and evaluation systems

This was measured using a scale identified by Kerr (1982) (see Appendix). Respondents were asked to indicate the extent of perceived differences on a Likert-type five-point scale (1 = very similar, 5 = very different). The Cronbach- α value for the scale was 0.90. Moreover, principal-components factor analysis indicated that all the eight items measuring differences in reward and evaluation systems loaded on a single factor. Again, a composite measure of the difference was calculated for each acquisition in the sample by taking the mean of the item scores, and these too correlated highly ($r = 0.78$, $p < 0.001$) with the overall measures provided by the respondents.

Post-acquisition integration

The extent to which the operations of the acquiring and acquired firms were integrated was measured along various manufacturing/R&D and marketing activities (see Appendix). Principal-component analysis identified two factors—with items on manufacturing integration loading on one and those used to measure marketing integration loading on the other. The Cronbach- α values were 0.91 and 0.90 for the scales measuring post-acquisition integration along manufacturing and marketing activities respectively. Here again, respondents were asked to indicate the extent of post-acquisition integration or consolidation of operations along each item of the scale (1 = very low integration to 5 = very high integration) and the individual scores were then used to calculate a composite index of the extent of post-acquisition integration of manufacturing and marketing functions. These two composite scores were then used to categorize the acquisition in the sample into two subgroups: a 'high integration' subgroup which consisted of acquisitions where the composite integration scores along *both* the manufacturing and marketing dimensions were greater than 3.0 (midpoint value in the scale) and a 'low integration' subgroup composed of acquisitions where *both* scores were less than 3.0. Seventy-one acquisitions were in the high integration category while 63 were characterized by low levels of post-acquisition integration. However, because of incomplete data the sample sizes in our analysis were 69 and 61 respectively.

Relative size

Various authors (e.g. Kitching, 1967; Kusewitt, 1985) have hypothesized that size differences between the acquiring and acquired firm influence acquisition performance. Kusewitt (1985), for example, found a negative relationship between relative size (ratio of the acquired firm to the acquiring firm) and acquisition performance. Kitching (1967), on the other hand, found that acquisitions where the acquired firms' sales were less than 2 percent of the acquiring firm had high failure rates. Given its potential impact, relative size was used as a control variable in this study. It was operationalized as the ratio of the sales of the acquired firm to that of the acquiring firm (in the year before the acquisition).

Acquisition performance

Acquisition performance was measured by asking the respondents for their assessments of the extent to which the acquisition was able to achieve prior expectations in terms of its impact on the performance of the acquiring firm. It was measured along five performance criteria, namely: ROI, EPS, stock price, cash flow, and sales growth, all of which have been widely used in prior research (e.g. Burgman, 1983; Souder and Chakrabarti, 1984). Respondents were asked to (1) rate the performance of the acquisition along each criterion using a five-point Likert-type scale, and (2) assign weights to each criterion according to its perceived importance. The importance scores were used to weight the 'performance scores' so that a weighted average 'acquisition performance' index could be established for each acquisition. Also, in a separate question, each respondent was asked to provide his opinion of the 'overall' performance of the acquisition in question. When compared, the two scores were highly correlated ($r = 0.89$, $p < 0.001$), suggesting consistency of response.

Perceptual measures were used in this study because of the difficulties and problems associated with the use of 'objective' measures in measuring post-acquisition performance (Burgman, 1983; Kitching, 1967; Porter, 1987). Accounting measures are typically available in aggregate form (i.e. for the entire corporation) and isolating the performance of the acquisition after controlling for the performance of other units and the impact of other events is difficult, if not impossible. Second, shareholder abnormal gains as a result of an announcement or consummation (used in event studies) do not measure acquisition performance as an outcome but merely reflect the security markets' 'a priori' expectations (Montgomery and Wilson, 1986). Therefore, they are unlikely to be appropriate measures of post-acquisition performance. In summary, neither accounting nor market measures (abnormal gains) can be used as valid measures of post-acquisition performance. A reasonable alternative is the use of considered management judgement, an approach which is likely to provide a picture of performance which is much closer to reality. This follows the guidelines of Dess and Robinson (1984) who advocate the use of subjective measures when appropriate objective measures are not available (as is the case in this study).

To validate the perceptual performance measure used in this study, an *ex-post* analysis of archival data was done using a randomly selected subsample of 75 acquisitions. Using Predicasts F&S Index, the *Wall Street Journal* index and the ABI Inform data base accounts pertaining to these acquisitions were identified in the business press. However, in 57 of the 75 acquisitions the extent of available information on post-acquisition performance from secondary sources was very limited and, hence, did not provide an opportunity for any meaningful evaluation. In the remaining 18 acquisitions, data from articles, news items, information in annual reports etc., on each acquisition were then carefully examined by an independent and informed evaluator to assess the level of post-acquisition success using multiple criteria, i.e. post-acquisition sales growth, post-acquisition profitability of the acquired division (where the information was available), cash flow changes, importance given to the acquired entity by the acquiring firm after the acquisition, and the opinions expressed by executives and industry analysts. His evaluations of the post-acquisition performance of the 18 acquisitions on a 1–5 scale (with '1' being 'very unsuccessful' and '5' being 'very successful') were then correlated with the composite measures of 'acquisition performance' calculated based on questionnaire data. The zero-order correlation coefficient of 0.77 ($p < 0.001$) between the two sets of scores indicates that the questionnaire responses were reasonably valid measures of post-acquisition performance.

Non-response bias

Given that the response rate was only 27 percent, we checked for possible non-response bias using two tests. First, the respondents and non-respondents were compared along the dimension of average size (measured in terms of sales revenue) for both the acquiring and acquired firms. The calculated *t*-statistic values of 0.403 and 0.103 for the acquiring and the acquired firm respectively (see Table 1) were statistically insignificant, which suggests that there were no significant differences between the responding and the non-responding groups. Second, given obvious difficulties in comparing the respondent and non-respondent samples across the research variables (differences in management styles, differences in reward and evaluation systems and

Table 1. Comparison of respondents and non-respondents (in terms of \$million sales revenue)

	Respondents		Non-respondents		<i>t</i>
	Mean	S.D.	Mean	S.D.	
Acquiring firms	1551.4	3665.4	1644.7	2252.0	0.403
Acquired firms	158.2	809.9	150.6	736.6	0.103

S.D. = Standard deviation.

acquisition performance), we compared the 'late' and 'early' respondents along these variables. The assumption behind this test for non-response bias (suggested by Oppenheim, 1966) is that the 'late' respondents (those responses received after the second mailing) are very similar to non-

respondents, given that they would have fallen into that category had a second set of questionnaires not been mailed. Again, as Table 2 illustrates, there were no significant differences between the two groups, providing further evidence of the representativeness of the sample.

ANALYSIS AND RESULTS

Table 3 provides the means and standard deviations of the study variables and also the correlation coefficients between them in the high and low integration subgroups. Hypotheses 1 and 4 were first tested on the entire sample using the following regression model:

$$\begin{aligned} \text{PERFORM} = & \alpha_0 + \alpha_1(\text{RSIZE}) \\ & + \alpha_2(\text{DIFSTY}) \\ & + \alpha_3(\text{DIFREW}) + \epsilon_i \end{aligned} \quad (1)$$

Table 2. Comparison of early and late respondents

Variable ^a	High Integration			Low Integration		
	Early (<i>n</i> =43)	Late (<i>n</i> =28)	<i>t</i> value	Early (<i>n</i> =37)	Late (<i>n</i> =26)	<i>t</i> value
1. Differences in management styles	3.113	3.203	0.655	3.381	3.373	0.046
2. Differences in reward and evaluation systems	3.197	2.900	1.536	3.340	3.119	0.917
3. Acquisition performance	3.093	3.264	0.781	2.925	3.075	0.042

^aVariables measured using five-point Likert-type scales.

Table 3. Correlations, means, and standard deviation of study variables

Variable ^a	High Integration (<i>n</i> =69)						Low Integration (<i>n</i> =61)					
	Mean	S.D.	1	2	3	4	Mean	S.D.	1	2	3	4
1. Differences in management styles ^a	3.152	0.706	—	—	—	—	3.377	0.681	—	—	—	—
2. Differences in reward and evaluation systems ^a	3.086	0.876	0.27	—	—	—	3.274	0.956	0.50	—	—	—
3. Acquisition performance ^a	3.184	0.883	-0.40	-0.22	—	—	3.010	1.150	-0.32	-0.21	—	—
4. Relative size	0.129	0.242	-0.11	-0.10	-0.08	—	0.168	0.233	-0.08	-0.20	0.05	—

^aMeasured using five-point Likert-type scales.

Table 4. Relationships between organizational differences and acquisition performance

Subgroup	No. of cases	Regression Coefficients			R^2	Adj R^2	F
		RSize	DIFSTY	DIFREW			
All acquisitions	173	-0.532 (-1.780)	-0.527*** (-4.467)	-0.123 (-1.378)	0.177	0.162	12.154***
High post-acquisition integration	69	-0.471 (-1.147)	-0.477** (-3.281)	-0.130 (-1.110)	0.191	0.154	5.129**
Low post-acquisition integration	61	0.049 (0.077)	-0.499* (-2.028)	-0.074 (-0.413)	0.109	0.062	2.321

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.
 Figures in parentheses represent t -statistics.

where

PERFORM = acquisition performance
 RSize = relative size
 DIFSTY = differences in management styles
 DIFREW = differences in reward and evaluation systems

In order to test Hypotheses 2, 3, 5 and 6 we estimated the above equation separately for the high and low integration subgroups.

$$\begin{aligned} \text{PERFORM} = & \beta_0 + \beta_1(\text{RSize}) \\ & + \beta_2(\text{DIFSTY}) \\ & + \beta_4(\text{DIFREW}) \\ & + \epsilon_2 \text{—high integration} \end{aligned} \quad (2)$$

$$\begin{aligned} \text{PERFORM} = & \gamma_0 + \gamma_1(\text{RSize}) \\ & + \gamma_2(\text{DIFSTY}) \\ & + \gamma_3(\text{DIFREW}) \\ & + \epsilon_3 \text{—low integration} \end{aligned} \quad (3)$$

Results of the regression analyses are presented in Table 4. The regression coefficient associated with the DIFSTY variable in the full model was negative and significant ($\alpha_2 = -0.527$, $p < 0.001$), providing statistical support for Hypothesis 1. In other words, differences in top management style and post-acquisition performance are negatively related after controlling for relative size and differences in reward and evaluation system

across all acquisitions. However, no significant relationship was observed between differences in reward and evaluation systems and performance ($\alpha_3 = -0.123$, $p = 0.17$).¹ Also, as hypothesized, a strong negative relationship was found between differences in management style and acquisition performance in the subgroup with high post-acquisition integration ($\beta_2 = -0.477$, $p < 0.01$) after controlling for relative size. However, contrary to expectations, a significant negative relationship was also observed in the low integration subgroup ($\gamma_2 = -0.499$, $p < 0.05$), suggesting that differences in management style can be an important factor in influencing acquisition performance even in acquisitions characterized by low levels of post-acquisition integration.

Contrary to what had been hypothesized (H5), no significant negative relationship was observed between differences in the reward and evaluation systems and acquisition performance in the high integration sample ($\beta_3 = -0.130$, $p = 0.27$). The direction of the regression coefficient was negative and suggestive of a possible negative impact of such differences on acquisition performance, but in the absence of significant results definite conclusions cannot obviously be drawn. Hypothesis 6 was supported in that no significant relationship was observed between differences in

¹ Berry and Feldman (1985) suggest computing R_i^2 (the proportion of variance in an independent variable explained by other independent variables) as a measure of the effects of multicollinearity. Multicollinearity is a serious problem if the value is close to 1.0—for none of the variables in the three regression models estimated in this study was the value more than 0.28.

the reward and evaluation systems and acquisition performance in the low integration subgroup ($\gamma_3 = -0.074$, $p = 0.68$).

In addition to the above, the study tested for the equality of coefficients in the regression models for high integration and low integration subgroups using the Chow test (Chow, 1960). The low F -statistic value of 0.59 indicates that the two models (high and low integration) are not statistically different, and suggests that the extent of post-acquisition integration does not significantly influence the relationships between organizational fit and acquisition performance (as had been hypothesized). Additional tests of the potential moderating effects of post-acquisition integration were undertaken using the procedures suggested by Arnold (1982). First, differences in the 'strength' of the relationship (measured by correlation coefficients) between differences in management style and acquisition performance across high and low integration subgroups, were examined. A similar test was done for the relationship between differences in reward and evaluation systems and performance. In either case no statistically significant differences in the value of the correlation coefficients across the two subgroups were identified. Second, t -tests used to examine whether post-acquisition integration moderates the 'form' of the relationship also did not produce significant results, providing further evidence that post-acquisition integration does not moderate the relationship between organizational fit and performance. Moreover, given that a single measure of post-acquisition integration cannot be obtained (the scale consists of two dimensions), moderated regression analysis (MRA), the alternative procedure suggested by Arnold (1982) and Stone and Hollenbeck (1984) to test for moderating effects, could not be used in this study.

DISCUSSION

This study examined the impact of two key factors pertaining to 'organizational fit', namely differences in management styles and reward and evaluation systems on acquisition performance. A negative relationship was hypothesized for both in acquisitions with high levels of post-acquisition integration. In acquisitions with low integration no such relationship was expected.

The findings of this study suggest that compatibility of management styles is important to superior performance in acquisitions characterized by both high and low levels of post-acquisition integration of operations. The findings therefore support the observations in case studies which indicate that acquisitions of firms with a different management style can result in conflicts, difficulties in achieving operational synergies, market share shrinkages and poor performance. These findings were not surprising given that most acquisitions are accompanied by significant changes in a relatively compressed period of time—changes which almost inevitably result in enhanced complexity and uncertainty. These problems are further aggravated by differences in managerial styles and ongoing tensions concerning which style will dominate. One can reasonably expect the level of apprehension to be much higher among acquired firm management, who often react defensively by clinging to their own beliefs and approaches in an effort to reduce uncertainty and preserve their identity. The outcome is likely to be one of conflicts and confrontations contributing to poor acquisition performance.

An interesting finding of this study is that differences in management styles have a negative impact on acquisition performance even in acquisitions characterized by low post-acquisition integration. It was, however, not totally unexpected, suggesting that, while in theory one can visualize keeping the management groups separate—thereby allowing each to maintain its style—in practice it is often not the case. Necessary post-acquisition administrative interactions in such acquisitions mean that the acquiring firm management often end up imposing their own style on the acquired firm. The likelihood is higher when the acquiring firm management believe that they can enhance target firm effectiveness by imposing their style, systems, and culture on the acquired firm. In other words, low post-acquisition integration does not necessarily mean true autonomy. Even in acquisitions followed by low integration of operations the acquired firm is often subjected to very close control and scrutiny. It can take the form of increased reporting, frequent visits by acquiring firm management, and fundamental changes being required of the acquired firm in their management priorities. Also, the studies of Lorsch and

Allen (1973) and Hoskisson and Hitt (1988) on diversified firms suggest that financial control is important in the successful management of an acquired firm in unrelated acquisitions characterized by low integration. To the extent that differences in management styles prevent agreements on attendant financial targets, goals, and investment criteria, the task of management control becomes more difficult in such acquisitions. In addition, 'arrogance' on the part of the acquiring firm, and a belief that its own style and practices are superior, can lead to the imposition of its style and systems on the acquired entity even if the actual integration of operations undertaken is low (Jemison and Sitkin, 1986). The result may be high post-acquisition turnover among key acquired firm executives. While not explored in this study, the loss of valuable expertise through the departure of key executives can be an important factor affecting performance in such acquisitions (Walsh, 1988).

The study findings suggest that differences in reward and evaluation systems do not have the same kind of negative impact on acquisition performance as differences in management styles in acquisitions characterized by either high or low post-acquisition integration. A possible reason may be that differences in reward and evaluation systems are more easily and quickly reconciled following an acquisition than differences in management styles. Consequently, such differences may not have a major long-term impact on acquisition performance as do problems arising from incompatible management styles (which are deep-rooted, and therefore much more difficult to overcome). Also indicated by the data is the relationship between differences in management style and in reward and evaluation systems, especially in acquisitions characterized by high post-acquisition integration. While management style and reward systems are two different components of the organizational form, it must be remembered that reward systems are often employed to reinforce values, beliefs, and practices in an organization (Kerr and Slocum, 1987). The relationship between the two, therefore, does not come as a major surprise. As observed by Cummings (1984), reward systems in an organization with a high risk-taking management style are likely to be different from one with a risk-averse culture, and a merger of two such organizations can pose significant

challenges in the integration phase.

In interpreting the results of this study however, one needs to take into account its limitations. First, this study was limited to the examination of just two of the factors representing 'organizational fit', with 'relative size' as a control variable. Obviously there are other factors (not included in this study) which potentially influence post-acquisition performance. To the extent that future studies use a more comprehensive and fully specified model, they will not only explain a greater percentage of the variability but also be able to identify possible confounding effects. Second, the data pertaining to a particular acquisition in this study were collected from a single respondent in the acquiring firm. The decision to use a single respondent was partly based on the opinions of executives who participated in the pretest. They strongly felt that use of multiple respondents would significantly increase their reluctance to participate in the study and consequently would have a very negative effect on the response rate. Taking into consideration their views, the fact that response rate on a sensitive topic such as mergers and acquisitions is likely to be low, and the very low response rate in a previous questionnaire-based study by Burgman (1983), we chose to use a single respondent. Certainly, a future study which uses multiple respondents can generate greater confidence in the results. Third, the study relies upon self-report measures. While reliability and validity tests undertaken provide grounds for confidence in the measures, future studies which use multiple data sources and more objective measures will yield stronger results. Finally, the research does not address the level within the acquiring firm at which the acquired firm is managed. A more in-depth future study of a limited number of acquisitions, preferably one where the researcher is provided 'inside access,' can better address this issue and its implications from the viewpoint of the relationships examined in the paper.

Implications for managers

The findings of this study have important implications from the perspective of executives associated with mergers and acquisitions. In addressing the issue of high failure rate among mergers and acquisitions, a number of authors

(e.g. Achtmeyer and Daniell, 1988; Rappaport, 1979) have suggested that the probabilities of success can be significantly improved through systematic planning. Our results imply that such planning, in order to be meaningful, should necessarily include a careful assessment of existing organizational differences, particularly differences in management styles. Unfortunately, in practice, such analysis is either overlooked or given secondary importance. The escalating momentum and the underlying desire to complete transactions quickly often leads to incomplete analysis and premature 'solutions' (Jemison and Sitkin, 1986), with organizational considerations often playing a very limited role in merger and acquisition decisions (Hirsch, 1987; Robino and DeMeuse, 1985; Schweiger and Ivancevich, 1985). This is especially surprising when one considers that in a recent survey of 101 CEOs and senior managers of large companies, by the management consulting firm of Egon Zehnder International, the most commonly cited causes for acquisition failure were people and organizational problems (*Mergers and Acquisitions*, 1987).

Another factor contributing to inadequate analysis might be the over-reliance on the services of investment bankers, who typically choose to de-emphasize questions and issues related to organizational fit. As Haspeslagh and Jemison (1987) suggest, it is not because investment bankers believe that qualitative organizational issues are any less important, but often because recommendations based on quantitative data are easier to defend, if legally challenged. Moreover, issues related to management styles and values are highly sensitive and controversial. The tendency, therefore, is to avoid them as much as possible during the pre-acquisition and negotiation phases. However, the findings of this study highlight the importance of including an analysis of key organizational dimensions as an integral part of any acquisition analysis. First, it will help managers gain a more realistic picture of synergistic benefits and, thereby, the true value of the acquisition. Second, considering the likely impact of organizational factors will prompt early thinking on how the acquisition can be best managed, once it is completed. For example, in acquisitions with differences in management styles, significant mental readjustments required for effective integration suggest the need for an atmosphere of open communications and mutual respect among

management groups, and facilitating conditions in which each group can better understand the others' perspective.

RESEARCH IMPLICATIONS AND DIRECTIONS FOR FUTURE RESEARCH

From the viewpoint of academic researchers, the findings highlight the importance of taking a broader perspective in their study of acquisition performance. There is a definite need to go beyond issues of relatedness and synergistic benefits, recognizing that the expansion of 'two plus two equals five' does not happen automatically. With the findings of the body of research linking 'strategic fit' and performance being largely inconclusive, future research should also focus on issues related to post-acquisition implementation. Shrivastava (1986) identifies three types of post-acquisition integration—procedural, physical and managerial/sociocultural. While procedural integration involves the combination of systems procedures, and rules, physical integration entails the consolidation of assets and equipment. Managerial and sociocultural integration, on the other hand, relates to cultural integration, integration of management styles, and changes in organization structure. The findings of this study indicate that one aspect of managerial integration, namely differences in management styles, has an important impact on post-acquisition performance while impediments to procedural integration in the form of differences in reward systems do not play an important role. Future research needs to identify impediments associated with other aspects of the three types of integration towards assessing their impact on acquisition performance.

A very important area for future research relates to the management of acquisitions. As emphasized by Haspeslagh and Jemison (1987), the probability of value creation in mergers and acquisitions stems not from relatedness but primarily on how the interdependencies that contribute to the benefits are managed. While the results indicate that high differences in management style are generally associated with poor performance, not all acquisitions with high differences in management styles in this study exhibited poor performance. Why did some acquisitions with high differences in management

styles perform better than others? An interesting area for future research, therefore, relates to the process of implementation, and on how the process can be best managed, particularly in cases where organizational incompatibility poses additional challenges. Another important area for future research is the role and importance of organizational mechanisms in successfully managing the interdependencies that promote resource/skill-sharing. For example, research that explores the importance of task forces in mediating problems and conflicts that emerge out of differences in terms of management styles, cultures, and systems should provide interesting insights. Such questions which involve contingent relationships can probably be appropriately examined using medium-grained methodologies (e.g. cluster analysis or *Q*-type factor analysis) suggested by Harrigan (1983). By combining the generalizability of coarse-grained methodologies (cross-sectional analysis using large data bases) with the detail of fine-grained methodologies (individual case studies) they provide a useful middle ground for examining contingent relationships.

In summary, although researchers such as Buono and Bowditch (1989), Jemison and Sitkin (1986), Hunt (1990), and Marks (1982) emphasize the importance of the implementation, such issues have played a very limited role in the empirical research on mergers and acquisitions. While research attention has primarily been on the potential benefits in such transactions, the high failure rate among acquisitions is a testimony to the fact that anticipated benefits (or synergies) are not easily realized. There is, therefore, a compelling case to extend research on the performance of acquisitions to an examination of the impact of key organizational and behavioral issues. Hirsch, Friedman, and Koza (1990) have emphasized the importance of looking at both the formulation and implementation sides of strategic decisions—and that certainly applies to research on mergers and acquisitions. The paucity of existing research on acquisition implementation provides excellent opportunities for meaningful future research in the area of strategic management. It is hoped that this study represents an important step in that direction, prompting further research which will provide a better understanding of the myriad factors that influence post-acquisition performance.

APPENDIX: QUESTIONNAIRE ITEMS

Differences in management style

1. Approach to management problems (proactive vs. reactive and cautious).
2. Degree of emphasis on R&D and innovation.
3. Degree of reliance on external borrowings or stock issues vs. funds generated from operations to finance growth.
4. Riskiness of the investments pursued.
5. Usage of sophisticated analytical techniques in decision-making.
6. Importance accorded to the long-term planning of investments and their financing.
7. Reliance on personal experience and judgement rather than on experts.
8. Orientation in decision-making (long-term vs. immediate future).
9. Extent to which the communication channels are structured and access to important financial information restricted.
10. Emphasis on adapting freely to changing circumstances without too much concern for past practice.
11. Usage of sophisticated control and information system for tight formal control.
12. Getting personnel to follow formally established procedures.
13. Getting line and staff personnel to adhere closely to formal job descriptions.
14. Participation sought by top management in decision-making relating to product- or service-related decisions.
15. Extent of participation in decision making among top management relating to capital budgeting decisions.
16. Extent of participation in decision-making in decisions related to long-term strategic growth and diversification.
17. Strongly individualistic decision-making by formally responsible executive vs. group-oriented consensus decision-making.

Differences in reward and evaluation system

Differences in the evaluation criteria

1. Time period over which the reward and

evaluation process focused (short-run vs. long-run performance).

2. Type of performance indicator used in the evaluation process (end result vs. intermediate performance).
3. Nature of indices used to measure performance (objective indices vs. judgmental input of superiors).
4. Performance measures based on divisional vs. corporate performance.

Difference in the administration of rewards

5. Form of reward (cash, stock, etc.).
6. Frequency with which rewards are distributed.
7. Extent to which bonuses are linked to the strategic risk incurred.
8. Uniformity of rewards across divisions.

Extent of post-acquisition integration

Production and R&D

1. Manufacturing process.
2. Purchasing.
3. Warehousing (raw materials and finished goods).
4. Maintenance.
5. Research and development.

Marketing

6. Product market served.
7. Distribution channels.
8. Promotion and advertising.
9. Customer service.

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