THE RELATIONSHIPS AMONG MERGER RELATEDNESS, STRATEGIC AGGRESSIVENESS, CAPABILITY RESPONSIVENESS AND MERGER PERFORMANCE

A

Dissertation

Presented to the

Graduate Faculty of the

United States International College of Business

Alliant International University

In Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

---

by

Sarawut Jack Phadungtin

San Diego, 2003

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Abstract of Dissertation

THE RELATIONSHIPS AMONG MERGER RELATEDNESS, STRATEGIC AGGRESSIVENESS, CAPABILITY RESPONSIVENESS, AND MERGER PERFORMANCE

by

Sarawut Jack Phadungtin

Alliant International University

Committee Chairperson: Dr. Patrick A. Sullivan

THE PROBLEM: This study examined the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance.

METHOD: A descriptive correlational study was conducted. The data for this study were collected through questionnaires that were mailed to companies formed by mergers or acquisitions in the United States between 1998 and 2000.

RESULT: This study found significant relationships among culture gap, strategy gap, capability gap, and merger performance. Culture gap, strategy gap, and capability gap were inversely related to the combined firm's performance.

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This study also found differences between mergers and acquisitions. These differences are:

1. Companies formed by mergers performed better than companies formed by acquisitions.

2. Cultures of acquisition partners were greater than cultures of merger partners.

3. Sizes of merger partners were greater than sizes of acquisition partners.

Results of the study support the premise that combined firms formed by partners from the same industry had a greater difference in their strategy gap than combined firms formed by partners from different industries. Further, this study provided empirical evidence regarding merger relatedness and additional empirical support for Ansoff's strategic success paradigm.

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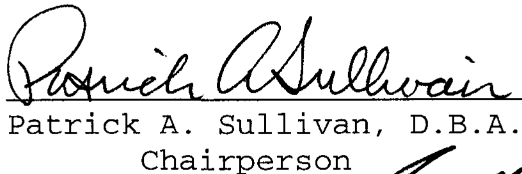

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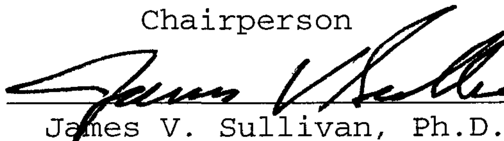

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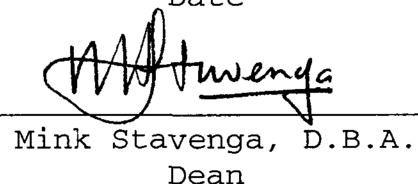

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Dean

Ali Abu-Rahma, D.B.A.

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DEDICATION

To

My parents for their greatest support and motivation;

My mother-in-Law for her endless care;

My late father-in-Law;

and most importantly,

My wife and best friend, Yuki.

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influenced this study. I am most appreciative to be one of your students.

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Chapter 1

RESEARCH PROBLEM

This research is concerned with the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and performance of merger. The study hypothesized that differences in strategic and capability gaps of a merger have greater effect on merger performance than merger relatedness. In addition, this study was designed to acquire empirical knowledge on mergers and acquisitions. It empirically tested the relationships among merger relatedness, strategic, and capability gaps, and merger performance.

This chapter provides a background of mergers and acquisitions with practical and theoretical problems. The background builds the foundation for the research problem in this study. Chapter 1 delineates the contributions this study can make to the practice and theory of mergers and acquisitions.

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General Background of the Problem

Mergers and acquisitions literature commonly showed the number and size of mergers and acquisitions completed continue to grow exponentially despite unfavorable success rates. Mergers and acquisitions are two of the most popular strategic alternatives to promote corporate growth and are complex and difficult to manage (Ansoff, 1965a, 1965b; Sirower, 1997). Porter (1987) suggested that more than one-half of mergers in the major United States corporate sector failed and that a large proportion of acquired companies were later either divested or sold. The prime reason for these failures was unsatisfactory performance. The following section presents the theoretical and practical background of the problem.

Theoretical Background

There were several merger studies conducted during the 1980s and 1990s. Trautwien (1990) summarized the major theories as follows:

Efficiency theory. The efficiency theory, also called synergy theory (Seth, Song, & Petit, 2000), views mergers

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as planned and executed to attain business synergies. This theory proposes that acquisitions take place when the value of the combined firms is greater than the sum of values of the individual firms (Bradley, Desai, & Kim, 1988). Further, the majority of mergers formed in the United States can be explained by this theory that states companies will achieve strategic gain through financial, operational, and managerial synergetic efficiency through mergers (Trautwien, 1990).

Financial synergy from mergers can be obtained by scope and scale economies of corporate financing and results in lower cost of capital. Unrelated mergers help companies to lower the systematic risk through diversified portfolio investment (Montgomery & Singh, 1984; Rumelt, 1986). Increasing in size can give the company access to cheaper capital (Scherer, Beckenstien, Kaufer, & Murphy, 1975). Trautwein (1990) stated, "Operational synergies can stem from combining operations of hitherto separate units" (p. 284). Knowledge transfer helps firms to lower operational cost and realize operational synergy (Porter, 1985).

Managerial synergy is plausible when management of the acquiring firm possesses superior planning and controlling

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ability that benefit the acquired company. This theory was studied and proved to be invalid by Trautwien (1990) due to inconsistent research findings.

Merger-makers frequently cite synergistic gains to justify their strategic choices (Maremont & Mitchell, 1988; Porter, 1987). The contradicting perceptions of several researchers (Dobrzynki, 1988a, 1988b; Rothman, 1988; Smith & Sandler, 1988) are the best indicators that direct evidence can produce unreliable results

Monopoly theory. This theory views mergers as a strategy to attain market power. The model states that both horizontal and non-horizontal mergers could obtain monopoly gains and asserts mergers can simultaneously limit competition in more than one market (Edwards, 1955). Not only can a firm reduce competition by merging with its competitors, it can also deter potential entrants to enter its market (Trautwien, 1990).

Porter (1985) referred to the advantages of monopoly gain as competitor interrelationships. The same term was referred to as "collusive synergies" by Chattergee (1986). According to Chattergee, these synergies represent no

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efficiency gains, but wealth transfers from the firm's customers.

The monopoly theory has been studied and proved to be flawed by Jensen (1984) and Ravenscraft and Scherer (1987). Their research findings showed that non-horizontal mergers barely achieve the monopoly benefits.

Valuation theory. This theory views mergers as a strategy to acquire capital gains through an ability to realize actual market value of the acquired firm. Mergers are planned and executed by managers who have better information about the target's value than the stock market (Holderness & Sheehan 1985; Steiner, 1975). The bidder's managers may have unique information about possible advantages to be derived from combining the target's business with their own. Private information possessed by management of the acquiring firm is used to justify the bid. A premium is offered based on value and expectation of the acquiring firm.

The difference between the valuation theory and other merger theories is its recognition of the role that genuine uncertainty plays in a strategic decision. The validity of the valuation theory is not well supported as it is not

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possible to derive any specific propositions regarding merger results (Trautwein, 1990).

Empire-building theory. This theory views mergers as a strategy that managers use to maximize their utility instead of the shareholder's value. The model is also called "managerialism theory" (Seth et al., 2000). This explanation has its roots in the separation of ownership and control of a corporation (Berle & Means, 1933). The theory explains that managers tend to seek higher growth in assets rather than in profit since managers' compensations are based on the amount of assets they manage.

Rhoades' (1983, 1985) analysis of the 1960 merger wave showed that the power motive replaced the profit motive in conglomerate mergers formed during this period. He concluded that mergers are not necessarily confined to the motive of growth maximization.

Process theory. This theory was derived from the literature on the strategic decision process and states that mergers are formed under one or more of the following influences:

1. *Limited information*. Duhaime and Schwenk (1985) discussed the influence of managers' limited information

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processing capabilities on acquisition and divestment decisions. Roll (1986) proposed his hubris hypothesis that views managers' expectations are systematically erroneous with bias resulting from being overly optimistic about the stock's market price of the target company.

2. *Organizational routines.* This influence forces organizations to merge as part of the organizational routines that developed over time as formulas of past success of the firm. Organizations are accustomed to merger and acquisition processes as part of their business operation (Allison, 1971).

3. *Political power.* Since strategic decisions are interpreted as the outcome of political games, mergers can be influenced by political power.

Trautwien (1990) stated that the process theory is ambiguous. Despite the supportive evidence, it is still insufficient to forbid any far-reaching inference.

Raider theory. This theory views a merger as a means to transfer wealth from stockholders of the acquired company to the individual who renders the bid. These wealth transfers include greenmail or excessive compensation after a success takeover. The raider theory is viewed as

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illogical because the premium paid for the acquired firm is usually unreasonably high and there has been insufficient and unfavorable evidence to validate this theory (Trautwien, 1990).

Practical Background

Curry (1997) stated the level of merger and acquisition (M&A) activities in the United States increased markedly in the 1990s when compared to other equivalent time periods in history. Further, once seen primarily in the United States, the M&A now takes place in countries throughout the world. In 1999, the total value of the M&A worldwide reached a record-breaking $3.44 trillion (Deogun, 2000). Hitt, Harrison, and Ireland (2001) stated the M&A became one of the most important corporate-level strategies of the new millennium.

M&As are strategic alternatives (Ansoff, 1965a; Sirower, 1997). Grundy (1995) suggested a merger is not a task for everyday management; rather it is a strategic task that alerts companies to help them realize a profit potential. In addition, M&As must be based firmly on sound and long-term strategies. As a strategy to attain external growth, M&As can produce results ranging from extraordinary

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success to dismal failure (Ansoff, Grandenburg, Portner, & Radosevich, 1971; Samuels, 1972). Theoretically, for example, mergers and acquisitions engender higher sales turnover, additional products, new management talent, and new geographic markets. Despite a large number of successful mergers, the public seems to focus its attention on mergers that fail (Samuels, 1972). In an interview with Dennis Carey (2001), Edward Liddy, Chairman and CEO of Allstate, stated one of the reasons for the bad reputation of M&As concerning the insurance firm's spinning off from Sears is that "acquisitions are so visible. When they fail, they draw intense notice. But a lot of things in business fail; we've started projects that didn't work out. The internal failures simply don't get as much attention" (p. 5).

The M&A literature suggested that merger motives are complex, numerous, diverse, and of multiple causation (McManus & Hergert, 1988; Trautwien, 1990). Trautwein noted "mergers are driven by a complex pattern of motives, and that no single approach can render a full account" (p. 285). Some common motives include business expansion, diversification, synergy, financial improvement, and

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enhanced corporate capability (Guaghan, 1996; Marks & Mirvis, 1998).

Salter and Weinhold (1978) stated achieving "critical mass" is one of the merger motives to create corporate value. Ansoff et al. (1971) suggested two possible merger motives are poor performance of the acquiring firms relative to others in their business environment and an initial trigger by aggressive management.

In summary, the M&A literature suggested several primary reasons that cause two M&A partners to combine. These motives are as follows:

Corporate growth. A desire to achieve an adequately large size to realize economies of scale and/or scope is one common objective of mergers and acquisitions (Ansoff et al., 1971; Lubatkin, 1983; Weston & Mansinghka, 1971). Mergers and acquisitions help firms to achieve sufficient size that enable them to have access to capital markets (Ansoff et al, 1971). Further, acquiring the necessary complementary resources from the outside, rather than developments within, can accelerate organizational growth (Carey, 2001). In the past, most large corporate organizations in the United States responded to a favorable

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economic climate by merging with other organizations to expand their business bases (Lynch, 1971; McCarthy, 1963; Salter & Weinhold, 1978, 1979).

Synergy. Literature relative to the field of M&As suggested synergy and efficiency are greatly related. In addition, studies have suggested synergy is one of the most important motives for mergers and acquisitions.

Seth et al. (2000) viewed mergers as a means to attain business synergies. The researchers stated corporations could achieve strategic gain through financial, operational, and managerial synergetic efficiency through mergers. Knowledge transfer helps firms to lower operational costs and realize operational synergy (Porter, 1985; Teece 1982).

The synergy hypothesis proposed that mergers and acquisitions take place when the value of the combined firms is greater than the sum of values of the individual firms (Bradley et al., 1988). Bajwa (1992) stated that scale economies in manufacturing, marketing, and purchasing of raw materials could be realized by consolidating individual firms and thereby creating synergy. He also suggested economies of scope, which exists when the cost of

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joint production is less than producing separately, may generate synergy.

Penrose (1959) stated the quest for productive opportunity leads a firm to seek new strategic business areas (SBA). Trautwien (1990) studied this theory and concluded it was invalid.

A study by Singh (1990) showed companies after mergers and acquisitions tended to outperform their corresponding industry averages in terms of revenue growth, inventory management, operating income, and debt. This study suggested these companies tended to grow faster than industry averages while maintaining the same level of operating income.

Competitive position. Ansoff et al. (1971) suggested mergers and acquisitions could reduce competition and, in some cases, could help the firm attain monopoly profits. They also stated firms respond to changes in the environment by using merger or acquisition strategies to increase their competitive position. The overarching reason for combining with another organization was that the union would provide for the attainment of strategic goals more

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quickly and inexpensively than if the company acted on its own (Haspeslagh & Jamison, 1991).

Ansoff et al. (1971) and Smith (1985) stressed that mergers should be formed with careful planning as part of the overall corporate strategy. This theory views a merger as a strategy to attain market power. Not only can a firm reduce competition by merging with its competitor, but can also deter potential entrants into its market. Porter (1985) referred to these advantages as "competitor interrelationships." However, this theory proved to be inconsistent (Jensen, 1984; Ravenscraft & Scherer, 1987).

Organizational capability. Mergers and acquisitions are a part of the management repertoire and can fulfill a desire to overcome a critical deficit in organizational capability (Ansoff et al, 1971). One merger aspiration is to more effectively utilize resources or personnel controlled by the firm with particular applicability to managerial skills. Ansoff et al. (1971) and Mandelkar (1974) suggested mergers and acquisitions could be used as a tool to displace an existing management. Displacing the existing management allows the firm to redesign and restructure a

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new management team that is more in line with the company's business environment.

<u>Organization flexibility</u>. Marks and Mirvis (2001) stated,

> in the era of intense and turbulent change, involving rapid technological advances and ever increasing globalization, combinations also enable organizations to gain flexibility, leverage competencies, share resources, and create opportunities that otherwise would be inconceivable. (p. 80)

Further, Vermeulen and Barkema (2001) agreed mergers and acquisitions help the organization improve flexibility. After some time, organizations tend to become rigid, narrow, and simple because they have been continually using the same knowledge bases (Miller, 1993, 1994). These statements support Ansoff's (1979b) organization myopia hypothesis that states an organization responds to changes in the environment late when it becomes myopic. Adaptation is thus hampered when environmental conditions change and alternative strategic responses are required over time. This phenomenon is known as "organization inertia" (Ansoff, 1979b) or "competency trap" (Levitt & March, 1998). Mergers and acquisitions are commonly viewed as instruments to prevent and/or resolve rigidity that is often caused by internal corporate expansion (Vermeulen & Barkema, 2001).

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Financial reasons. Reid (1968) stated M&As are a particular problem to prosperity. He posited that firms merge because of financial recognition and the ability to control their problems. M&As help firms diversify risk and improve cash-flow management. Lewellen (1971) suggested that when two individual firms merge and operate as a new single entity, the probability of bankruptcy of the combined firms is minimized. This occurs because the combined firms enjoy tax-deductible benefits from a relatively larger departmental structure created by the merger. Further, Nevaer and Deck (1990) suggested a merger is a civilized alternative to bankruptcy and believed it is a way to transfer assets from a failing to a growing firm.

Other reasons. Other motives for M&As include a desire of managers to create an image as aggressive managers who recognize a good thing when they see it (Ansoff et al., 1971). Smith (1985) stated that a merger may be a result of opportunistic reactions. However, Grundy (1995) posited that many opportunistic mergers might fall into a trap if the merger is based on an unsound strategic plan. Other reasons include improving operational performance, entering

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new markets (both domestic and international), responding to deregulation laws, and following industry trends.

The Need for Research

This study intended to acquire empirical knowledge of the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance. In addition, it seeks to determine multiple correlations among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance.

Statement of the Problem

Theory and studies suggested merger relatedness influences merger performance. Ansoff and McDonnell's (1990) strategic success hypothesis (SSH) stated that a firm's performance is affected by strategic aggressiveness and capability responsiveness and has been tested and supported. To date, there has been no empirical research that combines all elements and relates them to the firm's overall performance.

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Expected Contributions of this Study

This study presents possible contributions to the theory and practice of strategic management. These contributions are presented as follows:

1. This study represents the first attempt to combine merger relatedness theory and the Ansoff and McDonnell (1990) the strategic success hypothesis.

2. This study may provide empirical evidence that performance of a merger is proportionally related to merger relatedness, strategic aggressiveness, and capability responsiveness.

3. This study may establish the degree of relative importance among strategic aggressiveness, capability responsiveness, and merger relatedness in culture, industry, and size.

4. This study tested the Ansoff and McDonnell (1990) strategic success hypothesis in corporate mergers.

Literature Relevant to the Research Problem

Table 1 presents a list of descriptive and empirical studies relevant to the study's research problem. The list is divided into two categories, merger and acquisition studies and strategic management.

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Table 1

Literature Relevant to the Research Problem

Literature Categories	**Empirical Research**	**Theory**
Strategic Management and Management	Abu-Rahma (1999) Ansoff (1979a, 1979b, 1979c) Bergh (1997) Brousard-Lamb (1991) Capron, Mitchell, & Swaminathan (2001) Covin & Miles (2000) Dutz (1989) Hagarty (1970) Hoskisson, Johnson, & Moesel (1994) Jensen & Ruback (1993) Krug & Hegarty (2001) Lane, Cannella, & Lubatkin (1998) Shanley & Correa (1992) Sullivan (1987)	Aiello & Watkins (2001) Amihud & Lev (1981) Ansoff & McDonnell (1990) Boockholdt & Service (1997) Buono, Bowditch, & Lewis (1985) Eckbo & Langohr (1989) Finkelstein & Hambrick (1996) Galpin & Herndon (2000) Griffin (2002) Jemison & Sitkin (1986) Lanes, Steward, & Francis (2001) McCann & Gilkey (1988) McKay & Qureshi (2001) Montgomery & Wilson (1986) O'Rourke (1989) Pellet (1999) Sales & Mirvis (1984) Schweiger & NeNisi (1991)
Merger Theory	Ahuja & Katila (2001) Ansoff et al. (1971) Barney (1988) Bradley et al. (1998) Carey (2001) Chattergee (1986) Chattergee & Lubatkin (1990) Gordon (1985) Kusewitt (1985) Lubatkin (1983, 1987) Lubatkin, Schulze, Mainkar, & Cotterill (2001) Lubatkin, Schweiger, & Weber (1999) Mandelkar (1974) Meeks (1977) Montgomery (1982) Montgomery & Singh (1984) Poindexter (1970) Rumelt (1974, 1986) Scherer et al. (1975) Seth et al. (2000) Shelton (1988) Singh (1990)	Ansoff (1965a, 1965b) Bajwa (1992) Baker, Miller, & Ramperger (1981) Bettis & Hall (1982) Clemente & Greenspan (1999) Curry (1997) Davy, Kinicki, Kilroy, & Scheck (1988) Deogun (2000) Davis (1968) Gerber (1987) Grundy (1995) Gaughan (1996) Hambrick (1993) Hitt et al.(2001) Imberman (1985) Krung & Nigh (1998) Levitt & March (1998) Lustig (1987) Lynch (1971) Markides & Williamson (1994) Marks & Mirvis (1998) McCann & Gilkey (1988) McCarthy (1963)

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Literature Categories	Empirical Research	Theory
	Trautwien (1990) Walsh (1989) Weston & Mansinghka (1971)	McManus & Hergert (1988) Miller (1993, 1994) Nevaer & Deck (1990) Penrose (1959) Porter (1985, 1987) Reid (1968) Rockwell (1986) Salter & Weinhold (1978) Samuels (1972) Sirawer (1997) Smith (1985) Teece (1982) Vermeule & Barkema (2001)
History of Merger and Type of Mergers	Galbraith (1955) Kitching (1967) Markham (1955) Mueller (1977)	Ansoff & Weston (1962) Gaughan (1996) Lubatkin & Lane (1996) Mandelkar (1974) Wright Thompson, Chiplin, & Robbie (1991) Wyatt & Kieso (1969)
Merger Process		Ashkenas, Demonaco, & Francis (2001) Hooke (1997) Nevaver & Deck 1990) Wall & Wall (2000
Others	Dess & Robinson (1984) Venkatraman & Vasudevan (1986)	Ansoff (1987) Lombriser (1992)

Summary

The purpose of this study was to acquire empirical knowledge of the relationship among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance. Further, the problem addressed in this study has a theoretical and practical background. Regarding the theoretical background, researchers have responded to

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the need of the business community to develop a common foundation for analyzing and solving problems of mergers and acquisitions. Like practitioners, academicians are seeking a valid theory that can thoroughly explain the complexity of mergers and acquisitions. Despite the vast amount of literature in the field of mergers and acquisition, the need for empirical research is substantial. On a practical side, there exists a body of literature agreeing there is a need for established guidelines enabling managers to understand the relative importance of factors influencing merger performance.

In conclusion, this study attempted to provide empirical evidence that merger performance is relatively proportional to the degree of strategic aggressiveness, capability responsiveness, and merger relatedness. It aims at identifying factors that are the primary predictors of success of mergers. This study also attempts to test the Ansoff and McDonnell (1990) strategic success hypothesis relating to corporate mergers.

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Chapter 2A

THE GLOBAL MODEL:

GENERAL THEORETICAL FRAMEWORK

Chapter 2 is divided into two sections, the general theoretical framework (Chapter 2A) and specific research domain (Chapter 2B). Chapter 2A presents an in-depth review of relevant literature of the global and research models that were constructed in this research. Following the literature review, the global model presents a detailed description and explanation and its interactive relevant variables. In Chapter 2B, the research model and its descriptions and explanations are presented in detail.

Literature Review

The literature review discusses the theoretical principles and assumptions relating to the global model in this study. It is divided into three parts: History of mergers, types of mergers and acquisitions, and the mergers and acquisitions process.

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History of Mergers

McCarthy (1963) suggested a merger is a form of investment and the investment in general is prosperous when the market is high. Merger activities accelerate when the market rises and slacks off when the market falls (Lynch, 1971; McCarthy, 1963; Salter & Weinhold, 1978, 1979). The economic environment is characterized by major periods of merger activity. The literature suggested that in the United States there have been five periods of high merger activity. These periods, often called "merger waves," are characterized by strikingly high volumes of merger activities when compared with later periods of time marked by noticeably lower volumes of merger activities.

The first merger wave began in 1895 and ended in 1905. During this period, most mergers were influenced by a growth of technology that emerged in major industries of the United States. The primary reasons for mergers in this period included institutional changes, improved businesses, an organized large-scale capital market, and the number of shares traded. An aspiration to gain a monopoly benefit through market control and economies of scale was a dominant characteristic of mergers during this period (Lynch, 1971; Mandelkar, 1974; Mueller, 1977). The first

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merger period included many horizontal combinations and consolidations of several industries that involved an estimated 15% of all manufacturing assets and employees (Salter & Wienhold, 1979).

The second merger wave took place between 1922 and 1929. This wave was caused largely by an upturn in business activity during this period. Characteristics of this wave included the formation of numerous electric, gas, and water utility holding companies (Salter & Wienhold, 1979). The combinations formed during this period yielded a large geographic diversification (Galbraith, 1955). Further, horizontal and vertical combinations played an important role during this wave (Markham, 1955).

The third wave was the "conglomerate era" that began in 1965 and ended in 1969. Most mergers formed in this wave were a combination of unrelated partners. McManus and Hergert (1988) stated that mergers in this period revealed a "bigger is better" attitude. Many mergers were consummated with little consideration on how well partners would fit together as a combined entity. Porter's (1987) study showed that 53% to 74% of mergers formed during 1950 through 1980 were later divested. Wright et al. (1991) pointed out that the result of the third wave was often

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excessive overhead and complex bureaucratic structures. During this wave, competitiveness of United States companies declined sharply.

The fourth merger wave was from 1981 through 1989. The merger wave of the 1980s was fueled largely by a need to restructure and focus on core and related business (Hitt et al., 2001). Most mergers in this period shared a unique characteristic--a corporate raider who used the junk bond market to finance highly leveraged deals with America's largest corporations. This period is known as the "hostile takeover" merger wave.

Not until 2001 had the fifth wave of mergers occurred. Despite a high volume of merger activities in the early 1990s, Gaughan (1996) stated it was too early to make a determination that the high merger volume of the during this period constituted another merger wave.

Hitt et al. (2001) stated that mergers and acquisitions in the 1990s represented the fifth merger wave of the 20th century. Because of the size and number of mergers formed during this merger wave, the decade of the 1990s might be remembered as the "mega merger mania" period. The main motive of mergers was to achieve economies

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of scale and/or scope, and to enhance market power in order to increase competitiveness in global markets.

Most merger deals were driven by a growing need to cut costs, and institute massive technological changes, deregulation, and global competition. Relative to other periods, there were more mergers of related businesses during this time and most mergers were financed with equity (Lubatkin & Lane, 1996). Many companies in the 1990s were likely to be more cautious in the pursuit of acquisition opportunities (Grundy, 1995). Lubatkin and Lane stated that "the mergers of the 1990s are thought of as being more 'strategic'" (p. 21).

Types of Mergers and Acquisitions

Mergers and acquisitions are different in nature. Mastracchio and Zunitch (2002) stated that

> In a merger, the parties negotiate how relative value will translate into the amount of ownership each party will have in the new company. In an acquisition, the parties negotiate how the relative value contributed to the new enterprise will translate into the purchase price. (p. 39)

Further, Lubatkin (1983) classified mergers into four types, according to the Federal Trade Commission (FTC): horizontal, vertical, concentric, and conglomerate. The following are descriptions of each merger type.

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Horizontal. Horizontal mergers occur when two competitors combine to engage principally in the same industry. A primary motive for combinations of this type is to capitalize on economies of scale and existing marketing skills (Taqi, 1987; Wyatt & Kieso, 1969). Often there are geographical diversification aspects in horizontal mergers. The literature indicated that when well planned, mergers usually represent low-risk and cost-effective routes to improve market share and profitability (Kitching, 1967). A horizontal merger is sometimes called a "tactical acquisition."

Porter (1985) observed that most horizontal mergers failed because of an inability to capture a source of competitive advantage across strategic business unit (SBU) activities. A survey of the literature suggested success of horizontal mergers could be ensured by (a) possessing skills and competencies that can be applied to a partner's business, and (b) ability to operationally capture the horizontal or relatedness opportunities presented by the new asset of the acquired (Green & Berry, 1991).

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Vertical. Vertical mergers are business combinations in which a buyer-seller relationship exists or could exist. A vertical combination unites partners engaged in different stages or levels of production of a common product. Vertical expansion may be backward toward the raw material or forward toward the consumer (Wyatt & Kieso, 1969). While a common objective of backward integration is to save production costs, forward integration controls production and distribution.

Vertical mergers are usually complex and are commonly expensive. Taqi (1989) pointed out that vertical integration results in inflexibility in business since the acquiring firm automatically commits itself heavily to its present business, thereby raising eventual exit costs. In addition, the organization may be sacrificing future flexibility in a variety of other areas such as its choice of suppliers, distributors, and available technologies.

According to Ansoff's (1990) concept of turbulence levels, vertical mergers that integrate firms operating in different turbulence levels of the environment might experience strategic misalignment if partners are poorly incorporated.

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Concentric. The FTC defines concentric mergers as mergers between firms with highly similar product or distributional technologies. Ansoff and Weston (1962) stated concentric mergers are either horizontal or vertical. A concentric merger involves a common thread in the relationships between firms. The existence of a common thread will generate business synergy.

Kitching (1967) stated there are two types of concentric mergers, concentric marketing and concentric technology. Concentric marketing mergers are combinations of companies that have the same customer, but different technology. Concentric technology are mergers that both partners have the same technology, but different customer groups.

According to Taqi (1987), concentric mergers are popular for medium-sized firms. The merger literature suggested concentric combinations are performed more commonly for strategic purposes than for economic grounds. A main justification was that such moves allow firms to grab good companies before competition does so.

Concentric mergers are likely to yield high levels of strategic diversification and thus reduce corporate risk (Lubatkin & Lane, 1996). The principle rationale this type

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of merger is to reduce the firm's vulnerability to core industries when companies become increasingly competitive, highly uncertain, and more vulnerable to industry-specific shocks.

The concentric merger was pioneered by Procter & Gamble (P&G). In the 1960s and 1970s, P&G bought small, high-potential businesses and through its injection of strengths in technology, marketing, and distribution into these firms, the merger helped the company achieve leadership. Concentric combinations help acquiring firms remain competitive in their core businesses. For many companies using merger as a method of business diversification, concentric strategies require companies to move into related sectors in an aggressive manner.

Conglomerate. A conglomerate merger, also called "economic diversification," occurs when merger partners are not competitors and do not have a buyer-seller relationship. In addition, it is the fusion of partners with no apparent similarities in either production or marketing activities. A conglomerate merger offers lateral growth and is perhaps the fastest way to enter a new growth industry and broaden a production base.

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Conglomerate mergers are associated with high risk; therefore, the failure rate of this type of merger is significant (Kitching, 1967). Conglomerate mergers in the United States increased notably in the 1960s and 1970s. Although there can be many motives for conglomerate-style moves, the most common one is simple--the firm cannot find suitably attractive growth opportunities within its field.

A classic example of a conglomerate merger involves Swissair. This company began its diversification through concentric mergers and later moved beyond business industry boundaries to become a conglomerate merger organization including hotels, restaurants, and food processing subsidiaries. In conglomerate acquisitions, there are fewer synergies and economies of scale; thus, there are fewer cushions to help limit the downside risk. Further, portfolio management is viewed as one of the most important management tools to enhance the success rate of conglomerate mergers (Lubatkin, 1983).

Mergers and Acquisitions Process

Although mergers and acquisitions occur in different structures and sizes, their formations are somewhat similar. The literature suggested that mergers and

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acquisitions have life cycles (Ashkenas et al., 2001; Taqi, 1987; Wright et al., 1991). While the merger creates a new independent entity, it is not necessarily the case that combined organizations will continue in this form indefinitely.

According to Ashkenas et al. (2001), the following merger life cycle model was developed, refined, and used by General Electric. This model divides the process into four stages including preacquisition, foundation building, rapid integration, and assimilation. It recommends an ordinary sequence of leveraged actions that is comprised of various aspects of every acquisition-integration process.

Figure 1 illustrates the process of mergers and acquisitions. It is followed by a detailed explanation of the merger process.

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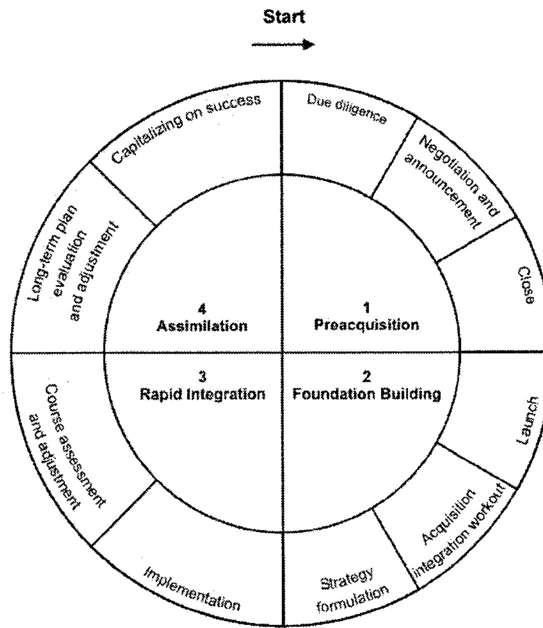

Figure 1. Process of mergers and acquisitions.

Adapted from General Electric's Merger Model: Harvard Business Review on Mergers and Acquisitions (Ashkenas et al., 2001, p. 154).

During the preacquisition stage, potential partners begin to assess differences in their business natures through due diligence--a process of detailed independent investigation. Due diligence is a fiduciary responsibility of a company on behalf of investors to investigate the target company's general management team, resources, and trading performance (Wright et al., 1991). It is common that both partners identify business and cultural barriers

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to integration success during this stage. Integration managers are assigned and communication strategies are developed during the preacqusition period. After extensive analyses including strength, weakness, opportunity, and threat (SWOT) and financial assessment are thoroughly completed, negotiations then begin. If all negotiations yield favorable outcomes and the decision to merge is decided, the deal is usually closed during this stage (Ashkenas et al., 2001).

The next stage is fundamental building. Upon the announcement of the merger, assigned integration managers are formally introduced to the two potential partners. Jointly formulated integration and communication plans are established after an extensive due diligence process. Involvement of senior managers in developing the combined firm's strategies is a predominant activity during this period. All resources are provided to help assign accountabilities within the new firm (Ashkenas et al., 2001).

After the preacquisition and fundamental building stages have been completed, rapid integration immediately follows. Developed integration plans for implementation of the deal are used as process maps to accelerate

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integration. Integration processes are commonly evaluated by an audit staff who will provide necessary feedback for continuous adaptations during the merging process. The combined entity usually initiates short-term management exchange during the stage (Ashkenas et al., 2001).

Results from the assimilation stage include evaluation and adjustment of long-term plans; development of common tools, practices, processes, and languages; and utilization of a corporate education center. Using the audit staff for an integration audit remains essential during this stage. The combined firms must evaluate and capitalize on success during this extensive stage (Ashkenas et al., 2001).

As a strategic alternative, mergers and acquisitions reoccur as a tool in response to changes in the environment. The pattern of their occurrences repeats as presented and explained in the above model (Ashkenas et al., 2001; Taqi, 1987; Wright et al., 1991).

The Global Model

The global model is a simplification of the reality of mergers and acquisitions and was developed to include selected important or essential attributes that constitute mergers and acquisitions (see Figure 2). The relationships

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among its attributes are clearly mapped. Further, according to Ansoff (1987), the conceptual model of this type is entitled a "homomorphic description [map] of reality" (p. 503). Lombriser (1992) stated the global model serves in the following manner:

1. Represents the entire picture.

2. Helps to understand the selected interrelated attributes by presenting how each of these attributes impinges on others.

3. Locates the research domain within which a large portion of the behavior is not influenced by exogenous variables.

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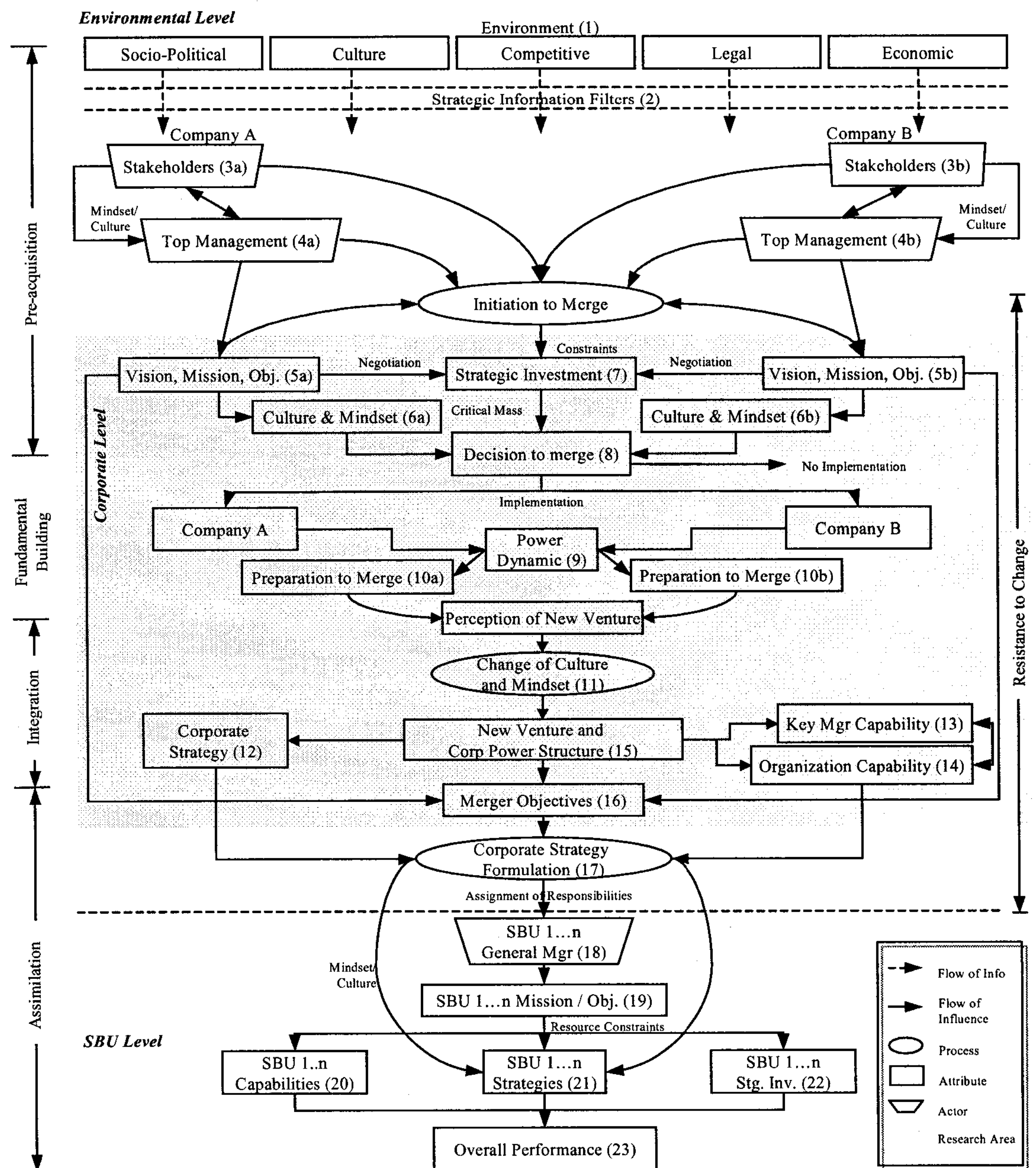

Figure 2. Global model: Formation of merger.

As presented in Figure 2, concepts behind the model are explained and the equivalent number of the attribute is marked in parentheses. The relationships among the global

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model's components are presented in the preacquisition, fundamental building, integration, and assimilation stages.

Preacquisition stage. As presented in Figure 2, during the preacquisition stage, changes and trends of the environment (1) are transmitted to both potential merger partners as signals that are developments of probable impacts that can affect the firm's operation through strategic information filters (2). After data are filtered through surveillance, mentality, and power filters strategic information become available to stakeholders (3) and top management (4) of both companies. This data is used for strategic decision-making. If the information convinces both groups that the merger is a viable alternative, initiation of the merger then begins. Merger initiation will lead both firms to launch the due diligence process by assessing each company's vision, mission, and objectives (5a and 5b). In addition to meticulous investigations into financial and operational issues, differences in culture and mindset (6a and 6b) of the two partners are also carefully assessed and compared. If strategic investment (7) is positively sound and merger motives are favorable, the merger could then be formed. Critical mass determination is a crucial process in the decision to merge

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(8), and negotiation must be undertaken with extreme caution when seeking to reach an agreement to merge.

Fundamental building stage. The fundamental building stage begins with the introduction of the merger. As presented in Figure 2, during the early stage of merger formation, acquisition decisions are reflected by power dynamics (9) by both merger partners. Through influencing, via power dynamic, both partners embark on integration plans and preparations for transition (10a and 10b). Changes in culture and mindset (11), post-acquisition corporate strategy (12) and capability (13, 14) are driven by the relative power of the merger partners.

Integration stage. As presented in Figure 2, while the surviving venture begins to formulate its responsive corporate strategy (12), it simultaneously restructures the key manager capability (13) and adjusts its organizational capability (14) according to the relative power within the surviving origination. During this stage, the new venture and corporate power structure (15) is formally established. This structure is influenced by both merging partners. Within the new components of corporate strategies, management capabilities, and new power structure the merged

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company declares new organizational merger objectives (16). These developments occur during the integration process.

Assimilation stage. The last stage is for the combined firms to assimilate the merger. As presented in Figure 2, long-term plans for the new venture are established and new corporate strategies (17) are formulated. With assignment of responsibilities, strategies are used to create responsive strategic business unit general managers (18) to be in charge of their corresponding strategic business areas. The mission and objectives (19) of each strategic business unit (SBU) are established according to its assigned responsibilities. Each SBU's capabilities (20), strategies (21) and strategic investment (22) are then defined and developed. The aggregate performances of all SBUs account for overall performance (23) of the merged company.

The last section of this chapter contains a detailed discussion of all variables presented in the global model (see Figure 2). The selected variables are discussed regarding the four stages of the merger process that includes preacquisition, fundamental building, integration, and assimilation.

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Preacquisition

Preacquisition behavior may yield clues to reasons why or how firms are motivated to seek acquisitions (Ansoff et al., 1971). The preacquisition stage begins when a potential merger partner has a need to strategically improve its corporate performance through merger. Such firm would begin its environmental surveillance to obtain necessary strategic information to support its decision to merge. Due diligence is one of the most important processes during this period and helps both partners determine if a merger is the most promising strategic move. At the end of this stage, the announcement of a merger is implemented. The following variables are directly related to this stage of a merger.

Environment. Complexity of the environment affects mergers. Ansoff et al. (1971) and Wall and Wall (2000) stated that mergers and acquisitions turn into attractive strategic alternatives when changes in the environment become rapid and unpredictable. According to Ansoff and McDonnell (1990), changes in the environment include sociopolitical, cultural, competitive, legal, and economic dynamic forces. Business infrastructures change over time due to the

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introduction of new technologies. In addition, customer needs change and laws, such as antitrust and merger taxes designed to cope with diverse types of mergers and acquisitions, have been introduced and enacted. Moreover, Samuels (1972) identified trends in environmental changes that affect mergers that include(a) greater interference by government in affairs of companies, (b) increasing importance of the institutional investor, (c) formation of countries into large trading blocks, and (d) emergence of large multinational corporations.

The perception of the environment can be viewed from both the position of the acquirer and of the acquired firm. In agreement with Ansoff and McDonnell's (1990) concept of strategic business area (SBA), Grundy (1995) suggested that industry attractiveness and competitive position of the target company must be carefully evaluated during the pre-merger process. To search for a merger partner, firms need to focus on establishing favorable SBAs and then identify specific companies that may be available.

Nevaer and Deck (1990) stated that a successful merger strategy is one way to allow a firm to become a responsive and limber player capable of anticipating and responding to the changing global market. Responsiveness to environmental

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changes becomes a critical success factor for corporations. Darwin (1999) stated, "[I]t's not the strongest species that survive, nor the most intelligent, but the ones most responsive to change" (p. 4)

Strategic information filter. Grundy (1995) stated, "very frequently value is actually destroyed by the acquiring company which suffers from imperfect information about the target" (p. 198) Ansoff and McDonnell (1990) reported, "signals and data about the future trends and possibilities in the environment are brought into the firm by means of environmental surveillance, forecasting and analysis" (p. 66). The data received by potential partners are processed by their surveillance filters, and characteristics are determined by forecasting and analysis techniques used by the firm. This data will pass through two additional filters (mentality and power) and become information upon which strategic decisions are based (Ansoff & McDonnell, 1990).

Mentality filters screen incoming data by eliminating information that is not relevant to the success models of managers' past experiences. Data is disregarded when the general management capability is not aligned with

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environmental turbulence. While familiar data tend to be readily accepted and used by managers, unfamiliar ones are usually ignored and regarded as irrelevant in strategic decisions, unless the general management capability is aligned with the turbulence of the environment.

After passing a mentality filter, data is passed through a power filter before information is used for strategic decisions. The power filter is exercised by persons authorized to make decisions and implement needed strategic actions (Ansoff & McDonnell, 1990).

Stakeholders. In practice, profits are not the only viable objective of the firm. The pursuit of other goals is a driving force behind a firm's behavior that is stimulated by stakeholders (Ansoff, 1979a; McManus & Hergert, 1988). Stakeholders include all parties such as shareholders, employees, suppliers, and customers who are able to influence the firm's behavior and performance (Ansoff & McDonnell, 1990; Griffin, 2002). Managers are assumed to be motivated by shareholder interests to create economic value. Salter and Weinhold (1978) suggested when deciding if to acquire another business either in a related or an

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unrelated field, top corporate executives must ensure the merger will increase value for shareholders.

Top management. The top management team has an influence on organizational behaviors. Managers can lead the firm in the direction they prefer. Amihud and Lev (1981) suggested that unless closely monitored by the shareholders, managers may attempt to reduce the future employment risk by avoiding a merger that may potentially jeopardize their employment status. This was debated by Cannella and Lubatkin (1998) as untrue in their study. The evidence supports Reid's (1968) findings of 478 large American industrial firms during 1951 to 1961 that suggested mergers are a result of managerial interest rather than of stockholders. This supports the empire-building theory (Berle & Means, 1933) that views mergers and acquisitions as a strategy to maximize manager utility instead of shareholder value.

The top management theory is also called "managerialism theory" (Seth et al., 2000). The model posits that managers tend to seek higher growth in assets rather than in profits since their compensations are based on the amount of assets managed.

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Ansoff et al. (1971) found an interesting difference between acquirers who had slow vs. high growth rates before merging. The researchers concluded that acquirers with slow growth used mergers as a means to improve performance, while those with rapid growth merged because of an aggressive drive by top management.

Initiation to merger. Often mergers are initiated and negotiated in a friendly environment (Wall & Wall, 2000). It is typical that initiation occurs when management of one firm contacts management of another potential partner. Aiello and Watkins (2001) stated,

> It's only natural that the management team of a target company going into preliminary negotiations should feel nervous, even suspicious, of potential new owners. Savvy acquirers use early negotiations to foster a sense that both sides are working together in good faith to arrive at a mutually advantageous transaction. They are flexible and respectful in their negotiations, and they try to help target managers see the career opportunities that could result in the new organization. (p. 28)

Because most mergers must be approved by boards of directors, management teams report and update its boards on the process of negotiations. If the process proceeds favorably and smoothly, the companies can close the deal quickly and readily and form a new combined firm. However,

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if negotiations are not mutually agreeable, it may lead to a termination of the bid or a hostile takeover.

Except for hostile transactions, mergers are usually the product of a negotiation process between management of the merging companies (Gaughan, 1996). Grundy (1995) stated it is absolutely important to have a clear negotiation strategy. Further, he believed both partners must know what they want and what they do not want. A seller's main concern is maximizing price and is solved via a modified auction conducted by an experienced intermediary (Hooke, 1997).

Vision, mission, and objectives. A comprehensive analysis of the current status of potential partners and the future of the combined firms must be prepared before any steps are taken toward acquisition (Nevaer & Deck, 1990). Given the input from an analysis, the vision, mission, and objectives of the combined firms must be modified to reflect current and future business philosophies regarding the type of company it wishes to operate.

Mergers occur when there are elements of visionary, defensive, and opportunistic decisions to expand and/or assure survival of a business (Green & Berry, 1991). These

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elements reflect reasons for the business's existence. Vision is a broad scope of the firm's aspirations and entails a mission and established objectives.

According to Senn (1989), a firm contemplating a strategy of growth through merger must first evaluate its corporate mission statement and determine if the merger is an appropriate strategic solution. It must carefully investigate current market dynamics, global completion, technological advances, and corporate talent before deciding to merge. The mission statement must reflect perceived talents and goals a firm has or hopes to have. Moreover, it should reflect the market within which the company operates or plans to operate. The organization's mission statement must be explicitly communicated at the corporate and business unit levels to ensure the unity of business practices.

Wyatt and Kieso (1969) stated the most desirable merger partners could be recognized when partners are aligned with established corporate objectives. While objectives are defined as the quality of the yardstick that is used to measure future performance of the firm, goals are defined as the quantity of such measurement (Ansoff & McDonnell, 1990). According to Wyatt and Kieso, corporate

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goals and objectives set a firm's direction and are statements that fulfill the corporate mission. Objectives are broad statements and goals and are more specific and measurable. Goals refer to specific achievements to be realized within a finite period (Smith, 1985).

Ansoff and McDonnell (1990) suggested a preferred objective of an organization is a combination of two major components, the preferred raison d'être and the rules of the game. Merger objectives should be developed at the top management level with collaborative support from members of the planning department and key executives from functional areas such as marketing, production, and finance (Smith, 1985).

According to Ansoff and McDonnell (1990), the legitimacy strategy of a firm could derive from the following three key ingredients: "(1) an analysis of the objectives, (2) an analysis of constraints, (3) and analysis of the power field within which the firm must act" (p. 201) These ingredients can be brought together to determine the firm's preferred objectives and rules of the game. Once the corporate vision, mission, and objectives have been defined strategies can be developed. Strategies

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are vehicles to transform the vision, mission, and objectives into reality.

Strategic investment. Hagarty (1970) stated "merger can be thought of a 'zero-sum, risk game' - an attractive form of investment for those firms whose managers are risk takers" (p. 389). Grundy (1995) suggested "the first thing to consider is the pricing of the deal" (p. 213). Furthermore, mergers imply an additional cost for acquiring firms such as a takeover premium of 20% to 40% on average (Eckbo & Langohr, 1989; Jarrell) and the cost of integrating the acquired firm into the acquiring organization.

The total cost of the merger directly reflects strategic investment. Kitching (1967) suggested potential partners must assess the success rate of the merger by considering critical mass. His study showed that a size-mismatch merger has a greater chance to fail than one with similar size parameters. Further, Kitching findings supports Ansoff's (1979a) "critical mass" theory. Critical mass (also called "strategic break-even point") was defined by Ansoff as the minimum level of strategic investment in a SBA to assure potential profitability. According to Ansoff

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and McDonnel (1990), "in no case should the investment be below the critical mass" (p. 182).

Culture and mindset. McKay and Qureshi (2001) stated "mergers encounter enormous difficulties, and among those, people problems rank high in the list of difficulties that ultimately derail the financial success of the transaction" (p. 33). It is clear that attainment of merger objectives is not realizable if the merger fails to meet strategic, financial and other objective criteria. However ignoring potential cultural conflicts (often called "soft" issues) may lead to failure (Senn, 1989). It is observable that in many mergers, personnel and organizational issues are assigned a low priority during the preacquisition process. These important issues are often an afterthought--only a concern after the decision has been made that the merger is an alternative to pursue.

According to Senn (1989), an organization's collective values, customs, and unwritten rules that govern behavior make up a corporate culture. He used "cultural clash" to describe the conflict of two companies' philosophies, styles, values, and missions. Senn stated further when two organizations merge, each partner tends to see the world

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through its own biased cultural filters. It is rather common that cross-industry mergers yield cultural conflicts that may jeopardize corporate performance when two partners decide to merge.

Decision to merge. Galpin and Herndon (2000) suggested there are five steps in the merger decision: formulate, locate, investigate, negotiate, and integrate. During the first step, both partners must formulate business and growth strategies for the combined firm. Acquisition criteria must be defined to help to evaluate potential partners. This step involves the development of integration processes and necessary strategic activities.

Target markets need to be identified and investigated during the second step. Pre-deal merger agreements are a result of assessing, planning, and forecasting combined corporate values. During this step, the two partners develop merger plans and agree on letters of confidentiality. The price of the merger is of prime concern during this step. Wright et al. (1991) stated the success of management negotiations of a merger depends primarily, but not solely, on paying the lowest price.

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Potential partners typically conduct due diligence during the "investigate" step. Financial, cultural, legal, environmental, operational, and intellectual capitals are carefully examined and often investigation of business synergy is conducted using sophisticated analytical techniques during this stage (McCann & Gilkey, 1988).

Thompson, Chiplin, and Robbie (1991) defined due diligence as

> a process of detailed independent investigation, on behalf of investors into the target company's management team, resource and trading performance. This includes rigorous testing of the business plan assumptions and the verification of material facts (e.g. existing accounts) and opinions." (p. 210)

If the investigation yields a favorable result, the two potential partners will negotiate the deal.

During the negotiation step, major concerns relate to tangible issues such as legal, structural, and financial. During this step, if both partners agree to merge, the deal can be closed. The last step occurring after the close of the deal is the process of integration. The two partners usually finalize and execute the integration plans. Organizational restructuring and combination management are major tasks during this stage (Marks & Mirvis, 1998). This step can be considered as a post-deal period during which

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the combined companies may realize the value of combining the business.

Fundamental Building

This stage begins after the merger is announced. Both partners begin to integrate in order to form a new entity. The power dynamic plays a significant role in forming the new organization. Instituting changes in culture and mindset are also important tasks for the combined firm. The following variables affect the merger during this stage (Ashkenas et al., 2001).

Power dynamic. Most commonly two companies announce joining of forces as a merger of equals. However in reality, Wall and Wall (2000) stated there are no true mergers of equals and "over time, one company--its leaders, its cultures, and its way of operating--will generally win out" (p. 20). Boockholdt and Service (1997) also wrote "assessing the culture of the new entity is difficult in a merger where the identities of the dominant and subordinate partner are unclear" (p. 28).

According to Ansoff (1979b), the power dynamic within an organization is predisposed to internal and external

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influences. While external influences derive from general management, mid- and lower-management and technocracy, internal influences originate from the firm's aspirations, perceptions of the environment, levels of strategic behavior, and transition of behaviors.

The concept of polarizing company power structures often causes failure (Pellet, 1999). To help in the integration process, the merged firm must explicitly publicize the new preferred culture, operation, and language. Senn (1989) suggested mergers must address the new organizational structure as early as possible to avoid conflicts possibly caused by management and employees of both partners. Mergers with unclear and/or inconsistent reporting relationships have a high tendency to fail. The exercise of power depends on its distribution among various agents of both merger partners. It is crucial to merger success that the appropriate power structure be established and communicated throughout the newly combined entity.

Preparation to merge. Galpin and Herndon (2000) stated that achieving and sustaining the strategic goals of a merger are usually difficult and for many organizations seemingly impossible. Most integration initiatives weaken during the

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implementation and follow-up stages. Organizational integration requires that operations, systems, and procedures of the newly formed company be clearly connected to the cultures of the merging partners. A clear connection between the new enterprise's business needs and the cultures of both merger partners not only enables effective integration but also embeds a strong new culture in the day-to-day life of the new organization.

Achieving and supporting full integration requires clear connections of all functional components (i.e., operation, finance, marketing, and human resources). Many organizations ignore cultural integration because its implementation appears to management to be difficult. Instead, management focuses on the supposedly more tangible types of integration that involve operations, equipment, systems, and procedures.

Environmental changes, both internal and external, affect the newly merged firm. During the integration, adaptability of the firm must be vitalized. Nevaer and Deck (1990) suggested it is important to install a strategic surprise management system to ensure that contingency plans have been defined if it becomes necessary to change strategy in midstream. Alternate strategies must be

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developed in advance in the event of an unforeseen emergency or if the current strategy does not work as well as planned. By having an alternate plan in place, policies can be altered and implemented quickly, a smooth transition to the new strategy can occur, and losses due to the unanticipated event can be minimized.

According to Hitt et al. (2001), firms with previous merger experiences are likely to be in a fluid stage and therefore are more readily adaptable to changes required during the merging process. Lanes et al. (2001) suggested that companies with strong acquisition history are not immune to negative market reactions and must provide evidence that each new merger deal will be a winner. For an effective integration of two separate businesses, substantial change in both firms may be required. Therefore, flexibility and adaptability should facilitate integration (Jemison & Sitkin, 1986).

Integration

An important empirical insight of the last two decades is that mergers and acquisitions are often associated with implementation problems and unsatisfactory post-acquisition performance. The literature suggested that mergers and

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acquisitions are complex. Top management has to cope with challenges to implement the strategy. Like other strategic work, the merger process needs a special task team to implement the integration (Ashkenas et al., 2001).

During the integration stage, the two potential partners focus on completing the written agreement, which results in the change of ownership of the target. It starts with the letter of intent, a non-binding agreement to conduct more detailed investigations, and culminates with the signing of the sale and purchase agreement. Actual completion requires approval by regulatory authorities, the boards of both buyer and seller, and in some cases their shareholders. Integration formally starts when all approvals have been granted and the target business becomes the property of the acquirer.

The degree of integration may be different in each merger. Wall and Wall (2000) suggested that a merger can be integrated on three levels: alignment, synthesis, and consolidation. A alignment integration allows the acquired company to continue to operate within its own market environment with its own business strategies, structures and systems. A synthesis integration combines the acquired and acquiring companies into a new entity that can

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capitalize on the unique aspects of each. Typically, it involves more trading of staff, systems, and processes than an alignment merger and is therefore a complex management challenge than is alignment. A consolidation integration occurs when the acquired company is wholly incorporated into the acquirer's organizational structure. Resistance to change is relatively greater in consolidation mergers than in synthesis and lowest in alignment mergers. Wall and Wall further stated the integration process must be malleable to allow for adaptation based on new discoveries.

Figure 3 was developed by Wall and Wall (2000) and presents the integration strategy and degree of integration. The variables of the integration stage are discussed and described in detail as follows.

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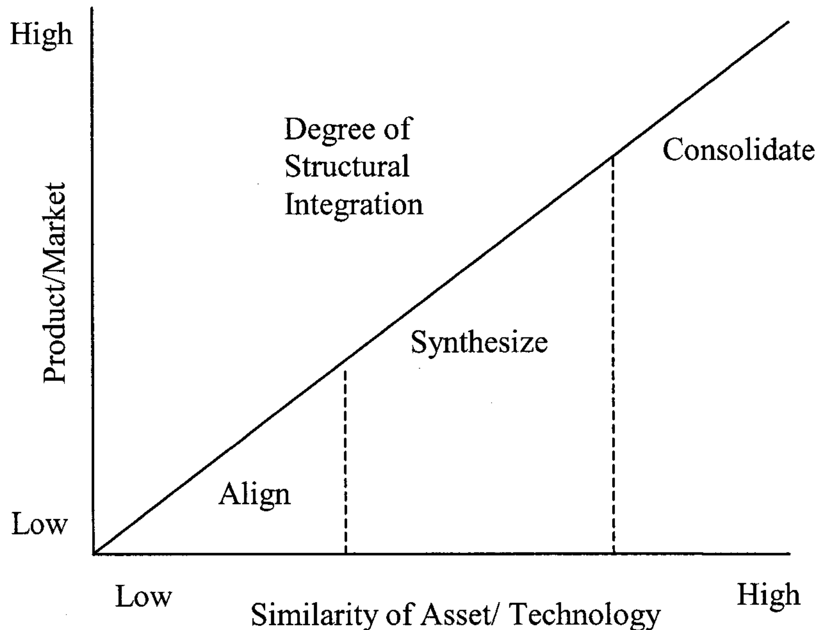

Figure 3. Integration strategy: Degree of integration. Adapted from Wall and Wall (2000, p. 37)

Change in culture and mindset. Corporate culture is defined as the integration of values, norms, roles, and ceremonies within organizations (McManus & Hergert, 1988). Mergers may lead to cultural clashes and tensions when the integration process takes place. On one hand, this process may cause immediate problems and unsatisfactory performance. On the other hand, it may enrich knowledge bases and break the rigidities of acquiring firms that enhance the viability of later ventures (Vermeulen & Barkema, 2001).

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Resistance to change. Ansoff and McDonnell (1990) defined resistance as "a multifaceted phenomenon, which introduces unanticipated delay, cost, and instabilities into the process of a strategic change" (p. 405). Resistance to change occurs at two levels, behavioral and systemic. While behavioral resistance is commonly generated by individuals or groups within the organizations, systemic resistance is induced by lack of organizational competence or the capacity to handle change. Although resistance to change could occur throughout all stages of merger, it becomes especially problematic during the integration stage. This occurs because the impact of change directly affects the organization and its employees (Ansoff, 1997).

Change in culture creates problems in mergers since the change greatly erodes organizational morale. O'Rourke (1989) suggested that management should delay change as long as possible to avoid conflict. She commented that sometimes it is not possible to delay change since speed of corporate integration depends on the condition of the company and the price. In a turnaround situation involving a company that is in a business crisis, the acquirer must introduce a quick change to manage the problem in a timely

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manner. Unnecessary expense could be induced if the integration plan is poorly incorporated and not implemented in time.

Two-way communication is imperative during the integration process. People who are relatively comfortable with ambiguity will not only weather a merger situation more easily, but also be more valuable to many organizations experiencing rapid change (Wall & Wall, 2000).

New venture and corporate power structure. Although an extension of the merger integration period could help reduce resistance to change, a clear and accurate understanding of the new entity must be perceived throughout the organization. Taqi (1987) suggested "nothing gets an acquisition off to a worse start than a perceived ambiguity in the attitude of the acquirer" (p. 143). It is important that an acquirer's first priority is to assign clear, undiluted responsibilities for the new combined firm. Each employee should have a clear understanding of his or her role in the new organization.

Perceived agreement was defined as "the extent to which actors believe themselves to agree", while actual

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agreement was defined as "the real accordance of their positions" (Shanley & Correa, 1992, p. 246). Several studies have examined how agreement among managers develops and affects a firm. These results often suggest that mutual agreements with precise perceptions relate directly to organizational performance.

Shanley and Correa (1992) found that agreement has three different dimensions: perceived agreement, actual agreement, and accuracy. They presented agreement as a multilevel phenomenon that encompasses individual judgments about their own situations, comparison of such judgments with those of reference group members, and projection of such judgment across formal and informal group boundaries.

Ansoff and McDonnell (1990) stated, "under normal conditions, it is trivial to say that people react to what they perceive. But during resistance-inducing changes, the gap between perception and reality can substantially and unnecessarily increase the level of resistance" (p. 410). Further, announcement of a merger commonly leads to a variety of dysfunctional outcomes such as uncertainty, stress, and job dissatisfaction (Buono et al. 1985; Mark & Mirvis 1985; Sales & Mirvis, 1984; Schweiger & Walsh, 1990). Krug and Hegarty (2001) suggested, "executives'

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perceptions of merger announcement, interactions with the acquiring firm's top managers following the merger, and long-term effects of the merger significantly influence their decision to stay or to leave" (p. 185). Executives' perceptions are an important determinant of their response to a strategic event (Finkelstein & Hambrick, 1996).

Perceptions of the merger may also be influenced by executives' interactions with top managers from the acquiring firm following the merger. Job dissatisfaction and rate of departure among target company employees decline when acquiring companies inform them of planned changes before they are implemented (Schweiger & DeNisi, 1991).

Communications between merging top management teams should have similar effects by sending strong signals to executives about their status as insiders or outsiders. Social integration among top managers increases conflict, decreases the frequency of communications, and increases turnover (Ancona & Caldwell, 1992). Gutknecht and Keys (1993) suggested communications within organizations before, during, and after merging must be sufficient and effective. Trust and loyalty from surviving employees must be preserved as they can enhance chances of merger success.

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Merger power structure. In combining two partners with similar functional capability, it is observable that some corporate assets, such as people and resources, could become redundant within the new organization (McManus & Herger 1988). This phenomenon induces asset divestiture which is "the partial or complete sale or disposal of physical organizational assets, shut down of facilities, and reduction of work forces of the target or acquired business" (Capron et al., 2001, p. 817). Asset divestiture helps firms gain scale efficiencies by selling off excess capacity (Bergh, 1997; Dutz, 1989; Hoskisson et al., 1994; Bergh, 1997; Jensen & Ruback, 1993).

Common problems occurring during the merging process include loss of key personnel and organizational effectiveness. The merger literature suggested that key personnel from the acquired firm leave the company during the merging process for various reasons, including not being able to adapt to cultural differences and feeling uncertainty and insecurity about their careers in the newly combined firms (Hambrick & Cannella, 1993; Krug & Nigh, 1998; Lubatkin, Schweiger & Weber, 1999; Walsh, 1989).

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To retain key persons during the merger, the power structure of the surviving entity must be clearly established, thereby minimizing problems caused by the polarized power of the previous partners. Moreover, this new power structure must be designed to be responsive to the new environment of the merged firm. The organizational structure should immediately be created and informed internally so employees have a clear understanding of their roles in the combined organization (Lubatkin et al., 1999).

Merger objectives. Senn (1989) stated that it is important the merger objectives are declared explicitly within the new combined corporation. The essential information that must be understood by employees includes the goals and objectives of the merger. Once objectives are defined, the merged organization can compare the objectives with performance trends. Information on career opportunities within the new entity and benefits of the merger to both the new enterprise and its employees must be explicitly communicated within the merger entities.

Organization capability. The compatibility of the organization is composed of two major components,

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functional capability and general management capability (Ansoff & McDonnell, 1990). After two potential partners are merged, the combined entity is considered a new organization that eventually has to restructure or re-establish the functional capability and general management capability of its organizational capabilities. Ansoff and McDonnell defined "general management capability" as "its propensity and its ability to engage in behavior which will optimize attainment of the firm's near- and long-term objectives" (p. 262). General management and its role are crucial for every organization. General managers integrate, coordinate, and direct the functional efforts toward common goals.

Braousard-Lamb (1991) stated that many mergers fail to meet corporate and employee expectations. Research shows that some members of the general management team tend to leave the combined firms before, during, or after the merger. Ansoff and McDonnell (1990) pointed out that new acquisitions, that were profitable before the merger, became unprofitable afterwards because of an increasing departure rate of key managers despite appealing financial enticements.

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A study of 200 mergers by Hambrick and Cannella (1993) showed the lower the performance of an acquired firm, the higher the rate of departure of acquired executives in the first 2 years. Turnover of the acquired firm key managers was often caused by their degraded status after completion of the merger (Nord, 1994). Nord suggested acquired executives feel inferior because they became a minority in the new organization and autonomy is removed. Consequently, the rate of acquired executive departure would be high.

Not only does the potential departure of general management imperil the newly formed organization, the departure of employees can also weaken the integration process. O'Rourke (1989) stated, "after almost every acquisition, people leave" (p. 224). The reasons for this include dissatisfaction in the merger process, unwillingness to adapt to the new culture, and being forced to leave by the surviving firm. Krug and Hegarty (2001) stated United States target companies can expect to lose approximately two-thirds of their executives within 5 years of acquisition. The researchers study showed the departure rate is even greater when the acquirer is a foreign multinational. Schweiger and Denisi (1991) found the merger announcement led to increased stress, uncertainty,

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absenteeism, job dissatisfaction, and rate of departure among manufacturing employees.

Uncertainty surrounding the change often causes management and employees to experience a loss of enthusiasm about their work and organization. In turn, this deteriorates organizational effectiveness. Senn (1989) suggested a merger must attempt to keep all key personnel (managers and those who work under them) who are crucial to organizational success within the combined corporate structure before, during, and after the merging process.

Corporate strategy. Nevaer and Deck (1990) suggested to ensure merger success, the new combined firms must state the company's strategy and develop an acquisition benchmark. Further, Ansoff and McDonnell (1990) defined strategy as a set of decision-making rules for guidance of organizational behavior. They suggested a company measure its present and future performance by using objectives and goals. While objectives measure qualitative performance, goals measure qualitative performance.

According to Ansoff and McDonnell (1990), legitimacy strategy of a firm could derive from three key ingredients: "(1) an analysis of the objectives, (2) an analysis of

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constraints, (3) and analysis of the power field within which the firm must act" (p 201). These ingredients can be combined to determine preferred objectives and rules of the game.

Like other forms of business entity, a merger needs to optimize its profit potential. According to Ansoff and McDonnell (1990), a merger must align its strategic aggressiveness to its turbulence in its environment. The authors defined aggressiveness as "the degree, which a firm introduces into succeeding generations of its products, technologies and marketing concepts" (p. 256). The strategic aggressiveness is measured by a match between the characteristics of the firm's competitive strategy and critical strategic success factors.

Assimilation

Pritchett, Robinson, and Clarkson (1997) stated once the merger deal is closed, the combined firms usually experiences post-merger drift. They (1997) noted "this stage is comparable to the postoperative period of recuperation experienced by the patient who undergoes surgery" (p. 128). Taqi (1987) suggested the main reason for failure in a merger was the inability of companies to

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look beyond acquisitions. For such companies, the act of merging or acquiring often appears to be a goal in and of itself rather than a vehicle to achieve a clear downstream objective. Thus, while carrying out a merger strategy that is exciting and often exhausting work, top management should realize that the game is not over upon the closure of the deal. Rather, the real work of the merger is just beginning and is likely to consist of small, purposeful steps throughout all the integration processes. These steps are will ultimately serve to translate a strategic vision into reality.

The assimilation process is a crucial but often missed staged in an effective acquisition management process. The process can be performed not only in terms of financial performance, but also across the range of all areas including corporate strategy formulation, merger integration, and power structure reestablishment. Wyatt and Kieso (1969) stated to avoid post-merger problems, the merger must plan for anticipated and unanticipated problems if and when they occur. The following are detailed explanations of variables that greatly influence this stage of a merger.

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Corporate strategy formulation. Significant shifts in strategy after an acquisition or a series of shifts can require the development of a new and shared vision for the new entity (Wall & Wall, 2000). The new vision should be established to help people align their work with the new strategic directions of the company. Planning has high payoff in merger performance (Ansoff et al., 1971). During this period, general managers not only have to learn about the acquisition process but must also re-form the new combined business by re-segmenting all possible new strategic business areas (SBAs) and then assigning appropriate managers to strategic business units (SBUs) that respond to each of the SBAs.

Strategic learning is a continuous process to ensure that the new combined firms operate appropriately during the change. Nevaer and Deck (1990) suggested to protect against market fluctuation, the combined firms must match the acquisition strategy to the industry and economic environment in which the firm competes or plans to compete. Further, Nevaer and Deck stated "the viability of type of venture is greatly reduced if the current capability of the firm is not assessed and does not complement the strategies of either the firm or the acquisition" (p. 119).

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SBU general manager. Incompatibility between the management capabilities of the partners can potentially impair the profitability of the firm and the success of the acquisition. A firm whose management is accustomed to an environment of slow and steady growth may find it difficult to adjust to a faster pace and the relatively unpredictable environment that a high growth industry may bring. Nevaer and Deck (1990) supported the Ansoff and McDonnell (1990) SSH that each strategic business area required unique management skills and, however subtle they may be, skills contribute to the success or failure of a merger. Managers with different skills and mindsets must be appropriately assigned for each strategic business unit to optimize the firm's overall success.

SBU mission and objectives. After the corporate vision, mission, and objectives are established the merged firm must use them as a guide to formulate the missions and objectives at the SBU level. Ansoff and McDonnell (1990) described an SBU as "a strategic profit center which is responsible for both near-term performance and for development of future performance" (p. 338).

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The SBU's missions and objectives need to be used strategically and operationally by each SBU. Galpin and Herndon (2000) suggested if able to leverage the merger goals, merging firms could accelerate the achievement of a tangible and pragmatic organizational combination.

SBU capability. It is important that the combined firms design and establish SBU capabilities that are responsive to the environment within which each SBU operates or will be operating. Operational learning will help the combined firms to survive in its new business (Grundy, 1995). Important components of capability include both quantity and quality of personnel and technology (Ansoff & McDonnell, 1990). A merger must ensure that a firm is equipped with organizational capabilities necessary to the new environment.

According to Ansoff and McDonnell (1990), a general manager's capability is not universal. Thus, it is important that general management capabilities are appropriate to the different levels within the turbulence environment. Ansoff and McDonnell (1990) stated:

> Numerous companies, having diversified into attractive but unfamiliar industries, found that the management style necessary for success in the new industry did

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> not match that of the parent. Some firms found the mismatch to be serious enough to warrant divesting from the recent acquisition. (p. 262)

Further, Ansoff and McDonnell presented two approaches to assess general management. The first approach, known as assessing the firm's "responsiveness," observes the firm's behavior on how it participates or reacts to a discontinuous environment. The second approach is to identify the firm's capability profiles that produce different types of responsiveness. Responsiveness can be described by three capacity attributes including climate, competency, and capacity. "Climate" is described as the management propensity to respond in a particular way when facing environmental changes, "competence" is management's ability to respond, and "capacity" is viewed as the volume of work that general management can handle.

<u>SBU strategy</u>. SBU strategies must support the established corporate strategy. According to Ansoff and McDonnell (1990), a SBU (a unit of the new combined firm) is responsible for one or more assigned strategic business units. "Elements of strategy at a higher management level become objectives at a lower one" (p. 44).

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Covin and Miles (2000) defined "strategy" as an integrated and coordinated set of commitments and actions designed to exploit core competencies and gain a competitive advantage. They stated a purposeful strategy precedes the taking of actions to which it applies, and demonstrates a shared understanding of the firm's strategic intent and mission.

Lubatkin et al. (2001) stated a merger that simultaneously introduces multiple products causes a sudden "jump" to a new environmental alignment. This leaves the combined firms with few resources and forces it to modify product strategies, reallocate resources, and restructure administrative routines in an effort to stabilize the newly formed organization.

<u>SBU investment</u>. Each SBU must carefully plan for its strategic investment. According to Ansoff and McDonnell (1990), a SBU must ensure that it will not invest in projects that have a return on investment below critical mass and strategic break-even point. The authors suggested there is a minimal critical mass for each SBA. Ansoff and McDonnell stated, "no matter how brilliant a firm's strategy, or how excellent its capability, a strategic

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investment below the critical mass level will not be profitable" (p. 73). They suggested a firm that is unable to operate above critical mass could have three possible solutions, withdrawal from the SBA, find a niche within the SBA, or form strategic alliances with other firms.

Different categories of investment include investment in capacity, investment in strategy, and investment in capability. Investment in capacity is the cost of facility and equipment needed to provide a necessary capacity of production facility, distribution network, the marketing organization, and research and development. Investment in strategy includes cost of strategic planning, market research, product development, and product launching. Investment in capability occurs because of acquisition of personnel and technology and training of personnel (Ansoff & McDonnell, 1990).

Overall performance. Mergers and acquisitions have been researched to a large extent in the past three decades. Overall performance of a merger can be evaluated by comparing the change that took place in the firm from the pre-merger to post-merger periods (Ansoff et al., 1971). Wright et al., (1991) suggested

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> The three principle objectives of a merger are to (1) secure a transaction that is satisfactory to vendors, management and the providers of finance, (2) to secure performance improvements, and hence (3) to enable managers and financiers to realize the best possible gain on their investment. (p. 138).

Further, the merger literature presented more studies on short-term performance than on long-term performance.

General performance of a merger can be measured objectively by using abnormal stock price returns (Halblian & Finkelstein, 1999). This measurement was among the most popular measures used during the 1970s; however, increasing attention is given to stockholder value (Lubatkin, 1987). Shareholders' expectations require a rapid and effective transition from buying to running the merged business. The work leading up to the deal merely begins the process. According to Lanes et al. (2001), the stock market does not always agree with the strategy and putative value behind mega mergers. In the majority of cases, acquirers' shareholder value drops when a merger is announced. In turn, this drop in value leaves companies and management teams vulnerable to criticism by shareholders and even boards of directors.

During the 1960s, mergers were examined extensively based on accounting performance. Montgomery and Wilson

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(1986) pointed out that accounting data are historical and only exhibit past performance. The use of accounting information to isolate the impact of mergers can be disputable since it does not reflect earning potential. Moreover, most publicly available accounting numbers are highly aggregated. Thus, accounting information does not serve as valid strategic information for either merger partner.

Gordon (1985) suggested the hallmark of successful acquirers is their ability to make all the decisions required throughout the acquisition process on a timely and effective basis. During the merging process, top management might overly engage in various merger activities and neglect operational work. Often an unintended consequence of mergers is reduced innovation. Firms engaging in multiple acquisitions are likely to produce fewer products for the market. This occurs because they often overemphasize financial controls and become more risk averse (Ahuja & Katila, 2001).

Sirower (1997) stated the post-acquisition realization of synergy is one of the most important dimensions for merger performance. Since a company's performance is multidimensional and can be assessed by several goal

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attainments, multiple measurements of performance can reflect alternative criteria for success (Kirchoff, 1978).

The subjective measurement approach was proven to be valid by prior strategic management research. Its validity to assess firm's performance is significant. Literature suggested that subjective measurement is consistent with objective measurement of performance (Dess & Robinson, 1984; Venkatranman & Vasudevan, 1986). In this study, performance is assessed by managers' perceptions of the firm's performance.

Summary

Chapter 2A provided the general theoretical framework and global model upon which this study was based. The relevance in this study is derived from the empirical and theoretical research on merger and acquisitions. Chapter 2B presented a literature review on variables related to the research model. Included were discussed the research problem, research model, research questions, and research hypotheses.

Chapter 2A included a literature review containing a history of mergers, types of mergers and acquisitions, and mergers and acquisitions process and performance. The

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knowledge of merger in this chapter is the foundation upon which the global model of this research was built.

The merger literature suggested there were five merger waves since 1895. Different in its economic environment, each wave was characterized by marked high volumes of merger activities when compared with prior periods of time that were marked by noticeably lower volumes of merger activity.

According to the FTC, there are four types of mergers: horizontal mergers, vertical mergers, concentric mergers, and conglomerate mergers. In addition, the common process for merger formation includes preacquisition, foundation building, rapid integration, and assimilation. The global model shown in Figure 2 presents the entire picture in this study. It includes the research domain and all variables related in this research.

This study is an integration of the Ansoff and McDonnell (1990) SSH and theory of merger relatedness. The strategic management process and merger process are jointly mapped in the global model presented in Chapter 2A. This global model presents the interactive relationships among the selected relevant variables.

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Chapter 2B

RESEARCH MODEL

This chapter is divided into eight parts. The sections contain a literature review, conceptual and operational definitions, independent and intervening variables, specification of research domain and research models, research questions, research hypotheses, and summary.

Literature Review

The relevant theoretical principles and assumptions of the research model in this study are discussed in the literature review. They are divided into three parts: relatedness of merger partners, the strategic success hypothesis, and merger performance.

Relatedness of Merger Partners

The literature of mergers and acquisitions places much importance on the interaction of the relatedness of merging firms and the value the level of relatedness creates

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(Lubatkin, 1987; Salter & Weinhold, 1978). However, there have been only a few empirical studies exploring this notion. Most merger literature on the effect of acquisition relatedness relies on the basic intuition that relatedness between merger partners should result in greater performance (Sirower, 1997). Examples of research in the literature that support this theory include Davis (1968) and McCann and Gilkey (1988). This literature, albeit inconclusive, concludes that relatedness would generate business synergy for the combined organization

The relatedness theory originated with Rumelt's (1974) extension of Penrose (1959) research. Past merger research defined relatedness of merger differently. As a result, the stud's findings provided inconsistent evidence regarding the relationship between merger relatedness and merger performance.

Sirower (1997) suggested there are two major problems in the literature on the effect of acquisition relatedness that may explain insignificant or conflicting findings regarding the effect of this variable. First, there has been little consideration of the degree of relatedness of acquisition; that is, acquisition relatedness has been measured as a dichotomous (1,0) variable. Second, there has

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been little consideration of other variables that may be driving performance such that acquisition relatedness does not have a direct effect on performance. Lastly, the models of performance have been incomplete. Many studies focus on the relatedness between the industry of acquirer and that of the acquired entity. The research results from these studies may not be empirically valid, as industry boundaries have noticeably become unclear (Ansoff & McDonnell, 1990). Barney (1988) stated that relatedness does not generate abnormal returns for bidding firms; however, it may generate synergistic cash flows and thus positive returns for shareholders.

The following is a summary of types of merger relatedness and their relationship with merger performance. They include cultural, capability, industry, and size relatedness and are discussed below.

Cultural relatedness. Clemente and Greenspan (1999) stated that understanding the components of corporate culture and achieving culture alignment are the keys to success for merger. Compatibility of partners' culture is referred to as "culture fit." (In every combination, there is a vital

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people element that constitutes the mind and muscle of merger partners (Wyatt & Kieso, 1969).

From the onset of a merger throughout the assimilation stage, changes in the corporate culture and organizational structure occur as the two partners merge. Cultural conflicts resulting from differences between the cultures of the partners that cause a destabilizing effect on the merger introduce an uncertainty regarding future employment to the merged organization's employees (Davy et al., 1988; Gerber, 1987; Imberman, 1985; Lustig, 1987). According to Brousard-Lamb's (1991) research, unmet and violated employee expectations, decreased employee job satisfaction, and increased employee turnover adversely affect the success of mergers. In a service-oriented business, poor employee commitment, due to low job satisfaction, can negatively affect customer service and customer satisfaction. The merger literature suggested shareholder gains and the relatedness of merging firms have a direct relationship.

Davis (1968) stated conflict between the merger partners is caused by differences in business styles. Further, he believed relatedness in business styles have a greater influence on merger success than relatedness in

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business type. This hypothesis has been tested, but results are not consistent with managerial expectations (Barney, 1988).

Capability relatedness. Hitt et al. (2001) stated related acquisitions provide more opportunities for complementary managerial and knowledge-base assets. Additionally, economies can be gained through physical assets and other functional forms. Chattergee and Lubatkin (1990) agreed related mergers create business synergy by providing opportunities to reduce operational cost through exploiting scale and scope economies.

The merger literature suggested capability relatedness and merger performance have an inverse relationship and differences in merger partners' capabilities create better performance. Conversely, the similarity in capability causes redundancy that often needs to be eliminated as the integration process progresses. Hitt, Harrison, & Ireland (1990) suggested mergers could achieve synergy if the acquirer and acquired firm possess complementary resources. The researchers defined the operative word "complementary" as meaning assets or resources of the acquiring and target

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firms are not the same. Rather, the assets and resources are different, but mutually supportive of one another.

Taqi (1987) suggested differences in business practices between both merger partners usually deteriorate merger performance. He summarized these differences as follows:

> i. Disagreement over accounting principles and practices;
> ii. Feuding over salary and benefit differentials;
> iii. Resistance to new reporting relationships;
> iv. Different values and psychologies (big spenders vs. nitpickers; egalitarians vs. elitists; consensus seekers vs. individualists; customer-oriented philosophies vs. production-oriented ones); and
> v. In cross-border mergers, problems in understanding business practices in the foreign country. (p. 83)

The literature also suggested an organization gains merger experience through trial and error. Lubatkin (1983) and Rockwell (1986) suggested experience enhances merger performance. Haleblian and Finkelstein (1999) concluded in their research on 449 acquisitions that relatively inexperienced acquirers (after their first acquisition) incorrectly generalize acquisition experience to subsequent dissimilar acquisitions. The findings also suggested that more experienced acquirers appropriately discriminate among the companies being acquired.

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Industry relatedness. Related mergers are referred to as the combination of two partners with physical commonalities between products, markets, and channels (Lubatkin & Lane, 1996). Markides and Williamson (1994) suggested related businesses provide stronger opportunities to gain economies of scope and develop synergy than do unrelated businesses. Therefore, firms are more likely to gain value when they acquire companies that operate in industries similar to or are the same as their own. Diversification into related industries is best when a company has the ability to export or import skills or resources useful in its competitive environment. Diversification into unrelated industries is more likely to be successful when a company has the ability to analyze and manage the strategies of widely different businesses (Salter & Weinhold, 1978).

Some studies related to the context of types of acquisition class (e.g. horizontal, vertical or conglomerate) (Kitching, 1967), and others to categories based on the standard industrial classification (SIC) (Meeks, 1977; Montgomery, 1982). Montgomery found that mergers resulting from partners in the same or related categories have greater success than do other mergers.

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Lubatkin (1987) conducted a study of over 1,000 large mergers to test the relationship between merger relatedness and stockholder value. He found the relatedness of merger partners or the partners' industries does not consistently result in greater stockholder values. Performed in 1983, Lubatkin demonstrated related mergers yielded better performance because they eased the knowledge transfer process. He believed it is relatively easier to share information and knowledge within the same industry. On the contrary, his 1987 research showed vertical mergers usually yielded greater stockholder values. Labatkin concluded that investors do not have more favorable expectations for related than unrelated mergers. Further, he believed if all other issues are equal, some product and market relatedness is better than none.

Chattergee (1986) suggested related mergers provide chances for firms to monopolize the market by becoming larger. Lubatkin and Chattergee (1994) stated relatedness allows firms to push some of the burden of dynamic market uncertainties onto their less related rival. The rationale is that relationships between non-competing businesses become the basis for economies of scope, which is a more

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meaningful control system and a source of innovation (Lubatkin & Lane, 1996).

Lubatkin and Lane (1996) also presented a paradox about related mergers. They stated

> The more closely the products, markets and technologies of the two businesses overlap, the greater the potential for conflict. This is because synergies usually mean the closing down of some facilities, uprooting people, and breaking apart work groups. Synergies also mean that the people from the two organizations are forced to come in close and frequent contact. As with marriage, close contact can heighten sensitivities to and intolerance for differences. (p. 31)

In addition, Wyatt and Kieso (1969) suggested horizontal and vertical mergers have a high expansion risk since they are directed into markets characterized by the same cyclical volatility and the same stage of development that faced the company prior to the combination.

Size relatedness. Kitching (1967) found that 84% of merger failures were caused by size mismatches. The researcher believed size mismatches occur when the acquired company's sales are less than 2% of the acquirer. Further, O'Rourke (1989) stated a large corporation acquiring an engineering-entrepreneurial company has a greater potential to fail

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because the culture of the small company is dramatically different from the acquirer.

The literature suggested there are two major streams of management research regarding mergers (Sirower, 1997). One stream studied the relationship between strategic fit and firm performance. Several studies were conducted to test hypotheses on this stream and failed to demonstrate there is a direct relationship between strategic fit and firm performance (Chattergee, 1986; Lubatkin, 1987; Singh & Montgomery, 1988; Shelton, 1988).

Strategic Success Hypothesis

The strategic success hypothesis (SSH) was originated by H. Igor Ansoff (Ansoff & McDonnell, 1990). The SSH was tested in 29 independent studies in various countries and across different managerial settings. According to Ansoff and McDonnell, the consistency and strength of the results of these studies across a very diverse group of organizations provided strong support of the SSH that states a firm can optimize its potential performance if (a) aggressiveness of the firm's strategic behavior matches its environmental turbulence, (b) responsiveness of the firm's capability matches the aggressiveness of its strategy, and

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(c) the components of the firm's capability are supportive of one another. Ansoff and McDonnell's (1990) SSH is importance in this study because it examined the relationship between merger relatedness strategic alignment and merger performance.

Conceptual and Operational Definitions

In this section the conceptual and operational definitions of the independent, intervening, and dependent variables in this study are described. The conceptual definition is explained first followed by the operational definitions of each variable.

Independent Variables

The independent variables include culture, strategic aggressiveness, capability responsiveness, and environmental turbulence. They are described below.

Culture.

Conceptual definition: Ansoff and McDonnell (1990) defined "culture" as a set of norms and values applied to the selection of a strategic project. Further, Han (1999) pointed out there are five dimensions of culture: time

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perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success. This study adopted these dimensions to assess the culture of merger partners.

Operational definition: This study used the average of the five attributes (time perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success) to represent the culture of each merger partner. The average score of these attributes determine the level of the merger partner culture as described below:

Culture = [(Time Propensity) +
(Tolerance of Uncertainty) + (Risk Propensity) +
(Change Propensity) + (Model of Success)] / 5

Time perspective.

Conceptual definition: This variable refers to the orientation of a firm toward futurity in sensing environment, solving problems, and seeking profitability. According to Ansoff's (1979b) description, the most future-oriented firms have creative and visionary leaders who seek novelty changes. These leaders focus less on "what will be" and more on "what can be."

Operational definition: Time perspective is measured on a scale from 1 to 5 (1 = past-oriented and 5 = future-oriented).

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Risk propensity.

Conceptual definition: An attitude toward risks indicates a particular risk-taking philosophy of the decision-maker who assumes full responsibilities for his/her decision (Ansoff, 1988). Risk propensity can also refer to the manager's perceived probability of potential gain or loss (Brockhaus, 1980).

Operational definition: Risk propensity is measured on a scale from 1 to 5 (1 = reject change and 5 = seek novel change).

Change propensity.

Conceptual definition: Ansoff and McDonnell (1990) pointed out there are two types of change resistance, behavioral and systematic. Behavioral resistance is induced by strategic myopia--a phenomenon of rejection of unfamiliar information--while systematic resistance is caused by a lack of organizational capacity and competence. Ansoff and McDonnell defined "resistance" as "a multifaceted phenomenon, which introduces unanticipated delay, costs, and instabilities into the process of strategic change" (p. 405).

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Operational Definition: Change propensity is measured on a scale from 1 to 5 (1 = reject risk and 5 = seek novel risk).

Tolerance of uncertainty.

Conceptual definition: Duncan (1976) defined "tolerance of uncertainty" as the ability to live with uncertainty. Thompson (1967) stated uncertainty implies risk. Ansoff (1988) pointed out uncertainty refers to a situation in which all alternatives are known, but not all probabilities. In general, managers have a low tolerance of uncertainty (Thompson, 1967).

Operational definition: Tolerance of uncertainty is measured on a scale from 1 to 5 (1 = reject uncertainty and 5 = prefer uncertainty).

Model of success.

Conceptual definition: This variable can be described as the culture value behavior that produces success in the environment (Ansoff, 1979b). When associated with a manager's mindset, based on his or her past degree of success, the model of success can cause strategic myopia for the firm.

Operational definition: The model of success is measured on a scale from 1 to 5 (1 = stability and 5 =

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creativity). Table 2 shows the scale and components of each attribute.

Table 2

Merger Culture

Attribute	**1**	**2**	**3**	**4**	**5**
Time Perspective	Past	Present	Extrapolated Future	Predictable Future	Possible Future
Change Propensity	Reject Change	Accept Familiar Change	Seek Familiar Change	Seek Unfamiliar Change	Seek Novel Change
Risk Propensity	Reject Risk	Accept Familiar Risk	Seek Familiar Risk	Seek Unfamiliar Risk	Seek Novel Risk
Tolerance of Uncertainty	Reject Uncertainty	Hardly Tolerate	Tolerate	Seek	Prefer Uncertainty
Model of Success	Stability	Production Efficiency	Balance: Efficiency/ Market	Invest in Best Opportunity	Creativity

Adapted with modification from Ansoff and McDonnell (1990, pp. 278-279)

Strategic aggressiveness.

Conceptual definition: This variable refers to the degree of change or discontinuity of the firm's strategies from past methods (Ansoff & McDonnell, 1990). Table 3 presents the relationship between environmental turbulence and the responding attributes of strategic aggressiveness.

Operational Definition: The level of strategic aggressiveness is determined by the average score of the

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following attributes: Responsiveness to customers, focus on new products/services, approach to market development, and responsiveness to competition.

Strategic Aggressiveness = [(Level of Response to Customers) + (Level of Strategic Focus on New Products/Services) + (Level of Market Development) + (Level of Response to Competition)] / 4

Table 3

Required Profile of Strategic Aggressiveness by Respective Level of Environmental Turbulence

Attribute	**1 Stable**	**2 Reactive**	**3 Antici-patory**	**4 Entrepre-neurial**	**5 Creative**
Response to Customers	Respect	"Our product is what the customer wants"	Anticipation of Need	Identification of Unmet Needs	Identification of Latent Needs
Focus on Product Develop-ment	Process Effic-iency	Product Cost Reduction	Product Improvement	Product Innovation	Product Pioneering
Market Develop-ment	"Stick to Our Customers"	"Follow Competitors"	Expand to Familiar Market	Expand to Foreign Market	Create New Markets
Response to Compet-ition	"We do not compete"	"We will respond to aggression"	"We will not be undersold"	"We lead the Pack"	"We are our own competitor"

Adapted with modifications from Ansoff (1990, pp. 225-226).

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Responsiveness to customers.

Conceptual definition: This attribute is based on how the firm responds to the needs of its customers. The degree of responsiveness is from the ability to understand the customer's need to the ability to identify the latent need.

Operational definition: This variable is measured on a scale from 1 to 5 (1 = respect customer need and 5 = identify of customer's latent need).

Focus on new products/services.

Conceptual definition: This attribute is measured by the degree of focus on product/service development. A firm may place emphasis on process efficiency, product cost reduction, product improvement, product innovation, or product pioneering.

Operational definition: This variable is measured on a scale from 1 to 5 (1 = process efficiency and 5 = product pioneering.

Approach to market development.

Conceptual definition: This is assessed by the degree of strategic aggressiveness regarding market development ranging from maintaining the current customer base to creating new markets.

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Operational definition: This variable is measured on a scale from 1 to 5 (1 = maintain existing customer and 5 = create new market).

Responsiveness to competition.

Conceptual definition: This attribute measures the degree of the merger responsiveness to competition.

Operational definition: This variable is measured on a scale from 1 to 5 = 1 do not compete and 5 = self compete).

Capability responsiveness.

Conceptual definition: This variable refers to the manager's overall ability to respond to the environment, and includes a combination of competence and climate/culture. Capability responsiveness can be measured by two capability components, general manager's competence and climate/culture. A general manager's competence can be measured by knowledge, problem-solving skill, information system, and rewards and incentives. Climate or culture can be measured by time perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success.

Operational definition: Each attribute, matched with a different level of environmental turbulence, is measured on

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a scale from 1 to 5 (1 = low) as follows: Custodial, production, marketing, strategic, and flexible.

Capability Responsiveness = [(Level of Knowledge) + (Level of Problem Solving) + (Level of Information System) + (Level of Organizational Flexibility) + (Level of Organization Adaptability) + (Time Propensity) + (Tolerance of Uncertainty) + (Risk Propensity) + (Change Propensity) + (Model of Success)] / 10

Knowledge.

Conceptual definition: According to Ansoff and McDonnell (1990), knowledge is based on ability to understand the firm and its environment. An array of knowledge relates to internal politics, internal operation, traditional marketing and competitor technology, global opportunity, and emerging environment.

Operational definition: This attribute is measured on a scale from 1 to 5 (1 = internal politics and 5 = emerging environment.

Problem solving skills.

Conceptual definition: This attribute refers to organization problem-solving skills and style whether they are based on precedents, trial and error, optimization of

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available alternatives, or creation of new alternatives (Ansoff & McDonnell, 1990).

Operational definition: This attribute is measured on a scale from 1 to 5 (1 = trial and error and 5 = creativity.

Information systems.

Conceptual definition: The information used in managing the merger may derive from historical performance, extrapolation, or wide-ranging environmental surveillance (Ansoff & McDonnell, 1990).

Operational definition: This attribute is measured on a scale from 1 to 5 (1 = historical and 5 = wide-ranging environmental surveillance).

Organizational structure.

Conceptual definition: This attribute is based on the degree and type of complexity the firm can handle and its flexibility and adaptability to change (Ansoff & McDonnell, 1990).

Operational definition: This attribute is measured on a scale from 1 to 5 (1 = low flexibility and low adaptability and 5 = high flexibility and high adaptability).

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Time perspective.

Conceptual definition: This variable refers to the orientation of a firm toward futurity in sensing the environment, solving problems, and seeking profitability. According to Ansoff (1979b), most future-oriented firms have creative and visionary leaders who seek novelty changes. These leaders focus less on "what will be" and more on "what can be."

Operational definition: Time perspective is measured on a scale from 1 to 5 (1 = past-oriented and 5 = future-oriented.

Risk propensity.

Conceptual definition: Attitude toward risk indicates a particular risk-taking philosophy of the decision-maker who assumes full responsibilities for his/her decisions (Ansoff 1988). Risk propensity can also refer to the manager's perceived probability of potential gain or loss (Brockhaus, 1980).

Operational definition: Risk propensity is measured on a scale from 1 to 5 (1 = reject change and 5 = seek novel change.

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Change propensity.

Conceptual definition: Ansoff and McDonnell (1990) pointed out there are two types of change resistance, behavioral and systematic. Behavioral resistance is induced by strategic myopia--a phenomenon of rejection of unfamiliar information--while systematic resistance is caused by a lack of organizational capacity and competence. Ansoff and McDonnell referred to resistance as "a multifaceted phenomenon, which introduces unanticipated delay, costs, and instabilities into the process of strategic change" (p. 405).

Operational definition: Change propensity is measured on a scale from 1 to 5 (1 = reject risk and 5 = seek novel risk.

Tolerance of uncertainty.

Conceptual definition: Duncan (1972) defined "tolerance of uncertainty" as the ability to live with uncertainty. Thompson (1967) stated uncertainty implies risk. Ansoff (1988) pointed out that uncertainty refers to a situation in which all alternatives are known, but not all probabilities. In general, managers have a low tolerance of uncertainty.

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Operational definition: Tolerance of uncertainty is measured on a scale from 1 to 5 (1 = reject uncertainty and 5 = prefer uncertainty).

Model of success.

Conceptual definition: This variable can be described as the culture value behavior that produces success in the environment (Ansoff, 1979b). When associated with manager's mindset, based on his/her past degree of success, the model of success can cause strategic myopia for the firm.

Operational definition: Model of success is measured on a scale from 1 to 5 (1 = stability and 5 = creativity).

Table 4 presents operational definitions of the required profile of organizational competence by respective level of environmental turbulence. The level of competence is determined by the average score of the following attributes.

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Table 4

Required Profile of Organizational Competence by Respective level of Environmental Turbulence

	Attribute	1 Custodial	2 Production	3 Marketing	4 Strategic	5 Flexible
General Manager's Competence	**Knowledge**	Internal Politics	Internal Operation	Traditional Market/competitor/ Technology	Global Opportunity	Emerging Environment
	Problem Solving Skills	Trial and Error	Diagnosis	Choice of Best Alternative	Searching for Alternative	Creativity
	Information Systems	Informal Precedents	Past Performance	Extra-polative Forecasting	Environmental	Surveillance
	Organiza-tional Structure	Low Flexibility Flexibility		Moderate Flexibility		High
		Low Adaptability Adaptability		Moderate Adaptability		High
Climate/culture	**Time Perspective**	Past	Present	Extra-polated Future	Predictable Future	Possible Future
	Change Propensity	Reject Change	Accept Familiar Change	Seek Familiar Change	Seek Unfamiliar Change	Seek Novel Change
	Risk Propensity	Reject Risk	Accept Familiar Risk	Seek Familiar Risk	Seek Unfamiliar Risk	Seek Novel Risk
	Tolerance of Uncertainty	Reject	Hardly Tolerate	Tolerate	Seek	Prefer
	Model of Success	Stability and Rejection	Production Efficiency	Balance: Efficiency/ Market	Invest in Best Opportunity	Creativity

Adapted with modifications from Ansoff and McDonnell (1990, p. 276)

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Environmental turbulence.

Conceptual definition: Ansoff and McDonnell (1990) defined "environmental turbulence" as a combined measure of the changeability and predictability of the firm's environment. The researchers explained the changeability of the environment may be determined by the complexity of the firm's environment and the relative novelty of the successive challenges that it encounters in the environment. Rapidity of change and visibility of the future indicates the predictability of the environment. Using the four attributes previously discussed, Ansoff and McDonnell classified environmental turbulence into five different levels as follows: Repetitive, expanding, changing, discontinuous, and surprisful. Operational descriptions of all turbulence levels with corresponding characteristics of each attribute are presented in Table 5.

Operational definition: This study used the average of the four attributes to represent the environmental turbulence as presented below:

Environmental Turbulence = [(Level of Complexity) + (Level of Novelty) + (Level of Speed of Change) + (Level of Visibility)] / 4

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Table 5

Environmental Turbulence

Attribute	1 Repetitive	2 Expanding	3 Changing	4 Discontinuous	5 Surprisful
Complexity	National Economy	⇔	Regional Technology	⇔	Global Socio-political
Novelty	Familiar	Extra-polatable	⇔	Discon-tinuous Familiar	Continuous Novel
Speed of Change	Slower than Response	⇔	Comparable to Response	⇔	Faster than Response
Future Visibility	Recurring	Forecastable	Predict-able	Partially Predictable	Unpredict-able

Adapted with modifications from Ansoff and McDonnell (1990:31)

Complexity.

Conceptual definition: Complexity is defined by Ansoff and McDonnell (1990) as "a dual measure of the pervasiveness of the impact of a challenge on various parts of the firms, as well as the frequency of occurrence of challenges" (p. 475).

Operational definition: According to the classification, each attribute is measured on a scale from 1 to 5 (1 = national economy and 5 = global sociopolitical).

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Novelty.

Conceptual definition: Ansoff and McDonnell (1990) described "novelty" as a measure of content of which knowledge is gained from past experience and can be extrapolated to responses to new challenges.

Operational definition: According to the classification, each attribute is measured on a scale from 1 to 5 (1 = familiar and 5 = continuous novel).

Speed of change.

Conceptual definition: This attribute is based on the ratio of the speed of evolution of challenges that have occurred in the environment to the average speed of responses in the firm's industry (Ansoff & McDonnell, 1990).

Operational Definition: According to the classification, each attribute is measured on a scale from 1 to 5 (1 = slower than response and 5 = faster than response).

Future visibility.

Conceptual definition: Visibility of the future is measured by the predictability of information regarding the future that is available at the time managers made their strategic decisions (Ansoff & McDonnell, 1990).

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Operational definition: According to this classification, each attribute is measured on a scale from 1 to 5 (1 = recurring and 5 = unpredictable).

Intervening Variables

The five intervening variables in this study are culture, industry, size, strategy, and capability gaps. The research hypotheses stated all dependent and intervening variables have a relationship with merger performance--the only dependent variable. The variables are discussed below.

Culture gap.

Conceptual definition: Culture gap refers to differences in corporate culture of the two potential partners. The culture of each merger partner is the average of five attributes: Time perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success.

Operational definition: The culture gap is the absolute value of the differences in the culture scores for each merger partner as presented below:

$$\text{Culture Gap} = |(\text{Culture of Partner A}) - (\text{Culture of Partner B})|$$

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Industry gap.

Conceptual definition: This variable refers to similarities or differences in the industries of pre-merger or acquisition partners. Some studies used the general manager's evaluation regarding how his/her previous company relates to the other partner. Some studies used the type of acquisition class (e.g. vertical, horizontal, concentric and conglomerate) to determine differences in the industry affiliation of merger partners (Baker et al., 1981; Kitching, 1967; Poindexter, 1970). Other studies used the SIC to measure industry relatedness of merger partners (Bettis & Hall 1982; Montgomery, 1979; Rumelt 1974). This study used a two-digit SIC commonality to identify if the merger or acquisition partners are from the same industries.

Operational definition: The merger or acquisition partners from the same industry have the same SIC. The SIC commonality was analyzed at a two-digit level. The two-digit level reflected a good distribution of variable measure values throughout the range of the measure (0% to 100%). SICs of acquiring companies are those developed from a consensus of sources applicable to the firm at the beginning of the period. Should one or both of the merger

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partners have more than one SIC, the dominant SICs, based on revenue that represented the merger partner, is used to calculate the difference in merger or acquisition partners' industries (Kusewitt, 1985). This variable is a nominal variable with 1 = same industry of merger or acquisition partners, and 2 = different industry of merger or acquisition partners

Size gap.

Conceptual definition: Differences in partner corporate size are relative. This variable refers to the difference in size of the merger partners. Corporate size may be determined by annual revenue (Kitching, 1967). Kusewitt (1985) used assets to determine corporate size.

Operational definition: This study used the asset approach to measure this variable. Size gap is defined as a ratio of the book value of acquired firm's assets and book value of the acquirer's assets at the end of the year prior to acquisition. This is expressed below:

$$\text{Size gap ratio} = (\text{assets of partner A} / \text{assets of partner B}) \times 100$$

$$\text{Assets of partner A} \leq \text{Assets of partner B}$$

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Strategy gap. The variable results from the difference between the level of environmental turbulence and level of post-merger strategy.

Operational definition: This study used the absolute value of the difference between the level of environmental turbulence and level of aggressiveness of the post-merger combined firm's strategy as presented below:

Strategic gap = | level of Environment Turbulence - level of aggressiveness of strategy |

Capability gap.

The variable results from the difference between the level of environmental turbulence and level of post-merger capability.

Operational definition: This study used the absolute value of the difference between the level of environmental turbulence and level of post-merger combined firm's general management capability as presented below:

Capability gap = | level of Environment Turbulence - level of responsiveness of general management capability |

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Dependent Variable

As discussed below, merger performance is the study's dependent variable. The variable includes improvement in overall performance, competitiveness in the industry, and achievement of merger objectives.

Merger performance.

Conceptual definition: This variable measures the overall success of a merger according to the general manager's objectives. This dependent variable is determined by level of attainment of important merger objectives in the second year after the merger is formed. Measurement during the second year provides sufficient time for the assessment of the merged firm's success. Measurements are used to assess merger performance through the following: improvement in overall performance, competitiveness in the industry, and achievement of merger objectives.

Operational definition: According to the literature, a manager's objectives are measured on a scale from 1 to 5 (1 = low). General managers are responsible for overall performance of the merger stakeholders. In this fashion, overall performance will be assessed through general

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managers. The average score of the following attributes determines the level of merger performance.

Merger Performance = [(Improvement in overall performance) + (competitiveness in the industry) + (achievement of merger objective)] / 3

Improvement in overall performance.

Conceptual definition: This attribute is measured by the manager's agreement that the merged firm showed improvement in its overall performance at the end of the second year after the merger.

Operational definition: This attribute is measured on a scale from 1 to 5 (1 = strongly agree and 5 = strongly disagree).

Competitiveness in the industry.

Conceptual definition. This attribute is measured by the manager's agreement that the merged firm is competitive in its industry at the end of the second year after the merger.

Operational definition. This attribute is measured on a scale from 1 to 5 (1 = strongly agree and 5 = strongly disagree).

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Achievement of merger objectives.

Conceptual definition. This attribute is measured by the manager's agreement that the merged firm has met all stated objectives declared during the announcement of the merger at the end of the second year after the merger.

Operational definition. This attribute is measured on a scale from 1 to 5 (1 = strongly agree and 5 = strongly disagree).

Research Domain and Research Model

The scope of this study was confined to the research problem illustrated in Figure 4 (the global model is presented in Chapter 2A).

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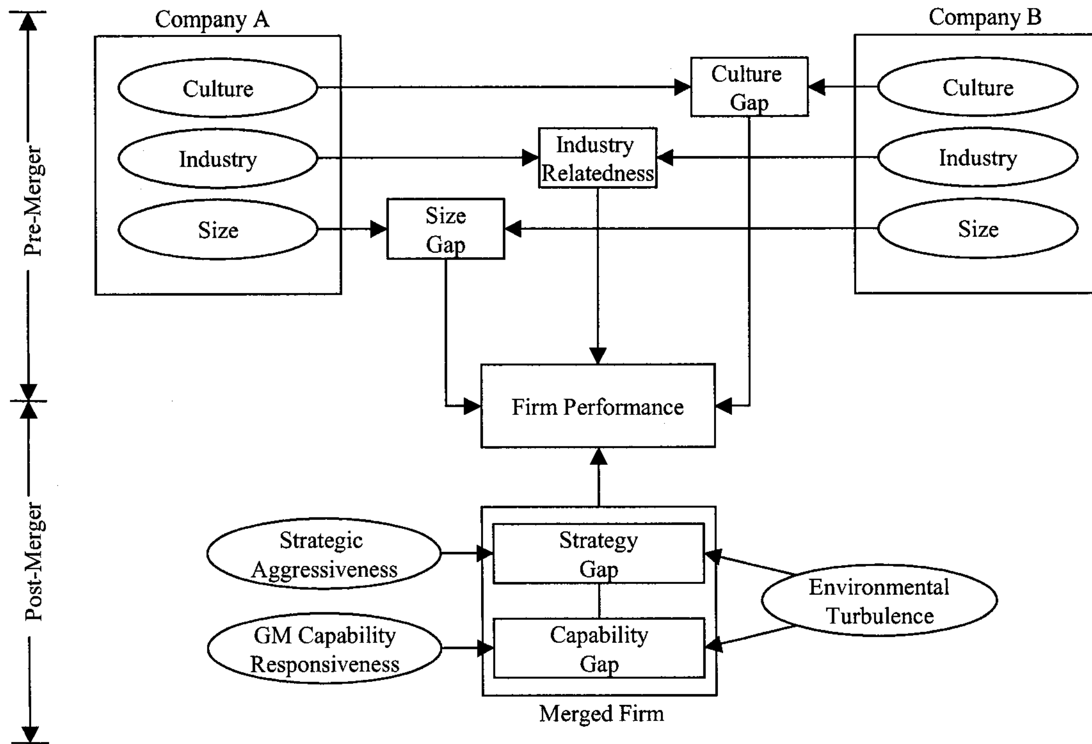

Figure 4 Research Model: The Relationships Among Merger Relatedness, Strategic Aggressiveness and Management Capability, and Merger Performance

Research Questions

The broad research question in this study is "What are the relationships among merger relatedness, strategic aggressiveness and capability responsiveness, and merger performance?" Further, there are seven detailed research questions that are presented below:

Question 1: What is the relationship between culture gap and merger performance?

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Question 2: What is the difference in performance between combined firms formed by partners from the same industries and combined firms formed by partners from different industries? Question 3: What is the relationship between size gap and merger performance?

Question 4: What is the relationship between strategy gap and merger performance?

Question 5: What is the relationship between capability gap and merger performance?

Question 6: What is the relationship between strategy gap and capability gap?

Question 7: What is the relative strength of the relationships among culture gap, size gap, strategy gap, capability gap and merger performance?

Research Hypothesis

This section presents seven research hypotheses that were formulated to answer the research questions described above. They are presented below:

Hypothesis 1: There is an inverse relationship between culture gap and merger performance.

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Hypothesis 2: Combined firms formed by partners from the same industries perform better than combined firms formed by partners from different industries.Hypothesis 3: There is an inverse relationship between size gap and merger performance.

Hypothesis 4: There is an inverse relationship between strategy gap and merger performance.

Hypothesis 5: There is an inverse relationship between capability gap and merger performance.

Hypothesis 6: There is a direct relationship between strategy gap and capability gap.

Hypothesis 7: Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, industry gap, and size gap.

Summary

The research model presented in Chapter 2B is a portion of the global model that represents the domain of research that was confined in a manageable area of research. The research model in this study presented the independent and intervening variables that influence merger

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performance. The independent variables include culture, industry, size, strategic aggressiveness, and capability responsiveness; the intervening variables include culture, industry, size, strategy, and capability gaps; and the dependent variable is merger performance.

Research questions were developed and several hypotheses were formulated in order to answer the questions. The broad research question for this study was "What are the relationships among merger relatedness, strategic aggressiveness and capability responsiveness, and merger performance."

The detailed research questions and research hypotheses were formulated according to the broad research question. A set of six research questions were presented along with six research hypotheses in Chapter 2B.

In conclusion, merger and acquisition studies suggested merger performance is influenced by merger relatedness including relatedness in culture, industry, and size. An organization's performance is influenced by strategic aggressiveness and capability responsiveness, according to the Ansoff and McDonnell's (1990) SSH. Further, this is the first empirical research to combine all these elements and relates them to merger performance.

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Chapter 3

RESEARCH METHOD

This chapter describes the research methods and procedures used to evaluate the hypotheses presented in Chapter 2B. In addition, it illustrates the specific areas of discussion including research design, selection and description of data source, instrument employed in this study, independent and dependent variables, procedures for data collection, methods used for analysis of the collected data, methodological assumptions and limitations of the study, and summary.

Research Design

This study was developed as an extension of the Ansoff and McDonnell (1990) SSH that states a firm's performance potential is optimum when its strategic aggressiveness and general management capability responsiveness are aligned with the environmental turbulence within which the firm operates (Ansoff, 1979b; Ansoff & McDonnell, 1990; Ansoff et al., 1993). The research was also designed to test the

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relationship between merger relatedness and merger performance. Further, the main objective in this study was to find empirical evidence in businesses that were formed by mergers or acquisitions and the relative strength of relationships among merger relatedness, strategy gap, capability gap, and merger performance.

This study required a systematic method that would be effective and accurate in describing the relationships among all variables measured. It was, therefore, designed and conducted as descriptive correlational research. According to Isaac and Michael (1977), a descriptive study is one that systematically describes a situation or area of interest in a factual and accurate manner.

The variables of this study consisted of six independent variables, five intervening variables, and one dependent variable as listed below.

Independent Variables: Culture, Industry, Size,
Environmental Turbulence, Strategy Aggressiveness, and Capability Responsiveness

Intervening Variables: Culture Gap, Industry Relatedness,
Size Gap, Strategy Gap, and Capability Gap

Dependent Variable: Merger Performance

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Further, the study employed a quantitative approach to seek empirical support for the hypotheses developed from theories of mergers and acquisitions. Obtained from standard questionnaires, the quantitative data were used to ensure an accurate empirical analysis without bias. The questionnaire instrument investigated relationships among the variables including independent, intervening, and dependent variables.

The research consisted of statistical hypothesis testing. Most responses by merger executives were quantified along 5-point scales, or as interval variables classified into one of two, three, four, or five alternative classes. Ratio and nominal variables were also included in this research involving book value and SIC of each merger partners.

Data Sources

The data sources were private and public business firms formed by merger or acquisition in the United States. The research populations were defined as mergers and acquisitions established between 1998 and 2000.

Names of all mergers and acquisitions formed during 1998 to 2000 were obtained from the *Merger Year Book* (1998,

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1999, 2000), a merger directory published by Securities Data Company (SDC). The SDC was once a research organization affiliated with Ohio State University, now a division of Thomson Financial Services. A merger tender is considered successful if SDC coded it as completed in its M&A database. SDC considers a transaction complete if the acquirer accepted tendered shares (Flannagan, D'Mello, & O'Shaughnessy, 1998).

The total study populations were identified by the *Merger Year Book* (1998, 1999, 2000). Based on information in these texts, Table 6 presents the number of mergers and acquisitions formed during these years.

Table 6

Study Population: Number of M&A Formed During 1998-2000

Year	**Number of Mergers and Acquisitions**
1998	11,162
1999	11,659
2000	12,897

The sampling strategies for this study included both random and convenience sampling. A computer-generated random table was used to select one research sample. A list

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of mergers and acquisitions formed in San Diego was also used to collect data to enhance the number of responses.

To obtain the quantitative data, questionnaires were sent via traditional mailing to the selected companies with a cover letter. To increase the rate of return, the cover letter also requested recipients to forward the questionnaire to their colleagues who meet the study's criteria (see Appendices A & B).

To achieve the purpose of this study, the selected respondents were executives who worked for the merger partners and have continued working for the combined organizations. Their positions in the organization may have included one of the following: Chairman of the board, chief executive officer, president, vice-president, top manager in the corporate office, top manager of the strategic business unit, and/or merger and acquisition manager.

Each traditional questionnaire was mailed with a postage-paid return envelope. Further, usable data refers to questionnaire responses with incomplete answers. The prime purpose of this study was to determine the relative importance of merger relatedness, strategy, and capability gaps to merger performance. Of the total 47 responses, 36 were useable. Table 7 presents statistics of the responses.

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Table 7

Questionnaire Response Statistics

Mail sent to prospective respondents from random list	Mail Responses	Response Rate	Mail sent to prospective respondents from convenience list	Mail Responses	Response Rate
974	32	3%	15	12	80%

Instrument

Questions on the survey were developed to measure all independent and dependent variables. The intervening variables were calculated from differences in each pair of independent variables that were compared. Further, the questionnaire was divided into two sections, acquiring pre-merger and post-merger data.

Acquiring pre-merger data measured the following variables: culture, industry, and size of the previous partners. Questions in this section were designed to obtain data during the pre-merger period. The data were measured and used for the calculation of three intervening variables: culture gap, industry relatedness, and size gap.

Acquiring post-merger data measured the following variables: environmental turbulence, strategic

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aggressiveness, and capability responsiveness of the merger. This portion of the instrument was validated by various dissertations completed at the United States International University (now Alliant International University) (Abu-Rahma, 1999; Han, 1999; Hatziantoniou, 1986; Jaja, 1989; Johanssen, 1994; Sullivan, 1987; Wang, 1991; Yum; 2000). This section also aimed at measuring the combined firm's performance according to management judgment.

Ansoff and McDonnell's (1990) 5-point-scales regarding environmental turbulence, strategic aggressiveness, and capability responsiveness were utilized in this study. In addition, questions for measuring merger performance were based on the subjective self-evaluation of a merger executive. This dependent variable is measured by a 5-point Likert scale. The approach proved to be valid by prior strategic management research, and its validity to assess a firm's performance was significant. Empirical studies supported the hypothesis that subjective measurement is consistent with objective measurement of performance (Dess & Robinson, 1984; Venkatranman & Vasudevan, 1986).

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Validity and Reliability of the Instrument

The validity and reliability of the instrument used was primarily based on previous research in the areas of merger and acquisition and strategic management as indicated in Chapter 2A and Chapter 2B. Further, the instrument was designed to best measure all the variables in this study. The questionnaire was modified and simplified so it contained clear instructions, questions, and possible answers. Opinions regarding the format and terminology of the instrument were obtained from managers across different industries from not-for-profit to for-profit organizations. Based on expert opinions, the instrument was reviewed and approved for its validity and reliability by the dissertation committee (Dr. Patrick A. Sullivan, Dr. James V. Sullivan and Dr. Ali Abu-Rahma).

As presented below, Table 8 lists a summary of various research variable-question relationships and their Cronbach alpha coefficients.

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Table 8

Variable-Question Relationships

No	Variables	Questions	Cronbach alpha
1	Culture Gap	4-8	.7847
2	Strategic Aggressiveness	9-12	.8096
3	Capability Responsiveness	13-21	.8913
4	Environmental Turbulence	22-25	.6190
5	Performance	26	.8648

Results from Table 8 illustrate the reliability analysis of the instrument used. In addition, it presents properties of measurement scales and the makeup of each item. Cronbach alpha coefficients were calculated to estimate the internal consistency (based on the average inter-item correlation) of all the variables. Values shown in Table 8 indicate the calculated coefficients were moderate. How the variables and the questionnaire are measured and related to each other are described as follows.

Independent Variables

The six independent variables are size, industry, culture, strategic aggressiveness, capability, and environmental turbulence. The variables are measured by

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questions on the questionnaire, and relationships between each variable and question are described as follows.

Size

The size of each merger partner was determined by its total assets the year prior to the merge. The amount of total assets for each merger partner was the value of total assets shown on the company's annual report. This information was obtained by the response to Question 2.

Industry

The industry of each merger partner was determined by its Standard Industry Code (SIC). This information was obtained by the response to Question 3

Culture

Respondents made an estimate of the level of each attribute of the pre-merger culture of each merger partner. The five attributes that determine the culture were selected and correspond with Questions 4 through 8 in the questionnaire. A five-level scale was used to measure the levels of the attributes. The questions used for this purpose were:

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Question 4 = time perspective

Question 5 = change propensity

Question 6 = risk propensity

Question 7 = tolerance of uncertainty

Question 8 = model of Success

The pre-merger culture of a merger partner was calculated as (Q4 + Q5 + Q6 + Q7 + Q8) / 5.

Strategic Aggressiveness

Respondents made an estimate of the level of post-merger strategic aggressiveness. The four attributes that determine the level of strategic aggressiveness were selected and correspond with Questions 4 through 16 on the questionnaire. A five-level scale was used to measure the level of the attributes.

Question 9 = organization's response to customers

Question 10 = organization's policy on new product/service development

Question 11 = organization's approach to market development

Question 12 = organization's responsiveness to competition in the market

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The level of post-merger strategic aggressiveness was calculated as (Q9 + Q10 + Q11 + Q12) / 4.

Capability

Respondents made an estimate of level of post-merger capability. The four attributes that determine the level of capability were selected and correspond with Questions 4 through 8 and Questions 13 through 16 on the questionnaire. A five-level scale was used to measure the level of the attributes.

Question 13 = personal knowledge required by top management

Question 14 = management's style of problem solving

Question 15 = information system

Question 16 = organizational structure [(16a) flexibility and (16b) adaptability]

Question 17 = time perspective

Question 18 = change propensity

Question 19 = risk propensity

Question 20 = tolerance of uncertainty

Question 21 = model of Success

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The level of post-merger capability was calculated as (Q13 + Q16 + Q15 + Q16a + Q16b + Q17 + Q18 + Q19 + Q20 + Q21) / 10.

Environmental Turbulence

Respondents made an estimate of the level of each attribute of post-merger environmental turbulence. The four attributes that determine the level of environmental turbulence were selected and correspond with Questions 9 through 12 on the questionnaire. A five-level scale was used to measure the levels of the attributes. The questions used for this purpose were:

Question 22 = complexity of the environment

Question 23 = novelty of change

Question 24 = need of change

Question 25 = visibility of future

The level of post-merger environmental turbulence was calculated as (Q22 + Q23 + Q24 + Q25) / 4.

Dependent Variable

This study has one dependent variable. This variable was measured on the questionnaire (Question 26 = merger performance).

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Merger Overall Performance

This variable was evaluated by the general manager and is determined by Question 26 on the questionnaire. This measurement of overall performance is a subjective self-evaluation on the five-level Likert scale.

Question 1 was added after the dissertation proposal defense, according to a suggestion Dr. James V. Sullivan, a committee member. It aimed at finding the differences between mergers and acquisitions.

Data Collection Procedures

Gathering data began with preparation of a list of prospective participants according to the selected sampling method. All company names were obtained from random sampling and were checked to verify they were in operation during the time the study was conducted. The *Ward's* (2002) directories of public and private companies in the United States were used for this purpose. Of the first 1,000 company names drawn from random sampling, 441 were in operation in 2002.

Another random sampling list of 1,500 was generated with company names and checked in the same fashion to determine those with existing mergers and acquisitions. A

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total of 533 surviving companies from the list were added to the first group. As a result, this study targeted 974 existing mergers and acquisitions formed in the United States between 1998 and 2000. Further, a number of mergers and acquisitions formed in San Diego during the same period were also used to enhance the number of responses.

To collect the data, traditional mailing surveys were sent to prospective participants on the sample list. Included in each mailed survey were a cover letter, questionnaire, and a postage-paid return envelope. The cover letter requested each questionnaire be completed and returned to the researcher within 1 month after prospective respondents received the questionnaire (see Appendices A & B).

Data Analysis

This study used two statistical tests to analyze the gathered data. The following are the methods employed:

1) Pearson *r* correlations were used to test the hypothesis of the degree of association between variables.

2) Stepwise Multiple Regression was utilized to analyze multiple effects of all the independent variables.

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3) Mann-Whitney U was used to test relationships between pairs of independent samples.

Due to an additional question that was added into the questionnaire to test the differences between mergers and acquisition, the Mann-Whitney U test was performed to find differences between these two groups. This tool is a nonparametric test that is suitable for small sample sizes and determines if two sampled populations are equivalent in location. The observations from both groups are combined and ranked with the average rank assigned in case of a tie.

Assumptions and Limitations

The following assumptions were formulated that were central to the design of this research. They were generated with respect to the model suggested in this study.

1. Research methods and procedures used in the conduct of this study are appropriate.

2. Respondents understand the questions and are able to answer all of them in the questionnaire.

3. Answers to the questionnaire are given with the respondent's knowledge and honesty.

4. Respondents accurately recall facts and events of the pre-merger and post-merger.

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5. Respondents are able to evaluate the cultures of the merger or acquisition partners.

Below are some limitations that may influence the results. These limitations include:

1. The samples were a combination or random and convenience selection of mergers completed between 1998 and 2000.

2. The samples were selected from a list of mergers and acquisitions from the United States. There were no differences in national culture.

Summary

This chapter discussed the research methods employed in conducting this study. In addition, it consisted of the following sections: research design, the selection and description of data source, research instrument, independent and dependent variables, data collection, data analysis, assumptions and limitations, and summary.

This study represented a historical investigation of the relationships among merger relatedness, strategic and capability gaps, and merger performance. In addition, it was designed and conducted as descriptive correlational research that contained six independent variables, five

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intervening variables, and one dependent variable. The instrument was verified as appropriate by the dissertation committee.

The quantitative part of this research was conducted through a standardized questionnaire that included 26 questions answered by executives regarding the merger. The questionnaires were delivered to respondents via traditional mail. Further, besides providing the statistical tool used to analyze this study, Chapter 3 summarized the statement of the study's assumptions and limitations.

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Chapter 4

FINDINGS

This chapter presents results of the data analysis in this study and is divided into four sections. The first section presents descriptive statistics and correlations of the variables. The second section includes tests performed on all hypotheses and results of each test. The third section shows additional findings. Lastly, this chapter concludes with a summary of all findings.

Descriptive Statistics and Correlation of the Research Variables

This section includes descriptive statistics and correlation of research variables. Table 9 presents the descriptive statistics of the research variables and elements of the variables. Research variables were calculated from responses in the questionnaires. Among 36 usable responses, 7 were from respondents whose companies experienced mergers, and the remaining 29 were from respondents whose companies experienced acquisitions. Of

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the entire sample, one-half were from mergers or acquisitions formed by partners in the same industries (see Appendices C & D).

Table 9

Descriptive Statistics

	N	**Minimum**	**Maximum**	**Mean**	**Std. Dev.**
Type					
1 Merger	7	N/A			
2 Acquisition	29				
Industry					
1 Same	18	N/A			
2 Different	18				
Size Gap	36	0%	97%	25.89%	28.98%
CULTURE GAP	36	0	2.6	0.9778	0.6672
Strategy Gap	36	0	3.25	0.6458	0.6076
Capability Gap	36	0	2.4	0.4444	0.4769
Merger Performance	36	1	5	2.9631	1.1626

Table 10 shows results of the correlations of all variables, except type and industry, which are nominal variables.

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Table 10

Results of the Pearson's r Correlations Between the Independent Variables

Correlation

		Size Gap	Culture Gap	Strategy Gap	Culture Gap	Perform-ance
Size Gap	Pearson Correlation	1				
	Sig. (2-tailed)	.				
	N	36				
Culture Gap	Pearson Correlation	-0.238	1			
	Sig. (2-tailed)	0.163	.			
	N	36	36			
Strategy Gap	Pearson Correlation	0.261	0.318	1		
	Sig. (2-tailed)	0.125	0.058	.		
	N	36	36	36		
Culture Gap	Pearson Correlation	0.152	0.303	0.693**	1	
	Sig. (2-tailed)	0.376	0.072	0	.	
	N	36	36	36	36	
Perform-ance	Pearson Correlation	0.095	-0.335*	-0.451**	-0.361*	1
	Sig. (2-tailed)	0.583	0.046	0.006	0.031	.
	N	36	36	36	36	36

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

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Hypothesis Testing

This section presents results of the statistical analysis of the seven hypotheses stated in Chapter 2B. Pearson's *r* correlation was used to measure the strengths of relationship between a pair of variables. Further, stepwise multiple regression was used to determine any meaningful coefficients of predictive power that dependent variables have over the dependent variable, merger performance. All significance calculations are two-tailed.

To discover additional findings, the Mann-Whitney U test was utilized to test relationships between a pair of smaller sample groups of independent variables. The following are pairs of statistical results for each hypothesis. The interpretations of the test results are also included.

Hypothesis 1: There is an inverse relationship between culture gap and merger performance.

As indicated in Table 11, culture gap was moderately correlated with merger performance, and the hypothesis was supported. The correlation was negative and was significant at the 0.046 level.

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Table 11

Results of the Pearson's r Correlation Between Culture Gap and Merger Performance

Variable	**N**	**Range**	**Mean**	**Std. Dev.**	**Pearson's r**	**Sig**
Culture gap	36	0-2.6	.978	.67	-0.335	.046

Table 11 illustrates that culture gap has an inverse relationship with merger performance. The greater the difference between the culture of merger or acquisition partners, the lower the combined firm's performance.

Hypothesis 2: Merger partners from the same industries perform better than merger partner from different industries.

Table 12 shows the results of the Mann-Whitney U test. There is no significant difference in the combined firm's performance for merger or acquisition partners from different industries. Thus, the hypothesis was not supported.

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Table 12

The Difference Between Industries of Merger or Acquisition Partners and Merger Performance

Type	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	p
Same	18	17.11	308.0	135.0	-.796	.443
Different	18	19.89	358.0			

Table 12 illustrates there is no difference in the combined firm's performance for merger or acquisition partners from different industries.

Hypothesis 3: There is an inverse relationship between size gap and merger performance.

As indicated in Table 13, size gap was not correlated with merger performance, and the hypothesis was not supported.

Table 13

Results of the Pearson's r Correlation Between Size Gap and Merger Performance

Variable	N	Range	Mean	Std. Dev.	Pearson's r	Sig
Size gap	36	97%	26%	28%	.95	.583

Table 13 illustrates that there is no significant relationship between size gap and merger performance.

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Hypothesis 4: There is an inverse relationship between strategy gap and merger performance.

As indicated in Table 14, strategy gap was moderately correlated with merger performance, and the hypothesis was supported. The correlation was negative and was significant at the 0.046 level.

Table 14

Results of the Pearson's r Correlation Between Strategy Gap and Merger Performance

Variable	**N**	**Range**	**Mean**	**Std. Dev.**	**Pearson's r**	**Sig**
Strategy Gap	36	0-3.25	.65	.61	-0.451	.006

Table 14 illustrates that strategy gap has an inverse relationship with merger performance. The greater the difference between the aggressiveness of strategies in the post-merger combined firm and the level of environmental turbulence, the lower the combined firm's performance.

Hypothesis 5: There is an inverse relationship between capability gap and merger performance.

As indicated in Table 15, capability was moderately correlated with merger performance, and the hypothesis was supported. The correlation was negative and was significant at the 0.031 level.

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Table 15

Results of the Pearson's r Correlation Between Capability Gap and Merger Performance

Variable	N	Range	Mean	Std. Dev.	Pearson's r	Sig
Strategy gap	36	0-2.4	.44	.361	-0.361	.031

Table 15 illustrates that capability gap has an inverse relationship with merger performance. The greater the difference between the responsiveness of general management capability in the post-merger combined firm and the level of environmental turbulence, the lower the combined firm's performance.

Hypothesis 6: There is a direct relationship between capability gap and strategy gap.

As indicated in Table 16, capability gap was strongly correlated with strategy gap, and the hypothesis was supported. The correlation was positive and was significant at the 0.000 level.

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Table 16

Results of the Pearson's r Correlation Between Capability Gap and Strategy Gap

Variable	N	Range	Mean	Std. Dev.	Pearson's r	Sig
Capability Gap	36	0-2.4	.44	.48	0.693	.000

Table 16 illustrates that strategy gap has a direct relationship on capability. The greater the misalignment between responsiveness of general management capability in the post-merger combined firm and its environmental turbulence, the greater the misalignment between aggressiveness of the strategy in the post-merger combined firm and environmental turbulence.

Hypothesis 7 was tested by stepwise multiple regression. This statistical test was performed to measure the relative predictive power of all five intervening variables with merger performance. The results of this test are presented in Tables 17, 18, and 19.

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Table 17

Results of the Multiple Regressions Among Merger Capability Gap, Strategy Gap, Culture Gap, Size Gap and Merger Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.706	0.499	0.484	2.2812
2	0.797	0.635	0.613	1.976

For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression. This CANNOT be compared to R Square for models, which include an intercept.

Model-1 Predictor: Culture Gap

Model-2 Predictors: Culture Gap, Size Gap

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Table 18

Results of the Multiple Regressions Among Merger Capability Gap, Strategy Gap, Culture Gap, Size Gap, and Merger Performance

ANOVA

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	181.238	1	181.238	34.826	.0..
	Residual	182.142	35	5.204		
	Total	363.38	36			
2	Regression	230.618	2	115.309	29.53	0.00
	Residual	132.762	34	3.905		
	Total	363.38	36			

- Model-1 Predictor: Culture Gap
- This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin.
- Model-2 Predictors: Culture Gap, Size Gap.
- Dependent Variable: Performance.
- Linear Regression through the Origin.

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Table 19

Results of the Multiple Regressions Among Merger Capability Gap, Strategy Gap, Culture Gap, Size Gap, and Merger Performance

Excluded Variables

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	Size gap	0.415	3.556	0.001	0.521	0.79
	Strategy gap	0.124	0.705	0.485	0.12	0.468
	Capability gap	0.109	0.651	0.52	0.111	0.52
2	Strategy gap	-0.17	-0.989	0.33	-0.17	0.363
	Capability gap	-0.081	-0.521	0.606	-0.09	0.456

- Predictors in the Model 1: Culture Gap
- Predictors in the Model 2: Culture Gap and Size Gap
- Dependent Variable: Performance
- Linear Regression through the Origin

Hypothesis 7. Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, and size gap.

The results from multiple regression in Table 18 indicated that no significant relationships (in the order of relative strength) were found among capability gap, strategy gap, culture gap, size gap, and merger performance. Nonetheless, the results from Table 18 showed

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all variables, grouped in Models 1 and 2, perform well in predicting performance with significance less than .01. However, Table 17 indicated that Model 2 produces the strongest overall correlation among the independent and dependent variables. This finding can be interpreted that the both strategy gap and capability gap are the best predictors of the combined firm's performance.

Additional Findings

This section presents additional findings of the statistical analysis. The results include:

1. Mergers perform better than acquisitions. Table 20 shows significant results of the Mann-Whitney U test.

Table 20

The Difference Between Performances of Mergers or Acquisitions

Type	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Z	p
Merger	7	26.50	185.0	480.5	-2.251	.024
Acquisition	29	16.57	480.5			

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2. Differences in cultures of acquisition partners are on average greater than those of merger partners. Table 21 shows significant results of the Mann-Whitney U test.

Table 21

The Difference Between Cultures of Merger Partners and Acquisition Partners.

Type	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z**	**p**
Merger	7	10.43	73.0	45.0	-2.27	0.23
Acquisition	29	20.45	593.0			

3. Differences in size of merger partners are on average greater than those of acquisition partners. Table 22 shows significant result of the Mann-Whitney U test.

Table 22

The Difference Between Sizes of Merger Partners and Acquisition Partners

Type	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z**	**p**
Merger	7	28.93	202.5	28.5	-2.92	.003
Acquisition	29	15.98	463.5			

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4. The combined firm formed by a merger of partners from the same industry had a greater difference in its strategy gap. Table 23 shows significant results of the Mann-Whitney U test.

Table 23

The Difference Between Industries of Merger or Acquisition Partners and Strategy Gap

Type	**N**	**Mean Rank**	**Sum of Ranks**	**Mann-Whitney U**	**Z**	**p**
Merger	7	21.91	21.97	99.5	-2.03	.047
Acquisition	29	15.03	15.03			

Summary

Hypothesis Testing

Table 24 summarizes the hypothesis testing followed by a brief summary of the overall research findings. Of the seven hypotheses, four were significant at the .05 level or better.

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Table 24

Summary of Hypothesis Testing

Results from Pearson Correlation			
Hypothesis Number. Independent Variable	Dependent Variable	Correlation Coefficient	P
1. Culture gap	Merger performance	-.335	<.01
3. Size gap	Merger performance	.095	N.S.
4. Strategy gap	Merger performance	-.451	<.001
5. Capability Gap	Merger performance	-.361	<.01
6. Strategy Gap	Capability gap	.693	<.001
Results from Mann-Whitney U			
Hypothesis Number. Independent Variable	Dependent Variable	Z	P
2. Industry Relatedness	Merger performance	-.796	N.S.
Results from Stepwise Multiple Regression			
Hypothesis Number. Independent Variable	Dependent Variable	Sig	
7. Culture gap, Industry gap, Size gap, Strategy gap, Capability gap	Merger performance	N.S.	

Note. N.S. = Not Significant

Research Findings

1. Mergers or acquisitions that are formed with partners that had similar cultures had better performance

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2. No difference was found in the post-merger combined firm's performance of partners from different industries.

3. No significant relationship was found between size gap and merger performance.

4. Companies formed by mergers or acquisitions with aggressiveness of strategy and aligned with environmental turbulence had better performance.

5. Companies formed by mergers or acquisitions with responsiveness of general management capability and aligned with environmental turbulence had better performance.

6. Companies formed by mergers or acquisitions with responsiveness of general management capability and aligned with environmental turbulence had aggressiveness of strategy that was aligned with environmental turbulence.

7. No significant relationship was found among merger capability gap, strategy gay, culture gap, industry gap, size gap, and merger performance.

8. Merger or acquisition partners from different industries had greater differences in their cultures.

9. Companies formed by merger performed better than companies formed by acquisitions.

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10. Differences in cultures of acquisition partners were greater than the differences in culture of merger partners.

11. Differences in sizes of merger partners were greater than differences in sizes of acquisition partners.

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Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This study analyzed the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance. In addition, it examined key success factors of mergers and acquisitions. The main focus of the research is the relative strengths among all variables tested.

This chapter summarizes the general theoretical framework that is directed to the specific research approach in the study. In addition, it presents the research hypotheses and questions this study aimed to answer. A summary of this study also delineates the findings, and concludes with recommendations and suggestions for future research.

Summary

The following summary recaptures the most important aspects of this research as presented in Chapters 1 to 4. Lastly, it concludes with a discussion of the findings.

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Background of the Problem

A significant increase in the number of mergers and acquisitions has drawn much attention from the business and academic communities. Mergers and acquisitions are deemed to be two of the most popular strategic alternatives to promote corporate growth (Ansoff, 1965a, 1965b; Sirower, 1997). Porter (1987) pointed out that mergers and acquisitions are complex and difficult to manage. As a result, more than one-half of mergers and acquisitions formed in the United States fail.

The theoretical background of the problem is summarized by Trautwien (1990). The following six major theories are directly related to mergers and acquisitions and are discussed as follows:

The *efficiency theory* views a merger as a business strategy to generate corporate synergies (Seth et al., 2000). The model states that mergers or acquisitions occur when the value of the combined firm is greater than the sum of the values of individual firms (Bradley et al., 1988). Corporate synergies can be achieved through an improvement in financial, managerial, and operational performance (Trautwien, 1990). Often decisions to merge or acquire are justified by strategic gain (Friedman & Gibson, 1988;

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Maremont & Mitchell, 1988a, 1988b; Porter, 1987). Several studies, including Dobrzynki (1988a, 1988b), Rothman (1988), and Smith and Sandler's (1988), proved this theory is unreliable.

The *monopoly theory* views merger as a strategy to realize market power by limiting competition in the market (Edwards, 1955). The theory states that monopoly gain can be obtained through either horizontal or non-horizontal mergers. Porter (1985) referred to these monopoly advantages as "collusive synergies." In addition, the theory was studied by Jenson (1984) and Ravenscraft and Scherer (1987) who proved its inconsistency.

The *valuation theory* views merger as a strategy to acquire capital gain through the ability to realize actual market price of the acquired firm (Holderness & Sheehan 1985; Steiner, 1975). Trauweien (1990) believed this theory recognizes the role of uncertainty that influences a strategic decision. Further, the valuation theory is not well supported since it is not possible to acquire any specific propositions regarding the merger result.

The empire-building theory views mergers as a tool that managers use to maximize their own wealth. The model is also called "managerialism theory" (Seth et al., 2000).

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The *empire-building theory* has its roots in the separation of ownership and control of a corporation (Berle & Means, 1933). Further, it states that managers tend to seek higher growth in assets rather than in profit since their compensations are based on the amount of assets they manage. Further, Rhoades' (1983, 1985) analysis of the 1960 merger wave showed that the power motive replaced the profit motive in conglomerate mergers formed during this period. He concluded that mergers are not necessarily confined in the motive of growth maximization.

The *process theory* originated from the concept of the strategic decision process that deems mergers are formed because of one of the following reasons: (a) Limited information about the target that leads managers to be overly optimistic about the merger deal, (b) organizational routines to merge, and (c) political power. Further, Trautwien (1990) stated that the process theory is imprecise. Despite large supportive evidence, it is still insufficient to forbid any far-reaching inference.

The *raider theory* states that a merger is a means to transfer wealth from stockholders of the acquired company to the individual who renders the bid. These wealth transfers include "greenmail" or excessive compensation

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after a success takeover. The model is viewed as illogical because the premium paid for the acquired firm is usually unreasonably high. There has been insufficient and unfavorable evidence to validate this theory (Trautwien, 1990).

An increase in the number of mergers and acquisitions in the United States and the rest of the world is phenomenal (Curry, 1997). Grundy (1995) suggested a merger is not a task for daily operation, rather a strategic function that draws a company's attention to profit potential. Despite a large number of successful cases in mergers and acquisitions, those that failed seemed to obtain close attention from the public (Samuels, 1972).

Mergers and acquisitions are driven by multiple motives that are complex, diverse, and interrelated (McManus & Hergert, 1988; Trautwien, 1990). The following is a summary of merger motives, according to the merger literature.

Corporate growth. Mergers and acquisitions help companies reach sufficient size and enable them to obtain access to capital markets. This in turn yields economies of scale and/or scope. Organizational growth can be achieved through gaining external resources (Carey, 2001). In the

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past, most large corporate organizations in the United States responded to a favorable economic climate by merging with other organizations in order to expand their business bases (Lynch, 1971; McCarthy, 1963; Salter & Weinhold, 1978, 1979).

Synergy. One prime merger motives is synergy. A merger can achieve strategic gain through financial, operational, and managerial efficiencies. Merger synergies occur when the value of a combined firm is greater than the sum of the values of individual organizations (Bradley et al., 1988). Singh's (1990) study showed that organizations that have grown from mergers or acquisitions tend to outperform others within the same industry.

Competitive position. Mergers and acquisitions can reduce competition by raising a barrier of entry to deter potential entrants in its markets. Firms respond to changes in the environment by using merger or acquisition strategy to increase their competitive position (Ansoff et al, 1971; Smith, 1985).

Organization capability. Mergers and acquisitions can be used to obtain organization capability. Not only can they help companies to overcome lack of critical resources (including personnel, knowledge and management skills), but

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also can aid companies to replace the existing management and allow the firm to redesign and restructure their new corporate structure (Ansoff et al, 1971; Mandelkar, 1974).

Organization flexibility. Organizations tend to become rigid, narrow, and simple over time as they continuously exercise the same knowledge bases (Miller, 1993). In addition, they can gain flexibility, leverage competencies, share resources, and create opportunities through mergers and acquisitions (Marks & Mirvis, 2001; Vermeulen & Barkema, 2001).

Financial reasons. Companies merge to gain financial recognition and control their problems (Reid, 1968). Mergers and acquisitions help to diversify risk, improve cash flow management, and reduce probability of bankruptcy (Lewellen, 1971). Nevaer and Deck (1990) stated a merger is a civilized alternative to bankruptcy and suggested it is a way to transfer assets from a failing firm to a growing company.

Other reasons. Reacting to opportunities, creating an aggressive management image, strategic planning, entering new markets, following industry trends, and responding to new laws and regulations are other ways to merge(Ansoff et al., 1971; Grundy, 1995; Smith 1985).

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The Need for Research

This study's intent was to acquire empirical knowledge of the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance. It also sought to determine the multiple correlations among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance

Statement of the Problem

Theory and prior studies suggest that merger relatedness influences merger performance. Ansoff and McDonnell's (1990) SSH has been tested and support that a firm's performance is affected by strategic aggressiveness and capability responsiveness. To date, there has been no empirical research that combines merger relatedness and SSH and relates them to a firm's overall performance.

Expected Contributions of the Study

The investigator has presented four possible expected contributions of the study. The contributions to the theory and practice of strategic management are as follows:

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1. This study represents the first attempt to combine merger relatedness theory and Ansoff and McDonnell's (1990) SSH.

2. This study may establish the correlations among strategic aggressiveness, capability responsiveness, and merger relatedness in culture, industry, and size.

3. This study may provide empirical evidence that performance of a merger is proportionally related to merger relatedness, strategic aggressiveness, and capability responsiveness.

4. This study tests the Ansoff and McDonnell (1990) SSH in corporate mergers and acquisitions.

Review of Literature Relevant to the Research Domain

Theoretical principles and assumptions related to this research include history of mergers, types of mergers and acquisitions, and the merger and acquisition process. These sections are summarized below.

There have been five periods of high merger activities in the United States and are often called "merger waves." The first merger wave began in 1895 and ended in 1905. Major characteristics of mergers formed during this period

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and corporate expansion gained monopoly advantages (Lynch, 1971; Mandelkar, 1974; Mueller, 1977.

The second merger wave took place between 1922 and 1929. This wave was caused largely by an upturn in business activity during this period. Characteristics of this wave include the formation of numerous electric, gas and water utility holding companies (Salter & Wienhold, 1978).

The third wave was the conglomerate era that began in 1965 and ended in 1969. Most mergers formed in this wave were the combination of unrelated partners. McManus and Hergert (1988) stated that mergers in this period revealed "a bigger is better attitude."

The fourth merger wave was from 1981 to 1989 and was fueled largely by a need to restructure and focus on core and related business (Hitt et al., 2001). This period is known as "hostile takeover" merger wave.

Hitt et al. (2001) stated mergers and acquisitions in the 1990s represent the fifth merger wave of the 20th century. The main motive of mergers in this period was to achieve economies of scale and/or scope, and to enhance market power in order to increase competitiveness in global markets. Lubatkin and Lane (1996) stated "the mergers of the 1990s are thought of as being more 'strategic'" p. 21).

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Because of the size and number of mergers formed during this merger wave, the decade of the 1990s may be remembered as "mega merger mania."

Lubatkin (1983) classified mergers into four categories (according to the FTC) horizontal, vertical, concentric, and conglomerate. The following are descriptions of each merger type.

A h*orizontal merger* occurs when two competitors are engaged principally in the same industry combine. It is sometimes called a "tactical acquisition." The literature suggested the success of horizontal mergers could be ensured by possessing skills and competencies that can be applied to the partner's business, and ability to operationally capture horizontal or relatedness opportunities presented by the new asset of the acquired (Green & Berry, 1991).

Vertical mergers are business combinations of which a buyer-seller relationship exists or could exist. A vertical combination unites partners engaged in different stages or levels of production of a common product (Wyatt & Kieso, 1969). While a common objective of backward integration is to save production costs, forward integration controls production and distribution. Further, vertical mergers are

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usually complex and are commonly quite expensive. They often result in inflexibility in business since the acquiring firm automatically commits itself heavily to its present business, thereby raising eventual exit costs (Taqi, 1989).

Concentric mergers are defined by the FTC as mergers between firms with highly similar products or distributional technologies. A merger of this type involves a common thread in the relationships between the firms. Kitching (1967) stated there are two types of concentric mergers, concentric marketing and concentric technology. Concentric marketing mergers are the combinations of companies that have the same customer but different technologies. Concentric technology mergers occur when both partners have the same technology, but different customer groups. Further, the merger literature suggested concentric combinations are performed more commonly for strategic purposes than for economic grounds. The principle rationale for this type of merger is to reduce the firm's vulnerability to core industries when industries become increasingly competitive, highly uncertain, and more vulnerable to industry-specific shocks.

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A *conglomerate merger*, sometimes called "economic diversification," occurs when merging partners are not competitors and do not have a buyer-seller relationship. It is the fusion of partners with no apparent similarities in either production or marketing activities and offers lateral growth. Conglomerate combination is probably the fastest way to enter a new growth industry and to broaden a production base. Further, conglomerate mergers are associated with high risk. Therefore the failure rate of this type of merger is significant (Kitching, 1967)

According to a survey of literature, mergers and acquisitions are a cycling process (Ashkenas et al., 2001; Taqi, 1987; Wright et al., 1991). General Electric, for example, developed a model of mergers that divided its life cycles into four stages: preacquisition, foundation building, rapid integration, and assimilation (Ashkenas et al., 2001). A summary of each stage is presented as follows.

During the *preacquisition stage*, potential partners begin to assess differences in their business natures through due diligence; this is defined as a process of detailed independent investigation (Wright et al., 1991). Due diligence helps both partners to identify business

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performance and cultural barriers to integration. After extensive analyses including strength, weakness, opportunity, and threat (SWOT) and financial assessment are thoroughly completed, negotiations then follow. If all negotiations yield a favorable outcome and the decision to merge is made, the deal is usually closed during this stage (Ashkenas et al., 2001).

The *foundation building stage* is when an announcement of a merger has been made and the assigned integration managers are formally introduced to two potential partners to communicate the jointly formulated integration and communication plans. Involvement of senior managers in developing the combined firm's strategies is a predominant activity during this period. All resources are provided to help assign accountabilities within the newly combined firm (Ashkenas et al., 2001).

The *rapid integration stage* is when developed plans for implementation of the deal are used as process maps to accelerate integration. Integration processes are commonly evaluated by an audit staff that provides necessary feedback for continuous adaptations during the merging process. The combined entity usually initiates a short-term

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management exchange during this stage (Ashkenas et al., 2001).

The *assimilation stage* includes evaluation and adjustment of long-term plans; development of common tools, practices, processes, and languages; and utilization of a corporate education center. Using the audit staff for an integration audit remains essential during this stage. The combined firm must evaluate and capitalize on its success during this extensive stage (Ashkenas et al., 2001). As described in Figure 5, the process of mergers and acquisitions, according to the General Electric model, is presented.

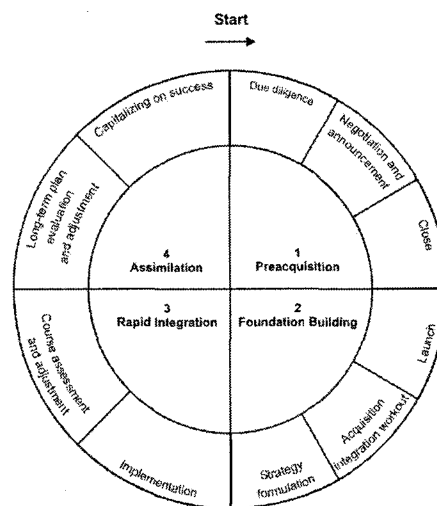

Figure 5. Process of mergers and acquisitions

Adapted from General Electric's Merger Model: Harvard Business Review on Mergers and Acquisitions (Ashkenas et al., 2001, p. 154)

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The Global Model

The global model is a homomorphic description of reality in this study. It represents the entire picture, helps to locate a research domain, and aids the understanding of the selected interrelated attributes. Figure 6 is an illustration of this study's global model. The concepts behind the global model are explained and the equivalent number regarding the attribute are marked in parentheses. The relationships among the global model's components are presented in the preacquisition, fundamental building, integration, and assimilation stages.

As shown in Figure 6, during the preacquisition stage, changes and trends in the environment (1) are transmitted to both potential merger partners as signals, which are developments of probable impacts that can affect the firm's operation through strategic information filters. After data are filtered by surveillance, mentality, and power filters (2), they become available as strategic information to stakeholders (3) and top management (4) of both companies. This information is used for strategic decision-making. If information convinces both groups the merger is a viable alternative, initiation of the merger then begins.

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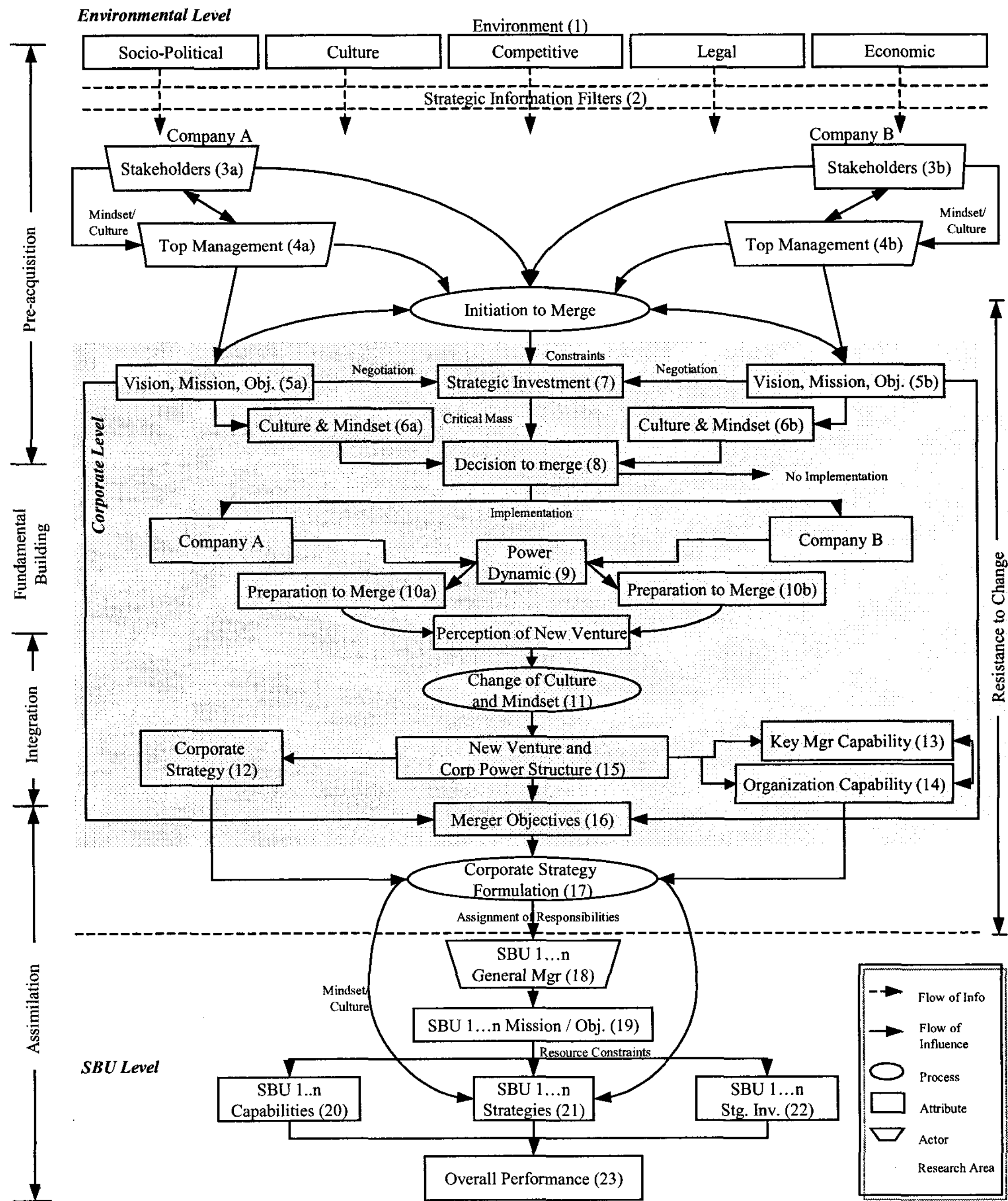

Figure 6. Global model: Formation of merger.

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Merger initiation will lead both firms to launch the due diligence process by assessing each other's vision, mission, and objectives (5a and 5b). In addition to meticulous investigations into financial and operational issues, differences in culture and mindset (6a and 6b) of the two partners are also carefully assessed and compared. If strategic investment (7) is positively sound and merger motives are favorable, the merger can then begin formation. Further, critical mass determination is a crucial process in the decision to merge (8). Negotiation must be undertaken with extreme caution when seeking to reach an agreement to merge.

The fundamental building stage (as described in Figure 6) begins with the introduction of the merger. During the early stage of merger formation, acquisition decisions are reflected by power dynamics (9) by both merger partners. By influencing this power dynamic, both partners embark on integration plans and preparations for transition (10a and 10b). Changes in culture and mindset (11), post-acquisition corporate strategy (12), and capability (13) are driven by the relative power of the merger partners (14).

As presented in Figure 6, the integration stage is discussed. While the surviving venture begins to formulate

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its responsive corporate strategy (12), it simultaneously restructures the key manager capability (13) and adjusts its organizational capability (14) according to the relative power within the surviving origination. During this stage, the new venture and corporate power structure (15) is formally established. This structure is influenced by both merging partners. Within the new components of corporate strategies, management capabilities, and new power structure the merged company declares new organizational merger objectives (16). These developments occur during the integration process.

The assimilation stage is a period when the combined firm assimilates the merger (see Figure 6). Long-term plans for the new venture are established and new corporate strategies (17) are formulated. With assignment of responsibilities, these strategies are used to create responsive strategic business unit general managers (18) to be in charge of their corresponding strategic business areas. The mission and objectives (19) of each strategic business unit (SBU) are established according to its assigned responsibilities. Each SBU capabilities (20), strategies (21), and strategic investment (22) are then defined and developed. The aggregate performances of all

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SBUs account for overall performance (23) of the merged company.

The Research Model

The relevant theoretical principles and assumptions of the research model are presented. Further, the relatedness of merger partners include cultural, capability, industry, and size are discussed below.

The relatedness theory originated with Rumelt's (1974) extension of Penrose's (1959) study. Past merger research defined "relatedness of merger" differently. As a result, research findings provided inconsistent evidence on the relationship between merger relatedness and merger performance. The literature regarding mergers and acquisitions places much importance on the interaction of the relatedness of merging firms and the value the level of relatedness creates (Lubatkin, 1987; Salter & Weinhold, 1978).

Regarding the effect of acquisition relatedness, most merger literature relies on the basic intuition that relatedness between merger partners should result in greater performance (Sirower, 1997). The following is a

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summary of types of merger relatedness and their relationship with merger performance.

Cultural relatedness. Clemente and Greenspan (1999) stated that understanding the components of corporate culture and achieving culture alignment are keys to success in merger. Changes in culture occur in both merger partners since the preacquisition stage. Conflicts resulting from differences between the cultures of the partners introduce an uncertainty about future employment to the merged organization's employees. These conflicts in turn yield lower merger performance (Davy et al., 1988; Gerber, 1987; Imberman, 1985; Lustig, 1987).

Davis (1968) suggested that conflict between the merger partners is caused by differences in business styles. He stated relatedness in business styles has a greater influence on merger success than relatedness in business type. This hypothesis has been tested, but results are not consistent with managerial expectations (Barney, 1988).

Capability relatedness. Related mergers and/or acquisitions provide more opportunities for complementary managerial and knowledge-base assets. Additionally, economies can be gained through physical assets and other

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functional forms. Related mergers create business synergy by providing opportunities to reduce operational cost through exploiting scale and scope economies (Chattergee & Lubatkin, 1990); Hitt et al., 2001).

On one hand, merger literature suggested that capability relatedness and merger performance have an inverse relationship. In addition, it suggested differences in merger partners' capability create better performance. This literature presented the similarity in capability causes redundancy that often needs to be eliminated as the integration process progresses (Hitt et al., 1990) On the other hand, Taqi (1987) suggested differences in business practices between both merger partners usually deteriorate merger performance due to disagreement over accounting principles and practices.

Industry relatedness. Markides and Williamson (1994) suggested related businesses provide stronger opportunities to gain economies of scope and develop synergy than do unrelated business. Therefore, firms are more likely to gain value when they acquire companies that operate in industries similar to or are the same as their own. Diversification into related industries is best when a company is ability to export or import skills or resources

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useful in its competitive environment. Diversification into unrelated industries is more likely to be successful when a company is ability to analyze and manage the strategies of widely different businesses (Salter & Weinhold, 1979).

Lubatkin (1987) conducted a study of over 1,000 large mergers to test the relationship between merger relatedness and stockholder value. His study showed if all other issues are equal, some product and market relatedness is better than none. This means that either vertical or horizontal mergers or acquisitions will have a direct relationship on merger performance.

Wyatt and Kieso (1969) suggested both horizontal and vertical mergers have a high expansion risk since they are directed into markets characterized by the same cyclical volatility and same stage of development that faced the company prior to the combination.

Size relatedness. Kitching (1967) found that 84% of merger failures were caused by size mismatches. O'Rourke (1989) stated a large corporation acquiring an engineering-entrepreneurial company has a large potential to fail because the culture of the small company is dramatically different from the acquirer.

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The literature suggested there are two major streams of management research on mergers (Sirower, 1997). One stream studied the relationship between strategic fit and firm performance. Several studies were performed to test the hypotheses regarding this stream and failed to demonstrate that there is a direct relationship between strategic fit and firm performance (Shelton, 1988; Singh & Montgomery, 1988; Lubatkin 1987; Chattergee, 1986).

The Strategic Success Hypothesis

The strategic success hypothesis (SSH) was originated by H. Igor Ansoff (Ansoff & McDonnell, 1990). The SSH was tested in 29 independent studies in various countries and across different managerial settings. According to Ansoff and McDonnell, the consistency and strength of results of these studies across a very diverse group of organizations provided strong support in using the SSH that states a firm can optimize its potential performance if: (a) Aggressiveness of the firm's strategic behavior matches its environmental turbulence, (b) responsiveness of the firm's capability matches the aggressiveness of its strategy, and (c) components of the firm's capability are supportive of one another. The SSH is of major importance in this study

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since it examines the relationship between merger relatedness and merger performance, and the relationship between strategic alignment and merger performance.

Research Variables

This study includes four independent variables: culture, strategic aggressiveness, capability responsiveness, and environmental turbulence. Five intervening gap variable in this study are culture, industry, size, strategy, and capability. The only dependent variable is merger performance. The following summarizes these variables.

Culture. Ansoff and McDonnell (1990) defined "culture" as a set of norms and values applied to the selection of a strategic project. Han (1999) suggested five dimensions of culture are time perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success. This study adopted these dimensions to assess the culture of the merger partners. Further, this study used the average of the attributes to represent the culture of each merger partner.

Strategic aggressiveness. This variable refers to the degree of change or discontinuity of the firm's strategies

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from past strategies (Ansoff & McDonnell, 1990). The following attributes are used to measure strategic aggressiveness: Responsiveness to customers, focus on new products/services, approach to market development, and responsiveness to competition. Table 3 presents the relationship between environmental turbulence and the responding attributes of strategic aggressiveness. The level of strategic aggressiveness is determined by the average score of these attributes.

Capability responsiveness. This variable refers to a manager's overall ability to respond to the environment. The manager ability is defined as a combination of the general manager's competence and climate/culture. In addition, capability responsiveness can be measured by two mangers' capability components, general manager's competence and climate/culture.

A general manager's competence can be measured by the following attributes: knowledge, problem solving skill, information system, rewards, and incentives. Climate or culture can be measured by time perspective, tolerance of uncertainty, risk propensity, change propensity, and model of success. Further, the level of capability responsiveness is determined by the average score of these attributes.

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Environmental turbulence. Ansoff and McDonnell (1990) defined "environmental turbulence" as a combined measure of the changeability and predictability of the firm's environment. They explained that changeability of the environment can be determined by the complexity of the firm's environment and the relative novelty of successive challenges that the firm encounters in the environment. Rapidity of change and visibility of the future indicate the predictability of the environment.

Using the culture, strategic aggressiveness, capability responsiveness, and environmental turbulence attributes, Ansoff and McDonnell (1990) classified environmental turbulence into five levels as follows: repetitive, expanding, changing, discontinuous, and surprisful. Operational descriptions of all turbulence levels with corresponding characteristics of each attribute are presented in Table 5. This study used the average of the four attributes to represent the environmental turbulence.

Culture gap refers to differences in the corporate culture of the two potential partners. The culture gap is the absolute value of the differences in culture scores for each merger partner.

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Industry gap refers to differences in the industry of the merger partners. Industry gap is measured by the general manager's evaluation on how one partner's industry relates to the other. Some studies used the type of acquisition class (i.e., vertical, horizontal, concentric, and conglomerate) to determine differences in the industry affiliation of the merger partners (Baker et al., 1981; Kitching, 1967; Poindexter, 1970).

Industry gap is measured by the percentage of the book value of acquired assets that were of the same two-digit SIC code as the acquirer. The SIC commonality was analyzed at the two digit level that reflected a good distribution of variable measurement values throughout the range of the measure (0% to 100%). SICs of acquiring companies are developed from a consensus of sources as applicable to the firm at the beginning of the period. Should either or both merger partners have more than one SIC, the dominant SICs (based on revenue that represents the merger partner) are used to calculate industry gap (Kusewitt, 1985).

Size gap occurs when differences in partner corporate size are relative. This variable refers to differences in sizes of merger partners. Corporate size can be determined by annual revenue (Kitching, 1967). Kusewitt (1985) and

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assets to determine corporate size. This study used the asset approach to measure size gap. "Size gap" is defined as a ratio of the book value of an acquired firm's assets and the book value of the acquirer's assets at the end of the year prior to acquisition.

Strategy gap resulted from the difference between the level of environmental turbulence and level of merger strategy.

Capability gap resulted from the difference between the level of environmental turbulence and level of merger capability.

Merger performance measured the overall success of a merger according to the general manager's objectives. This dependent variable is determined by level of attainment of important merger objectives in the second year after the merger formed. Measurement during the second year gives sufficient time for assessment of the merged firm's success. Three measurements used to assess merger performance include improvement in overall performance, competitiveness in the industry, and achievement of merger objectives.

The manager's objectives are measured on a scale from 1 to 5 (1 = low). General managers are responsible for

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overall performance of the merger stakeholders. In this fashion, overall performance was assessed through the general managers. The average score of the following three attributes determines the level of merger performance.

Research Domain and Research Model

The scope of this study was confined to the research problem illustrated in Figure 7.

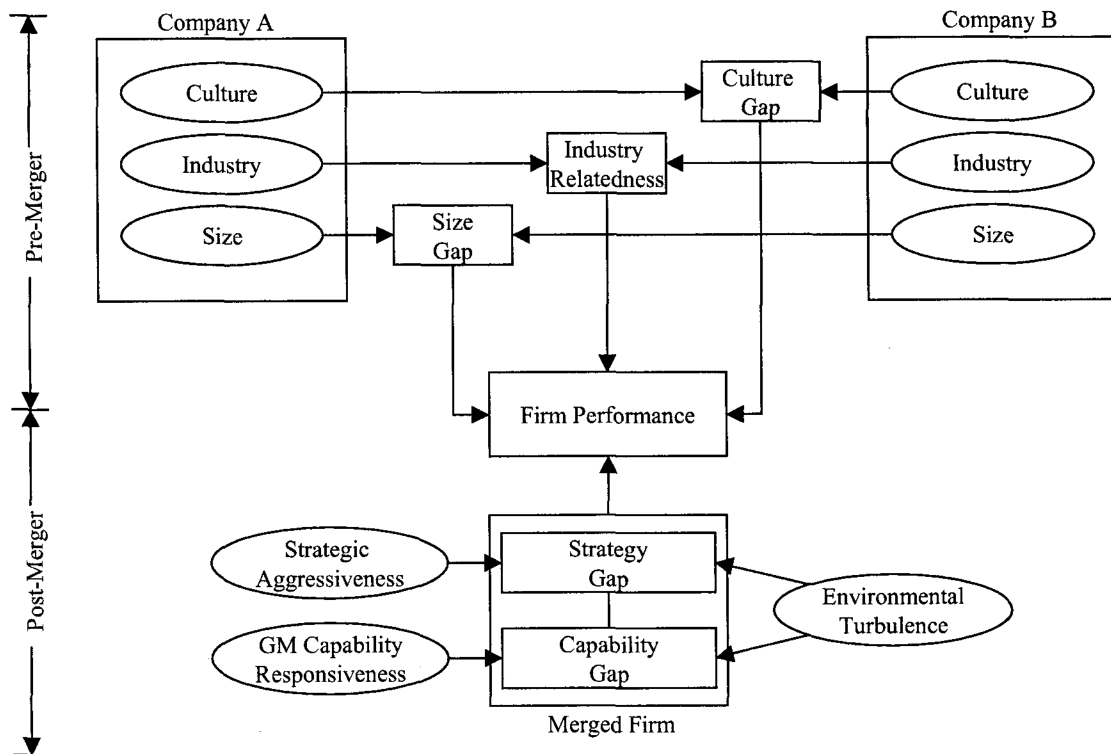

Figure 7. Research Model: The relationships among merger relatedness strategic aggressiveness and management capability and merger performance

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Research Questions

The broad research question is: What are the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance? The detailed research questions are as follows

Question 1: What is the relationship between culture gap and merger performance?

Question 2: What is the difference in performance between combined firms formed by partners from the same industries and combined firms formed by partners from different industries?

Question 3: What is the relationship between size gap and merger performance?

Question 4: What is the relationship between strategy gap and merger performance?

Question 5: What is the relationship between capability gap and merger performance?

Question 6: What is the relationship between strategy gap and capability gap?

Question 7: What is the relative strength of the relationships among culture gap, industry gap, size gap, strategy gap, capability gap, and merger performance?

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Research Hypothesis

This section presents the research hypotheses. The following hypotheses were formulated to answer the research questions.

Hypothesis 1: There is an inverse relationship between culture gap and merger performance.

Hypothesis 2: Combined firms formed by partners from the same industries perform better than combined firms formed by partners from different industries.

Hypothesis 3: There is an inverse relationship between size gap and merger performance.

Hypothesis 4: There is an inverse relationship between strategy gap and merger performance.

Hypothesis 5: There is an inverse relationship between capability gap and merger performance.

Hypothesis 6: There is a direct relationship between strategy gap and capability gap.

Hypothesis 7: Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, industry gap, and size gap.

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Research Design

The main objective of this study was to find empirical evidence in businesses that were formed by mergers or acquisitions and the relative strength of the relationships among merger relatedness, strategy gap, capability gap, and merger performance. This study required a systematic method that is effective and accurate to describe the relationships among all variables measured. It was designed and conducted as descriptive correlational research. According to Issac and Michael (1977), a descriptive study is one that systematically describes a situation or area of interest in a factual and accurate manner.

This study employed a quantitative approach to seek empirical validations on mergers and acquisition. Obtained from standard questionnaires, the quantitative data were used to ensure an accurate empirical analysis without bias. The questionnaire instrument investigated relationship among variables including independent, intervening, and dependent variables.

The research also consisted of statistical hypothesis testing. Most responses by merger executives were quantified along 5-point scales or as interval variables classified into one of two, three, four or five alternative

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classes. Ratio and nominal variables were also included in this research and involved book value and SIC of each merger partner.

Data Source

Data were collected from private and public organizations formed by mergers or acquisitions in the United States. The research populations were mergers and acquisitions established between 1997 and 2000. Names of all mergers and acquisitions formed during 1998 to 2000 were obtained from the *Merger Year Book* (1998, 1999, 2000). This directory was published by the Securities Data Company (SDC), a once research organization affiliated with Ohio State University and now a division of Thomson Financial Services. A merger tender is considered successful if the SDC coded it as complete in its M&A database. The SDC considers a transaction complete if the acquirer accepted tendered shares (Flannagan et al., 1998).

The sampling strategies in this study were both random and convenience sampling. A computer-generated random table was used to select a research sample. A list of mergers and acquisitions formed in San Diego, California during the same period was also used to collect data.

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To obtain quantitative data, questionnaires were sent via traditional mailing to selected companies with a cover letter. To increase the rate of return, the cover letter also requested recipients to forward the questionnaire to colleagues who meet the study's criteria (see Appendices A & B).

To achieve the purpose of this study, the selected respondents were executives who worked for the merger partners and continue to work for the combined organization. Their position in the organization was one of the following: Chairman of the board, chief executive officer, president, vice-president, top manager in the corporate office, top manager of the strategic business unit, and/or merger and acquisition manager.

Each traditional questionnaire was mailed with a postage-paid return envelope to enhance the response rate. Further, "unusable data" refers to questionnaire responses with incomplete answers. The prime purpose of this study was to determine the relative importance of merger relatedness and strategic and capability gaps in merger performance. Therefore, of the total 47 returned questionnaires completed by respondents, 36 were unusable

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because respondents joined the firm after the merger announcement.

Instrument

Questions on the questionnaire were developed to measure the independent and dependent variables. The intervening variables were calculated from differences in each pair of the independent variables that were compared. Further, the questionnaire was divided into two sections. The first section was designed to acquire per-merger data and the second was to acquire post-merger data.

The first section measured the following variables: culture, industry, and size of the previous partners. Questions in this section were designed to obtain data during pre-merge period. The data was measured and used to calculate the three intervening variables: culture gap, industry relatedness, and size gap.

The second section measured the following post-merger variables: environmental turbulence, strategic aggressiveness, and capability responsiveness of the merger. This instrument was validated by various doctoral dissertations at the United States International University (now Alliant International University) (e.g., Abu-Rahma,

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1999; Han, 1999; Hatziantoniou, 1986; Jaja, 1989; Sullivan, 1987; Wang, 1991; Johanssen, 1994; Yum; 2000). This section aimed at measuring merger performance according to management judgment.

Ansoff's (1990) 5-point scales on environmental turbulence, strategic aggressiveness, and capability responsiveness was utilized in this study. The instrument for measuring merger performance was the subjective self-evaluation of the merger executive. This dependent variable is measured by a five-level Likert scale.

Data Collection Procedures

Gathering data began with preparing a list of prospective participants, according to the selected sampling method. To collect data, traditional mailed surveys were sent to prospective participants on the sample list. Included in each mailed survey were a cover letter, questionnaire, and postage-paid return envelope. The cover letter requested each questionnaire to be completed and returned to the investigator within 1 month after the prospective respondent receive the questionnaire (see Appendices A & B).

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Data Analysis

This study used three statistical tests to analyze the obtained data. The following are the methods employed: (a) Pearson r correlation was used to test the hypothesis of the degree of association between variables; (b) stepwise multiple regression was utilized to analyze multiple effects of all the interval variables; and (c) Mann-Whitney U was used to find differences in performance between the merger or acquisition partners that were from the same or different industries. This test was used to also find differences in relationships of variables in the additional findings.

Assumptions and Limitations

The following assumptions were formulated that were central to the design of this research. They were determined with respect to the model suggested in this study.

1. The research methods and procedures used in the conduct of this study are appropriate.

2. Respondents understand the questions and are able to answer all questions on the questionnaire.

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3. Answers from questionnaire are given by knowledgeable and honest respondents.

4. Respondents can accurately recall facts and events of the pre-merger and post-merger.

5. Respondents are able to evaluate the cultures of both merger partners. There are some limitations that may influence the finding of this research. These include:

1. Samples in the study were a combination or random and convenience selection of mergers completed between 1998 and 2000.

2. The samples were selected from a list of mergers and acquisitions in the United States. There were no differences in national culture.

Research Findings

Table 25 provides the results of the statistical analysis of the research hypotheses. The test methods are also presented in the Table 25.

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Table 25

Results of Statistical Analysis of the Research Hypotheses

#	Research Question	Research Hypothesis	Test Method	Results
1	What is the relationship between culture gap and merger performance?	There is an inverse relationship between culture gap and merger performance.	Pearson's Correlation	P.C. = -.335 Sig = .046 Supported
2	What is the difference in performance between combined firms formed by partners from the same industries and combined firms formed by partners from different industries?	Combined firms formed by partners from the same industries perform better than combined firms formed by partners from different industries.	Mann-Whitney U	Z. = -.796 Sig = .443 Not Supported
3	What is the relationship between size gap and merger performance?	There is an inverse relationship between size gap and merger performance	Pearson's Correlation	P.C. = -.095 Sig = .583 Not Supported
4	What is the relationship between strategy gap and merger performance?	There is an inverse relationship between strategy gap and merger performance.	Pearson's Correlation	P.C. = -.451 Sig = .006 Supported
5	What is the relationship between capability gap and merger performance?	There is a inverse relationship between strategy gap and capability gap	Pearson's Correlation	P.C. = -.361 Sig = .031 Supported
6	What is the relationship between capability gap and strategy gap?	There is a direct relationship between capability gap and strategy gap.	Pearson's Correlation	P.C. = .693 Sig = .000 Supported
7	Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, and size gap	Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, and size gap.	Stepwise Multiple Regression	R = .451 F = .006 Not Supported

Discussion of Findings

The research findings and data analyses are presented in Chapter 4. This section discusses the hypotheses testing and findings in this study.

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Hypothesis 1: There is an inverse relationship between culture gap and merger performance. Hypothesis 1 was supported. The correlation was negative and moderate with the significant level at 0.046.

Hypothesis 2: Combined firms formed by partners from the same industries perform better than combined firms formed by partners from different industries. Hypothesis 2 was not supported. No significant difference was found in the combined firm's performance for merger or acquisition partners from different industries.

Hypothesis 3: There is an inverse relationship between size gap and merger performance. Hypothesis 3 was not supported. No significant relationship was found between size gap and merger performance.

Hypothesis 4: There is an inverse relationship between strategy gap and merger performance. Hypothesis 4 was supported. The correlation was negative and moderate with the significant level at 0.046.

Hypothesis 5: There is an inverse relationship between capability gap and merger performance. Hypothesis 5 was supported. The correlation was negative and moderate with the significant level at 0.031.

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Hypothesis 6: There is a direct relationship between capability gap and strategy gap. Hypothesis 5 was supported. The correlation was positive and strong with the significant level at 0.000.

Hypothesis 7: Capability gap will have the strongest relationship with merger performance followed by strategy gap, culture gap, and size gap. Hypothesis 7 was not supported. No significant relationships were found among merger capability gap, strategy gay, culture gap, size gap, and merger performance.

Additional Findings

This section presents additional findings of the statistical analysis. They are:

Additional Finding 1: Companies formed by mergers performed better than companies formed by acquisitions.

Additional Finding 2: Differences in cultures of acquisition partners were greater than differences in cultures of merger partners.

Additional Finding 3: Differences in sizes of merger partners are greater than differences in sizes of acquisition partners.

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Additional Finding 4: The combined firms form merger partners from the same industry had a greater difference in their strategy gap.

Conclusions

Results Supported by the Findings

The findings in this study support the following conclusions.

Hypothesis 1: There is an inverse relationship between culture gap and merger performance. Hypothesis 1 was supported. The correlation was negative and was significant at the 0.046 level.

Except for the study of Barney (1988), this finding is in an agreement with merger literature that stated culture conflicts among merger partners often result in failures (Clemente & Greenspan, 1999; Davis, 1968; McKay & Qureshi, 2001; Senn, 1989; Wyatt & Kieso, 1969).

Hypothesis 2: Performance will be greater for combined firms formed by merger or acquisition partners from the same industries than combined firms formed by merger or acquisition partners from different industries. Hypothesis 2 was not supported. No

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significant difference was found in combined firms' performance formed by merger or acquisition partners from the same or different industries.

This study provided different results when compared with Montgomery's study (1982). She found that mergers resulting from partners in the same or related categories have greater success than do other mergers. However, the findings from this study were in conformity with Lubatkin's (1987) research. He conducted a study of over 1,000 large mergers to test the relationship between merger relatedness and stockholder value and discovered that relatedness of merger partners or partners' industries does not consistently result in greater stockholder values. Labatkin concluded that investors do not have more favorable expectations for related mergers than unrelated ones.

Hypothesis 3: There is an inverse relationship between size gap and merger performance. Hypothesis 3 was not supported. No significant relationship was found between size gap and merger performance.

Kitching (1967) found that 84% of merger failures were caused by size mismatches. According to the researcher, size mismatches occur when the acquired company's sales are less than 2% of the acquirer. O'Rourke (1989) stated a

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large corporation acquiring an engineering-entrepreneurial company has a higher potential in failing because the culture of the small company is dramatically different from that of the acquirer. This study contradicts Kitching's findings, but was somewhat consistent with O'Rourke's research since there was a significant relationship between culture gap and performance.

Hypothesis 4: There is an inverse relationship between strategy gap and merger performance. Hypothesis 4 was supported. The correlation was negative and was significant at the 0.006 level.

The results in this study further supported the Ansoff and McDonnell (1990) SSH that was tested by 29 independent studies in various countries across different managerial settings. The findings showed strategy gaps were negatively related to merger performance.

Hypothesis 5: There is an inverse relationship between capability gap and merger performance. Hypothesis 5 was supported. The correlation was negative and was significant at the 0.031 level.

The results in this study also reconfirmed Ansoff and McDonnell's (1990) SSH. The findings showed capability gaps were negatively related to merger performance. The findings

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were consistent with other previous studies (e.g. Abu-Rahma, 1999; Han, 1999; Hatziantoniou, 1986; Jaja, 1989; Sullivan, 1987; Wang, 1991; Johanssen, 1994; Yum; 2000).

Hypothesis 6: There is a direct relationship between capability gap and strategy gap. Hypothesis 5 was supported. The correlation was positive and was significant at the 0.000 level.

The results of this study showed companies formed by mergers or acquisitions with responsiveness of general management capability and aligned with environmental turbulence had aggressiveness of strategy that was aligned with environmental turbulence. This is also consistent with prior research on Ansoff and McDonnell's (1990) SSH where responsiveness of general management capability had the strongest relationship to performance.

Hypothesis 7: Capability gap will have the strongest relationship with merger performance followed by strategy, culture, and size gaps. Hypothesis 7 was not supported. No significant relationships were found among merger capability gap, strategy gay, culture gap, size gap and merger performance.

Despite the result of this hypothesis testing, the findings showed that both strategy gap and capability gap are the

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best predictors of the post-merger combined firm's performance. This finding is in conformity with the Ansoff and McDonnell SSH.

Additional findings of the statistical analysis are listed below.

Additional Finding 1: Mergers on average perform better than acquisitions. Mann-Whitney U results showed the mean rank of merger and acquisition are 26.5 and 16.57, respectively. Means of performance of merger is 3.895 and acquisition is 2.758. This result is significant at the .023 level.

Additional Finding 2: Differences in cultures of acquisition partners are greater than those of merger partners. Mann-Whitney U results showed the mean rank of culture gaps of merger and acquisition are 10.43 and 20.45, respectively. Means of culture gap of mergers partners is 0.96 and acquisition partners is 0.95. This result is significant at the .023 level.

Additional Finding 3: Differences in sizes of merger partners are greater than differences in sizes of acquisition partners. The Mann-Whitney U results showed the mean rank of difference size of merger partners and acquisition partners is 28.93 and 15.98,

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respectively. Means of size gap of merger partners is 62% and acquisition partners is 17%. This result is significant at the .002 level.

Additional Finding 4: The combined firms formed by merger partners from the same industry had a greater difference in their strategy gaps than the combined firms formed by merger partners from different industries. The similarity in the industries of merger or acquisition partners could result in a greater degree of misalignment between the aggressiveness of the combined firm's strategy and its environmental turbulence. The Mann-Whitney U results show that the mean rank of strategy gaps of the same and different industries is 21.97 and 15.037, respectively. The same industry mergers have a 0.83 mean of strategy gap. The different industry merger has a mean of .045. This result is significant at the .047 level.

The reason mergers on average perform better than acquisitions may occur because mergers usually were formed by partners that were more similar in their cultures. The smaller the culture gap, the better the combined firm's performance. When combined, Additional Findings 1 and 2 are consistent with the tested results of Hypothesis 1 that

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stated culture gap and merger performance are negatively correlated.

Additional Finding 3 suggested that on average merger partners, when compared with acquisition partners, have greater differences in their sizes. Based on findings from Hypothesis 3, size gap was not correlated with merger performance. Although merger partners could have had greater differences in their sizes, the combined firms could still outperform acquisitions that were usually formed by the partners with lesser difference in their sizes.

Additional Finding 4 suggested the combined firms formed by merger partners from the same industry had a greater difference in their strategy gap. The similarity in the industries of merger or acquisition partners could result in a greater degree of misalignment between the aggressiveness of the combined firm's strategy and its environmental turbulence. This finding is inconsistent with the merger literature. Wyatt and Kieso (1969) suggested that both related-industry mergers have a high expansion risk since they are directed into markets characterized by the same cyclical volatility and stage of development that faced the company prior to the combination. In addition,

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partners from the same industry that were combined had some corporate assets, such as people and resources that could become redundant within the new organization (McManus & Herger 1988). These reasons probably caused mergers or acquisitions formed by partners from the same industry to misalignment between the aggressiveness of the combined firm strategy and its environmental turbulence. According to the findings from Hypothesis 6, the combined firms that had a larger strategy gap probably had a larger capability gap and may have had lower performance.

Results Suggested by the Hypotheses

Relating to the hypotheses, the research findings suggested the combined firm's performance had inverse relationships with culture gap, strategy gap, and capability gap. However, the strategy gap had a direct relationship with the capability gap. Further, the combined firm formed by the merger or acquisition partners had greater differences in their cultures and were likely to have lower performance than the combined firm formed by merger or acquisition partners that had lesser differences in their cultures. Differences in the partners' cultures may likely have generated cultural conflicts that may have

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deterred the merger performance. It can be presumable that the greater the cultural conflicts between the partners, the lower the combined firm's performance.

Differences in sizes and/or industries of merger or acquisition partners may have not been key factors in influencing the combined firm's performance. However, differences in industries of merger or acquisition partners may have induced a strategy gap of the combined firm and possibly reduced the firm's performance.

The study showed relationships between strategy gap and firm performance existed. Regardless of differences in sizes, industries and/or cultures of the merger or acquisition partners, the combined firms with smaller strategy gaps may most likely perform better than the combined firms with larger strategy gaps.

It is possible to assume that the combined firm's performance also depends on the alignment of its general management capability and environmental turbulence. Mergers or acquisitions with management capability that are aligned with the firm's environmental turbulence will presumably have better performance than mergers or acquisitions with misalignment between general management capability and environmental turbulence.

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Capability and strategy gaps of the combined firm are to a greater extent related. A combined firm with responsiveness of general management capability and is aligned with environmental turbulence most probably has aggressiveness of strategy that is aligned with environmental turbulence.

It can be concluded from the results in this study that culture, strategy, and capability gaps are the most important key success factors for mergers or acquisitions. Among these factors, strategy gap and capability gap appear to have the strongest influence on the success of the mergers or acquisitions. In addition, types of business combination, either mergers or acquisitions, could have an effect on the culture gap between the merger or acquisition partners and the combined firm's performance. On average, mergers would perform better than acquisitions. This is probably because merger partners are likely to have lesser differences in cultures than acquisition partners. Although differences in sizes of previous partners of the combined firms do not reflect the level of their performance, it is notable that this study found that merger partners have greater differences in their sizes than acquisition partners.

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This study suggested combined firms formed by merger or acquisition partners from the same industry had a greater strategy gap than combined firms formed by merger or acquisition partners from different industries. This larger strategy gap may have caused the same industry mergers or acquisitions to have misalignment between the aggressiveness of the combined firm's strategy and its environmental turbulence. As a result, these combined firms had larger capability gaps that were associated with larger strategy gap and lower performance.

The following suggest reasons why some hypotheses were not supported with significant results. They are:

1. *Conflicts in merger and acquisition theories.* The merger literature suggested differences in merger and acquisition theories. The literature emphasized greatly an importance of merger relatedness and the value it can create (Lubatkin, 1987; Salter & Weinhold, 1978). Most theories are bases on intuition, not empirical findings that merger relatedness should result in greater performance (Sirower, 1997).

This study attempted to find empirical evidence on the relationships among size gap, culture gap, and combined

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firm's performance, and the research finding showed these three variables are not correlated.

2. *Construct validity.* Assessing industry size can be performed by different approaches (i.e., using sales, revenue, or assets). Using the book value of assets as a base to determine the size of each merger partner might not be appropriate. The merger literature often emphasized the importance of merger premium which, in this case, might have been a factor to consider.

It is difficult to determine the industry difference of merger or acquisition partners. The SIC code might not be sufficient to clarify the degree of industry relatedness of both partners. Moreover some new high-tech industries might have not been appropriately classified by SIC.

3. *Small sample size.* Reasons for a small number of respondents might include:

(a) Several companies on the mailing list may have experienced more than one merger or acquisition during 1998 through 2000. This might have made it difficult for managers to recall information in responding to questions regarding merger partners;

(b) Names of managers obtained from the Hoover's (2002) directory might not have been current;

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(c) According to the merger literature, turnover rate of executives is high. During 1998 to 2000, merger executives might have left the combined firm and the questionnaire might have been sent to managers who were not eligible to participate since they were employed by the company throughout the pre- and post-merger period;

(d) Historical information for some questions, such as SIC and the book value of assets of the 2-year prior to the business combination, may have not been readily available to managers. This reason probably caused most of the unusable responses;

(e) The four-page questionnaire might have been too long and complex for managers to answer;

(f) Managers may have not had time to participate in the study; and

(g) A larger *N* may have produced significant results in testing the failed hypothesis since it could have provided different dimensions of size gaps that may in turn yield significant results. With a larger number of *N*, Pearson's correlation could have been used to test differences in performance of both mergers and acquisitions separately. Further, results from the multiple regression might also have been significant.

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Executive Summary and Recommendations for Business Practitioners

In order to enhance success in mergers or acquisitions, business executives and managers should place importance on the following issues:

1. The alignment of the combined company's strategic aggressiveness and its environmental turbulence;

2. The alignment of the combined company's general management capability responsiveness and its environmental turbulence;

3. Managing conflicts resulting from different cultures of both merger and acquisition partners can negatively influence the combined company's performance;

4. The awareness that differences in the industries of merger or acquisition partners can result in misalignment between the aggressiveness of the combined firm's strategy and its environmental turbulence;

5. Awareness that mergers on average can outperform acquisitions. This might help managers to select the best approach when they plan to combine businesses;

6. Awareness that acquisitions, when compared with mergers, might result in a greater cultural conflict;

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7. Awareness that mergers, when compared with acquisitions, are often formed by partners that have a greater difference in their sizes.

Contributions to the Theory of Strategic Management and the Theory of M&A

This study provided empirical evidence regarding the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance. Its benefits to theory and practice of management and strategic management are discussed below. It has contributed to the following theory of management and strategic management.

1. Established empirical support for the relationships between merger relatedness and the combined firm's performance. The research findings showed that difference in cultures of M&A partners could influence the combined firm's performance and there were no relationships among differences in sizes and industries of merger partners and the combined firm's performance.

2. Added additional empirical support of Ansoff and McDonnell's (1990) SSH that stated firm performance is

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optimum when strategic aggressiveness and capability responsiveness are aligned with environmental turbulence

3. Provided empirical evidence that links the merger relatedness theory to Ansoff and McDonnell's (1990) SSH. Besides the alignment among strategic aggressiveness, capability responsiveness, and environmental turbulence difference in cultures of merger or acquisition partners can influence the combined firm's performance

Contributions to the Practice of Strategic Management

The following contributions to the practice of strategic management are as follows:

1. Provided managers with knowledge of key success factors regarding mergers and acquisitions in the areas of merger relatedness and strategic management.

2. Provided strong evidence that strategic alignment among strategic aggressiveness, capability responsiveness, and level of environmental turbulence of the firm are crucial to the firm's success.

3. Provided managers with awareness regarding differences in degree of influences on merger and acquisition success.

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Recommendations for Future Research

The recommendations for future research were developed according to the findings in this research. They include five recommendations as listed below:

1. Conduct the same study with a focus on mergers and acquisitions formed by partners with different national cultures.

2. Perform a study on the relationships among merger relatedness, strategic aggressiveness, capability responsiveness, and merger performance using secondary financial data.

3. Research a smaller group of companies that agree to have management in different levels participate in the study.

4. Utilize a study with larger samples in each group of mergers and acquisitions, and compare the differences.

5. Direct a longitudinal study to observe changes after the combinations.

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APPENDICES

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APPENDIX A

QUESTIONNAIRE

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QUESTIONNAIRE
Research on Mergers and Acquisitions (M&A)

Answer questions 1 - 8 using information from your previous company and the company with which it combined before the merger or acquisition took place.

1. **What type of business combination did your previous company experience?** ***(Check ONE)***

   ❑ Merger ❑ Acquisition

2. **What was the total amount of book value of assets of each M&A partner at the last year-end before the merger or acquisition was announced?**

   - Book Value of the company for which you worked before the merger or acquisition: $____________
   - Book Value of the company which combined with your previous firm: $____________________

3. **What was the Standard Industry Code (SIC) of each M&A partner?** *If the company has more than one SIC, please answer this question using the dominant SIC based on revenue. Provide the first two digits.*

   - SIC of the company the company for which you worked before the merger: ________________
   - SIC of the company which combined with your previous firm: ______________________

4. **The company decisions were based on:** ***(Check ONE for each M&A partner)***

	the past performance only	the knowledge of present based on actual performance	prediction of future based on historical performance	prediction of future based on partially available info	potential Future without the available info
Your previous company	❑	❑	❑	❑	❑
The M&A partner	❑	❑	❑	❑	❑

5. **The company reacted to change when it was:** ***(Check ONE for each M&A partner)***

	facing a crisis.	facing unsatisfactory results.	dealing with significant threats.	pursuing new opportunities in global markets	making innovative breakthroughs.
Your previous company	❑	❑	❑	❑	❑
The M&A partner	❑	❑	❑	❑	❑

6. **The company:** ***(Check ONE for each M&A partner)***

	always rejected risks.	accepted familiar risks.	preferred to take familiar risks.	preferred to take unfamiliar risks.	sought novel risks.
Your previous company	❑	❑	❑	❑	❑
The M&A partner	❑	❑	❑	❑	❑

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7. **The company was operating in:** ***(Check ONE for each M&A partner)***

	a highly certain environment *(outcomes are predictable)*	a certain environment *(outcomes are somewhat predictable)*	a somewhat certain environment *(outcomes are partly predictable)*	an uncertain environment *(outcomes are unpredictable)*	a highly uncertain environment *(outcomes are highly unpredictable)*
Your previous company	❑	❑	❑	❑	❑
The M&A partner	❑	❑	❑	❑	❑

8. **The company's model of success was based on:** ***(Check ONE for each M&A partner)***

	stability and repetition	service and efficiency	balance of internal efficiency &marketing	investment in the most profitable opportunities	investment in creative product/service development
Your previous company	❑	❑	❑	❑	❑
The M&A partner	❑	❑	❑	❑	❑

Answer questions 9 through 26 using current information from the combined company

9. **Which of the following statements best describes the combined company?** ***(Check ONE)***
   - ❑ The company deems that response to customer is not important.
   - ❑ The company deems that its products/services are what the customer wanted.
   - ❑ The company mainly anticipates the customers' needs.
   - ❑ The company mainly identifies unfilled customer needs.
   - ❑ The company mainly identifies needs that were expected to occur in the future.

10. **The combined company:** ***(Check ONE)***
    - ❑ does not develop new products/services.
    - ❑ develops new products/services mainly by imitating the existing ones in the market.
    - ❑ develops new products/services mainly by improving the existing ones in the market.
    - ❑ develops new products/services mainly by adopting new ones in the market.
    - ❑ develops new products/services mainly by pioneering new ones in the market.

11. **The combined company most commonly:** ***(Check ONE)***
    - ❑ serves its existing customers.
    - ❑ follows competitors in their market development.
    - ❑ expands to familiar markets.
    - ❑ expands to foreign markets.
    - ❑ creates new markets.

12. **The combined company:** ***(Check ONE)***
    - ❑ does not compete with others.
    - ❑ does not need to aggressively complete with other firms, but responds appropriately if being attacked.
    - ❑ continuously seeks new tactics and responds to all competitors' movements to show customers that it is still the best in the business.
    - ❑ leads, and leave the rest of the competition behind.
    - ❑ is its own competitor.

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13. **The personal knowledge required by top management in the combined company for conducting business is:** ***(Check ONE)***

- ❑ internal politics
- ❑ internal operation
- ❑ traditional market, competitor's behavior and technologies
- ❑ global opportunities.
- ❑ changes in the environment

14. **The top management's way of solving problems in the combined company is:** ***(Check ONE)***

- ❑ trial and error
- ❑ diagnosis
- ❑ choosing among existing alternatives
- ❑ searching for alternatives
- ❑ creating alternative solutions.

15. **The information systems of the combined company is based primarily on:** ***(Check ONE)***

- ❑ past precedent.
- ❑ information about past performance.
- ❑ projection of past performance.
- ❑ data relative to developing changes collected by environmental surveillance.
- ❑ data relative to possible changes collected by environmental surveillance.

16. **Which ONE of the following statements best describes the organizational structure of the combined firm:**

Level of Flexibility: ***(Check ONE)***

- ❑ Low
- ❑ Somewhat low
- ❑ Moderate
- ❑ Somewhat high
- ❑ High

Level of Adaptability to change: ***(Check ONE)***

- ❑ Low
- ❑ Somewhat low
- ❑ Moderate
- ❑ Somewhat high
- ❑ High

17. **The combined company primarily based its decisions on:** ***(Check ONE)***

- ❑ what it had done in the past.
- ❑ knowledge from the present, based on actual performance.
- ❑ a view of the future based on extrapolating from historical performance.
- ❑ a prediction of the future for which information is at least partially available.
- ❑ a view of a potential future, for which dependable information is not available.

18. **Major changes of the combined company occurs primarily when:** ***(Check ONE)***

- ❑ facing a crisis.
- ❑ facing unsatisfactory results.
- ❑ dealing with significant threats.
- ❑ pursuing new opportunities for diversification or expanding to international and global market.
- ❑ making innovative breakthroughs.

19. **The combined company:** ***(Check ONE)***

- ❑ always rejects risks.
- ❑ accepts familiar risks.
- ❑ prefers to take familiar risks.
- ❑ prefers to take unfamiliar risks.
- ❑ seeks novel risks.

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20. The combined company is operating in: ***(Check ONE)***

- ❑ a highly certain environment in which outcomes are predictable.
- ❑ a certain environment in which outcomes are somewhat predictable.
- ❑ a somewhat certain environment in which outcomes are somewhat predictable.
- ❑ an uncertain environment in which outcomes are unpredictable.
- ❑ a highly uncertain environment in which outcomes of decisions are highly unpredictable.

21. Model of success of the combined company is primarily based on: ***(Check ONE)***

- ❑ stability and repetition
- ❑ service and efficiency
- ❑ balance of internal efficiency and marketing
- ❑ investment in the most profitable opportunities
- ❑ investment in creative product/service development

22. The range of the combined company's business is: ***(Check ONE)***

- ❑ Local only
- ❑ Domestic (USA)
- ❑ Domestic and a few adjacent countries
- ❑ Regional (such as NAFTA, EU, or Pacific Rim)
- ❑ Global

23. Which one of the following statements best describes the familiarity with events in the environment of the combined company? ***(Check ONE)***

- ❑ Nothing really changes much in the environment.
- ❑ Changes in the environment are repetitions of the past experience.
- ❑ Changes in the environment are understood as historical development.
- ❑ Changes in the environment are different, but can be explained with past experience.
- ❑ Changes in the environment are new, and not experienced before.

24. Speed of change in environment of the combined company is: ***(Check ONE)***

- ❑ much slower than speed that the company could respond to it.
- ❑ slower than the speed that the company could respond to it.
- ❑ comparable to the speed that the company could respond to it.
- ❑ faster than the speed that the company could respond to it.
- ❑ much faster than speed that the company could respond to it.

25. The environment of the combined company: ***(Check ONE)***

- ❑ remains substantially unchanged.
- ❑ evolves in historically logical manner.
- ❑ is predicable through analysis of threats and opportunities.
- ❑ is difficult to predict.
- ❑ is characterized by unpredictable surprises.

26. Please check *ONE box for each row* to show how much you agree or disagree with the following statements.

Statements	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
After the second year-end, the combined firm shows improvement in its overall performance	❑	❑	❑	❑	❑
After the second year-end, the combined firm is competitive in its industry.	❑	❑	❑	❑	❑
After the second year-end, the combined firm has met all the stated goals declared at the announcement of merger.	❑	❑	❑	❑	❑

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APPENDIX B

COVER LETTER

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February 20, 2003

«First_Name» «Last_Name»
«Company_Name»
«Address»
«City», «State» «Zip»

Dear «First_Name»

The attached questionnaire is part of a research study on mergers and acquisitions (M&A) and their performances. The results of this study will help business organizations like yours to understand key success factors for mergers and acquisitions.

Your organization was selected because it has experienced an M&A during the past five years. The respondents to this survey will remain anonymous. Confidentiality is guaranteed as the identities of organizations and individual respondents will not be known by anyone.

Completing this questionnaire should require approximately 15-20 minutes. We are requesting that this questionnaire be completed by any key personnel in your organization who were present before, during and after the merger or acquisition. Key personnel might include: chairman of the board, CEO, president, VP, top manager in the corporate office, manager of the strategic business unit, merger and acquisition manager and others whom you deem appropriate. *Please feel free to duplicate this questionnaire and pass it on to any individuals who meet the criteria of this study.*

Should your company have experienced more than one M&A during the past five years, please answer these questions for the last M&A, which occurred before the end of calendar year 2000.

Please complete the questionnaire and send it back to us using the enclosed pre-paid-postage envelope by March 20, 2003. Other phases of this research cannot be carried out until we complete analysis of the questionnaire data. By completing the attached anonymous questionnaire, you are indicating consent to participate in the study.

The results of this study can be viewed at www.alliant.edu/usicb/ansoff between May 1 and June 30, 2003. If you wish to obtain a hard copy of this result, please email your request to the below address.

Thank you for your participation.

Sincerely

Jack Phadungtin
Researcher

Dr. Patrick A. Sullivan
Professor, Principal Investigator

Email: jsp@alliant.edu
Phone: 858.635.4716
Fax: 858.635.4528

Enclosure: Questionnaire

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APPENDIX C

RESEACH DATA

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Raw Data
Variable Calculations

Type	BVpartA	BVpartB	SizeRatio	SICpartA	SICpartB	Indsim	DicisionA	DicisionB	ChangeA	ChangeB	RiskA	RiskB	EnvA	EnvB	SuccessA	SuccessB	CultGap	|CultGap|	Cusomter	Product	Market	Compete	Strat	Knowledge	Problem	IS	Flex	Adapt	Dicision	Change	Risk	Env	Success	CapGap	Business	Familiar	Speed	Predict	Turbul	Improve	Comp	Goal	Perfrom	StratGap	CapGap	|StratGap|	|CapGap|
2	67.0	275.0	0.24	36	36	1.00	2	4	1	4	2	3	4	4	4	5	-1.40	1.40	2	2	3	2	2.25	2	2	2	1	1	2	2	2	3	3	2.00	5	4	2	1	3.00	4	4	2	3.33	0.75	1.00	0.75	1.00
2	1.0	2.0	0.50	79	79	1.00	4	3	3	4	3	2	3	2	5	1	1.20	1.20	2	1	1	1	1.25	2	1	1	1	1	1	1	1	4	1	1.40	5	2	1	1	2.25	2	2	1	1.67	1.00	0.85	1.00	0.85
2	168.0	14.8	0.09	83	28	2.00	4	4	5	2	5	2	5	2	5	1	2.60	2.60	4	5	3	4	4.00	4	4	2	3	3	3	2	2	2	1	2.60	5	3	3	2	3.25	5	5	5	5.00	-0.75	0.65	0.75	0.65
2	45.0	5.0	0.11	73	75	2.00	4	3	3	2	5	3	4	3	5	3	1.40	1.40	5	5	5	2	4.25	5	5	3	4	3	3	4	5	4	3	3.90	2	5	3	4	3.50	2	2	2	2.00	-0.75	-0.40	0.75	0.40
2	1.5	15000.0	0.00	33	33	1.00	5	3	5	2	5	3	5	3	5	3	2.20	2.20	3	5	3	3	3.50	1	4	4	3	3	4	4	3	4	4	3.40	5	4	4	4	4.25	4	1	1	2.00	0.75	0.85	0.75	0.85
2	382.0	22.0	0.06	53	53	1.00	4	2	3	1	3	3	3	3	2	1	1.00	1.00	2	4	1	2	2.25	2	4	2	3	4	3	5	3	3	2	3.10	2	5	3	2	3.00	5	5	3	4.33	0.75	-0.10	0.75	0.10
1	15.6	9.1	0.58	13	13	1.00	3	3	1	2	2	2	4	2	3	2	0.40	0.40	3	5	3	3	3.50	4	4	4	4	3	4	2	2	3	3	3.30	5	3	2	2	3.00	4	4	3	3.67	-0.50	-0.30	0.50	0.30
2	4.0	13000.0	0.00	73	33	2.00	3	4	2	4	2	4	2	3	2	4	-1.60	1.60	3	4	3	2	3.00	3	4	3	4	4	4	3	3	3	3	3.40	2	4	3	3	3.00	2	4	1	2.33	0.00	-0.40	0.00	0.40
1	6.9	7.1	0.97	67	87	2.00	3	4	3	3	3	4	3	3	3	3	-0.40	0.40	3	3	3	3	3.00	3	4	3	2	1	3	2	2	3	2	2.50	2	3	3	2	2.50	4	4	5	4.33	-0.50	0.00	0.50	0.00
2	98.1	22.0	0.22	67	63	2.00	3	3	4	3	4	3	4	4	4	3	0.60	0.60	3	3	3	3	3.00	3	4	4	4	5	3	4	4	3	4	3.80	3	3	3	3	3.00	4	3	4	3.67	0.00	-0.80	0.00	0.80
1	663.0	37.0	0.06	60	63	2.00	3	4	4	4	3	4	3	4	3	4	-0.80	0.80	3	3	3	2	2.75	3	2	3	3	2	3	3	3	3	2	2.70	3	3	3	2	2.75	3	3	2	2.67	0.00	0.05	0.00	0.05
2	584000.0	680.0	0.00	60	73	2.00	2	4	2	4	2	4	3	4	2	4	-1.80	1.80	3	3	3	2	2.75	3	2	3	3	2	3	4	3	3	2	2.80	4	2	4	2	3.00	1	2	1	1.33	0.25	0.20	0.25	0.20
2	4.5	9.1	0.49	50	50	1.00	2	3	2	4	3	4	3	4	3	4	-1.20	1.20	3	2	3	3	2.75	3	4	4	3	4	3	4	3	3	3	3.40	4	4	3	3	3.50	2	3	2	2.33	0.75	0.10	0.75	0.10
2	60.0	5.7	0.10	48	48	1.00	4	4	4	3	5	4	5	4	4	4	0.60	0.60	5	4	4	4	4.25	4	4	5	3	3	4	4	5	4	4	4.00	5	4	3	4	4.00	4	3	4	3.67	-0.25	0.00	0.25	0.00
2	61.0	10.0	0.16	35	33	2.00	4	4	4	1	3	3	3	4	3	4	0.20	0.20	2	3	4	2	2.75	5	2	4	4	4	4	3	3	5	4	3.80	4	4	4	4	4.00	1	2	1	1.33	1.25	0.20	1.25	0.20
2	7.5	22.3	0.34	82	82	1.00	2	2	2	4	3	4	2	5	2	5	-1.80	1.80	1	4	3	3	2.75	3	5	5	2	4	4	2	5	5	5	4.00	5	4	5	5	4.75	1	1	1	1.00	2.00	0.75	2.00	0.75
2	450.0	58238.0	0.01	45	43	2.00	3	2	1	4	2	1	3	1	2	1	0.40	0.40	2	5	5	4	4.00	4	2	5	3	3	4	4	3	3	4	3.50	5	5	2	2	3.50	3	4	4	3.67	-0.50	0.00	0.50	0.00
2	22.3	7.5	0.34	82	82	1.00	3	3	4	4	2	2	3	3	3	3	0.00	0.00	2	3	3	3	2.75	1	1	3	3	3	3	1	2	3	4	2.40	5	2	2	5	3.50	1	1	2	1.33	0.75	1.10	0.75	1.10
2	2.0	0.4	0.20	73	73	1.00	4	5	4	1	4	3	4	5	5	2	1.00	1.00	3	5	1	3	3.00	5	5	2	4	4	4	2	4	5	5	4.00	5	4	3	4	4.00	2	3	2	2.33	1.00	0.00	1.00	0.00
2	7.5	22.3	0.34	82	82	1.00	3	1	1	3	1	3	2	2	1	3	-0.80	0.80	2	2	1	1	1.50	1	1	2	2	2	1	1	2	2	3	1.70	3	2	2	2	2.25	2	2	2	2.00	0.75	0.55	0.75	0.55
1	174000.0	116000.0	0.67	67	60	2.00	3	3	3	2	4	3	3	3	3	3	0.40	0.40	3	3	3	4	3.25	3	3	3	4	5	2	3	2	2	3	3.00	2	3	2	2	2.25	3	4	4	3.67	-1.00	-0.75	1.00	0.75
2	3685.0	1480.0	0.40	59	59	1.00	2	2	2	2	3	3	3	2	3	3	0.20	0.20	2	2	3	2	2.25	3	2	3	1	2	2	2	2	3	2	2.20	2	2	3	2	2.25	4	5	5	4.67	0.00	0.05	0.00	0.05
2	10463.0	560.0	0.05	20	20	1.00	4	2	3	1	3	2	3	2	4	2	1.60	1.60	3	3	3	3	3.00	3	4	4	4	3	3	4	3	2	3	3.30	5	4	3	3	3.75	3	4	3	3.33	0.75	0.45	0.75	0.45
2	8000.0	840.0	0.11	67	20	2.00	4	3	4	2	4	2	4	1	3	1	2.00	2.00	4	4	3	3	3.50	4	3	3	4	5	3	4	3	4	3	3.60	3	3	3	4	3.25	2	1	2	1.67	-0.25	-0.35	0.25	0.35
1	6200.0	1400.00	0.23	35	36	2.00	5	4	4	5	4	5	4	5	4	5	-0.60	0.60	4	4	3	4	3.75	4	5	4	5	4	4	4	3	5	4	4.20	4	4	4	3	3.75	4	4	4	4.00	0.00	-0.45	0.00	0.45
1	5.0	6.00	0.83	10	12	2.00	2	2	2	2	3	3	3	2	3	3	0.20	0.20	2	1	1	2	1.50	3	2	2	1	2	2	3	2	2	2	2.10	2	2	2	2	2.00	5	4	5	4.67	0.50	-0.10	0.50	0.10
2	242000.0	7500.0	0.03	48	35	2.00	4	3	4	2	3	2	4	2	4	2	1.60	1.60	4	3	3	3	3.25	3	3	3	2	2	3	3	2	3	2	2.60	2	3	3	2	2.75	2	2	1	1.67	-0.50	0.15	0.50	0.15
2	242000.0	59000.0	0.24	48	36	2.00	4	3	4	3	3	2	4	3	3	2	1.00	1.00	4	3	3	3	3.25	3	3	3	2	2	3	3	2	3	2	2.60	2	3	3	3	2.75	3	3	3	3.00	-0.50	0.15	0.50	0.15
1	3.9	3.8	0.97	49	49	1.00	3	2	3	3	3	2	3	3	3	2	0.60	0.60	3	2	2	2	2.25	2	3	3	1	1	2	2	2	3	3	2.20	2	2	2	2	2.25	4	3	4	3.67	0.00	0.05	0.00	0.05
2	80.0	2300.0	0.03	39	33	2.00	3	3	4	4	3	2	2	1	5	1	1.20	1.20	3	5	5	2	3.75	5	5	4	4	5	3	4	3	1	4	3.80	5	4	2	1	3.00	4	5	2	3.67	-0.75	-0.80	0.75	0.80
2	1000.0	40000.0	0.03	50	50	1.00	4	4	2	3	3	3	3	3	2	3	-0.40	0.40	2	3	3	3	2.75	4	5	3	1	2	1	2	1	2	2	2.30	5	1	2	2	2.50	4	4	2	3.33	-0.25	0.20	0.25	0.20
2	26.0	32.0	0.81	45	45	1.00	4	1	4	2	4	2	3	2	4	2	2.00	2.00	2	1	1	1	1.25	2	1	3	3	1	2	1	1	3	4	2.10	5	5	4	4	4.50	1	1	1	1.00	3.25	2.40	3.25	2.40
2	519.0	58000.0	0.01	45	45	1.00	1	3	2	4	5	3	2	2	1	3	-0.80	0.80	3	3	3	3	3.00	5	5	5	3	4	3	4	2	2	3	3.60	5	4	3	3	3.75	4	5	4	4.33	0.75	0.15	0.75	0.15
2	519.0	58000.0	0.01	45	45	1.00	4	4	3	4	4	3	3	4	4	3	0.00	0.00	4	3	3	3	3.25	1	4	3	2	3	3	4	3	3	4	3.00	5	5	3	3	4.00	2	4	2	2.67	0.75	1.00	0.75	1.00
2	5360.0	430.0	0.08	35	73	2.00	5	4	4	5	4	5	4	5	4	5	-0.60	0.60	5	5	5	5	5.00	5	5	5	4	4	5	5	5	4	5	4.70	5	5	5	4	4.75	3	2	4	3.00	-0.25	0.05	0.25	0.05
2	19800.0	287.0	0.01	51	54	2.00	4	4	5	5	4	5	4	5	4	5	-0.60	0.60	4	4	4	4	4.00	4	4	5	4	4	4	4	4	4	4	4.10	4	4	3	3	3.50	4	5	4	4.33	-0.50	-0.60	0.50	0.60

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	type	sizegap	industry	cultgap	stratgap	capgap	perform
1	2	0.24	1	1.4	0.75	1	3.33
2	2	0.5	1	1.2	1	0.85	1.67
3	2	0.09	2	2.6	0.75	0.65	5
4	2	0.11	2	1.4	0.75	0.4	2
5	2	0	1	2.2	0.75	0.85	2
6	2	0.06	1	1	0.75	0.1	4.33
7	1	0.58	1	0.4	0.5	0.3	3.67
8	2	0	2	1.6	0	0.4	2.33
9	1	0.97	2	0.4	0.5	0	4.33
10	2	0.22	2	0.6	0	0.8	3.67
11	1	0.06	2	0.8	0	0.05	2.67
12	2	0	2	1.8	0.25	0.2	1.33
13	2	0.49	1	1.2	0.75	0.1	2.33
14	2	0.1	1	0.6	0.25	0	3.67
15	2	0.16	2	0.2	1.25	0.2	1.33
16	2	0.34	1	1.8	2	0.75	1
17	2	0.01	2	0.4	0.5	0	3.67
18	2	0.34	1	0	0.75	1.1	1.33
19	2	0.2	1	1	1	0	2.33
20	2	0.34	1	0.8	0.75	0.55	2
21	1	0.67	2	0.4	1	0.75	3.67
22	2	0.4	1	0.2	0	0.05	4.67
23	2	0.05	1	1.6	0.75	0.45	3.33
24	2	0.11	2	2	0.25	0.35	1.67
25	1	0.23	2	0.6	0	0.45	4
26	1	0.83	2	0.2	0.5	0.1	4.67
27	2	0.03	2	1.6	0.5	0.15	1.67
28	2	0.24	2	1	0.5	0.15	3
29	1	0.97	1	0.6	0	0.05	3.67
30	2	0.03	2	1.2	0.75	0.8	3.67
31	2	0.03	1	0.4	0.25	0.2	3.33
32	2	0.81	1	2	3.25	2.4	1
33	2	0.01	1	0.8	0.75	0.15	4.33
34	2	0.01	1	0	0.75	1	2.67
35	2	0.08	2	0.6	0.25	0.05	3
36	2	0.01	2	0.6	0.5	0.6	4.33

Final Data (calculated variables)

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APPENDIX D

STATISTICAL RESULTS

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Descriptives

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TYPE	36	1	2	1.81	.40
SIZEGAP	36	.00	.97	.2589	.2898
INDUSTRY	36	1	2	1.50	.51
CULTGAP	36	.00	2.60	.9778	.6672
STRATGAP	36	.00	3.25	.6458	.6076
CAPGAP	36	.00	2.40	.4444	.4769
PERFORM	36	1.00	5.00	2.9631	1.1626
Valid N (listwise)	36				

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Correlations

Correlations

		SIZEGAP	CULTGAP	STRATGAP
SIZEGAP	Pearson Correlation	1.000	-.238	.261
	Sig. (2-tailed)	.	.163	.125
	N	36	36	36
CULTGAP	Pearson Correlation	-.238	1.000	.318
	Sig. (2-tailed)	.163	.	.058
	N	36	36	36
STRATGAP	Pearson Correlation	.261	.318	1.000
	Sig. (2-tailed)	.125	.058	.
	N	36	36	36
CAPGAP	Pearson Correlation	.152	.303	.693**
	Sig. (2-tailed)	.376	.072	.000
	N	36	36	36
PERFORM	Pearson Correlation	.095	-.335*	-.451**
	Sig. (2-tailed)	.583	.046	.006
	N	36	36	36

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Correlations

		CAPGAP	PERFORM
SIZEGAP	Pearson Correlation	.152	.095
	Sig. (2-tailed)	.376	.583
	N	36	36
CULTGAP	Pearson Correlation	.303	-.335*
	Sig. (2-tailed)	.072	.046
	N	36	36
STRATGAP	Pearson Correlation	.693**	-.451**
	Sig. (2-tailed)	.000	.006
	N	36	36
CAPGAP	Pearson Correlation	1.000	-.361*
	Sig. (2-tailed)	.	.031
	N	36	36
PERFORM	Pearson Correlation	-.361*	1.000
	Sig. (2-tailed)	.031	.
	N	36	36

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

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Regression

Variables Entered/Removed[a,b]

Model	Variables Entered	Variables Removed	Method
1	CULTGAP	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).
2	SIZEGAP	.	Stepwise (Criteria: Probability-of-F-to-enter <= .050, Probability-of-F-to-remove >= .100).

a. Dependent Variable: PERFORM

b. Linear Regression through the Origin

Model Summary

Model	R	R Square[a]	Adjusted R Square	Std. Error of the Estimate
1	.706[b]	.499	.484	2.2812
2	.797[c]	.635	.613	1.9760

a. For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression. This CANNOT be compared to R Square for models which include an intercept.

b. Predictors: CULTGAP

c. Predictors: CULTGAP, SIZEGAP

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ANOVA[d,e]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	181.238	1	181.238	34.826	.000[a]
	Residual	182.142	35	5.204		
	Total	363.380[b]	36			
2	Regression	230.618	2	115.309	29.530	.000[c]
	Residual	132.762	34	3.905		
	Total	363.380[b]	36			

a. Predictors: CULTGAP

b. This total sum of squares is not corrected for the constant because the constant is zero for regression through the origin.

c. Predictors: CULTGAP, SIZEGAP

d. Dependent Variable: PERFORM

e. Linear Regression through the Origin

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	CULTGAP	1.904	.323	.706	5.901	.000
2	CULTGAP	1.391	.314	.516	4.423	.000
	SIZEGAP	3.418	.961	.415	3.556	.001

a. Dependent Variable: PERFORM

b. Linear Regression through the Origin

Excluded Variables[c,d]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	SIZEGAP	.415[a]	3.556	.001	.521	.790
	STRATGAP	.124[a]	.705	.485	.120	.468
	CAPGAP	.109[a]	.651	.520	.111	.520
2	STRATGAP	-.170[b]	-.989	.330	-.170	.363
	CAPGAP	-.081[b]	-.521	.606	-.090	.456

a. Predictors in the Model: CULTGAP

b. Predictors in the Model: CULTGAP, SIZEGAP

c. Dependent Variable: PERFORM

d. Linear Regression through the Origin

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NPar Tests

Mann-Whitney Test

Ranks

	TYPE	N	Mean Rank	Sum of Ranks
SIZEGAP	Merger	7	28.93	202.50
	Acquisition	29	15.98	463.50
	Total	36		
INDUSTRY	Merger	7	22.36	156.50
	Acquisition	29	17.57	509.50
	Total	36		
CULTGAP	Merger	7	10.43	73.00
	Acquisition	29	20.45	593.00
	Total	36		
STRATGAP	Merger	7	12.50	87.50
	Acquisition	29	19.95	578.50
	Total	36		
CAPGAP	Merger	7	13.36	93.50
	Acquisition	29	19.74	572.50
	Total	36		
PERFORM	Merger	7	26.50	185.50
	Acquisition	29	16.57	480.50
	Total	36		

Test Statistics[b]

	SIZEGAP	INDUSTRY	CULTGAP	STRATGAP
Mann-Whitney U	28.500	74.500	45.000	59.500
Wilcoxon W	463.500	509.500	73.000	87.500
Z	-2.923	-1.246	-2.270	-1.724
Asymp. Sig. (2-tailed)	.003	.213	.023	.085
Exact Sig. [2*(1-tailed Sig.)]	.002[a]	.287[a]	.023[a]	.094[a]

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Test Statistics[b]

	CAPGAP	PERFORM
Mann-Whitney U	65.500	45.500
Wilcoxon W	93.500	480.500
Z	-1.442	-2.251
Asymp. Sig. (2-tailed)	.149	.024
Exact Sig. [2*(1-tailed Sig.)]	.153[a]	.023[a]

a. Not corrected for ties.

b. Grouping Variable: TYPE

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NPar Tests

Mann-Whitney Test

Ranks

	INDUSTRY	N	Mean Rank	Sum of Ranks
SIZEGAP	Same	18	20.53	369.50
	Different	18	16.47	296.50
	Total	36		
CULTGAP	Same	18	18.42	331.50
	Different	18	18.58	334.50
	Total	36		
STRATGAP	Same	18	21.97	395.50
	Different	18	15.03	270.50
	Total	36		
CAPGAP	Same	18	20.00	360.00
	Different	18	17.00	306.00
	Total	36		
PERFORM	Same	18	17.11	308.00
	Different	18	19.89	358.00
	Total	36		
TYPE	Same	18	20.00	360.00
	Different	18	17.00	306.00
	Total	36		

Test Statistics[b]

	SIZEGAP	CULTGAP	STRATGAP	CAPGAP
Mann-Whitney U	125.500	160.500	99.500	135.000
Wilcoxon W	296.500	331.500	270.500	306.000
Z	-1.157	-.048	-2.031	-.856
Asymp. Sig. (2-tailed)	.247	.962	.042	.392
Exact Sig. [2*(1-tailed Sig.)]	.252[a]	.963[a]	.047[a]	.406[a]

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