

Integrating Strategic, Organizational, and Human Resource Perspectives on Mergers and Acquisitions: A Case Survey of Synergy Realization

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This paper is exciting because it synthesizes several theoretical perspectives into an integrative model and addresses a very significant topic—mergers and acquisitions—with a sharp eye towards clear managerial relevance and with innovative methods. I expect it to become a defining paper in M&A research.

Kathleen Eisenhardt

Abstract

Mergers and acquisitions are complex events in organizational life for which we have incomplete understanding, in part because researchers have tended to consider only partial explanations of them. The authors addressed that problem by developing a conceptual framework that integrates theoretical perspectives from economics, finance, and especially strategy, organization theory, and human resource management to offer a broader process-oriented integrative model. The integrative model explicitly describes how synergy realization is a function of the similarity and complementarity of the two merging businesses (combination potential), the extent of interaction and coordination during the organizational integration process, and the lack of employee resistance to the combined entity. The approach differs from traditional methods of studying mergers and acquisitions in three ways: (1) the success of a merger or acquisition is gauged by the degree of synergy realization rather than more removed and potentially ambiguous criteria such as accounting or market returns; (2) the key attribute of combination potential is conceptualized not only in terms of the similarities present across businesses, as in most studies of mergers and acquisitions, but also in terms of the production and marketing complementarities between the two businesses; and (3) the data are derived from a case survey method that combines the richness of in-depth case studies with the breadth and generalizability of large-sample empirical investigations.

The framework was tested empirically across a sample of 61

mergers and acquisitions. The extent to which a merger or acquisition resulted in synergistic benefits was related to the strategic potential of the combination, the degree of organizational integration after the deal was completed, and the lack of employee resistance to the integration of the joining firms. Furthermore, the analysis revealed that (1) independent of any similarities across joining firms, the presence of complementary operations increased the probability of acquisition success by boosting synergy realization, (2) organizational integration was the single most important factor in explaining synergy realization, even to the extent that M&As with high combination potential were significantly more successful when coupled with high organizational integration than when integration efforts were less forceful, and (3) mergers and acquisitions that were dependent on gains from combining similar production and marketing operations tended to elicit more resistance from employees than M&As focused on realizing complementary benefits. Overall, the findings provide strong support for an integrative theory of mergers and acquisitions.

(Mergers and Acquisitions; Synergy; Case Survey)

The 1980s were characterized by a wave of mergers and acquisitions (M&As) that transformed industries and affected the careers of millions (Golbe and White 1988,

Madrack 1987, Magnet 1984). However, many M&As have been unsuccessful, suggesting that they are generally not well understood in practice (Jemison and Sitkin 1986, Hitt et al. 1991, Porter 1987). Similarly, scholarly research on M&As has grown substantially over the last decade, but our theoretical understanding of what accounts for their success and failure has been constrained by the fragmented nature of the studies (Chatterjee et al. 1992, Haspeslagh and Jemison 1991, Schweiger and Walsh 1990).

Mergers and acquisitions have been studied through several theoretical lenses. First, the field of strategic management has studied M&As as a method of diversification, focusing on both the motives for different types of combinations (Ansoff et al. 1971, Salter and Weinhold 1981, Walter and Barney 1990) and the performance effects of those types (Lubatkin 1987, Seth 1990, Shelton 1988, Singh and Montgomery 1987). Second, research in economics has emphasized such factors as economies of scale and market power as motives for merger, and has examined acquisition performance with mostly accounting-based measures (Goldberg 1983, Ravenscraft and Scherer 1987, Steiner 1975). Third, finance scholars typically have studied acquisition performance, relying on stock-market-based measures in doing so (Jarrell et al. 1988, Jensen and Ruback 1983, Weston and Chung 1983). Fourth, organizational research has focused primarily on the post-combination integration process (Haspeslagh and Jemison 1991, Pablo 1994), highlighting both culture clash (Buono et al. 1985, Nahavandi and Malekzadeh 1988) and conflict resolution (Alarik and Edström 1983, Blake and Mouton 1985, Mirvis 1985). Finally, research on M&As in the human resource management (HRM) literature has emphasized psychological issues (Astrachan 1990, Levinson 1970, Marks 1982), the importance of effective communication (Schweiger and DeNisi 1991, Sinetar 1981), and how M&As affect careers (Hambrick and Cannella 1993, Hirsch 1987, Walsh 1989). Although the streams of research are not mutually exclusive, they have been only marginally informed by one another.

The fragmentation has resulted in several barriers to the development of more integrative research on M&As. First, there is ongoing controversy between researchers using an economics perspective who report poor overall M&A performance and those in finance who have often shown the opposite (Caves 1989, Goldberg 1983, Jensen and Ruback 1983).

Second, as Lubatkin (1983) has noted, there also is a dysfunctional gap between often untested contingency frameworks in strategy and industrial organization and empirical work in finance that tends to disregard strategic

differences across M&As. Even though more recent studies have begun to bridge the gap between the strategy and finance perspectives (Comment and Jarrell 1995, Lubatkin 1987, Shelton 1988, Singh and Montgomery 1987), they still produce conflicting results (Seth 1990). One reason for the mixed results relates to a third problem with the nonintegrative nature of M&A research: strategic, economic, and financial M&A research tends to disregard the organizational and HRM issues that are a central part of the acquisition integration process and may play a large role in determining the success or failure of M&As (Chatterjee et al. 1992, Datta 1991). Furthermore, much research from an organizational or HRM perspective does not integrate important notions drawn from the strategy and finance literatures (Schweiger and Walsh 1990). M&As are clearly multifaceted phenomena that are poorly understood through incomplete and partial application of theories from separate fields.

Interestingly, the fragmented literature on M&As may actually invite a theoretical synthesis. The strategic motives for a particular merger or acquisition can be viewed as potential benefits that are realized through organizational integration and HRM, all of which affect a combination's performance. Hence, the research problem of how combination potential is realized through the organizational integration of M&As provides a foundation for bridging across research areas. The few attempts along those lines indicate the potential value of integrative approaches, and include research linking strategic and organizational perspectives (Haspeslagh and Jemison 1991), especially through multiple case studies of integration processes (Buono and Bowditch 1989, Hitt et al. 1993, Hunt 1990, Jemison 1988). However, though contributions from that work are substantial, the studies have had limited scope and have not attempted to test relationships empirically across a broad sample of M&As.

The purpose of our study was twofold: (1) to develop and test a model that synthesizes theoretical perspectives on the strategic combination, organizational integration, HRM, and financial performance components of M&As and (2) to examine the mechanisms through which several critical characteristics of an acquisition affect its performance. We reasoned that synergy realization is a conceptually advantageous measure of M&A performance and that synergy realization depends on the combination's potential, the degree of integration achieved, and the lack of employee resistance. Furthermore, we developed hypotheses on the interrelationships among those factors, and on how they mediate the performance effects of such key characteristics of M&As as management style similarity, cross-border combination, and relative company size. We tested the ideas through the case survey

method (Bullock and Tubbs 1987, Larsson 1993, Yin and Heald 1975). Case surveys represent a methodological attempt to transcend the difficult tradeoff between rich case studies that lack generalizability and broader large-sample studies that use more coarse-grained measures (Jauch et al. 1980). The combination of idiographic and nomothetic research is particularly well-suited to the study of complex organizational activities such as M&A processes because it can capture a broad range of relatively detailed phenomena without the severe limits on the number of observations that are inherent in case study methods (cf. Lee 1991, Luthans and Davis 1982).

Our study makes several contributions: (1) it empirically examined in a relatively large sample, for perhaps the first time, a model based on the integration of the major theoretical approaches to understanding mergers and acquisitions; (2) M&A performance was conceptualized in terms of synergy realization, a construct that tries to capture the multifaceted nature of M&As; (3) the integrative model was applied to investigate whether interrelationships among strategic, organizational, and human resource factors create problems that hinder M&A success; (4) the model was used to shed new light on how strategic similarity and complementarity, management style similarity, cross-border combination, and relative company size affect acquisition performance, and (5) use of the case survey method—combining in-depth case study richness with large sample breadth—allowed both conceptual synthesis and examination of synergy realization as the dependent variable.

An Integrative Merger and Acquisition Model

The different foci of the strategic, economic, financial, organizational, and HRM fields have fragmented M&A research into largely separate treatments of the combination, integration, employee, and performance issues, as illustrated in Figure 1. Researchers have begun to synthesize some of those issues by relating organizational integration with either strategic combination (Haspeslagh and Jemison 1991), employee reactions (Buono and Bowditch 1989), or financial performance (Chatterjee et al. 1992). Taking a broad process perspective, however, we believe it is possible to integrate the combination, integration, employee, and performance issues into a comprehensive model that views M&A performance (conceptualized as synergy realization) as a function of combination potential, organizational integration, and employee resistance. In the following sections we develop both the theoretical rationale for these ideas and specific hypotheses to test the model.

Merger and Acquisition Performance

Are mergers and acquisitions related to firm performance? That question has been studied for more than 50 years, and we still find no consensus in the research literature. A series of research reviews of M&As have shown that corporate combinations are often unsuccessful (Goldberg 1983, Hogarty 1970, Lubatkin 1983), but some scholars have argued that the “scientific evidence indicates that activities in the market for corporate control almost uniformly increase efficiency and shareholders’ wealth” (Jensen 1984, p. 120). Much of the controversy stems from dependence on accounting-based measures of acquisition performance in economics in the first instance and event studies of stock returns in finance in the second, methods that are subject to significant error (Bradley and Jarrell 1988, Jensen 1988, Ravenscraft and Scherer 1987, Shleifer and Summers 1988).

Studies based on those two types of measures of M&A performance also pay little attention to such potentially important influences on M&A success as organizational integration of, and employee reactions to, the merger or acquisition (Schweiger and Walsh 1990). As a result, the economics and finance literatures implicitly treat M&As as though post-acquisition processes were undifferentiated and hence unimportant.¹ However, much of the value from a merger or acquisition may be created during the acquisition integration process (Haspeslagh and Jemison 1991, Pablo 1994). In addition, only a few studies in economics and finance have considered acquisition relatedness (e.g., Morck et al. 1990), a factor of central importance in the strategy literature (Chatterjee 1986, Lubatkin 1987, Seth 1990, Shelton 1988, Singh and Montgomery 1987). Indeed, in a recent meta-analysis of 41 event studies, Datta et al. (1992) recommended that researchers model such strategic factors as combination type or relatedness to gain a better understanding of why some M&As do better than others. Hence, in contrast to many researchers working from an economics or finance perspective, we are less concerned with whether M&As are profitable than with the antecedents of M&A performance as reflected in strategic, organizational, and HRM considerations (cf. Caves 1989).

Given the problems associated with accounting-based and event study measures of M&A performance, and the importance of incorporating strategic, organizational, and HRM perspectives, we conceptualize M&A performance in terms of synergy realization. We define it as the actual net benefits (reduced cost per unit, increased income, etc.) created by the interaction of two firms involved in a merger or acquisition. Because of its focus on the consequences of bidder and target interaction, synergy realization is conceptually well-suited for an integrative study

Figure 1 A Literature Overview and Integrative Model of Mergers and Acquisitions

M&A Field	M&A Issue			
	Combination	Integration	Employee Reactions	Performance
Strategy	<i>Motives</i> (e.g., Ansoff et al. 1971, Trautwein 1990, Walter and Barney 1990) <i>Relatedness</i> (e.g., Salter and Weinhold 1981, Lubatkin 1983)			<i>Effect of Relatedness</i> (e.g., Singh and Montgomery 1987, Lubatkin 1987, Shelton 1988, Seth 1990, Datta et al. 1992)
Economics	<i>Motives</i> (e.g., Steiner 1975, Scherer 1980, Goldberg 1983)			<i>Accounting-based Measures</i> (e.g., Ravenscraft and Scherer 1987)
Finance				<i>Stock Market-based Measures</i> (e.g., Jensen and Ruback 1983, Jarrel et al. 1988)
Organization Theory		<i>Organizational Integration</i> (e.g., Searby 1969, Yunker 1983, Shrivastava 1986, Pablo 1994)	<i>Cultural Clashes</i> (e.g., Sales and Mirvis 1984, Nahavandi and Malekzadeh 1988) <i>Conflict Resolution</i> (e.g., Blake and Mouton 1985, Mirvis 1985)	
Human Resource Management			<i>Communication</i> (e.g., Sinetar 1981, Schweiger and DeNisi 1991) <i>Career Implications</i> (e.g., Hirsch 1987, Walsh 1989, Hambrick and Cannella 1993)	
Integrative Model {combination potential, organizational integration, employee resistance} = synergy realization				

of the effects of strategic, organizational, and HRM factors in M&As. Viewing M&A performance in terms of synergy realization avoids the problem of event studies capturing only anticipated performance because the emphasis is on benefits that are actually realized after the deal is completed. In addition, it avoids the problem of accounting-based measures that are unable to distinguish between performance attributable to the combination and “ordinary” performance that would have accrued to the bidder and target if they had remained independent, because synergy realization focuses solely on the value-creating activities of the merged firms (Jemison 1988). Hence, synergy realization may afford a more accurate conceptualization of value creation in M&As than either anticipatory stock market reactions or general accounting performance.

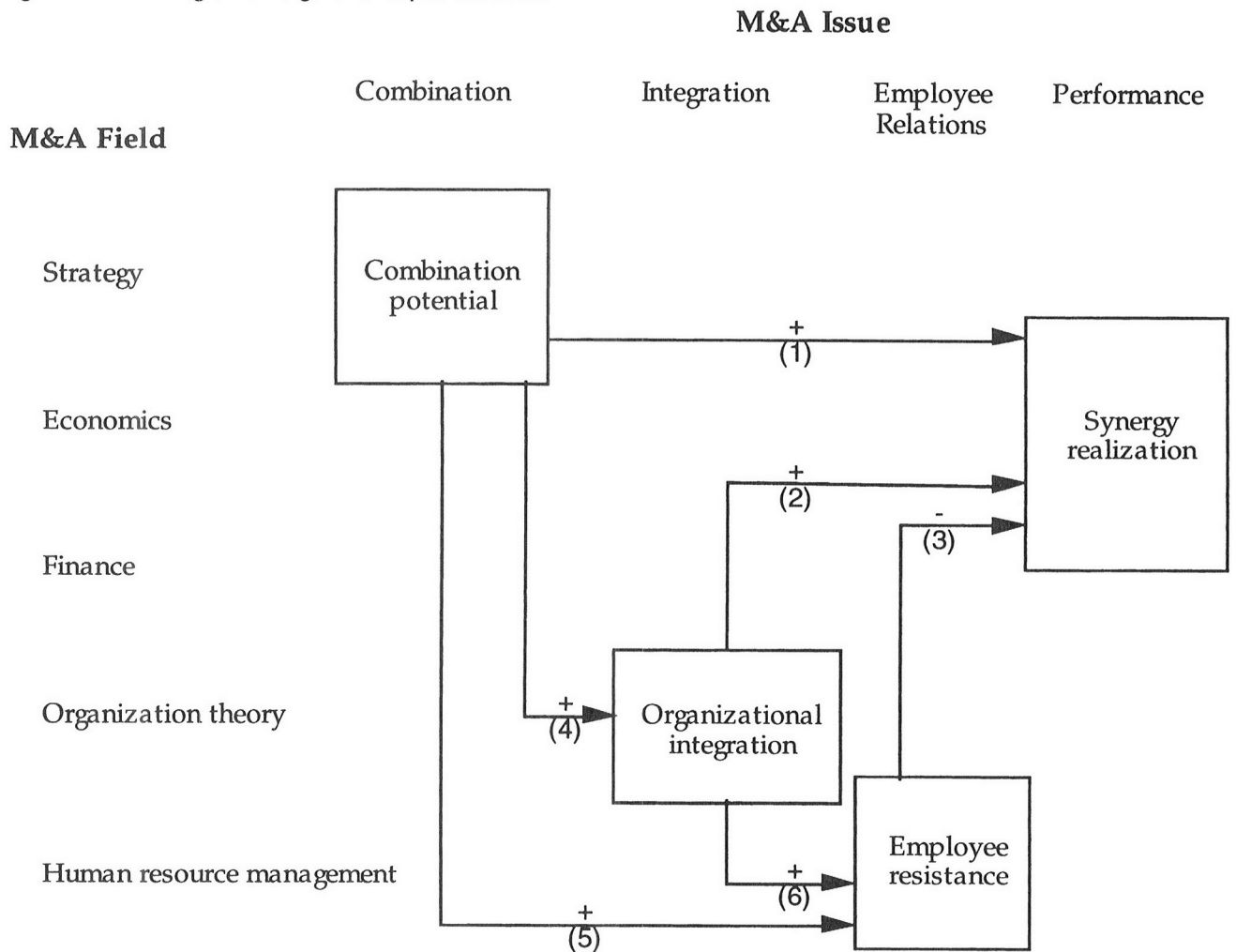
Though conceptually advantageous, the synergy realization measure is less “objective” and precise than stock-market and accounting-based measures of M&A performance. Because it typically requires the longitudinal collection of rich, idiographic case studies, we relied on the case survey method. The following sections elaborate on our basic model as we develop specific hypotheses on how synergy realization is affected by strategic (combination potential), organizational (organizational integration), and HRM (employee resistance) factors. (See Figure 2.)

Combination Potential

Theories of M&As that emphasize value creation tend to highlight the importance of efficiency gains derived from various synergy sources (e.g., Chatterjee 1986, Lubatkin



Figure 2 An Integrative Merger and Acquisition Model^a



^aNumbers in parentheses refer to hypotheses.

1983), including (1) operational synergies in production, marketing, R&D, and administration achieved through economies of scale (Bain 1959, Lloyd 1976), vertical economies (Chandler 1977, Harrigan 1984, Williamson 1975), and economies of scope (Seth 1990), (2) collusive synergies from market and purchasing power (Caves and Porter 1977, Chatterjee 1986, Scherer 1980), (3) managerial synergies from applying complementary competencies or replacing incompetent managers (Davis and Stout 1992, Lorsch and Allen 1973), and (4) financial synergies from risk diversification and coinsurance (Lubatkin 1983, Seth 1990). The various sources of synergy define a combination's potential, which in turn is expected to affect the extent to which synergies will be realized in an acquisition. That expectation reflects the notion that M&As with very low combination potential

are not likely to realize many significant efficiencies, whereas high-potential combinations provide greater opportunity for synergy realization.

The combination potential of M&As is usually conceptualized in terms of their degree of relatedness (Datta 1991, Kusewitt 1985, Singh and Montgomery 1987), as gauged by the industry affiliations (SIC codes) of bidder and target (e.g., Morck et al. 1990). However, traditional conceptualizations of relatedness between joining firms focus on the similarity of their operations (e.g., Shelton 1988, Singh and Montgomery 1987, Montgomery and Hariharan 1991), with strategic differences often viewed as less valuable than similarities or even as dysfunctional (Shanley and Correa 1992). As a result, traditional conceptualizations of relatedness do not fully capture complementary synergy sources that may be present



throughout the value chain. Such synergistic complementarities—different products, market access, or knowhow that fit with and enhance one another—have been found to be key success factors in qualitative studies of M&As (Hitt et al. 1993). Hence, synergies can be achieved through both “economies of sameness” (from accumulating similar operations) and “economies of fitness” (from combining different, but complementary, operations). We therefore conceptualize the *combination potential* of M&As in terms of both the strategic similarity and the strategic complementarity of operations of the joining firms. As Figure 2 suggests, combination potential is intended to capture parsimoniously the performance effect of strategic antecedents of M&As.

HYPOTHESIS 1. *The greater the combination potential, the greater the synergy realization.*

Organizational Integration

Organizational and HRM researchers have pointed out that strategic combination potentials are not automatically realized, and that the extent of synergy realization depends on how the new organization is managed after the M&A deal is closed (Datta 1991, Hunt 1990, Schweiger et al. 1987). Organizational integration, defined as the degree of interaction and coordination between the two firms involved in a merger or acquisition, is commonly cited as an important consideration in the M&A process (Buono and Bowditch 1989, Pablo 1994, Shrivastava 1986, Yunker 1983). Indeed, numerous typologies of organizational integration processes have been suggested in the literature, each distinguishing between high and low degrees of integration (e.g., Haspeslagh and Jemison 1991, Hunt 1990, Napier 1989). The degree of integration has also been used as a moderator of the organizational fit/M&A performance relationship by Datta (1991), who found it to be nonsignificant in his study.

We propose that the degree of integration has a direct effect on M&A performance, as indicated in Figure 2. Although some writers have argued that organizational integration should proceed judiciously (Chatterjee et al. 1992, Levinson 1970), evidence suggests that considerable interaction and coordination are necessary to exploit the strategic interdependencies that may be present between two firms engaged in a merger or acquisition (Haspeslagh and Jemison 1991, Pablo 1994, Shrivastava 1986). Organizational integration can be divided conceptually into (1) the degree of interaction between the joining firms through, for instance, restructuring and material flows and (2) the extent of coordinative effort to improve the quality of that interaction through special integrators, transition teams, preplanning, and so forth. Both the

quantity and quality of organizational integration between joining firms should have a positive effect on synergy realization because little, or poorly-executed, interaction and coordination are unlikely to produce substantial joint benefits.

HYPOTHESIS 2. *The greater the organizational integration, the greater the synergy realization.*

Employee Resistance

Much of the extensive HRM literature on M&As pertains to individual and collective employee reactions (e.g., Hayes 1979, Larsson et al. 1996, Marks 1982, Schweiger et al. 1987, Schweiger and Walsh 1990). Individual employee reactions have been conceptualized primarily from psychological (Levinson 1970, Marks and Mirvis 1986) and career (Hirsch 1987, Walsh 1989) perspectives, whereas collective reactions have been viewed from a cultural perspective (Buono et al. 1985, Nahavandi and Malekzadeh 1988). In either case, previous research has generally shown that acquired company employees react unfavorably to M&As, a result often cited to explain why many M&As are not successful (e.g., Blake and Mouton 1985, Hambrick and Cannella 1993, Walter 1985). Unfortunately, with few exceptions (Chatterjee et al. 1992, Datta 1991), the notion that negative employee reactions help account for unsuccessful M&As has historically been based on evidence that is more anecdotal than empirical (e.g., Arnold 1984, Scarby 1969).

Why are employee reactions to M&As so negative? First, research from a psychological perspective has identified such problems as “we versus they” antagonism, condescending attitudes, distrust, tension, and hostility (Astrachan 1990, Blake and Mouton 1985, Levinson 1970). Relatedly, Marks and Mirvis (1986, p. 41) describe the “merger syndrome,” whereby employees of the acquired firm “mourn a corporate death,” and deal with worst-case rumors, various stress reactions, and constricted communication. Second, M&As can severely affect career plans of employees by forcing layoffs, relocation, and the loss of individual influence (Greenwood et al. 1994, Hirsch 1987, Walsh 1989). For example, in a study of a multi-billion dollar merger, Gaertner (1986) found that career mobility, career patterns, and career development activities were all adversely affected in substantial ways. Finally, culture clashes are not uncommon during the integration process as two organizations, each with established routines, attempt to reach some type of accommodation (Chatterjee et al. 1992). Typically, it is the acquired firm that finds its cultural traditions most challenged. The resulting conflict has been described in terms of the disturbance of human rights (Walter 1985), cultural retrenchment (Altendorf 1986), countercultures

(Buono and Bowditch 1989), and cultural rejection (Sales and Mirvis 1984).

Hence, we find considerable support for the idea that *employee resistance*, defined as the individual and collective opposition of employees to the combination and subsequent integration of the joining firms, is associated negatively with M&A performance. The opposition can be both active (e.g., by voice, voluntary exits, and sabotage) and passive (e.g., absenteeism, disobedience, and shirking), and is expected to undermine significantly the actual realization of synergies during the integration process.

HYPOTHESIS 3. *The greater the employee resistance, the less the synergy realization.*

Interrelationships Among Antecedents of M&A Performance

We have argued that combination potential, organizational integration, and employee resistance are all important antecedents to M&A performance in general, and synergy realization in particular. Taken individually, none of those factors is new to the literature. Taken together, however, they afford a synthesis of the present state of research on strategic, organizational, and HRM influences on M&As. In addition, a fundamental contribution of the integrative framework we develop is its ability to represent the interrelationships among the three factors simultaneously. Hence, it not only opens up the possibility of understanding how those primary antecedents of M&A success are interrelated, but also facilitates examination of how other critical aspects of M&As affect acquisition performance.

We begin by considering three types of interrelationships among combination potential, organizational integration, and employee resistance, as depicted in Figure 2. Firms involved in M&As with great synergy potential are more likely to interact and coordinate their actions than those with low combination potential (e.g., Buono and Bowditch 1989, Shrivastava 1986). To a large extent, that expectation is driven by the greater need for high-potential M&As to integrate organizational activities effectively to achieve synergies (Haspeslagh and Jemison 1991). Hence, combination potential is likely to increase the degree of organizational integration in M&As.

HYPOTHESIS 4. *The greater the combination potential, the greater the organizational integration.*

In addition, employee resistance may be influenced by both combination potential and organizational integration. When the potential synergies to be achieved are significant, we might expect employees to react more negatively. Incentives to cooperate during the integration

process are almost certainly affected by employee perceptions about their future role in the new organization (Greenwood et al. 1994). However, because many of the benefits and efficiencies that arise from M&As are due to such activities as removal of overlapping positions and consolidation of structural hierarchies (Buono and Bowditch 1989, Porter 1987), employee resistance may be most severe when combination potential is great. Correspondingly, Walter (1985) suggests that M&As with fewer potential synergies tend to experience less cultural conflict.

HYPOTHESIS 5. *The greater the combination potential, the greater the employee resistance.*

As noted, the degree of integration between joining firms may not only help realize synergies, but also embolden employees to resist the changes more actively. Such employee resistance is propelled by a broad set of actions that often take place as organizations interact and coordinate operations, such as restructuring plants, consolidating functions, adjusting administrative procedures, and preparing transition teams (Napier 1989, Shanley and Correa 1992). Each of these activities increases uncertainty and stress among employees who must wonder about the stability of their departments and jobs (Marks and Mirvis 1986), and represents significant change in its own right. With the potential disruption of individual careers, work groups, and organizational culture comes resistance to change (Blake and Mouton 1985, Lawrence 1969, March 1981, Schein 1985), and the likelihood that organizational integration after M&As will be met with employee resistance and noncooperation.

HYPOTHESIS 6. *The greater the organizational integration, the greater the employee resistance.*

Although combination potential, organizational integration, and employee resistance are key determinants of how successful an acquisition will be, managers may have difficulty attending to all three at once. Acquiring firms that emphasize combination potential and organizational integration may risk significant employee resistance that could disrupt the acquisition, whereas firms that emphasize placating employees may be conceding much of the "upside" associated with greater potential and integration. Hence, the conflicting requirements associated with those key acquisition performance antecedents highlight a potentially important tradeoff facing managers that has not been examined empirically to date. Our integrative framework facilitates such an examination of the potential tradeoffs managers face in balancing strategic, organizational, and human resource considerations in M&As.

We are also interested in examining how such critical M&A factors as management style similarity, cross-border combination, and relative company size affect acquisition performance. Each of those factors was selected for study because the literature suggests its importance in explaining acquisition success. However, in each case, the precise manner in which M&A performance is enhanced is not at all clear. Because our model formally considers combination potential, organizational integration, and employee resistance, we can investigate the means by which management style similarity, cross-border combination, and relative company size affect synergy realization.

Management Style Similarity

Management style similarity—defined as the degree to which managers in combining organizations emphasize risk-taking, authority, and structure—may affect synergy realization in two different ways. First, when management styles are similar across organizations, the level of cooperation is often enhanced and perceptions of the degree of change taking place may be cushioned (Diven 1984, Marks 1982, Buono and Bowditch 1989, Walter 1985). Hence, the extent of employee resistance to an acquisition may be attenuated. Second, cooperation can increase the likelihood that synergies will be realized because the interaction and coordination necessary for M&A success can proceed with less contentiousness than might otherwise occur (Chatterjee et al. 1992, Datta 1991). Although both arguments have been made in the literature, no direct investigation of their relative efficacy has been reported.

HYPOTHESIS 7a. The greater the management style similarity, the greater the organizational integration.

HYPOTHESIS 7b. The greater the management style similarity, the less the employee resistance.

Cross-border Combination

Synergy realization may be affected by whether the joining firms are located in the same country. However, research has not been able to indicate precisely how cross-border combination affects M&A performance. Our integrative model enables us to investigate three alternatives. First, from an organizational perspective, cross-border mergers can impede the interaction and coordination needed to realize synergies because of geographic distance as well as legal, financial, and other country differences (Lindgren 1982, Marks and Mirvis 1993). Second, from a HRM perspective, cross-cultural differences at the societal level can exacerbate culture clashes that promote employee resistance (Calori et al. 1994, Kogut and Singh 1988). Finally, and in contrast to the first two

arguments, a strategic perspective suggests that cross-border mergers may speed new market access and promote globalization synergies (Forsgren 1989, Olie 1990). Hence, cross-border M&As can enhance combination potential in ways that are not available domestically. In all, the effect of cross-border combination on acquisition performance is somewhat controversial, with different perspectives suggesting other, sometimes conflicting, explanations. The following hypotheses summarize our discussion.

HYPOTHESIS 8a. Cross-border M&As are positively associated with combination potential.

HYPOTHESIS 8b. Cross-border M&As are negatively associated with organizational integration.

HYPOTHESIS 8c. Cross-border M&As are positively associated with employee resistance.

Relative Size

The relative size of a target firm and a bidder (or a junior partner and a senior partner in a merger) may be an important consideration in explaining synergy realization for two reasons. First, when the bidder is much larger than the target, the combination potential will necessarily be limited by size constraints (Kusewitt 1985, Seth 1990). Without the necessary critical mass, relatively small acquisitions are less likely than larger M&As to offer the full range of combination potential. Second, smaller M&As may not receive sufficient managerial attention to turn potential synergies into realized ones (Diven 1984, Ravenscraft and Scherer 1987). Consistent with that logic, Kitching (1967) found that in a sample of 69 acquisitions, the sales of the acquired firm constituted less than 2% of the acquirer's sales in 84% of the transactions classified as failures. More recent research has confirmed those findings (Hunt 1990), suggesting that organizational integration and the relative size of target to bidder will be positively associated. Again, our integrative model enables us to investigate the relative importance of the two arguments.

HYPOTHESIS 9a. The greater the relative size of target to bidder, the greater the combination potential.

HYPOTHESIS 9b. The greater the relative size of target to bidder, the greater the organizational integration.

Methods

We used the case survey method to test our model. Case surveys constitute a relatively inexpensive and powerful method of identifying and testing patterns across studies (Lucas 1974, Larsson 1993), particularly when the area

in question is dominated by case studies (Yin and Heald 1975), the organization is the unit of analysis, the researcher is interested in incorporating a broad range of conditions (Jauch et al. 1980), and experimental design is not critical (Bullock and Tubbs 1987). The basic procedure is to (1) select a sample of case studies relevant to the chosen research question, (2) develop a coding scheme for systematic conversion of qualitative case descriptions into quantified variables, (3) use multiple raters to code the cases, measuring interrater reliability, and (4) statistically analyze the coded data.

Several strengths of the case survey method have been identified in the methodological articles cited above. First, case surveys tap the rich, complex data reported in most case studies. The method can thereby overcome the typical lack of processual and contextual depth in questionnaire surveys. Second, the case survey method pools relevant cases into larger samples to overcome the major drawbacks of single case studies, their inability to examine cross-sectional patterns and to generalize to larger populations. Third, the use of coding schemes and cases allows replication and the measurement of reliability. Fourth, researchers using case surveys can actively control for and analyze how studies change over time by including the time period of the case as a variable, instead of discarding "dated" studies and thereby missing opportunities to identify learning over time among the studied population. Finally, case surveys help bridge the gap between quantitative and qualitative research (Jick 1979), nomothetic and idiographic research (Luthans and Davis 1982), and positivistic and humanistic/interpretive research (Lee 1991). Mintzberg et al. (1976), Miller and Friesen (1977, 1980), Osborn et al. (1981), and Bullock and Lawler (1985) have demonstrated the usefulness of the method for investigating complex organizational processes.

Given the specific and sensitive nature of issues related to synergies and especially employee resistance, we deemed the case survey to be more suitable than a questionnaire, which tends to yield relatively low response rates for complicated or sensitive questions (Ansoff et al. 1971, Datta 1991), and is subject to biases from *ex post* rationalization (Miller and Friesen 1977) and common method variance (Podsakoff and Organ 1986). In addition, relying solely on archival data was not feasible because of the difficulty of capturing the integration process that was central to our study through secondary sources. The complex processual and contextual nature of M&A integration requires more intensive research methods (Hunt 1990). Hence, the case survey method, as a

medium-grained methodology (Harrigan 1983), is particularly well-suited for such a study because it "combin[es] the generalizability of coarse-grained methodologies (cross-sectional analysis using large data bases) with the detail of fine-grained methodologies (individual case studies)" (Datta 1991, p. 294).

Sample

More than 500 references to M&As in the United States and Europe were identified from bibliographies, case catalogues, reference lists, computer searches, and direct inquiry of colleagues. Through further exploration of titles, keywords, and abstracts, as well as prior knowledge, 112 empirical case studies on integration processes were collected from research journals and books, dissertations, conference proceedings and papers, teaching cases, business publications, and unpublished papers. By casting such a wide net for potential cases, we avoided premature exclusion of studies based on arbitrary *a priori* judgments about their methodological rigor, publication status, or age (Bullock and Tubbs 1987). Hence, the case survey method enabled us to test for possible systematic differences among sources to make informed judgments on which cases to include or exclude. Even cases based on *Fortune* articles (Miller and Friesen 1977, 1980; Osborn et al. 1981) and student reports (Mintzberg et al. 1976)—sources that would not generally be considered rigorous—have been used successfully.

A detailed screening of the cases to assess the relevance and completeness of the actual case descriptions yielded a final sample of 61 cases. To be included, a case study had to (1) describe a specific merger or acquisition, (2) contain at least two pages of description on both strategic and organizational issues, and HRM issues, and (3) include a description of at least one year of the integration process. The final case sample consisted of a wide set of domestic and cross-border M&As of varied sizes and types completed during a period of more than 30 years in most major industries and in more than 10 home countries. Selected case studies were associated primarily with the fields of organization, economics, strategy, and HRM, and had an average length of 50 pages. Appendix A is a descriptive listing of the case sample.

We tested for possible sampling biases in two ways. Systematic differences among case sources and designs were assessed by using several methodological control variables as described in the next subsection. The representativeness of the sample was tested by comparing the M&As we studied with the population of M&As. A series of *t*-tests comparing the case survey sample with several larger samples of M&As in the United States and Europe (e.g., U.S. Federal Trade Commission 1978, Montgomery

and Wilson 1986, Ryden 1972) along such dimensions as acquisition type, relative size, and the incidence of subsequent selloffs indicated no significant differences between the sample and the population from which it was drawn. Hence, our sample appears to be representative of the population of M&As, enhancing external generalizability.

Measures

The original coding scheme was built primarily on 5-point scales (plus an "insufficient information" alternative for each item) to capture as much information as possible, with interrater reliability serving as a quality constraint. Items that could not be coded reliably at a 5-point level of detail were collapsed to fewer points until acceptable reliability was obtained (Larsson 1993). In that way, we tried to maximize the amount of information captured through coding. (Alternatively, we could have used less detailed scales originally to maximize initial reliability. However, such an approach would have artificially reduced the amount of information captured by the coding instrument, yielding more coarse-grained measures than necessary.) The original coding scheme included 84 items; however, only items actually used in the study are described in Appendix B.

A total of 16 raters were involved in the coding process. Twelve had actually written the cases they coded, two other raters were experienced M&A researchers, and two were senior doctoral students. All but two were blind to the research hypotheses. In general, each case was coded by three different raters; 14 cases were coded by only two raters for language reasons.

The 12 case authors coded their own cases, 33 in total. In addition, another author provided extra information that contributed to the coding of several variables in 10 other cases that author had written. Author participation was highly valued because it provided (1) extra information not included in the case reports (Bullock and Tubbs 1987), and (2) secondary validation of the codings as case authors were the primary researchers who had first-hand knowledge of the actual cases (Lucas 1974). For example, additional information provided by case authors facilitated the replacement of almost all instances of "insufficient information" with substantive codings in the 33 cases they coded. It also enabled us to test for possible differences between author-validated codings and the nonvalidated codings of the other cases (as described below). In all, the participation of case authors in the coding process and the inclusion of three different raters for most cases were expected to enhance substantially the validity and reliability of the data.

Dependent Variable. We used a total of 11 items to

capture the extent of synergy realization from a merger or acquisition, including realized benefits from purchasing, production, marketing, market power, administration, vertical economies, new market access, cross-selling, transfer of current know-how, creation of new know-how, and other substantial synergy sources that may be described in a case. Those items capture the major types of synergy associated with M&As (e.g., Chatterjee 1986, Lubatkin 1983, Porter 1985, Seth 1990). Each of the items was coded on a scale as low (0), moderate (1), or high (2), and then they were summed to create an overall measure of synergy realization (Cronbach $\alpha = 0.68$). The synergy realization variable included some items, such as *consolidation of competitor* and *consolidation of supplier or customer*, that would not be expected to covary. As a result, reliability estimates such as Cronbach's alpha may actually be quite conservative. In general, however, alpha greater than 0.60 is considered good in research on organizations (Eisenhardt 1988, Finkelstein 1992, Van de Ven and Ferry 1980).

As an example, consider the acquisition of the paint company Nordsjo by Casco, Sweden's leading adhesive maker. Synergy realization was estimated to be as high as 20% of the joint earnings of the two companies over five years, gains arising from "increased purchasing power . . . , increased market power . . . , and the greater expansion base created by complementary competencies and combination opportunities" (Larsson 1990, p. 170). Synergy realization was coded as high in that case for 6 of 11 items and as moderate for one item, resulting in one of the highest total scores in the sample (13).

Independent Variables. Combination potential was measured as the sum of four items: similarity of marketing operations (e.g., geographic markets, customer groups, and industries); similarity of production operations (e.g., types of input, process, and product); complementarity of marketing operations (e.g., possible transfer of marketing capabilities to new markets or new products); and complementarity of production operations (e.g., possible vertical economies by transferring production capabilities) (Cronbach $\alpha = 0.66$). Because combination potential captures both similarities and complementarities between organizations involved in a merger or acquisition, the reliability estimate reported may be understated.

The importance of complementarities for combination potential is evident when one considers the acquisition of Italian appliance maker Zanussi by Electrolux. According to the case narrative, "there were not many overlaps; we were strong where Zanussi was weak, and vice versa". There were significant complementarities in products, markets, and opportunities for vertical integration"

(Ghoshal and Haspeslagh 1990, p. 7). Marketing and production complementarities were coded as high and very high, respectively, whereas marketing and production similarities were coded as high and moderate, respectively. In all, the Electrolux-Zanussi case had one of the highest combination potentials in the sample (16).

Organizational integration was computed as the sum of (1) the extent of operational interaction and (2) the employment of coordinating mechanisms and structures during the post-combination integration period (Cronbach $\alpha = 0.78$). To illustrate, when Lykes made a conglomerate acquisition of Youngstown Sheet & Tube in 1969, organizational integration was minimal (coded as very low on both items). However, the subsequent horizontal acquisition of Lykes/Youngstown by LTV (parent of J&L Steel, the seventh largest U.S. steel producer at the time), resulted in "... a drive to improve Youngstown's operations and maximize integration economies. Youngstown's corporate headquarters and ancillary offices were closed, and the two firms' sales forces were combined" (Ravenscraft and Scherer 1987, p. 278). In the latter case, both organizational integration items were coded very high.

Employee resistance was measured as the active and passive opposition of acquired company employees to the acquisition. To assess whether employee resistance varied over time, we measured resistance separately for the first and second halves of the integration process described in each case. The resulting measure of employee resistance was computed by taking the mean score across those stages (Cronbach $\alpha = 0.60$).² The importance of a time dimension to the employee resistance measure is evident in the following example: "In DC, the strong preference to remain independent and preserve the culture, when coupled with a militant strategy and a 'we-they' orientation toward GrandCo, all served to polarize cross-cultural relations and promote conflict." Subsequently, "the relationship between DC and GrandCo improved over the years" (Sales and Mirvis 1984, pp. 110, 131). As a result, employee resistance was coded as high in the first half of the studied integration period, but as only moderate during the second half.

Management style similarity was measured by comparing the degrees of formality and participation across merging organizations. For example, in "Bank A, the CEO style was reported ... as being participative and ... egalitarian. In sharp contrast, the CEO of Bank B was seen as ... 'elitist' [and] authoritarian. ... Management style and tone in Bank B was reported by employees to be 'management by crises,' while in Bank A, actions and decisions were perceived by its members to be more

planned. ... With respect to the relative orientation toward people vs. task, in Bank A there seemed to be a much stronger emphasis on the 'human side' of business than in Bank B" (Buono et al. 1985, pp. 485-487) (coded as very low management style similarity).

The final two measures were straightforward. Cross-border mergers were coded as one (1) if the bidder and target were headquartered in different countries and as zero (0) otherwise. Relative company size was coded simply as the ratio of target to bidder size.

Control Variables. Case surveys enable researchers to examine relevant characteristics of the cases themselves to assess their impact, if any, on the theoretical constructs of interest. Hence, we could assess empirically whether any of the cases studied should be excluded from the analysis because of some potential bias related to how and when they were conducted. We examined five control variables to investigate whether design differences across cases unduly affected results: (1) the extent of data collection in the case (case data collection), (2) whether the case author adopted the perspective of the acquiring firm, the acquired firm, or a mix of both (case perspective), (3) publication status of the case (case publication), (4) the average calendar year of the integration period described in the case (case calendar year), and (5) the length of the integration period described in the case (case period length).

Reliability and Validity of the Data

Despite their many important advantages, case surveys may be subject to potential common methods problems because of their reliance on subjective coding for all variables in a study. We therefore conducted several alternative tests of reliability and validity, described in Appendix C.

In all, our tests of reliability and validity appear to provide strong support for the measures used in the study. We were able to compare case survey measures with ratings by individuals actually involved in the merger or acquisition, objective data collected from public and private sources, event study returns based on stock market data, and internal accounting data made available by informants, finding significant associations in each test. Although each of the tests was of somewhat limited scope, the consistent pattern of results across different data sources and methods helped establish the validity and credibility of our case survey method.

Data Analysis

We used structural equation modeling (LISREL 7) to investigate the proposed relationships among synergy realization, antecedents to synergy realization, and control variables. That technique combines path analysis with

multiple regression (Jöreskog and Sörbom 1989) to provide both an overall assessment of the fit of a hypothesized model to the data and tests of individual hypotheses. LISREL is particularly well suited to testing the complex set of simultaneous equations characteristic of our hypotheses (Saris and Stronkhorst 1984).

Several models were estimated. The first, designed to provide a baseline model of the basic framework in Figure 2, included the core antecedents of synergy realization, the interactions among those antecedents, and the control variables. The second model was a parsimonious base model created by dropping the control variables that were not significant in model 1. The next three models had added paths testing H7, H8, and H9. Finally, model 6 included the paths necessary to test simultaneously all of the hypotheses in the study. It was the most comprehensive model tested, and for purposes of exposition is illustrated in Figure 3.

Results

Table 1 reports the means, standard deviations, and Pearson correlation coefficients for all variables of interest in the study. Most correlations among independent variables are not of sufficient magnitude to warrant concern. Indeed, after an *r*-to-*z* transformation (Cohen and Cohen 1983), the average correlation between exogenous variables is only 0.23. The correlation greatest in magnitude is that between combination potential and organizational integration, a result that is not at all surprising given H4. Overall, the combination of simultaneous equation modeling with the various tests of reliability and validity provide added confidence in the data used in our study.

Several of the correlations in Table 1 provide preliminary support for some of the hypotheses. Synergy realization is positively associated with both combination potential and organizational integration, which are themselves significantly correlated. However, correlations with employee resistance are all nonsignificant. In addition, management style similarity is negatively correlated with employee resistance and relative size is positively associated with both combination potential and organizational integration, findings that are consistent with hypotheses. Finally, case data collection is positively correlated with all four constructs in the integrative M&A model developed in the study, probably reflecting the fact that case authors tended to gather more data when there were more data of interest to gather. Importantly, a great attribute of the case survey method is its ability to control for such characteristics of case study design, affording clear tests of hypotheses.

Table 2 reports results from the LISREL analysis. We examined several fit indices to assess the appropriateness of the models tested. For example, for model 1 the chi-square statistic with 10 degrees of freedom is 12.08 ($p = 0.280$) and the goodness of fit index is 0.957, suggesting a reasonably good fit of model to data. A similar pattern is evident for models 2 through 6. In addition, we computed the noncentralized normed fit index (NCNFI) for each model as: $NCNFI = [(F_n - df_n) - (F_t - df_t)] / (F_n - df_n)$, where F_n is the chi-square for the null model, df_n is the degrees of freedom for the null model, F_t is the chi-square for the target model, and df_t is the degrees of freedom for the target model. The NCNFI is particularly recommended for small-sample studies such as ours because it "removes the bias that can occur in the ordinary normed fit index for small samples (McDonald and Marsh 1990)" (Bagozzi et al. 1991, p. 437). As Table 2 indicates, the NCNFIs are greater than the rule of thumb of 0.90 in each model (Bentler and Bonnett 1980), indicating an acceptable fit. Finally, according to the squared multiple correlation (SMC) criterion (Hunt and Morgan 1994, Tharenou et al. 1994), the estimated models also appear to explain a significant degree of the variance in synergy realization: the SMC ranges from 0.65 to 0.67 in each model.

The parameter estimates for each model are also reported in Table 2. Consistent with our expectations, the results from model 1 indicate that the first three hypotheses predicting direct effects of combination potential (LISREL parameter = 0.463, $p < 0.001$), organizational integration (LISREL parameter = 0.415, $p < 0.001$), and employee resistance (LISREL parameter = -0.394, $p < 0.001$) on synergy realization are all supported. H4, predicting a positive association between combination potential and organizational integration, also is supported (LISREL parameter = 0.614, $p < 0.001$). However, H5 and H6 on employee resistance are rejected. Neither combination potential nor organizational integration is significantly associated with employee resistance. The pattern of results found for H1 through H6 holds in all models tested.

H7a and H7b examine the extent to which management style similarity increased organizational integration and decreased employee resistance. Model 3 in Table 2 indicates that management style similarity is related negatively and significantly to employee resistance, providing support for H7b, but not H7a.

H8a, H8b, and H8c posit the effects of cross-border M&As on combination potential, organizational integration, and employee resistance, respectively. Results are mixed. Model 4 shows an unexpectedly negative and marginally significant relationship between cross-border

Figure 3 Model of M&A Performance

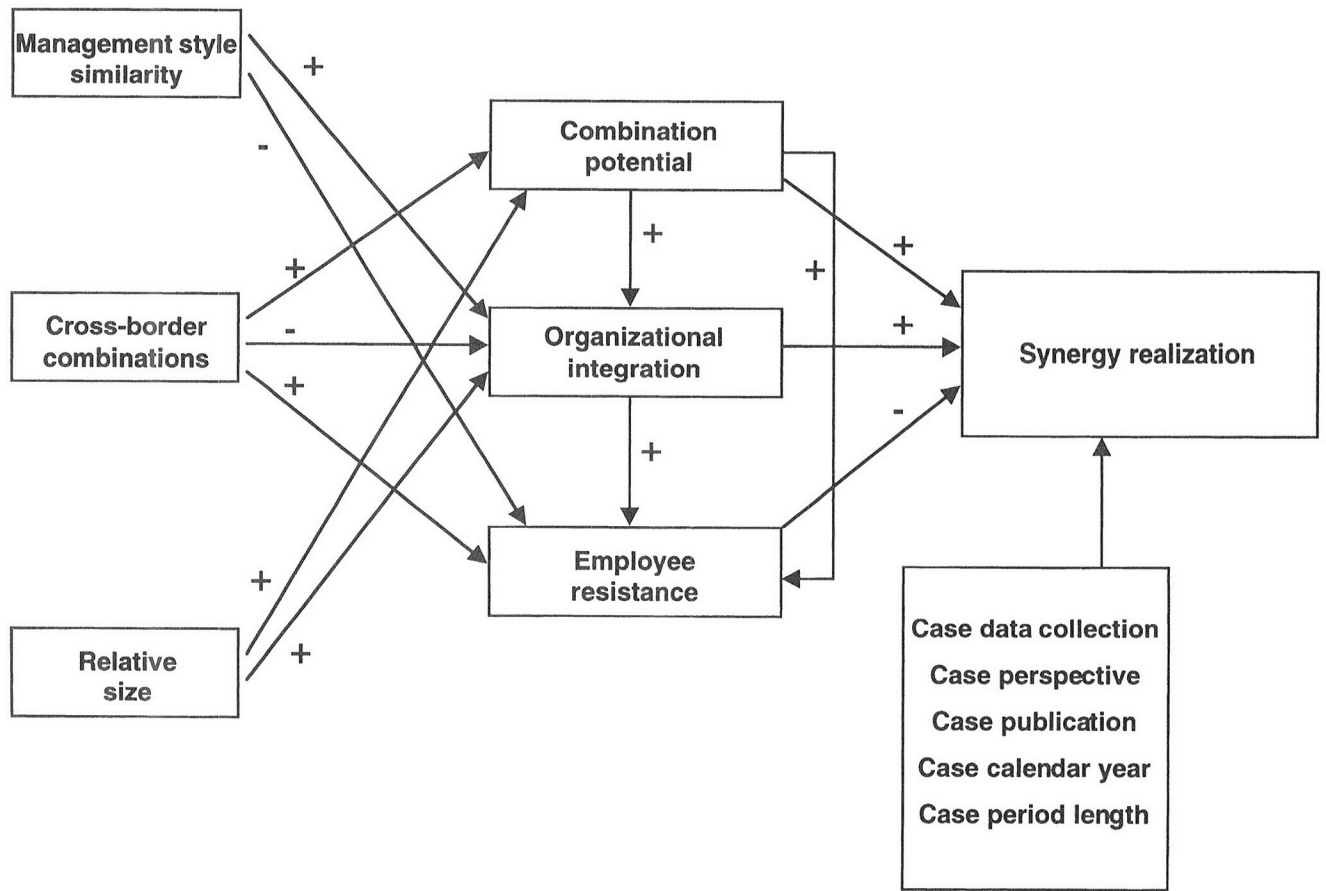


Table 1 Person Correlation Coefficients of All Variables in Study

Variable	Mean S.D. N ^a	1	2	3	4	5	6	7	8	9	10	11
1. Synergy Realization	4.25 3.73 61											
2. Combination Potential	12.48 3.84 58	0.59***										
3. Organizational Integration	5.95 2.18 60	0.66***	0.61***									
4. Employee Resistance	2.62 1.11 54	-0.22	0.24	0.14								
5. Relative Size	2.40 1.64 60	0.31*	0.36**	0.27*	0.25							
6. Management Style Similarity	1.98 0.95 60	0.06	-0.06	0.14	-0.30*	-0.08						
7. Cross-border Combinations	0.26 0.44 61	0.13	0.13	0.17	-0.20	-0.40**	0.29*					
8. Case Data Collection	2.18 0.79 56	0.34*	0.56***	0.40**	0.35*	0.42**	-0.15	-0.09				
9. Case Perspective	1.92 0.64 61	-0.17	-0.24	-0.17	0.17	0.12	-0.42***	-0.57***	0.28*			
10. Case Publication	2.97 1.17 61	-0.23	-0.52***	-0.27*	-0.24	-0.16	0.15	-0.11	-0.25	0.11		
11. Case Calendar Year	3.97 1.03 61	0.33**	0.30*	0.36**	0.06	0.02	-0.05	0.20	0.06	-0.13	-0.32*	
12. Case Period Length	2.96 1.22 53	0.04	-0.26	-0.13	-0.16	-0.05	-0.04	0.06	-0.18	-0.14	0.09	-0.16

^aDifferences are due to insufficient information coding for some variables.

*p < 0.05

**p < 0.01

***p < 0.001



Table 2 Results of LISREL Analysis

Hypothesis	Description of Path	Hypothesized Direction	Model 1 LISREL Parameter	Model 2 LISREL Parameter	Model 3 LISREL Parameter	Model 4 LISREL Parameter	Model 5 LISREL Parameter	Model 6 LISREL Parameter
1	Combination potential → Synergy realization	+	0.463***	0.441***	0.441***	0.441***	0.441***	0.441***
2	Organizational integration → Synergy realization	+	0.415***	0.459***	0.459***	0.459***	0.459***	0.459***
3	Employee resistance → Synergy realization	-	-0.394***	-0.368***	-0.368***	-0.368***	-0.368***	-0.368***
4	Combination potential → Organizational integration	+	0.614***	0.614***	0.625***	0.602***	0.595***	0.570***
5	Combination potential → Employee resistance	+	0.254	0.254	0.184	0.264	0.254	0.202
6	Organizational integration → Employee resistance	+	-0.019	-0.019	0.066	0.016	-0.019	0.076
7a	Management style similarity → Organizational integration	+			0.179			0.156
7b	Management style similarity → Employee resistance	-			-0.295*			-0.247*
8a	Cross-border combinations → Combination potential	+				0.130		0.328*
8b	Cross-border combinations → Organizational integration	-				0.093		0.097
8c	Cross-border combinations → Employee resistance	+				-0.237 ⁺		-0.167
9a	Relative size → Combination potential	+					0.359**	0.492***
9b	Relative size → Organizational integration	+					0.053	0.113
Controls	Case data collective → Synergy realization		0.068					
	Case perspective → Synergy realization		0.098					
	Case publication → Synergy realization		0.063					
	Case calendar year → Synergy realization		0.126					
	Case period length → Synergy realization		0.193*	0.158 ⁺	0.158 ⁺	0.158 ⁺	0.158 ⁺	0.158 ⁺
Chi-square			12.08	0.63	2.19	6.02	9.82	12.18
d.f.			10	2	3	4	5	8
p			0.280	0.729	0.534	0.197	0.080	0.143
Goodness of fit index (GFI)			0.957	0.996	0.988	0.967	0.949	0.954
Bentler noncentralized normed fit index (NCNFI)			0.986	1.000	1.000	0.977	0.949	0.960

⁺p < 0.10

*p < 0.05

**p < 0.01

***p < 0.001.



M&As and employee resistance, but model 6 does not. Cross-border M&As are not significantly associated with combination potential in model 4, but the relationship is positive and significant—as hypothesized—in model 6. Overall, those results provide some support for H8a, and do not support H8b and H8c.

Finally, H9a and H9b were tested by adding paths from relative size to both combination potential and organizational integration. As models 5 and 6 indicate, the former path is significant, thereby supporting H9a but not H9b.

The LISREL analysis also indicated that only one control variable, case period length, was significantly associated with synergy realization when the full model was tested. By definition, such methodological controls are viewed as artifacts of the case survey method. For example, less synergy realization is likely to be evident in a case when the studied integration period is curtailed. The fact that tests of hypotheses were conducted after controlling for such design artifacts provides greater confidence in the results.

Discussion and Conclusions

Our results provide considerable support for an integrative perspective on mergers and acquisitions. The adoption of the synergy realization construct to assess M&A performance represents a departure from previous work, and the results we report should be evaluated accordingly. Measuring M&A success in terms of synergy realization is an attempt to bring the dependent variable of interest closer to the phenomenon under investigation. As discussed previously, traditional measures of M&A performance in accounting and economics are problematic, especially when a study is examining many of the internal dynamics that occur after an acquisition is completed. Although it is not without difficulties, notably the subjective nature of the operationalization, we believe synergy realization more directly captures what goes on in an acquisition than measures of financial performance. Further, to the extent that combination potential, organizational integration, and employee resistance are the key antecedents to M&A success, researchers must adopt dependent measures that have the potential to reflect their effects.

All three of the major antecedents to M&A success were related significantly to synergy realization. Our results on combination potential are particularly interesting in light of how we defined that idea. In contrast to virtually all previous studies on acquisition relatedness, which highlight the extent to which two merging firms are similar, we argue that strategic differences can create

opportunities for synergistic complementarities by combining different operations that enhance the competitive position of the resulting entity. Assessing combination potential in terms of both similarities and complementarities is considerably more direct than relying on SIC codes or classification schemes that cannot differentiate among potential sources of value creation (Dess et al. 1995). The strongly positive and significant relationship between combination potential and synergy realization we report provides some support for that perspective.

In a post-hoc inquiry, we redid the LISREL analysis after replacing combination potential first with similarity (of marketing and of production operations) and then with complementarity (also of marketing and production operations) to see how robust our results would be when combination potential is broken down to its components. In both cases we found a positive and significant association with synergy realization, with most other results staying essentially the same (but see the following discussion of employee resistance for an exception). Hence, for possibly the first time in a relatively large sample, we established that the potential benefits from sharing resources across organizations increases the success of an acquisition in terms of the specific synergies actually realized.

The findings on complementarity may be even more interesting. Independently of any similarities between joining firms, the presence of complementary operations increases the probability of acquisition success by boosting synergy realization. That post-hoc finding further supports our contention that “economies of fitness” arising from complementary operations—and not just “economies of sameness” arising from similar operations—are important components of what makes acquisitions work. The fact that explicit consideration of complementarities has been missing in previous empirical research on M&As may be one reason for the mixed results of the work on acquisition “relatedness” (e.g., Blackburn et al. 1990, Chatterjee 1986, Elgers and Clark 1980, Lubatkin 1987, Matsusaka 1993, Seth 1990, Singh and Montgomery 1987). Clearly, it represents an opportunity for future work.

For practitioners, this finding serves to highlight a potential driving force that tends not to be highlighted. In several cases in our sample of M&As, success can be attributed as much to economies of fitness as to economies of sameness. Consider again the case of Electrolux’s acquisition of Zanussi. Combination potential was driven by significant production and marketing complementarities, and overall synergy realization was among the highest in the sample. As is evident in that case, there may be

benefits to focusing on complementarities in M&A situations. For both practitioners and researchers, the findings pertaining to complementarities warrant careful consideration.

The acquisition integration process is often cited as an essential element in making M&As work (e.g., Haspeslagh and Jemison 1991). However, few studies have statistically examined organizational influences on M&A success in both a relatively large-scale sample of acquisitions and in conjunction with other antecedents. Of all the determinants of synergy realization we studied, organizational integration was the strongest predictor. We found that the greater the degree of interaction and coordination between combining firms, the greater the degree of synergy realization. That finding is consistent with those of many writers on M&As (e.g., Pablo 1994, Shrivastava 1986), and suggests that it may not be enough for a merger or acquisition to have potential synergies to exploit; structural and processual changes must be undertaken that allow those synergies to be realized.

Interestingly, the strong association between combination potential and organization integration in our sample seems to indicate that acquisition integration was almost a natural consequence of high potential combinations. On closer examination, however, a somewhat different picture emerges. Of the 30 cases (of 61) in which combination potential scores were at or above the median, 18 (60%) also scored above the median in organizational integration, but 12 did not. So, in 40% of the cases where combination potential was high, organizational integration was actually low. That such a sizable number of M&As had those dual characteristics is very much in line with the view of writers who argue that firms tend to underemphasize the importance of the integration process to M&A success (e.g., Arnold 1984, Haspeslagh and Jemison 1991, Lubatkin 1983, Shrivastava 1986). Further, the lack of attention to integration issues has serious repercussions for synergy realization. A comparison of the high potential/high integration subgroup with the high potential/low integration subgroup reveals that synergy realization was significantly higher in the former set than in the latter ($t = 4.80$; $p < 0.001$). In fact, average synergy realization scores were more than four points higher (synergy realization ranged from 0 to 13) when high organizational integration accompanied high combination potential than when potential was high and integration was low. Thus, our results provide strong support for the importance of organizational integration as a means of synergy realization when combination potential is high.

One final point on the role of organizational integration is worth highlighting. Why would firms not expend the

effort on integration when combination potential is high? Our data do not speak directly to that issue, but some inferences are possible. Certainly, managers in some acquiring firms may not realize how important acquisition integration is for M&A success (Diven 1984, Kitching 1967), and problems in pre-acquisition deal-making are well-known (Jemison and Sitkin 1986). However, the mere presence of significant synergistic potential in an acquisition may necessitate nontrivial efforts to realize it, and perhaps the greater the combination potential, the more compelling the need for integration. High potential acquisitions are most challenging because they require effective interaction and coordination to realize their potential. When an acquisition affords fewer potential synergies, the problem of realizing them is reduced because cooperation is less important and coordination costs are less severe. As Lubatkin and O'Neil (1987, p. 668) have argued, "administrative business risk" is greater when there is significant combination potential. Hence, although combination potential is an important driving force for M&A success in general, acquisition integration is particularly important for realizing synergies when such potential is high. That may also be another reason why "related" acquisitions do not always do better than "unrelated" acquisitions (Elgers and Clark 1980, Lubatkin 1987): realizing synergies entails considerably higher interaction and coordination costs in related acquisitions than it does in unrelated transactions.

The third major antecedent to M&A success, employee resistance, was negatively associated with synergy realization. We argued that M&As often have a severe effect on employees in acquired firms, to the extent they may experience significant stress, career disruptions, and culture clashes in the months and perhaps years following the merger or acquisition. Those consequences of M&As in turn engender resentment, hostility, and dissatisfaction, increasing employee turnover in the process. Our study shows just how problematic such employee resistance is, and the difficulty of realizing synergies from acquisitions under such circumstances. For example, although combination potential was very high and integration moderate in the acquisition of Getty Oil by Texaco in 1984, severe employee resistance greatly reduced the extent to which synergies actually were realized in that deal (Altendorf 1986).

The LISREL analysis of how combination potential and organizational integration affect employee resistance is also telling. The LISREL parameters for both factors are nonsignificant, implying that employee resistance tends to be a generalized phenomenon in most M&As. Although such a conclusion cannot be refuted on the basis of our post-hoc analysis splitting combination potential

into strategic similarity and strategic complementarity, we raise one caveat. That is, although both strategic similarity and strategic complementarity are positively but not significantly related to employee resistance—as is the case for combination potential—the magnitude of the path coefficients is worth noting. The pattern that emerges indicates that similarity tends to be a stronger predictor of employee resistance than complementarity (by a factor of 2 to 10 times in models 1 through 6). In addition, employee resistance is correlated at 0.24 ($p < 0.10$) with similarity, but only at 0.14 (not significant) with complementarity. Hence, though certainly not definitive, those supplementary findings suggest that employee resistance is engendered more by strategic similarities between merging firms than by differences. Such a relationship makes sense when one considers that firms often seek to realize synergies from overlaps in production and marketing by downsizing (Larsson 1990). In contrast, combining complementary operations is likely to be seen as much less threatening to employees (Walter 1985). To the extent those suppositions are correct, they provide further support for the idea that complementary acquisitions can be an effective approach to realizing synergies. Managers—and researchers investigating M&As—may benefit by broadening their view of what combination potential is all about. Complementarities—or economies of fitness, as we call them here—may well be an underappreciated source of value creation in M&As, acting both to boost synergy realization and to ease employee resistance.

Beyond confirming the value of the integrative framework illustrated in Figure 2, our study provides evidence that highlights the mechanisms through which management style similarity, cross-border combination, and relative company size affect acquisition performance. Although each of those factors has been linked with acquisition performance in the past, previous work has not attempted to, nor been able to, clarify the mechanisms through which such relationships may hold. Including paths in the LISREL model between those M&A characteristics and the core antecedents of synergy realization enabled us to go beyond these previous strictures to indicate why management style similarity, cross-border combination, and relative company size appear to affect acquisition performance.

We found that management style similarity reduced employee resistance, even though it had little effect on organizational integration. That finding is important for it empirically establishes that management style similarity may have its greatest effect on eventual synergy realization through its attenuation of cultural differences between merging organizations, rather than by facilitating

interaction and coordination among different management groups. That employees apparently pay so much attention to such managerial differences across organizations is not that surprising given the importance of symbols and rituals in organizations and the role of an organization's leaders therein (Salancik and Meindl 1984).

We also found that combination potential was higher when the target was larger in relation to the bidder company, but that organizational integration was unaffected by acquisition size, a result that tends to support a “critical mass” argument (Kusewitt 1985) for synergy realization more than it does a “managerial attention” logic (Ravenscraft and Scherer 1987). The critical mass argument holds that the target must be of sufficient size in relation to the bidder for it to generate substantial combination potential, whereas the managerial attention argument suggests that, with enough attention and energy directed toward integrating the acquisition, synergies—regardless of their size—can be realized. Hence, our results provide new insight to previous research on the effects of relative size on acquisition performance (e.g., Kitching 1967), suggesting that bigger acquisitions do better because they offer greater synergy potential, not because managers pay more attention to the integration process when targets are large.

That finding has important implications. It suggests that relative size is a key factor to consider when selecting potential targets because of its relationship to combination potential. Advocates of the managerial attention argument—who may believe they can make small acquisitions and be successful if they spend enough time on integration—run the risk of understating the importance of combination potential in M&As. In fact, when we examined the 31 cases in which combination potential was below the median, organizational integration (whether high, 11 times, or low, 20 times) seemed to make only a marginal difference for synergy realization ($t = 1.46$, $p < 0.10$). That observation is in contrast to the highly significant difference made by integration when combination potential was high, as noted above ($t = 4.80$; $p < 0.001$). Hence, as important as organizational integration is in M&As, its greatest effect on M&A success occurs when combination potential is high. Although not unimportant when combination potential is low, the potential value-added of an integration effort is somewhat muted when acquisitions have little synergy potential. Thus, what emerges from those findings is the notion that M&As work best when both combination potential and organizational integration are high, and that deals involving only one of those characteristics may fall somewhat short.

Finally, cross-border M&As (marginally) reduced employee resistance, an unexpected finding that may provide

some insight to how the human side of merger can be better understood and managed. Perhaps employee resistance is affected not so much by the overall degree of combination potential and organizational integration as the nature of those factors in different situations. For example, combination potential may be more complementary—and hence less threatening—in cross-border combinations than in domestic M&As with overlapping operations. Certainly the positive sign between cross-border M&As and combination potential in model 6 is consistent with such logic. Another possibility is that the cultural differences that can derail effective integration in domestic M&As are more carefully attended to in cross-border combinations because of managers' heightened sensitivity to such an apparently important consideration when combining firms in different countries. As a result, though certainly not without significant challenge, cross-border M&As may actually not represent the daunting hazard they are sometimes made out to be in the popular press (e.g., *Business Week* 1995).

Conclusions

In all, our findings provide considerable support for our integrative model of M&As and have relatively clear implications for future research. Perhaps most importantly, they indicate that researchers should consider strategic, organizational, and HRM explanations for M&A success simultaneously. Each of the main antecedents to M&A performance is independently and significantly related to synergy realization. Hence, the integrative model we tested appears to have some potential and, more generally, suggests the value of theoretical synthesis to improve understanding of complex phenomena such as M&As. Further, by examining interrelationships among the antecedents to synergy realization, and how such key characteristics of M&As as management style similarity, cross-border combination, and relative size affect M&A performance, the integrative approach we adopted affords important insights. Future work on larger samples can move our efforts forward by (1) examining in greater detail the interactive effects of the three antecedents to synergy realization, (2) comparing both accounting and stock returns with synergy realization in a more comprehensive

way, and (3) testing more detailed models of M&A performance. The latter might include examination of the antecedents to different types of synergy realization, or investigation of different aspects of, say, employee resistance. Such analyses represent important future research opportunities.

In addition to highlighting the importance of synthesis, our study demonstrates that the case survey method has the potential to provide insights to difficult questions. In particular, the integrative model we tested requires relatively rich and extensive data to investigate effectively. Such data are not readily available from secondary sources, and whether traditional (questionnaire-based) survey data can generally match the degree of richness characteristic of case survey data is not clear. In a similar vein, our adoption of a complex, multidimensional construct such as synergy realization as the dependent variable calls for the type of rich and extensive data that the case survey method can produce. Thus, our choice of method is closely tied to the nature of the model investigated. Given the complex nature of the phenomena typically studied by strategy researchers, we believe the case survey method may be particularly appropriate for them (cf. Miller and Friesen 1977, 1980). By allowing both a synthesis and an empirical examination of fundamental relationships affecting M&As in our study, the case survey approach enabled us to move beyond a reliance on anecdotal evidence to a broader, yet more analytical, treatment of the phenomenon that helps to address the concerns of practitioners and researchers alike.

Acknowledgments

The study was developed from Rikard Larsson's doctoral dissertation at the University of Southern California. It was funded in part by the Institute of Economic Research, Lund University, Arthur Andersen & Co. Foundation (in Sweden), the Center for Effective Organizations (at USC), and the Bank of Sweden Tercentenary Foundation. The authors thank Warren Bennis, Tom Douglas, Michael Driver, John Haleblan, Michael Lubatkin, Patricia Riley, participating case authors Björn Alarik, Dayle Altendorf-Smith, Karen Gaertner, Bengt Johannisson, Amelie Kraus, Ulf Lindgren, Philip Mirvis, Sven Modell, Ingela Petersson, F. M. Scherer, Lena Sturesson, and Gunilla Svensson, and additional raters Daniel George, Gerry Ledford, and Susanne Östlund for their important contributions to the project.

Appendix A. Case Survey Sample

Case Title	Primary Reference	Number of Pages	Publication Status	Home HQ Country		Combination Year
				Acquiring Firm	Acquired Firm	
A--1 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
A--2 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
A--B Consumer Goods ^a	Gaertner 1986	19	Conf. pap.	US	US	1980
AMF--Harley Davidson	Ravenscraft and Scherer 1987 ^b	23	Res. book	US	US	1968
B--3 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
B--4 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
B--5 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975
Bank A--Bank B ^a	Buono et al. 1985 ^b	65	Res. article	US	US	1981
Beatrice Foods--Harman International	Ravenscraft and Scherer 1987 ^b	22	Res. book	US	US	1977
Bendix--Boise Home System	Ravenscraft and Scherer 1987 ^b	20	Res. book	US	US	1972
Bendix--Caradco	Ravenscraft and Scherer 1987 ^b	20	Res. book	US	US	1979
Bilsped--Scansped	Klintman and Modell 1992	65	Unpublished	Sweden	Sweden	1985
Boverket (Bostadstyrelsen-Planverket)	Idland and Petersson 1991 ^b	119	Unpublished	Sweden	Sweden	1988
BRIO--Alga	Larsson 1990	44	Doc. diss.	Sweden	Sweden	1982
C--6 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
C--7 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
C--8 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
C--9 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
Casco--Nordsjö	Larsson 1990	34	Doc. diss.	Sweden	Sweden	1983
Chromalloy Am. Corp.--Sintercast	Ravenscraft and Scherer 1987	18	Res. book	US	US	1959
Consolidated Foods--Robert Bruce	Ravenscraft and Scherer 1987	17	Res. book	US	US	1973
D--10 ^a	Lindgren 1982	17	Doc. diss.	Sweden	Foreign	1975--1980
Drake--Cecil	Graves 1981	25	Res. article	GB	GB	1974
EEE ^a	Marjasola 1989	17	Unpublished	Finland	Finland	1985
Electrolux--Zanussi	Goshal and Haspeslagh 1990 ^b	84	Teaching	Sweden	Italy	1984
Ericsson Info System	Dahlgren and Witt 1988	264	Doc. diss.	Sweden	Sweden	1981
Futeco Textile ^a	Alarik and Edström 1983 ^b	133	Doc. diss.	Sweden	Sweden	1976
GrandCo--DC ^a	Sales and Mirvis 1984 ^b	47	Res. article	US	US	1978
Gränges--SAPA	Johannisson 1981	104	Doc. diss.	Sweden	Sweden	1976
Gulf&Western--Marquette Cement	Ravenscraft and Scherer 1987 ^b	20	Res. book	US	US	1976
Int. Nickel of Canada--ESB	Ravenscraft and Scherer 1987	20	Res. book	Can	US	1974
Kronanverken	Johannisson 1981	105	Doc. diss.	Sweden	Sweden	1975
Leisure Group ^a	Alarik and Edström 1983 ^b	133	Doc. diss.	Sweden	Sweden	1976
LEM--Prime Motors ^a	Schwarz and Sathe 1982	19	Teaching	US	US	1975
LTV Corp--Lykes Corp	Ravenscraft and Scherer 1987 ^b	22	Res. book	US	US	1978
Lykes--Youngstown Sheet&Tube	Ravenscraft and Scherer 1987 ^b	20	Res. book	US	US	1969
Marcor (Montgomery Ward-Container)	McNichols 1983	20	Teaching	US	US	1968
McCord--Davidson ^a	Gilmore and Austin 1972 ^b	112	Teaching	US	US	1964
Milk cooperative Arla	Nyström and Utterström 1983 ^b	94	Doc. diss.	Sweden	Sweden	1971
Milk cooperative NNP	Nyström and Utterström 1983 ^b	94	Doc. diss.	Sweden	Sweden	1970
Milk cooperative Värmland	Nyström and Utterström 1983 ^b	94	Doc. diss.	Sweden	Sweden	1967
Navigator--Swedese	Johannisson 1981	92	Doc. diss.	Sweden	Sweden	1974
Penwalt Chemical--S.S. White	Ravenscraft and Scherer 1987	20	Res. book	US	US	1966
Philip Morris--ASR	Ravenscraft and Scherer 1987	18	Res. book	US	US	1960
Rothborough-Transcom ^a	Sonnenfeld and Dowd 1982	14	Teaching	US	US	1981
SKF--ATB	Larsson et al. 1994 ^b	49	Unpublished	Sweden	Netherlands	1988
SKF--Jacob	Larsson et al. 1994 ^b	19	Unpublished	Sweden	Switzerland	1987
SKF--Prototyp	Larsson et al. 1994 ^b	53	Unpublished	Sweden	Germany	1986
Slater-Walker--Crittall-Hope	Hope 1976	17	Res. article	GB	GB	1968

Stansaab--Datasab	Dahlgren and Witt 1988	165	Doc. diss.	Sweden	Sweden	1978
Svensk Apparatur--Värme&Tryck ^a	Allen and Lorsch 1974	26	Teaching	Sweden	Sweden	1962
Texaco--Getty	Altendorf 1986 ^b	214	Doc. diss.	US	US	1984
Texas Instr--Metals & Controls	Anonymous HBS case 1960	22	Teaching	US	US	1959
Textile Corporation (3 firms)	Dechamps et al. 1983	17	Teaching	US	US	1967
Textron--Talon	Ravenscraft and Scherer 1987	21	Res. book	US	US	1968
Transway/Sero--Intertrans ^a	Blake and Mouton 1985	16	Res. article	US	GB	1981
Trucking A--B ^a	Larsson 1990	6	Doc. diss.	Sweden	Sweden	1982
United Tech--Mostek	Anderson et al. 1982	11	Res. article	US	US	1979
US Industries--Great Lakes Screw	Ravenscraft and Scherer 1987	18	Res. book	US	US	1967
W.R. Grace--Letisse	Ravenscraft and Scherer 1987 ^b	24	Res. book	US	US	1969
WM Data--Edebe	Klintman and Modell 1992	205	Unpublished	Sweden	Sweden	1989

^aFictitious name.

^bAdditional references were used (available from authors by request).

Appendix B. M&A Case Survey Coding

Dependent Variable

Synergy Realization. Equal to the sum of the following 11 items (all 3-point scales from low = 0 to high = 2):

Estimate the degree to which the merger or acquisition realized the following benefits:

- Consolidated *purchases* of input to reduce purchase price/cost per unit (e.g., like through volume rebates);
- Consolidated *production* to reduce production cost per unit (e.g., like utilization of excess capacity);
- Consolidated *marketing* to reduce marketing cost per unit (e.g., like integrated salesforce with fewer employees);
- Consolidation of *competitor* to increase market power by reducing competition, thereby being able to command higher prices (without losing corresponding volume);
- Consolidated *administration* to reduce administrative overhead per unit (e.g., like elimination of duplicated head offices);
- Consolidation of possible *supplier or customer* to reduce transaction costs per unit (e.g., like elimination of intermediate storage, marketing, and purchasing);
- *Access* to new geographic market(s) through the other firm's established local sales organization to increase joint sales;
- *Cross-selling* of complementary products to joint customers to increase joint sales;
- Transfer of *current know-how* (including R&D) from one firm to the other for the latter firm to manage its operations more effectively;
- Creation of *new know-how* from the interaction between the joining firms that one firm can use to manage its operations more effectively;
- *Other* explicit sources of synergy in the case study that are of significance to the estimation of the total amount of synergy realization made up of these synergy sources (e.g., like financial).

Independent Variables

Combination Potential. Equal to the sum of the following four items (all 5-point scales from very low = 1 to very high = 5):

- *Marketing Similarity.* Estimate the similarity of marketing operations between the joining firms based primarily on their geographic markets, customer groups, and main industries.

- *Production Similarity.* Estimate the similarity of production operations between the joining firms based primarily on their input, process, and product types.

- *Marketing Complementarity.* Estimate the complementarity of marketing operations between the joining firms in terms of the extent to which their different marketing capabilities fit each other and can thereby be transferred between the different markets and products of the two firms.

- *Production Complementarity.* Estimate the complementarity of production operations between the joining firms in terms of the extent to which their different production capabilities fit each other and can thereby be transferred between them, such as vertical economies between firms with long-linked technologies.

Organizational Integration. Equal to the sum of the following two items (both 5-point scales from very low = 1 to very high = 5):

- *Firm Interaction.* Estimate the degree of operational interaction between the joining firms during the integration period in relation to the total amount of activity in the acquired firm (e.g., like the creation of everyday material, information, and cash flows between the firms and/or restructuring resulting in more permanent transfer of products, facilities, personnel and other resources between the firms);

- *Coordinative Effort.* Estimate the degree of coordinative effort expended to enhance synergy realization by adjusting the operational interaction between the joining firms. This can be inferred from the amount of utilization of coordination mechanisms across the joining firms, such as special integrators, transition teams, management information systems, integration plans, senior management involvement, and temporary personnel exchange/rotation.

Employee Resistance. Equal to the mean of the following two items (both 5-point scales from very low = 1 to very high = 5):

- *Employee Resistance First Half.* Estimate average acquired employee resistance [defined as the active and passive opposition to the integration process with the acquiring firm, such as vocal opposition (voice), symbolic opposition (anti-acquirer posters), voluntary exits, absenteeism, passivity, and sabotage] during the first half of the studied integration period;

- *Employee Resistance Second Half.* Estimate average acquired employee resistance (see above) during the second half of the studied integration period.

Management Style Similarity. Estimate the degree of management

style similarity between the joining firms at the beginning of the integration phase. Management style is here viewed in terms of degrees (low versus high) of formality, employee participation, and any other dimensions emphasized by the case author. (5-point scale from very low = 1 to very high = 5).

Cross-border Combination. Was the nationality/home country of the joining firms the same or different? (2-point scale with same home country = 0 and different home countries = 1.)

Relative Size. Estimate relative size defined as the ratio of annual sales of acquired firm to the annual sales of acquiring firm in the year of (or prior to) the legal combination (if sales are not available, use total assets; if they are also not available, use total number of employees). [5-point scale from very low (<10%) = 1 to very high (>67%) = 5.]

Control Variables

Case Data Collection. How extensive was the data collection? [3-point scale from low (1–7 interviews and <30 document pages) = 1 to high (>20 interviews and >100 document pages) = 3.]

Case Perspective. Estimate the dominant perspective of the case study in terms of whose viewpoint is mostly used. (3-point scale from acquiring firm's = 1 to acquired firm's = 3.)

Case Publication. What is the research publication status of the case study? [5-point scale from very low (unpublished working paper, etc.) = 1 to very high (research journal) = 5.]

Case Calendar Year. Estimate the average integration year studied defined as (calendar year of legal combination + calendar year of the end of the studied period) divided by 2. [5-point scale from 1964 or earlier = 1 to 1980 or later = 5.]

Case Period Length. Estimate the length of time of the studied (i.e., described) integration period [typically from the legal combination (prior background description to be included) to the end of the description or complete divestment.] (4-point scale from 1 or 2 years = 1 to >4 years = 4.)

In addition to those 27 items, 9 other items were used for purposes of sample description and representativeness and for testing the validity of the data. They included whether the rater was the case author, the number of case study sources and pages, the field of research most closely associated with the case material, whether the names of merging firms were disguised, FTC combination types, the primary industry of the acquired firm, overall M&A performance, and the degree of subsequent selloff.

The complete coding scheme with the full set of instructions, scale anchors, etc. is available upon request.

Appendix C. Tests of Reliability and Validity of the Data

Interrater Reliability

Most case studies were coded by three different raters to increase the reliability of the resulting data. We computed interrater reliability after (1) dropping the 48 items in the original coding scheme that were not used in the study (interrater reliability scores computed for the full coding scheme did not differ materially from those reported here) and (2) excluding ratings by case authors because they were based on more data than were available to other raters. (Additional information that was not contained in a case, but that case authors may have internalized, would not be available to other coders. Therefore, inclusion of

author coders in computing interrater reliability may actually understate the extent of agreement among coders, and inaccurately evaluate the extent of disagreement created by the coding system itself.) Interrater reliability, measured as average pairwise percent agreement of codings across raters (Larsson 1993), was 68.8%. That measure of interrater reliability was preferred to others (e.g., percentage absolute agreement among raters) because it is a more precise assessment of agreement between coders and it is independent of the number of raters. The level of interrater reliability was considered satisfactory in comparison with the benchmark of 65% recommended in the literature (Yin and Heald 1975, Jauch et al. 1980), and the reliability reported in other complex case surveys (Yin and Yates 1974, Miller and Friesen 1977, Yin et al. 1977).

To eliminate coding differences among raters and arrive at the final set of codings to be used in the analysis, we followed a limited version of Bullock and Tubbs' (1987) consensus approach. In that procedure, raters meet to resolve coding discrepancies by reexamining case studies and jointly determining appropriate ratings where they disagree. Further, at that stage we were able to rely on additional information provided by case authors that would not have been available to the other raters, which boosted the validity and completeness of the final set of codings. The consensus approach we used was superior to alternative decision rules (e.g., majority, average, or expert) because in effect it enabled raters to reexamine the codings for items that were not in agreement, thus facilitating detection of any coding errors and inclusion of valuable additional information from case authors. For example, the majority approach rules out the unique information that author raters provide, whereas relying on averages dilutes author information while allowing individual coding mistakes to affect the final codings.

Secondary Validation

The validity of the final coding was tested in several ways. To assess whether reliance on cases coded only by nonauthors (secondary data) introduced any systematic bias relative to cases coded by authors (primary data), we examined correlations between a binary variable for "author" participation and the variables in the study. If no systematic differences were found, the secondary data from nonauthor-coded cases could be seen as being as representative of the primary data as the author-coded cases. We found that only 2 (of 12) correlations with author were significant: (1) cross-border M&As and (2) case period length. Consequently, the codings do not appear to be subject to considerable differences in interpretation among case authors and other coders, suggesting that the significant correlations may be random. Hence, the final case codings used in our tests of hypotheses appear to represent systematically the primary data of the case sample.

Convergent Validity

We conducted four tests of convergent validity. First, because we had direct access to 14 individuals who were principals in six of the cases, we followed Miller (1993) and Miller and Friesen (1977, 1980) and collected additional primary data to help validate the case survey coding. We asked those informants (including one chairman of the board, two CEOs, three administrative VPs, and two personnel VPs) to estimate the degree of synergy realization, combination potential, organizational integration, and employee resistance, as well as the overall acquisition performance (the coding instrument also included an item whereby the raters evaluated the overall success of the M&A combination: "overall acquisition performance"), in the merger or acquisition

in which they were a participant. We then computed partial correlations between case survey data and the average of informants' estimates for each of those variables, controlling for the specific merger or acquisition. The partial correlation coefficient was 0.69 ($n = 30$; $p < 0.01$), providing additional support for the validity of the case survey codings used.

Second, we tried to obtain objective measures for the independent variables to help validate the case survey codings. However, the lack of data on such M&A processual factors as organizational integration and employee resistance was an important motivation for adopting the case survey method. We did obtain objective data on combination potential for a subsample of M&As. Using the FTC's Large Merger Series for acquisitions before 1980 and data compiled by Securities Data Corporation for acquisitions after 1980, we computed a measure of relatedness (to assess combination potential) for the 18 mergers or acquisitions that were included in those listings and for which data on SIC classification were available. Counting acquisitions in which both the bidder and target companies shared a common 4-digit SIC code as related (Morck et al. 1990), we found that combination potential and relatedness were positively and significantly correlated (Spearman rank correlation = 0.60; $p < 0.01$). Alternative measures of relatedness that attempted to differentiate between primary and secondary businesses, and 2-digit, 3-digit, and 4-digit matches, yielded a similar result. In light of our previous discussion of how combination potential captures both similarities and complementarities—which SIC-based measures of relatedness do not—the magnitude of the correlation is especially noteworthy and strongly supports the case survey measure of combination potential. In addition, FTC data on combination type (the FTC classifies acquisitions into horizontal, vertical, product extension, market extension, and conglomerate types) and relative size were identical to similar measures also coded in the case survey 20 of 24 times (83%).

Third, for M&As in which (1) the identity of the two organizations involved in the merger or acquisition was known (20 of 61 M&As in the sample were anonymous), (2) a precise announcement date could be established, and (3) data were available on tapes prepared by the Center for Research in Securities Pricing (CRSP), we computed the abnormal stock returns to the acquiring firm and compared them with the case survey measure of synergy realization. Abnormal stock returns were computed by the formula:

$$R = a + b(Rm) + e.$$

where Rm is the market return and a and b are market parameters estimated from 300 days to 50 days before the acquisition date. Although we used a window of five days before and after the announcement date to compute actual returns (Brown and Warner 1985), findings did not change appreciably when slightly narrower or broader windows were used.

Although computing M&A performance by the event study method is the dominant approach in the finance literature (Brown and Warner 1985), it may not necessarily be highly related to synergy realization, a construct that is based on the actual integration period for assessing M&A success. However, to the extent that those measures are correlated, they provide additional support for the validity of the dependent variable in our study. We computed abnormal stock returns for the 13 acquiring firms that met our criteria, and found that the measure was positively correlated (using Spearman rank correlations) with synergy

realization ($r = 0.51$, $p < 0.10$). Further, overall acquisition performance as estimated by the raters also was positively correlated with abnormal stock returns for the 13 acquiring firms ($r = 0.56$; $p < 0.05$), whereas the correlation between synergy realization and overall acquisition performance was 0.69 ($p < 0.01$).

Fourth, given the importance of synergy realization in our study, we conducted one final test of the convergent validity of that construct for a limited subsample of firms for which we were able to obtain internal (unaudited) accounting measures of firm performance. Using the primary data obtained from internal company documents, we compared the change in return on sales (ROS) (by computing the percentage change in average ROS in the three years after the merger or acquisition over the average ROS across both merging firms in the three years before the deal) to our measure of synergy realization. We could obtain the internal accounting data for only five M&As, yielding a Spearman rank correlation of 0.89 ($p < 0.05$). We emphasize that the data were proprietary to each firm, and indicated its internal assessment of accounting profits. The informants providing the information to us noted that the internal figures were viewed as superior to the more aggregated data reported in financial statements, lending additional support to the use of the data.

Endnotes

¹Although research in finance and economics does not examine the post-acquisition integration process, certain inferences are possible. For example, in a study of large acquisitions and divestitures in the 1970s and 1980s, Kaplan and Weisbach (1992) found that unrelated divisions were more likely to be divested after acquisition than related divisions, and that such divestitures created more value. Hence, perhaps related acquisitions were more likely to be integrated successfully than unrelated acquisitions in their sample. Alternatively, perhaps related divisions, which may have been more closely integrated than unrelated divisions, made divestment more difficult irrespective of performance. Such inferences are somewhat speculative because the acquisition integration process was not studied.

²In five cases, only one of the two indicators of employee resistance could be coded. To avoid bias, we redid all of our analyses after adding a dummy variable to indicate when a single item was used to measure employee resistance. Results were essentially the same as those reported here. In addition, because the length of the integration period differed among cases, potentially affecting our measure of employee resistance, we controlled for length of integration period as described in the text.

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Accepted by Kathleen Eisenhardt, former Senior Editor; received October 1997. This paper has been with the authors for one revision.