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New Evidence Regarding Organizational Downsizing and a Firm's Financial Performance: A Long-term Analysis*

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During the current economic turbulence facing corporations, executives are searching for strategies that will enable the organization to survive and potentially grow. One approach many companies are employing to cope with the hostile and dynamic environment is organizational downsizing. Recently, international companies such as General Electric, Lucent Technologies, General Motors, Fujitsu, American Airlines, Boeing, and British Airways have announced major layoffs. Likewise, downsizing has spread to the "dot coms" (e.g., Priceline, AOL) and other high technology companies (e.g., Sun Microsystems, Hewlett-Packard, JDS Uniphase, Cisco Systems). According to the Bureau of Labor Statistics, downsizing activities in the United States have exceeded two million job

* This article is dedicated to the memory of our friend, Dr. Thomas J. Bergmann. Tom passed away May 30, 2003, after a short battle with cancer.

cuts in *both* 2001 and 2002 (''Mass Layoff Statistics,'' 2002).

Several articles in the business press have extolled the benefits of organizational downsizing (Byrne, 1994; Fuchsberg, 1993; Koretz, 1997). For example, it has been proposed that downsizing (a) reduces operating costs, (b) eliminates unnecessary levels of management, (c) streamlines operations, (d) enables an organization to prune deadwood, (e) enhances overall effectiveness, and (f) ultimately, makes a company more competitive in today's marketplace (Collins and Rodrik, 1991; Jensen, 1986; McKinley *et al.*, 1995; Neinstedt, 1989). However, several authors also maintain that downsizing can have a negative effect on organizations, such as (a) reducing profits, (b) slowing dividend growth, (c) lowering stock prices, (d) decreasing employee morale and satisfaction, (e) increasing tardiness, absence, and turnover, and (f) escalating employee workloads, stress, and company health care expenses (De Meuse and Tornow, 1990; Gombola and Tsetsekos, 1992; Mishra and Spreitzer, 1998; Noer, 1993; Pfeffer, 1998; Reich, 1993; Worrell *et al.*, 1991). In addition, recent authors contend that downsizing disrupts or damages an organization's ability to learn and adapt to the changing environment because the informal communication networks are adversely affected (Fisher and White, 2000; Lei and Hitt, 1995).

Despite the frequency in which downsizing has been implemented, there are very few, if any, scientific data organizational leaders can point to that support the efficacy of this strategy (see De Meuse and Marks, 2003). It may be that executives simply assume the overall benefits outweigh the costs. Or upper-level managers may perceive that they have no alternative (i.e., if they do not cut costs immediately, their companies will not survive). On the other hand, it may be that executives simply have jumped on the downsizing bandwagon, like they have done with so many other management fads (e.g., re-engineering, quality circles, cell manufacturing, t-group training). As researchers, collecting data in companies that downsize is exceedingly difficult. Executives frequently are unwilling to share their financial and operational data with outside parties. In addition, executives often are reluctant to have researchers scrutinize their managerial decisions. Legally, organizations are hesitant to make public information on personnel-related decisions. Consequently, many questions remain concerning the financial effectiveness of organizational downsizing. For example:

1. Does downsizing really work? That is, do companies that downsize financially out-perform companies which do not?
2. Do companies that implement a ''deep cut'' perform differently than those companies that implement a ''small cut''?
3. Do companies that downsize multiple times perform differently than those that do not?

The primary purpose of this study is to systematically examine the relationship between the strategy of downsizing and financial performance over an extended period of time. A secondary objective is to investigate the *magnitude* and *frequency* of downsizing and its impact on various financial indicators. In the following section, we examine the theoretical basis for organizational downsizing and propose three hypotheses. In the

Methodology section, we describe the sample, define the variables employed in the study and how they were measured, and present the statistical techniques used to test the hypotheses. The final two sections present the results of the analyses and discuss the implications of this study.

THEORETICAL BASIS FOR ORGANIZATIONAL DOWNSIZING

Although there has been a great deal of discussion concerning the efficacy of downsizing on organizational performance in the media and professional literature, there have been relatively few empirical studies or theoretical papers published in the academic journals. There appears to be two different theoretical perspectives regarding the impact that downsizing will have on the financial performance of an organization. One perspective is the psychological contract theory and the other is economic theory. In the next few paragraphs, we will highlight both the psychological contract and the economic theoretical approaches.

The psychological contract literature proposes that a mutual relationship emerges between employees and their organizations. Any organizational restructuring can have a potential effect on the organization's ability and willingness to fulfill its obligation in that relationship. Specifically, employees will perceive organizational downsizing as a violation of the employer's responsibility to provide stable employment and a positive work environment (cf. De Meuse and Tornow, 1990; Morrison and Robinson, 1997; Rousseau, 1995). Employees' perception of a contract violation may have an adverse effect on their job performance and correspondingly a negative impact on the financial performance of the organization.

The psychological contract literature dates back to the early 1960s (Levinson *et al.*, 1962). An abundance of literature in this area has found that employees and employers form an emotional bond over time. Denise Rousseau and her colleagues define the psychological contract as a set of mutual obligations that emerges during an employee's tenure with an organization (Rousseau, 1989, 1990; Robinson *et al.*, 1994). The relationship is based on the expectation that each party will fulfill its obligation. In terms of the employee, this denotes that individuals will work hard, will be committed to updating their job skills, and will support the organization's goals. In contrast, the organization is expected to provide stable employment, offer competitive wages and benefits, and provide opportunities for individual development and promotion. If either party perceives that the other has violated this agreement, negative consequences can occur. For example, when employees experience organizational downsizing, they likely perceive a breach in the psychological contract and will alter their behavior and performance accordingly.

The literature suggests that individuals may reduce their organizational contributions (i.e., motivation to perform, long-term commitment to the organization) and/or neglect to engage in activities that will directly benefit organizational goals. In extreme instances, employees may even engage in sabotage or retaliatory behaviors (Buono, 2003). Overall, companies likely will experience a number of adverse consequences when they implement major organizational

change (e.g., lower employee morale and job satisfaction, additional employee stress, increased cynicism and distrust toward top management). These outcomes can directly escalate organizational health care costs, increase recruiting and selection efforts due to unwanted employee turnover, and lower product quality and productivity (cf. Kivimaki *et al.*, 2000; Lester *et al.*, 2003; Noer, 1993; Pfeffer, 1998). Joel Brockner and his colleagues published a series of studies demonstrating the adverse effects downsizing has on the "surviving" employees (Brockner *et al.*, 1985, 1993). A recent study appearing in the *British Medical Journal* found that employees in work groups experiencing job cuts were more than twice as likely to take sick leave as those employees in a cohort work group not experiencing downsizing (Kivimaki *et al.*, 2000). Consequently, the psychological contract literature theorizes that downsizing will have an adverse effect on the financial performance of organizations.

An alternate theory views the effect of organizational downsizing primarily from an economic perspective. This theoretical approach is based on the assumption that executives engage in downsizing to reduce organizational costs while simultaneously enhancing financial performance. Such a perspective is built upon an "economic/rational paradigm" (McKinley *et al.*, 2000). Economic theory proposes that organizational downsizing has a positive effect on a company's financial performance, because it enables management to eliminate redundancies, streamline operations, and reduce labor costs. Up until this point, the literature has been largely based on managerial *perceptions* of downsizing effectiveness. For example, a national survey found that managers in 75% of those companies which downsized *believed* performance did not improve ("Pink-Slip Productivity," 1992). Cameron *et al.* (1991) investigated 30 firms in the automobile industry which had implemented downsizing and found that employees did not *perceive* an improvement in the effectiveness of their company. In contrast, their perception was that there was a decline in production quality, quantity, and employee morale (see also "Downsizing Hurts," 1992; Knox, 1992; Lesly and Light, 1992; Mische, 2001; Pfeffer, 1998). While considerable research on downsizing has been conducted based on perceptions, very little has focused on actual measures of financial performance.

In one of the few investigations to directly assess financial performance, Cascio (1998) examined 311 companies in Standard and Poor's 500 that downsized between 1981 and 1990. He measured the following financial indices: (a) return on assets, (b) cost of goods sold, (c) expenses to sales ratio, (d) profit margin, and (e) stock price. Cascio computed financial performance averages for the three years prior to the announced layoff ("pre-downsizing") and three years following the year of downsizing ("post-downsizing"). The results indicated that none of those financial variables were significantly affected following downsizing. Further, financial performance during the pre-downsizing period was unrelated to the magnitude or frequency of downsizing conducted. Overall, Cascio concluded "downsizing *per se* did not appear to lead to improved company financial performance, nor did it have a detrimental effect on company financial performance" (1998: 69).

Another empirically-driven analysis of organizational downsizing over time was conducted by De Meuse *et al.* (1994). These researchers tracked several measures of financial performance of Fortune 100 companies over a five-year period—1987 through 1991. Specifically, the researchers examined 35 companies without layoffs and compared their financial performance to 17 firms which announced layoffs in 1989. They measured five indices of financial performance two years *prior to* the announced layoff, the *same* year, and two years *following* it. They found that the group of 17 companies with layoff announcements did not differ financially from the 35 without layoffs one and two years prior to the announcement. As expected, financial performance differences between the two groups of companies emerged during the 1989 announcement year and then surprisingly *increased* in magnitude each of the following two years. For example, mean profit margins for the group of companies with layoffs were 6%, 6%, 4%, 2%, and 0% in 1987, 1988, 1989, 1990, and 1991, respectively. In contrast, mean profit margins for the no-layoff companies were 6%, 6%, 7%, 6%, and 5%, respectively, for those same years. T-tests revealed that the layoff firms had significantly lower means for profit margin, return on assets (ROA), return on equity (ROE), and the market-to-book ratios for the announcement year, as well as each of the two subsequent years. The only exception to the pattern of results was the financial index, asset efficiency. Asset efficiency was not significantly different across the two groups of companies before, during, or after the announcement. Consequently, this study demonstrated that downsizing had no apparent effect on either increasing profits or curbing the downward spiral of financial performance.

Although the Cascio (1998) and De Meuse *et al.* (1994) studies are informative, both have some significant limitations. Cascio investigated the effects of corporate downsizing on financial performance during the decade of the 1980s, whereas De Meuse *et al.* examined financial outcomes from 1987 to 1991. Both studies failed to examine the financial effects of downsizing during the turbulent decade of the 1990s. Further, the Cascio (1998) and De Meuse *et al.* (1994) studies only examined financial performance three and two years (respectively) after the downsizing occurred. Some individuals have contended that it may take several years before the positive effects of downsizing materialize (Byrne, 1994). Top executives also have claimed that the positive effects of some strategies are not realized for three-to-five years following implementation.

The economic perspective theorizes that managers implement downsizing because it will lead to a positive financial effect on the company (McKinley *et al.*, 2000). However, the above literature is inconclusive in supporting this claim. The inconsistent findings between downsizing and changes in financial performance may be due to the relatively short period downsizing was investigated or due to the lack of objective indices that measure an organization's financial effectiveness. In addition, the psychological contract literature brings into question the efficacy of downsizing. This literature proposes that downsizing violates the psychological contract, leading to several potential employee problems and, ultimately,

lower financial performance. In an effort to address all the above issues, we directly examine the relative financial performance of downsizing companies over a protracted period using a variety of measures in various ways.

The present study tracks the financial performance of the same companies which downsized (or did not downsize) over a 12-year period from 1987 through 1998. This time frame represents a period of frequent downsizing in corporate America. This research expands the time frame in which organizations are studied, thus enabling the researchers to obtain measures of financial performance for up to nine years after the downsizing occurred. Such a protracted investigation enables one to better detect more accurately the long-term effects of downsizing. The first hypothesis of this study focuses on extending the earlier work of De Meuse *et al.* (1994). Their initial set of 35 companies which implemented no layoffs, and the 17 which did, were tracked for seven additional years (i.e., from 1992 through 1998). Given the nature, limitations, and findings of prior research, as well as alternative theoretical perspectives, no directionality of findings will be proposed. Hence, the following hypothesis is tested:

Hypothesis 1: The financial performance of companies which downsize will be significantly different than companies which do not downsize.

In his study investigating the effect of downsizing on financial performance, Cascio (1998) examined only those companies which reduced their employment by three percent or more during a given year. He assumed that a minor change in employment (less than three percent) was unlikely to cause a significant disruption in a company's operations; therefore, it was unlikely to have an adverse impact on financial performance. In the hypothesis that was tested above, all firms were classified as engaging in downsizing regardless of the size of the reduction. If Cascio's assumption is correct, the results found in Hypothesis 1 may be misleading.

In order to examine whether the *magnitude* of the downsizing is related to financial performance, the present study uses an expanded data base. De Meuse *et al.* (1994) examined only those Fortune 100 companies which laid-off employees in 1989 ($n = 17$) and contrasted their performance with those companies which reported no downsizing whatsoever throughout the investigatory period of 1989 - 1991 ($n = 35$). Although the original research design permitted the authors to isolate the financial performance of downsized companies over three years, it resulted in the elimination of 48 Fortune 100 firms that downsized in either 1990 or 1991. In the following hypotheses, all companies in the Fortune 100 are included and financial measures are tracked from 1987 to 1998.

It seems logical that when a *large* number of employees are laid-off, the amount of work required to be performed by the remaining employees (the so-called "survivors") increases greatly (Pfeffer, 1998). Moreover, organizational stress and uncertainty likewise increase (Tombaugh and White, 1990). Many remaining employees may become dispirited, frustrated, and angry with management for terminating their friends, mentors, and *protégés* and thus may perceive a breach in the psychological contract. This breach may adversely affect employee behaviors and nega-

tively impact an organization's financial performance. The overall pattern of behavior for survivors can adversely affect other employees as well as customers (Bastien *et al.*, 1996). Joel Brockner and his colleagues have found that the downsizing environment can significantly influence the remaining employees' job performance (Brockner *et al.*, 1985, 1993).

When executives view labor as a cost rather than an asset, they likely will attempt to maximize the cost reduction, leading to larger layoffs (De Meuse *et al.*, 1997). In contrast, when top management considers what is the appropriate number of employees required to perform effectively, they are likely to downsize more responsibly (Cascio, 1998; Morris *et al.*, 1999). It would seem reasonable that when a large percentage of the work force is terminated, surviving employees will be affected to a greater extent due to a more pervasive breach in the psychological contract. Consequently, a company's financial performance is more likely to be adversely affected. In order to examine this issue, the present study classified organizations into two groups: (a) those companies which did not downsize whatsoever or downsized less than three percent, and (b) those firms which downsized the work force more than three percent. Hence, the second hypothesis tested in this study is:

> *Hypothesis 2: The financial performance of companies which terminated three percent or more of their work force in any one year will be significantly lower than companies which downsized less than three percent or did not downsize at all.*

Another issue that may be relevant to downsizing and its impact on financial performance is the *frequency* with which a firm implements this strategy. Researchers have suggested that downsizing in some companies has come to be taken for granted and, over time, becomes an accepted management practice in dealing with environmental uncertainty. When announcing downsizing, executives not only discuss the economic savings but also emphasize that it will make the organization more flexible, agile, and responsive to changing market conditions. McKinley *et al.* (2000) proposed an "institutional perspective" of organizational downsizing to explain the popular adoption of downsizing among corporations in the 1990s. These authors contended that downsizing takes on the status of an institutionalized norm and provides legitimacy to those companies implementing it. For example, De Meuse *et al.* (1994) found that 62% of the companies in their sample that downsized in 1989, likewise downsized in 1990. Further, 85% of the companies that downsized in 1989, downsized again in 1991. The frequent downsizing also might desensitize employees to the breach in the psychological contract. Thus, it appears that downsizing has become an acceptable management practice in some organizations despite the absence of compelling evidence of its financial effectiveness (O'Neill *et al.*, 1998). Since the current theoretical literature makes no reference to what constitutes "frequent" downsizing, a standard of 33% or greater will be used in this study. That is, when a company implements downsizing at least once every three years, it will be considered frequent. The third hypothesis is:

> *Hypothesis 3: The financial performance of companies which frequently downsize (i.e., three or more times during an eight-year period) will be significantly lower than companies which downsize less frequently.*

METHODOLOGY

Sample

Data were collected from the following four public sources. Layoff announcements were obtained from *Workplace Trends* and *The Wall Street Journal.* Companies' indices of financial performance were collected from *Fortune Magazine's* annual survey of the largest corporations in the United States. Data on employment levels were gathered from *Forbes'* annual survey of the 500 largest U.S. corporations. The study tracked announced layoffs and employment levels of the Fortune 100 companies for eight years, 1989 through 1996. Financial performance was measured for 12 years, 1987 through 1998 (i.e., two years before and nine years after the downsizing period). Since the Fortune listing of organizations is based on reported annual sales, firms are added and deleted from this list each year. Therefore, this study used those firms identified as Fortune 100 companies in 1989 (see Table 1).

Measure of Organizational Downsizing

Scholars define downsizing as an intentional management action involving a reduction in personnel designed to improve a company's competitive position in the marketplace (Amabile and Conti, 1999; Freeman and Cameron, 1993). The literature often assesses the downsizing of a company in terms of "announced layoffs" (cf. De Meuse *et al.*, 1994; Gombola and Tsetsekos, 1992; Wertheim and Robinson, 2000). The assumption made is that companies will implement the layoff strategy as announced. A random check of the employment data coded in this study verified that firms that announced layoffs actually experienced a reduction in work force the following year. Given that the number of employees varies greatly across the Fortune 100, a standardized measure was developed to provide a more accurate means to compare downsizing among companies. The organizational downsizing variable used in the study is the magnitude of the announced layoff divided by total number of employees in the company. Such a *relative* assessment of downsizing provides a more accurate means of examining the impact of a layoff on a company's financial performance. For example, a 5,000-employee layoff in a firm the size of Chrysler (362,000 employees) is likely very different from a 5,000-employee layoff at UNISYS (101,000 employees).

Dependent Variables

Five indices of financial performance were tracked for the 12-year period of the study. According to Brigham and Gapenski (1993), these five variables capture different perspectives in a company's operations and represent some of the most frequently-used measures of financial performance.

Profit Margin. A company's profit margin is calculated by dividing profits by sales. This ratio can be a reverse proxy for the cost of producing each dollar of sales. If the per unit labor cost decreases as a result of downsizing, profit margin will rise.

Return on Assets. A company's return on assets (ROA) is computed by dividing profits by assets. This measure examines the profitability of a company in relation to dollars invested. It is an index of overall return

Table 1

Fortune 100 Companies Used in the Study

Companies with No Layoff Announcements (n = 14)		
Abbott Laboratories	Amerada Hess	American Brands
Archer Daniels Midland	Borden	Coastal
DANA	Dow Chemical	General Mills
Georgia-Pacific	James River Corporation	Ralston Purina
Stone Container	3M	

Companies with Layoff Announcements (n = 78)		
Alcoa	Allied Signal	Amer. Home Products
Apple Computer	Amoco	Anheuser Busch
Ashland Oil	Atlantic Richfield	Baxter International
Bethlehem Steel	*Boeing*	Bristol Myers Squibb
Campbell Soup	Caterpillar	*Champion Inter.*
Chevron	*Chrysler*	Coca Cola
Conagra	*Digital Equipment Corp.*	Du Pont
Eastman Kodak	Emerson Electric	Exxon
Ford	General Dynamics	*General Electric*
General Motors	Goodyear Tire & Rubber	*Hewlett-Packard*
H.J. Heinz	Hoechst Celanese	*Honeywell*
IBM	International Paper	John Deere
Johnson & Johnson	Kimberly Clark	Litton Industries
Lockheed	Martin Marietta	McDonnell Douglas
Merck	Mobil	Monsanto
Motorola	NCR	Northorp
Occidental Petroleum	Pepsico	Pfizer
Phillip Morris	Phillips Petroleum	PPG Industries
Proctor & Gamble	Quaker Oats	Raytheon
Reynolds Metals	RJR Nabisco	Rockwell International
Sara Lee	Sun	Tenneco
Texaco	*Texas Instruments*	Textron

Table 1 (continued)

Companies with Layoff Announcements (n = 78)		
TRW	Unilever	Union Carbide
UNISYS	United Technologies	*Unocal*
USX	Westinghouse	Weyerhaeuser
Whirlpool	W.R. Grace	Xerox

Note: Companies in italics denote that they were classified as "layoff companies" in De Meuse *et al.'s* (1994) original study. The following eight companies announced no layoffs, but were excluded due to missing or unusable financial data: BASF, Hanson Industries, LTV, Lyonell Petrochemical, Miles, North American Phillips, Shell Oil, and Time Warner.

on investment and indicates how efficiently those dollars are utilized.

Return on Equity. A company's return on equity (ROE) is determined by dividing profits by stockholders' equity. It is similar to ROA but focuses on the actual financial rate of return to the company's owners. Therefore, ROE is the best measure in terms of determining whether the layoffs helped achieve the primary purpose of the company (i.e., improved the financial rate of return to its owners).

Asset Efficiency. The asset efficiency of a company is measured by dividing sales by assets. This measure identifies how efficiently a company is using its assets to produce its sales. If a firm can reduce its assets while eliminating employees and simultaneously maintain or increase sales, it will enhance its asset efficiency. In contrast, if sales significantly drop with the reduction in staff, asset efficiency could remain constant or even decrease.

Market-to-Book Ratio. A company's market-to-book ratio is calculated by dividing the market value of the equity of a firm by its value on the books. This measure more directly reflects the investors' perceptions of future performance than current or past performance. Thus, if investors believe that the announced layoff will improve the future effectiveness of the company, the ratio should increase.

Hypothesis Testing and Analysis

The means of the five financial indices for the two groups of companies were calculated and tested for statistically significant differences using Fisher's *t-tests* for examining differences between uncorrelated means (Guilford and Fruchter, 1978). This procedure enables one to ascertain whether the organizational downsizing strategy helped or hurt the financial performance of the respective companies relative to the non-downsizing companies during each year of the 12-year period of investigation. To test Hypothesis 1, the original set of companies investigated between 1987 and 1991 by De Meuse *et al.* (1994) was tracked an additional seven years (1992 to 1998). Because the time frame was extended, 21 of the original 35 companies in the no-layoff category were eliminated due

to subsequent layoffs. Thus, the present study contrasted the financial performance of the 14 companies remaining in the no-layoff set with the 17 layoff companies from the original study. It was hypothesized that the five financial indices of companies which downsized would be significantly different than companies which did not downsize.

To test Hypotheses 2 and 3, all Fortune 100 companies initially were included in the analyses. In Hypothesis 2, a "base year" and "lagged years" were established to measure the effect that the layoff had during the year of announcement and subsequent years. Since companies laid off in different years, the "base year" includes financial data for all companies whether the *initial* layoff announcement occurred in 1989, 1990, 1991, etc. "Lagged years" are defined as the year or years following the initial announcement. For example, a "one-year lag" represents one year post-downsizing for all those companies which had layoffs, regardless of the year the layoff was announced. Specifically, if a company's initial layoff was 1989, the one-year lag would be 1990; whereas, if another firm's initial layoff was in 1993, its one-year lag would be 1994. Consequently, the sample sizes get smaller the further one is removed from the base year. This procedure reduced the effect that the overall economy might have had on the findings, because the initial year when a given company's financial performance was analyzed could range from 1989 through 1998.

For Hypothesis 3, those companies announcing layoffs three or more times between 1989 and 1996 were classified as "high-frequency" companies. In contrast, those companies that announced layoffs one or two times were classified as "low-frequency" companies. In order to examine the cumulative effect of downsizing, the financial indices were examined at the end of the eight-year period (1989-1996) in which downsizing was tracked (i.e., 1996). In addition, financial performance was measured one and two years following this downsizing period (1997 and 1998).

RESULTS

Overall, 78 of the Fortune 100 companies downsized at least once during the period of investigation. Of these firms, 17 had downsized once, 12 had downsized twice, and the remaining companies had downsized three or more times. The cumulative amount of the work force downsized during the period of study was as follows: (a) 21 companies announced layoffs of 5% or less, (b) 14 companies announced layoffs of 6 — 10%, (c) 12 companies announced layoffs of 11 — 15%, (d) 10 companies announced layoffs of 16 — 25%, and (e) the remaining companies had layoff announcements of greater than 25%. An inspection of companies in the layoff group reveals that a wide variety of industries were involved in downsizing, including automotive, oil, chemical, entertainment, electronics, steel, pharmaceutical, food, defense, and consumer products. Likewise, companies in the no-layoff group represent a diversity of industries, including chemical, food, consumer products, oil, and pharmaceutical (see Table 1). Obviously, all the companies are very large entities with sales ranging upwards to $178 billion and employment levels to 813,000.

Table 2 displays the mean values of financial performance measures for no-layoff and layoff companies from

Table 2

Mean Financial Performance Values for No-Layoff and Announced Layoff Companies

Performance Measure	1987	1988	**1989**	1990	1991	1992	1993	1994	1995	1996	1997	1998
Profit Margin												
No layoff	.06	.07	**.07***	.06*	.04*	-.01	.02	.03	.05	.06	.07	.08
Layoff	.06	.06	**.04**	.02	.00	-.01	.01	.03	.05	.05	.03	.05
ROA												
No layoff	.08	.08	**.08***	.06*	.05	.02	.04	.03	.06	.06	.08	.07
Layoff	.06	.05	**.04**	.02	.01	.00	.02	.03	.05	.04	.03	.05
ROE												
No layoff	.21	.22*	**.23***	.21*	.15*	.02	.08	.16	.39	.27	.29	.45
Layoff	.14	.13	**.10**	.05	-.01	-.21	.04	.10	.15	.15	.12	.20
Asset Efficiency												
No layoff	1.29	1.25	**1.20**	1.15	1.09	1.02	1.04	1.13	1.21	1.11	1.10	1.01
Layoff	1.13	1.05	**1.06**	1.08	1.03	1.04	1.01	1.02	1.00	.98	1.00	.93
Market-to-Book Ratio												
No layoff	2.65	2.65*	**2.81**	3.40	3.18	3.21	2.84	3.91	8.33	5.86	7.20	11.21
Layoff	1.74	1.62	**1.69**	1.83	1.84	2.30	2.88	2.54	2.92	3.35	4.75	5.52

Note: Mean values were rounded off to two decimal places; $n = 14$ companies which made no layoff announcements during 1989 through 1996 and $n = 17$ companies which made layoff announcements in 1989 (highlighted in **bold**).

*$p < .05$.

1987 through 1998. In the De Meuse *et al.* study (1994), it was found that layoff firms had significantly lower means for profit margin, ROA, ROE, and market-to-book ratios for the announcement year (1989), as well as for each of the two subsequent years (1990 and 1991). The present longitudinal analysis examined those differences for an additional seven years (1992 - 1998). No statistically significant differences between the two groups of companies for any of the additional years were found. Thus, the data suggest that firms which downsize appear to perform worse than firms which do not layoff, but the performance gap disappeared by 1992. A closer inspection of the data reveals that the layoff firms did not perform better than the no-layoff firms with regard to profit margin, ROA, and ROE for any of the additional years under study. Consistent with De Meuse *et al.* (1994), there were no differences in asset efficiency and market-to-book ratios throughout the entire period investigated. Overall, Hypothesis 1 was not supported, in that the financial performance of companies which downsized was not significantly different than companies which did not.

To examine the effect that the size of the announced layoff might have on a company's financial performance, the five indices for companies which downsized less than three percent in any given year (or did not downsize at all) were compared to those of companies which downsized more than three percent in any year. Table 3 presents the mean financial values for the base year and for each of the subsequent seven lagged years through 1998. As can be observed, the only significant differences were found in the base year for profit margin, ROA, ROE, and market-to-book ratios. In each case, the firms laying off less than three percent performed better than the firms which laid off three percent or more of the employees. Although for the majority of lagged years the small layoff firms out-performed the higher layoff companies, the difference was slight and non- significant. Thus, Hypothesis 2 generally was not supported, in that companies which terminated three percent or more of the work force did not perform significantly lower than companies laying off less than three percent or not at all.

The relative size of an announced layoff can indicate the magnitude of financial turmoil a company is experiencing. Although a three-percent reduction in force might suggest the firm is in financial trouble, a larger announced cut (e.g., one in double-digits) could convey the serious nature of the financial viability of the company. To examine whether such a large-scale layoff may affect financial performance more substantially than a smaller one, a *post hoc* analysis was conducted using a 10% criterion. Table 4 presents the mean values of financial performance measures contrasting those firms that laid off 10% or more employees in a single year versus those firms that laid off less than 10%. Since the *post hoc* analysis was exploratory in nature, a 0.10 level of significance was employed.

As can be observed, the general pattern of results suggests that firms announcing double-digit layoffs significantly under-perform those organizations announcing relatively fewer employees would be laid off. Financial differences were particularly evident in the base year. However, one year after the announced downsizing profit margin, ROA and ROE

Table 3

Mean Financial Performance Values for Companies with Less Than Three Percent and Three Percent or More Layoff Announcements

Performance Measure	Base Year	1-Year Lag	2-Year Lag	3-Year Lag	4-Year Lag	5-Year Lag	6-Year Lag	7-Year Lag
Profit Margin								
< 3% Layoff	.041**	.011	.070	.048	.056	.056	.060	.059
≥ 3% Layoff	.006	.023	.041	.060	.064	.058	.060	.053
ROA								
< 3% Layoff	.049**	.025	.068	.053	.064	.060	.065	.056
≥ 3% Layoff	.006	.023	.042	.057	.064	.052	.049	.059
ROE								
< 3% Layoff	.180**	.011	.395	.288	.301	.216	.216	.283
≥ 3% Layoff	-.034	-.045	.120	.187	.198	.164	.174	.165
Asset Efficiency								
< 3% Layoff	1.12	1.09	1.06	1.09	1.10	1.06	1.06	1.00
≥ 3% Layoff	1.03	1.03	1.01	0.99	1.02	1.01	1.00	1.01
Market-to-Book Ratio								
< 3% Layoff	3.56*	3.28	3.35	5.32	6.48	5.03	5.05	7.23
≥ 3% Layoff	2.37	2.79	3.38	3.58	4.28	4.74	3.74	4.57

Note: Mean values were rounded to three decimal places; $n = 72$ companies which made layoff announcements between 1989 through 1996.

*$p < .05$; **$p < .01$.

Table 4

Mean Financial Performance Values for Companies with Less Than Ten Percent and Ten Percent or More Layoff Announcements

Performance Measure	Base Year	1-Year Lag	2-Year Lag	3-Year Lag	4-Year Lag	5-Year Lag	6-Year Lag	7-Year Lag
Profit Margin								
< 10% Layoff	.025*	.020	.051†	.070*	.074*	.068*	.064†	.045
≥ 10% Layoff	-.016	.025	.027	.047	.044	.041	.036	.069
ROA								
< 10% Layoff	.025*	.019	.050	.067†	.072†	.064†	.063†	.046
≥ 10% Layoff	-.011	.031	.033	.048	.048	.038	.030	.085
ROE								
< 10% Layoff	.033†	-.087	.151	.212*	.223**	.192*	.214†	.140
≥ 10% Layoff	-.088	-.076	.074	.149	.131	.113	.067	.200
Asset Efficiency								
< 10% Layoff	.98†	.97†	.97†	.97	.96*	.95*	1.02	.96†
≥ 10% Layoff	1.13	1.14	1.08	1.06	1.14	1.12	1.02	1.22
Market-to-Book Ratio								
< 10% Layoff	2.73†	3.30**	4.00*	4.19†	5.05†	5.44†	3.76	3.84
≥ 10% Layoff	2.05	2.10	2.46	2.89	3.11	3.40	3.40	5.79

Note: Mean values were rounded to three decimal places; $n = 72$ companies which made layoff announcements between 1989 through 1996.

†$p < .10$; *$p < .05$; **$p < .01$.

differences were no longer statistically significant. Even though the large-scale layoff firms generally experienced improved financial performance, firms laying off less than 10% consistently out-performed them in subsequent years (2- to 7-year lags). Financially, firms laying off less than 10% of their work force significantly out-performed firms laying off more than 10% in 17 of the 30 possible lagged year comparisons ($ps < .10$; see Table 4). The "asset efficiency" financial index did not follow a similar pattern of results. In this instance, asset efficiency indices for firms implementing large-scale layoffs were consistently higher beginning with the base year and continuing up to seven years after the layoff. Although this does seem to support the idea that large layoff companies exhibited more sales per dollar of investment, an indicator of increased efficiency, it does not seem to have carried over to increased profitability. In contrast, the other four measures are more directly affected by a firm's actual financial performance. Overall, this *post hoc* analysis supports the view that companies which layoff a larger percentage of their work force perform relatively poorer than those companies with smaller layoffs. These results bring in to question what cut-off constitutes a significant layoff (e.g., 3% or 10%).

The frequency of layoff announcements also may influence a company's financial performance. Of the 78 companies in the Fortune 100 that announced layoffs during the eight-year period of investigation, 47 announced layoffs three or more times. It was hypothesized that the financial performance of these companies would be lower than companies that laid off less frequently. Table 5 displays the mean values of the five financial indices for "high-" and "low-frequency" layoff companies. Both profit margin and ROA were statistically significant in 1996, the final year of the eight years layoffs were examined. In particular, it was found that companies laying off three or more times performed worse than companies laying off two or fewer times. Profit margin and ROA were not statistically significant in 1997 (one year later) and 1998 (two years later). Although the comparison of high- and low-frequency layoff companies failed to reach statistical significance, 13 of the 15 mean financial values were lower for firms downsizing more frequently. Thus, Hypothesis 3 was partially supported, in that the financial performance of companies which frequently downsized was consistently lower than those companies that downsized less often.

DISCUSSION

The present study examined the long-term relationship of organizational downsizing on five commonly-used measures of financial performance from 1987 to 1998. In comparing companies which did and did not announce layoffs, it was found that downsizing companies performed significantly poorer up to two years following the announcement on several financial indices. However, beginning with the third year, none of the differences reached statistical significance. When analyzing the *magnitude* of the announced layoff, it was observed that companies that had laid off a relatively small number of employees (three percent or less) performed significantly better on four of the five financial indices in the year of the announcement (i.e.,

Table 5

Mean Financial Performance Values for Companies with "Low" and "High" Frequency Layoff Announcements

Performance Measure	1996	1997	1998
Profit Margin			
Low frequency	.077*	.074	.071
High frequency	.047	.053	.054
ROA			
Low frequency	.079**	.076	.068
High frequency	.044	.051	.052
ROE			
Low frequency	.200	.200	.190
High frequency	.150	.170	.200
Asset Efficiency			
Low frequency	1.03	1.05	1.00
High frequency	1.03	1.01	0.93
Market-to-Book Ratio			
Low frequency	4.88	5.93	6.26
High frequency	3.34	4.55	5.11

Note: Mean values were rounded off to three decimal places. Low frequency companies (n = 29) made one or two layoff announcements between 1989 and 1996. High frequency companies (n = 47) made three or more layoff announcements during this time.

*$p < .05$; **$p < .01$.

the base year). In contrast, there were no significant financial differences found after this initial base year. For companies that announced large-scale layoffs (10% or higher), many statistically significant differences were observed throughout the eight-year period of investigation. It was found that companies laying off 10% or more of the work force significantly under-performed firms laying off less on profit margin, ROA, ROE, and market-to-book ratio. The study also investigated the *frequency* in which companies announced layoffs during the eight-year period. The results indicated that the frequency with which downsizing occurred had a slight negative relationship with financial performance (viz., those firms laying off more often reported lower financial performance).

Many corporate executives believe that when a company gets into financial trouble due to lagging sales or rising costs, cutting the size of the organization to reduce fat and waste is a normal, effective response. In some ways the findings of this study support the assertion that downsizing works. The data clearly show that the firms which downsized were significantly *under*-performing the firms which did not downsize on several financial indices in the year of the announced layoff and each of the two subsequent years. However, three years after the announcement occurred and for the remaining years investigated, the firms that had laid off were no longer significantly *under*-performing their counterparts. It seems that downsizing helped those companies improve their financial success relative to the non-downsizing firms. This viewpoint would be consistent with the economic theory proposed by McKinley *et al.* (2000). That is, the decision by the executives to layoff did result in a financial improvement. Further, it could be argued that the downsizing decisions implemented by executives may have saved the organization from continuing financial deterioration and possible bankruptcy.

The magnitude of the downsizing appears to have little effect on the financial performance of a firm, unless the size of the layoff is very large. Contrary to what Cascio (1998) proposed, the financial performance of firms laying off less than three percent of the work force were not significantly different than those companies laying off three percent or more. It is important to note that companies announcing large-scale (10% or higher) layoffs continued to significantly under-perform those companies with downsizing announcements less than 10%. Thus, the large-scale downsizing strategy implemented by executive management did not close the financial performance gap. The decision by executives to reduce the work force by 10% or more may be perceived by employees as a major violation of the psychological contract. The psychological contract literature would theorize that when employees believe there has been a serious breach it likely will adversely influence their attitudes, behaviors, and performance. Ultimately, the financial performance of the firm will be adversely impacted

The relationship between downsizing frequency and financial performance appears small. For those companies which have implemented a series of small job cuts, it appears that it does not have a deleterious effect on financial performance. This finding may be explained by the institutional perspective (McKinley *et al.*, 2000). This approach suggests when

employees experience many layoffs they may begin to accept this organizational action as a legitimate strategy in a competitive, global marketplace. The gradual acceptance of downsizing may diminish the adverse feeling employees have toward management, lessening the negative effect on their performance. Consequently, this finding suggests that executives troubled with the prospect of frequent layoff announcements should not be overly concerned.

At the same time, executives should recognize that downsizing activities create a disruption within the organization's culture that can affect employees as well as customers (Bastien *et al.*, 1996; Shah, 2000). When implemented poorly, employees may perceive the downsizing as a violation of the psychological contract which may lead to several organizational problems. It likely takes something far more innovative than simply laying off employees to renew an organization and re-position it for profitability (De Meuse and Marks, 2003; Mische, 2001). Recently, several companies which were faced with cutting costs tried alternative measures to employee layoffs. At Hewlett Packard, employee raises were delayed for three months and top executives received no annual bonuses. Squeezed by a continuing decline in trading volume, Charles Schwab ordered half of its 26,000 employees to take three unscheduled days off during a five-week period. Employees could take the days as unpaid leave or as part of their allotted paid vacation. First Union Bank requested their work force to restrict first-class travel and limit their hotel expenses. Several other corporations have requested that their employees take sabbaticals, unpaid vacations, or time off to reduce labor costs (e.g., Intel, Adobe Systems, Accenture). The effect of these measures on a company's financial performance remains to be measured.

There are some limitations that may impact the generalizability of the findings of this study. Obviously, the sample size of companies investigated was small ($N = 100$). Likewise, they represent some of the largest corporations in the U.S. One needs to be cautious when generalizing the effects of downsizing to other, smaller firms. When one examines Table 2, it becomes apparent that the overall economy likely influences the financial health of *all* companies to a large extent. It is easy to observe the financial decline bottoming out in 1992 and a subsequent gradual increase in corporate profits, ROA, and ROE. This trend is true whether a set of companies conducted downsizing or not. To reduce the effect of the economy on the financial data, we established the layoff year for a given company as the "base year" and each subsequent year as a "lag year." Consequently, the financial performance for the "base year" and "lagged year" displayed in Tables 3 and 4 report financial performance irrespective of the specific year the downsizing occurred. Nevertheless, the overall time frame in which downsizing is examined in this study remains primarily in the 1990s. Finally, the reader should remember that "cause and effect" conclusions cannot be drawn. Do companies that layoff *cause* poor financial results, or do companies layoff *because of* poor financial performance? Certainly, the latter point is partially true. This study investigated the relationship of downsizing on financial performance. A number of factors affect the financial

health of companies. Any field research, such as this one, must be careful to not overly dramatize the findings. Perhaps, the most appropriate conclusion that one can draw from this study is that downsizing appears to be somewhat related to the financial performance of a company. During the initial few years following downsizing, financial performance is poor but then improves. An obvious question for future research is whether those companies that had downsized would have turned themselves around more quickly if they had not downsized in the first place. One approach to examine this question might be to identify a pool of poor-performing firms and compare the subsequent performance of those firms which did downsize and those that did not.

This research investigation cannot evaluate the merits of downsizing for a specific company. The findings suggest that when a company implements downsizing it will take several years before its financial health will re-emerge. The uncertainty and turmoil created by downsizing will take time to dissipate. Nevertheless, the findings do suggest that after a "healing period," the company likely will improve. The two prior empirically-based studies conducted by Cascio (1998) and De Meuse *et al.* (1994) simply may have not investigated the downsizing process long enough to observe an eventual increase in the financial performance of those companies.

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