

## ***Retrenchment Activities of Small Firms during Economic Downturn: An Empirical Investigation***

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*Recent advances in the operationalization of retrenchment strategies have aroused interest in the investigation of its relationship to company performance. Limited evidence exists, however, concerning retrenchment's value for pro-cyclical firms as the means to counter declining economic conditions. This*

*study provides a longitudinal analysis of retrenchment activities and financial performance during macroeconomic recession. Results indicate that many common retrenchment activities improve small firm performance during economic downturn.*

A basic principle of strategic management theory is the necessity to balance the emphasis between outside and inside operating environments if strategy formulation is to be successful (Pearce 1983). Businesses that managed their strategies properly were better able to prosper and grow. This picture has become less clear because of ever expanding environmental turbulence and the resultant need for firms to retrench to compete, or even to survive (Alevras and Frigeri 1987; Appelbaum, Simpson, and Shapiro 1987; Bailey and Szerdy 1988; Bibeault 1982; Boyle and Desai 1991). Environmental turbulence generates important sets of contextual factors, each with differing impacts on company strategic direction (Hamel and Prahalad 1994) and on the process by which

strategies are crafted. Defined broadly, such turbulence includes impending reductions and shortages (Cameron, Whetton, and Kim 1987), losses of markets and market share to foreign competitors (Cameron, Sutton and Whetton 1988), industry dynamics and structure, hostility (Covin and Slevin 1989; Hall 1980), or general economic decline (Ewaldz 1990b; McCallum 1991; Touby 1991; Want 1990). Until recently, most research on company retrenchment centered on large complex businesses and had little to do with economic conditions as a reason for environmental decline or with smaller firms' responses to it.

Small firms are now responsible for larger and larger portions of the macroeconomy. Since such options as divesting a strategic business unit, diversifying into a more stable business, or seeking short run financing from a parent company to smooth operating disturbances are not available to small firms, small firms are more likely than large firms to choose retrenchment as a response to recession.

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This study deals with small manufacturing firms' uses of retrenchment to react to, or proactively prepare for, possible macroeconomic decline or recession. It is descriptive and empirical: we describe how small firms retrench operations, and we measure the effects of retrenchment on company performance in terms of two performance dimensions—return on common equity and cash flow to sales. Specifically, we studied firms in procyclical industries (those that normally move in the same directions as the macroeconomy) over the duration of the most recent (1989–1992) downward trend in the business cycle to address the following research questions: (1) What retrenchment activities are effective in helping smaller firms deal with economic slowdown? and (2) What actions can management take to mitigate the impact on company performance?

### **Economic Conditions**

The industrial sector remains the bellwether of the U.S. economy, even after a five-decade shift of employment to service businesses. In 1995, manufacturing

held only 20 percent of nonfarm employment, down from 41 percent in 1941. Yet, between 1982 and 1990, nearly 2.5 million new jobs were created, helping to drop unemployment to its lowest levels since the early 1970's. Average U.S. productivity increased 4.5 percent annually, a roughly constant share of real GDP. During 1987 and 1988, plant capacity edged upward toward maximum levels. By 1990, U.S. firms, through a clearer understanding of international business dealings and wider uses of technology, were able to counter much foreign encroachment on traditional market strongholds and regain a leadership position as a global exporter. The downward and upward movements that encompass the U.S. economy bar entry to some but provide sustainable competitive advantage to others. While many factors characterize economic slowdown (for example, Gross National Product, Consumer Price Index, unemployment, bond yields, interest rates, disposable personal income), Gross Domestic Product (GDP) is the

**Table 1**  
**Real Gross Domestic Product Trends (1988-1992)**

Year	Quarter	Percent Change*
1988	2	4.2
	3	2.2
	4	4.0
1989	1	2.3
	2	2.0
	3	1.1
	4	1.2
1990	1	1.8
	2	1.7
	3**	0.2
	4	(4.0)
1991	1	(2.4)
	2	1.4
	3	1.8
	4	0.3
1992	1	2.2

\* *New York Times* 6/18/92 C1C2. Percentage change, annual rate, constant dollars, seasonally adjusted

\*\* Start of recession: *Survey of Current Business* (May 1992), published by the National Bureau of Economic Analysis. Key factors of their research: Employment, Sales, Income, Production

indicator of choice among modern economists and management theorists. As a summary measure of production, it excludes net factor income and reflects production attributable to factors located in the United States, making it an excellent research variable for this study.

Real GDP growth ranged from strong to very strong from 1982 through 1989. An examination of Table 1 shows that the GDP slowed and then reversed to negative percentages during 1990. The growth seen in early 1990 was most likely an extension of 1989. The second quarter of 1990, with a drop in *real GDP*, began the most recent economic recession, less severe than a depression, but lasting for at least two consecutive quarters. Negative growth is evident in a minority of quarters (for example, 4/1990 and 1/1991), and very slow growth in a majority of consecutive quarters (for example, 2/1990, 3/1990, 2/1991, 3/1991, and 4/1991). Net growth in 1990 and 1991 was -.3 percent and .8 percent respectively. Thus, the 1990-1991 recession offers an opportunity to study the impact of economic decline on small firms and to see how it influenced the management practices of these firms. While this GDP level approach admittedly fails to encompass the complex range of variables found in the macroeconomy, it does provide a summary point of reference from which other clarifying data might be drawn.

### **Retrenchment Theories**

There is confusion about the meaning of retrenchment and turnaround. The literature summarizes retrenchment as a set of senior management initiatives to reverse declining financial performance and achieve cost and asset reductions, or in some cases revenue generation (Schendel and Patton 1976; Hofer 1980; Bibeault 1982; Heany 1985; O'Neill 1986; Barker and Mone 1994; Pearce and Robbins 1993). For firms facing significant declines in financial performance, restoring profitability and stabilizing operations almost always entails strict cost and/or asset reductions followed by shrinking back to the segments of the

business with the most likely prospects of good margins (Hambrick and Schecter 1983; Hambrick 1985; Finkin 1992; Bailey and Szerdy 1988; Dumaine 1990). At least two categories of research can be derived from these propositions, each of which is necessary but incomplete. In the first, retrenchment is seen as the initial stage of a two-stage turnaround process. Hofer's 1980 field study of 12 financially distressed businesses identified the nature of turnaround situations, types of retrenchment strategies, and guidelines for matching turnaround situations with particular retrenchment approaches. His basic retrenchment strategies of cost cutting, asset reduction, and revenue-generation could be used singly or in concert with each other. Firms using revenue-generating strategies focused primarily on existing product lines and secondly on reintroducing discontinued products and/or short-term manufacturing of new products. Acceptance criteria required all products to be produced quickly and profitably and to utilize excess plant capacity. Furthermore, there was low-to-moderate R & D funding, reduced head counts relative to sales, shorter term price-cutting, and increases in advertising and direct sales programs. Hambrick and Schecter's (1983) study of mature product businesses used multivariate data analysis to identify patterns of cost cutting and asset reductions. They found a significant number of firms that pursued retrenchment strategies of cost and asset reductions and selective product/market pruning, but they did not find any of the revenue generating schemes suggested by Hofer (1980). More recently, Robbins and Pearce's (1992) two-stage paradigm of turnaround identified retrenchment as a distinct process critical to the firm's post-decline performance that may or may not be followed by strategy reorientation.

Cautions apparent from the two-stage turnaround approach suggest the retrenchment phase may be overlapped and possibly obscured by any subsequent recovery stage as the firm imple-

ments strategy redirection. Also, while retrenchment is recommended as an integral component of the turnaround process, such recommendations are not specific enough due to a lack of benchmarks on when, what, and how much to retrench in various contexts (Bibeault 1982; Robbins and Pearce 1992).

In the second research category, retrenchment is identified empirically as a stand-alone tactical response to decline in financial performance rather than just a part of the overall turnaround process. Firms in industries where profits rise and fall with the general business cycle (hereafter called procyclical) commonly use retrenchment as a tactical response to poor macroeconomic conditions. Macroeconomic fluctuations such as recessions provide a natural basis to illustrate retrenchment as a stand-alone approach. To date, there are few studies or discussions of a single-phase retrenchment process.

### ***Small Firm Retrenchment during Recession***

From the research focusing on negative environmental circumstances as the reason for retrenchment (D'Aveni 1989; Ewaldz 1990a; McCallum 1991; Smart and Vertinsky 1984; Steiner and Solem 1988; Want 1990), Bibeault (1982) defined critical differences among the lowest performers, average performers, and best performers in healthy and sick industries. The firms that either remained profitable or quickly returned to profitability did so only through effective retrenchment strategies. Well-managed companies typically outperformed competitors through disciplined control over the economics of the business, intensive development of appropriate product/market niches, and a leadership style that sustained entrepreneurial drive and commitment among their managers. Slatter (1984, p. 43) endorsed the study of retrenchment in the context of the business cycle:

Retrenchment tends to expose a company's competitive weaknesses, although the source of these weaknesses

is often the result of management decisions or acts of omission during the previous boom phase. Management is usually too busy just meeting demand in a boom period to worry about whether it is losing market share (and hence eroding its relative cost position vis-à-vis competition); decisions to build extra capacity are usually taken at this time with insufficient attention given to the state of market demand when the new capacity comes on stream.

Firms engaged in systematic retrenchment during declining environmental conditions enjoy significant performance benefits over competitors (Hambrick and Schecter 1983; O'Neill 1986; Robbins and Pearce 1992). Smaller firms, however, have been less successful in executing turnarounds, even though their ability to retrench is the crucial factor in their chances of survival (Mills and Schumann 1985). The recession of the early 1990's presents a good opportunity to test these ideas in small firms.

### ***Methods***

The intent of this research was to measure two interconnected, yet distinct factors: (1) the retrenchment activities of small firms in light of economic slowdown; and (2) the impact of these retrenchment activities on key financial performance variables in the participating firms. Both objective and subjective data were necessary to profile needs for retrenchment, types of retrenchment policies, and overall company performance prior to and following the turnaround period.

### ***Extraneous Variables***

*The New York Times*, *The Survey of Current Business*, and related federal government documents were researched to identify significant trends in GDP as a summary measure most likely to impact the retrenchment activities of the firms under study. The time period between 1989–1992 was selected because it reflected the end of the growth period of the 1980's, the recession of 1990–1992,

**Table 2**  
**Industries in the Study**

**Special Industrial Machinery NEC 3559** Component parts and fully assembled limited-use industrial machinery for such industries as chemical refining, distilling, metal smelting, wood drying, plastic forming, and electroplating.

**Computer/Communication Equipment 3576:** Lower technology chips, data switches, and network connecting devices for computers and special-use communication hardware.

**Computer Peripheral Equipment NEC 3577** Keyboards, graphic displays, magnetic and optical disk and tape drives, optical scanners, plotters, printers, and related input/output devices.

**Telephone and Telegraph Apparatus 3661** Communication interface and transmission system components, repeaters, line conditioning devices, switching and multiplexing equipment, and customer premise modems, answering machines, and fax machines.

**Radio/TV Broadcast/Communication Equipment 3663** Cellular telephones, fixed and mobile radio systems, transmitters, receivers, fiber optics equipment, satellite communications systems, closed-circuit, cable TV, and studio equipment.

**Semi-Conductors/Related Devices 3674** Semi-conductors, integrated circuits, discrete devices, diodes, rectifiers, integrated microcircuits, transistors, solar cells, and light-sensing and emitting devices.

**Electronic Components NEC 3679** Receiving antennas, switches, and high and low technology waveguides.

**Surgical/Medical Instrument/Apparatus 3841** Manually operated human and veterinary devices (syringes, clamps, hypodermic/suture needles, stethoscopes, laparoscopic tools, catheters) and various measuring instruments.

**Orthopedic, Prosthetic, Surgical Appliances/Supplies 3842** Materials and equipment for professional and personal healthcare: skeletal and muscular braces, trusses, elastic hosiery, dressings, tapes, and related personal safety items.

**Electro-Medical Apparatus 3845** Electrical and battery powered patient-monitoring and diagnostic systems ranging from arc lamps to pacemakers, cardiographs, defibrillators, ultrasonic scanning devices, and magnetic resonance imaging equipment.

and the beginning of macroeconomic recovery in 1992.

### **The Study**

To generate valid conclusions and to control for environmental conditions that could overshadow any performance differences attributable to retrenchment management, it was necessary to limit the sample of firms to those of approximately equal size and to those that faced similar operating and competitive situations. Thus, the sample was limited to

companies in ten closely related four-digit Standard Industrial Classification Codes (SIC) with annual revenues between \$1 million and \$100 million. Table 2 details the SIC codes and shows that the sample represents many machinery, electronics, and computer related firms (SIC 35, 36, 38). There were five reasons for choosing these types of companies. First, they had similar technology levels or product life cycle patterns. Second, their degrees of excess capacity typified those of major U.S. and global

industries. Third, despite different geographic locations, they held similar susceptibilities and recovery potential to economic turbulence. Fourth, these industries continue to be prominent in the U.S. economy. Finally, they were some of the first traditional manufacturing industries to face intensifying global competition.

### **Survey Data**

Empirical organizational data for this study were obtained from survey instruments mailed to chief executive officers (CEOs) of 451 manufacturing firms with the pre-selected SIC codes. A comprehensive, non-regionally restricted setting was selected to obtain more generalizable results over non-industry factors such as local regulation, taxation, and wage rates. CEOs were viewed as the most accurate source of gauging each company's management formality and defining changes in company direction. Cover letters addressed each CEO by name and title, and gave an overview of the research with a request for participation. Anonymity was guaranteed to individual respondents to reduce the potential for response bias or unintended error, as proposed by Warwick and Lininger (1975). As further protection against self-report bias, CEOs were asked to complete the questionnaire in the presence of two senior executives who were involved in planning and operationalizing the retrenchment activities undertaken by the business in response to the recent recession. Titles of co-respondents were requested. Following a second mailing, 110 complete and usable questionnaires were received, for a response rate of 24.4 percent.

### **Operational Definitions**

To measure broad organizational responses to economic downturn, the survey instrument was designed to focus on the types of issues management faces during a period of retrenchment. In all, 62 questions were prepared based on the retrenchment literature discussed above. As a result, the survey instrument

asked a series of questions regarding changes to the overall business strategy, product-market strategies, cost cutting and asset allocation, R & D funding and application, production management, advertising, promotion, pricing and distribution, organizational structure, pay/incentives, financial management, and decision-making approaches. To help prevent a possible bias from question order, questions were randomized.

To gauge the degree of emphasis a particular firm gave to the various retrenchment activities, respondents were asked to indicate (1) which activities were emphasized in the year prior to the recession (1989), and (2) which activities were emphasized in response to the recession. This procedure enabled comparisons of firms in terms of their completeness and commitment to the various retrenchment activities. Responses were gauged with Likert-type scale anchors ranging from 1 ("not emphasized at all") through 5 ("given great emphasis") in the overall retrenchment process. (This questionnaire is available from the authors upon request). Likert-type anchors were used for the questionnaire due to their well-known ability to measure attitudes, in this case the attitudes of top management regarding their actions in dealing with retrenchment.

### **Objective Performance Data**

Every firm in this study was publicly traded, allowing access to individual financial data through Standard & Poor's *Compustat Financial Data Base of U.S. Companies*. Several issues guided the selection of financial performance via Compustat as the measure of organizational performance. First, financial performance measures are well known and are among the most commonly used measures of performance in business research (Shrader, Taylor, and Dalton 1984), providing the ultimate measure of firm performance for many researchers and practitioners. Second, there is often a reluctance on the part of managers to report data that they view as sensitive. Therefore, the use of Compustat data eliminated our need to ask respondents

to report any sensitive performance information. Third, although organizational performance is best viewed as a multidimensional construct, over the span of several years non-financial measures tend to influence financial performance and are, therefore, largely accounted for in financial performance measures (Venkatraman and Ramanujam 1986). Fourth, the use of objective financial performance measures helps reduce possible methods bias, which can result when subjective performance measures are used in the same study with other subjective measures.

Financial performance was measured for each firm at two separate points in time (fourth quarter 1989 and fourth quarter 1992). This time frame bracketed the range of economic downturn factors mentioned earlier. The first performance measure, return on common equity (net income minus preferred dividend payments divided by common stockholders' equity, reported as a percentage), was selected due to its widespread use as a financial performance indicator. Cash flow to sales (net income plus depreciation divided by sales, reported as a percentage) was selected because it factors out the effects of accounting accruals, which may distort the view of the firm's performance in the short run.

## Findings

### Characteristics of the Responding Firms

The manufacturing firms responding to the survey were relatively small, as indicated by revenue and assets measured at the end of fourth quarter 1992. The size of the responding firms as measured by mean revenue (calculated from Compustat data) was \$8.03 million (std.dev. = \$8.13 million), with the largest firm showing revenues of \$31.6 million and the smallest showing revenues of \$25,000. Size as measured by mean assets (from Compustat) was \$25.3 million (std.dev. = \$23.8 million), with the largest firm showing assets of \$97.3 million and the smallest demonstrating assets of \$201,000. As illustrated by these

data, the responding firms from the ten SICs sampled for this study were small and represent a range of firm sizes within the small business category.

### Data Analysis

Two series of regression analyses were used to estimate the relationships between the change in the return on common equity (ROCE) and change in cash flow to sales (CFSALES) and the retrenchment variables ( $X_i$ ). For both dependent variables, the change score was calculated by a subtraction of the Time One results (fourth quarter 1989) from the Time Two results (fourth quarter 1992). Likewise, the change score for the survey-based retrenchment variables (the independent variables) was calculated by subtracting the Time One results from the Time Two results. In addition to the retrenchment variables used in this analysis, size, as measured by the logarithm of Total Assets, was included as a control variable. For analysis of both ROCE and CFSALES, the least squares method was used to estimate the regression coefficients ( $b_i$ ) in two separate equations of the form:

$$Y_{ROCE} = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n + u \text{ (Equation 1)}$$

$$Y_{CFSALES} = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n + u \text{ (Equation 2)}$$

where  $u$  denotes the random disturbance term. In these equations, the regression coefficient ( $b_i$ ) represents the change in the dependent variable associated with a one-unit change in the independent variable. Prior to estimating the respective regression equations, all data were standardized (to a mean of zero and a standard deviation of one) to remove any possible effects due to large magnitude differences in units. Following standardization of the data, stepwise regression was used to determine which of the independent variables were significantly related to the respective dependent variables. Results from the stepwise regressions were confirmed by using the forward and backward regression procedures.

**Table 3**  
**Regression Estimates of Change in Return on Common Equity Relationship**

Variable	Parameter Estimate	Standard Error	t-Value	p-Value	Standardized Estimate
Intercept	0.13	0.05	-2.45	0.02	0.00
Major expenditures on product development R & D	-0.40	0.07	-6.02	0.00	-0.40
Relying on long-term debt as a source of funds	0.14	0.06	2.26	0.03	0.14
Restructuring departments according to product lines	0.30	0.06	5.15	0.00	0.32
Restructuring departments according to functional areas	0.30	0.06	5.20	0.00	0.36
Producing high-quality products	-0.38	0.10	-4.03	0.00	-0.28
Manufacturing on a customer order basis	0.57	0.08	7.29	0.00	0.59
Improving new product development capability	0.43	0.07	5.89	0.00	0.45
Increased productivity from R&D by matching explicit R&D objectives with proposed expenditures	-0.33	0.06	-5.97	0.00	-0.38
Securing large contracts from government and other large customers	-0.21	0.07	-2.86	0.01	-0.19
Reducing sales staff and advertising budgets	-0.20	0.07	-2.87	0.01	-0.19
Involve BOD in decisions on corporate mission, competitive strategies, and organizational structure	-0.20	0.10	-2.08	0.04	-0.22
Involve BOD in decisions on capital allocation and capital structure	-0.42	0.11	-3.94	0.00	-0.45

Regression Equation Characteristics:  $R^2 = 0.89$ ; Adjusted  $R^2 = 0.85$ ;  $n = 110$



Evaluation of the final regression equations included tests for violations of the basic assumptions of the regression model. No violations of the regression model assumptions due to deviations in normality, heteroscedasticity, or independence of the error terms was detected. In addition, evidence of influence points and/or outliers were checked and found to be within generally acceptable limits.

## Results

Equation 1, which investigated the organizational factors related to overall firm performance, as measured by return on common equity (ROCE), produced a model with an adjusted  $R^2 = .85$ ;  $F = 25.03$  (see Table 3). It is interesting to note that the mean change in ROCE from the fourth quarter of 1989 to the fourth quarter of 1992 was 9.25 percent (std. dev. = 163.13 percent). This 9 percent increase in average ROCE during the study period demonstrates that the firms studied appear to have developed effective responses to the economic downturn.

The retrenchment variables that were significantly related to ROCE at the .05 level were: (1) major expenditures on research and development ( $b = -.40$ ); (2) relying on long-term debt for funding ( $b = .14$ ); (3) restructuring departments by product line ( $b = .30$ ); (4) restructuring departments along functional responsibilities ( $b = .30$ ); (5) producing high quality products ( $b = -.38$ ); (6) manufacturing on a customer-order basis ( $b = .57$ ); (7) improving new product development capabilities ( $b = .43$ ); (8) increasing research and development productivity ( $b = -.33$ ); (9) focusing on large contracts ( $b = -.21$ ); (10) reducing sales staffs and advertising expenses ( $b = -.20$ ); (11) involving the Board of Directors in strategic planning ( $b = -.20$ ); and (12) involving the Board of Directors in capital allocation decisions ( $b = -.42$ ). The intercept for Equation 1 (ROCE) was significant with a  $b = .13$ . Interestingly, size was not significantly related to ROCE.

Equation 2, which investigated the organizational factors related to performance, as measured by cash flow to sales (CFSALES), produced a model with an adjusted  $R^2 = .86$ ;  $F = 26.05$  (see Table 4). Examination of the mean change in CFSALES demonstrated a decrease of 4 percent (std. dev. = 47 percent). This decrease in the average ratio of cash flow to sales for the firms in this study illustrates the difficulty the firms were having maintaining cash flow levels during this period of economic slowdown.

The retrenchment variables that were significantly related to CFSALES at the .05 level were: (1) narrowing geographic distribution coverage ( $b = .39$ ); (2) broadening geographic distribution coverage ( $b = .47$ ); (3) relying on long-term debt for funding ( $b = .33$ ); (4) decreasing product line breadth ( $b = -.26$ ); (5) decentralizing managerial responsibility ( $b = -.30$ ); (6) focusing on better control of firm performance ( $b = -.21$ ); (7) producing low-cost, low-quality products ( $b = .77$ ); (8) using value analysis in product development ( $b = .29$ ); (9) technological leadership ( $b = .52$ ); (10) capital structure flexibility in terms of raising new funds ( $b = -.26$ ); (11) attempting to improve bond ratings and common stock performance ( $b = -.39$ ); and (12) involving the Board of Directors in cost reduction decisions ( $b = -.80$ ). The intercept term was significant with a ( $b = -.05$ ). Once again, size was not significant in the analysis.

Table 5, giving the mean differences and associated standard deviations for the retrenchment activities found significantly related to ROCE or CFSALES, completes the picture for the small firms studied. It is important to note that a positive mean difference for an activity shown in Table 5 implies that the retrenchment activity was emphasized in response to the recession, while a negative mean difference implies that the retrenchment activity was de-emphasized in response to the recession. It is also interesting to note that only "major expenditures on product development-oriented R & D" was de-emphasized dur-

**Table 4**  
**Regression Estimates of Change in Cash Flow to Sales Relationship**

Variable	Parameter Estimate	Standard Error	t-Value	p-Value	Standardized Estimate
Intercept	-0.05	0.06	0.76	0.45	0.00
Narrowing geographic coverage from international to national or from national to regional	0.39	0.08	4.76	0.00	0.37
Broadening geographic coverage from regional to national or from national to international	0.47	0.07	6.32	0.00	0.46
Relying on long-term debt as a source of funds	0.33	0.07	5.04	0.00	0.30
Decreasing product line breadth from full to partial line or from partial line to single line	-0.26	0.09	-2.98	0.01	-0.23
Decentralizing managerial responsibility	-0.30	0.07	-4.14	0.00	-0.25
Achieving better overall control of general firm performance	-0.21	0.08	-2.45	0.02	-0.17
Producing low cost, low quality, discount products	0.77	0.08	10.24	0.00	0.83
Using value analysis for improving present products and developing and using more economical and easily available raw materials	0.29	0.09	3.15	0.00	0.24
Technological leadership	0.52	0.07	7.52	0.00	0.43
Capital structure allowing flexibility to raise additional funds for growth	-0.26	0.06	-4.21	0.00	-0.26
Improving bond ratings and common stock market performance	-0.39	0.07	-5.69	0.00	-0.33
Involving BOD in decisions on cost cutting and asset reduction programs	-0.80	0.07	-10.75	0.00	-0.86

Regression Equation Characteristics:  $R^2 = 0.89$ ; Adjusted  $R^2 = 0.86$ ;  $n = 110$

**Table 5**  
**Mean Differences and Associated Standard Deviations for Significant Regression Variables**

<b>Regression Variable</b>	<b>Mean Difference</b>	<b>Standard Deviation</b>
Narrowing geographic coverage from international to national or from national to regional	.27	.91
Broadening geographic coverage from regional to national or from national to international	.02	1.29
Major expenditures on product development oriented R & D	-.02	1.57
Relying on long-term debt as a source of funds	.12	.96
Restructuring departments according to product lines	.47	1.18
Restructuring departments according to functional areas	.39	.91
Decreasing product line breadth from full line to partial line or partial line to single	.48	1.21
Decentralizing managerial responsibility	.07	.88
Achieving better overall control of general firm performance	.75	1.67
Producing high quality products	.39	.85
Producing low cost, low quality, discount products	.11	.68
Manufacturing on a customer-order basis	.30	.89
Improving new product development capability	.48	1.34
Value analysis for improving products and developing and using more economical and available raw materials	.44	.94
Technological leadership	.14	1.06
Increased productivity from R and D by matching explicit R and D objectives with proposed expenditures	.42	.84
Securing large contracts from government and other large customers	.24	1.02
Reducing sales staffs and advertising budgets	.43	1.67
Capital structure allowing flexibility to raise additional funds for growth	.30	1.02
Improving bond ratings and common stock market performance	.16	1.05
Involving board of directors in decisions on corporate mission, competitive strategies, and organizational structure	.41	.96
Involving board of directors in decisions on capital allocation and capital structure	.34	.98
Involving board of directors in decisions on cost cutting and asset reduction programs	.47	.99

Note: A negative mean implies the firm de-emphasized the activity across the period of interest.



ing the study period. All other activities were emphasized in response to the recession.

### **Discussion**

One major objective of this research was to explore which retrenchment activities contributed most to the performance of small businesses reacting to the pressures of an economic downturn. These retrenchment activities can be grouped into five general areas: financial management, marketing, product development and R & D, production management, and organizational restructuring. Of the financial management factors included in this study, an increase in the emphasis on long-term debt for funding had a positive impact on ROCE. This is most likely due to an increase in financial leverage in these firms during the study period.

In the area of product development, the firms in this study increased their emphasis on improving new product development capabilities during the study period. This increase in product development emphasis was found to be positively related to ROCE. Apparently, during economic downturn, an increase in product development capabilities can be used to boost performance in small firms. However, it appears that "major" expenditures on product development R & D during an economic downturn is not the best approach. Firms in the study decreased these major R & D related expenditures during the study period, which proved to be an appropriate action, as the de-emphasis on these expenditures was positively related to ROCE. It is also interesting to note that increases in R & D productivity were emphasized during the study period, but also had a negative relationship with ROCE. Given these findings it appears that an increase in the emphasis on product development capabilities is appropriate, but careful control over the types of expenditures in related research and development areas is effective. However, care must be taken not to stifle the creative process by over-emphasizing increases in R & D productivity.

In the area of production management, two factors appear to have an impact on performance as measured by ROCE. The first factor deals with an increased emphasis on manufacturing on a customer-order basis. This increase in manufacturing for specific customer orders proved to be strongly related to ROCE and may reflect reducing the expenses of meeting customer requirements by reducing the uncertainty present in marketing a product to a large market (versus a specific customer). Also of interest is that the production of high-quality products was emphasized during this period and was found to be negatively related to ROCE. Apparently, these small firms focused on producing high-quality products, but this focus missed its mark in terms of satisfying customers (who were apparently less interested in quality products during this period), which hurt performance as measured by ROCE.

Several marketing issues appeared to have an impact on ROCE. The first marketing activity that was negatively related to ROCE was an increased emphasis on large contracts secured from large customers and the government. Large orders often require expensive customization to meet special customer requirements. In addition, often large orders are placed only when a discount is offered. This emphasis on large orders appears not to have had the desired benefit to these small firms, as emphasizing large contracts hurt these firms during the economic downturn. This is interesting when contrasted to the positive relationship between manufacturing on a customer-order basis and ROCE. Manufacturing for specific customer orders typically lowers the firm's risk and financial exposure due to large inventories. However, this advantage appears to be partially offset by the discounting necessary to obtain large orders. Perhaps an optimum order size exists to balance these factors. Obviously, this is an area that needs additional exploration and in-depth study. Finally, although cost control is important during periods of eco-

conomic turmoil, apparently cutting the advertising and sales budget is not a good place to attempt retrenchment. Firms that reduced their marketing efforts by reducing sales staffs and advertising expenditures fared worse than firms that maintained or increased marketing efforts.

Organizational restructuring is also a tactic that firms used to respond to the economic downturn. The small businesses in this study emphasized either functional or product line-based restructuring in their retrenchment activities. For the firms in this study, these restructuring activities appear to have been appropriate responses to the recession, as restructuring by product lines or by functional areas was positively related to ROCE. Another action sometimes employed by firms is to increase the involvement of the Board of Directors (BOD) in the major planning and operating decisions of the firm. It appears that an increase in BOD involvement is not particularly useful, as an increase in BOD involvement in strategic planning activities and capital allocation decisions had a negative impact on ROCE. Thus, it appears that involving the BOD in these issues is counterproductive, perhaps due to the distance between day-to-day operating decision and the BOD's perspective.

The second approach to assessing the impact of the recession on the performance of the small firms in this study focused on the impact on cash flow to sales (CFSALES). Five areas appeared to have an impact on CFSALES: finance, production, marketing, distribution, and organizational restructuring.

Three financial management strategies were emphasized by the firms to meet the challenge of the recession. The first, the improvement of bond ratings and stock performance, proved to be negatively related to CFSALES. By emphasizing stock and bond performance (perhaps through over-emphasis on cost cutting), it appears that these small firms actually hurt their cash flow situation during the study. The second financial management factor, the development of

a flexible capital structure to fund growth during this period, hurt performance, as measured by CFSALES. The third, using long-term funding as a source of funds and thereby increasing financial leverage, appears to have been an appropriate action, as it was positively related to CFSALES.

The second area to significantly impact CFSALES was marketing. The two factors with the highest beta coefficients were: (1) an emphasis on producing low-cost, low-quality, discount products ( $b = .77$ ); and (2) an emphasis on using value analysis in ongoing product development ( $b = .29$ ). Apparently, the customers of these small firms were more interested in discount products (those delivering adequate performance at low prices) than on quality products during the recession. This is somewhat to be expected, as customers trim their own budgets. Thus, the firms in this study that emphasized lower-priced, lower-quality products tended to perform better. It is interesting to note that although many firms cut product lines during this period, customers apparently wanted firms to maintain their full lines during this period—decreasing product line breadth during the recession was negatively related to CFSALES ( $b = -.26$ ). Taken together, these factors indicate that the best performing firms maintained product lines but shifted emphasis to lower-price, lower-quality products during the recession.

Analysis of the firm's distribution efforts paints a somewhat conflicting picture. Firms with higher levels of performance, as measured by CFSALES, both broadened geographic coverage and narrowed geographic coverage during the recession. Interestingly, both of these approaches were positively related to CFSALES. However, the mean difference for broadening geographic coverage is very small (.02) with a fairly large standard deviation (1.29), which may indicate that firms were not really broadening geographic coverage. Alternatively, firms may have narrowed coverage in some geographic areas while actually in-

creasing breadth in areas that appeared promising.

In addition to marketing, distribution, and finance, organizational restructuring was also related to CFSALES. Emphasizing the decentralization of management responsibilities was negatively related to CFSALES. Although this finding runs counter to much of the popular management theories about empowerment, during recessions empowerment may be more inefficient and thus hurt cash flow. This finding supports the idea that firms should centralize some decision-making during recession to control costs and reduce the inefficiencies that may be present in a highly decentralized organization. Running somewhat contrary to prior expectations, an emphasis on control over the firm's general performance was negatively related to CFSALES. This finding appears to reflect the need to assert control without stifling all lower management initiative and creativity. Or perhaps this finding reflects an emphasis on the wrong techniques to control performance. This finding definitely needs further exploration and study.

The next two areas of interest, each with one tactic significantly related to CFSALES, were (1) technical leadership, and (2) BOD involvement in cost reduction decisions. Technological leadership was emphasized during the study period and demonstrated a strong positive relationship with CFSALES, thus demonstrating its appropriateness. Also emphasized during the study period but negatively related to CFSALES was involving the Board of Directors in cost reduction decisions. This was strongly and negatively related to CFSALES ( $b = -.80$ ), illustrating a counterproductive action. Thus it appears that involving the Board of Directors in cost cutting may be a poor tactic for small firms during economic downturn.

### **Summary and Conclusions**

This study investigated a set of retrenchment activities that small businesses can use to improve their performance during periods of economic downturn. The good news is that many common

retrenchment activities did improve the performance of the small firms studied. For example, organizational restructuring was an effective tactic, as was a focus on lower cost products for customers, combined with careful management of the research and development and product development functions. In essence, it appears that when a recession forces cutbacks among a small manufacturing firm's customers, these companies must be flexible enough to respond to their customers' need for less expensive products. Careful management of costs across the organization and careful management of the research and development and product development areas appear to be vital parts of delivering the cost savings benefits needed by the firms' customers.

Cost cutting is not without its risks, however. This study points out that an over-emphasis on cost cutting (especially in advertising and sales-related areas) is often counterproductive. This finding is especially interesting in that many of the firms studied operate in relatively high-tech industries, where marketing and sales capabilities often are viewed as less important than research and development capabilities. Thus, it appears that managers in these and similar industries can hit a point of diminishing returns in cutting their advertising and sales functions, and if this occurs, performance will be negatively impacted. Furthermore, it appears that an over-emphasis on control by upper management and the BOD can hurt performance during an economic downturn. Most likely, this negative impact stems from attempts by upper management and the BOD to micromanage issues better understood by lower and middle management. Obviously, these conclusions must be viewed as somewhat preliminary in light of the sample employed in this study. However, for managers of small manufacturing firms, these findings present useful insights into common retrenchment activities during periods of economic downturn.

## References

- Alevras, J., and A. Frigeri (1987). "Picking Up The Pieces After Downsizing," *Training and Development Journal* (September), 29-31.
- Appelbaum, S., R. Simpson, and B. Shapiro (1987). "The Tough Test of Downsizing," *Organization Dynamics* 16, 68-79.
- Bailey, G., and J. Szerdy (1988). "Is There Life After Downsizing?" *Journal of Business Strategy* 9(1), 8-11.
- Barker, V., and M. A. Mone (1994). "Retrenchment: Cause of Turnaround or Consequences of Decline?" *Strategic Management Journal* 15(2), 395-405.
- Bibeault, D. G. (1982). *Corporate Turnaround: How Managers Turn Losers Into Winners*. New York: McGraw-Hill.
- Boyle, R., and H. Desai (1991). "Turnaround Strategies for Small Firms," *Journal of Small Business Management* 29(3), 33-43.
- Cameron, K., R. I. Sutton, and D. A. Whetton (1988). "Issues in Organizational Decline," in *Readings in Organizational Decline*. Ed. K. S. Cameron, R. I. Sutton, and D. A. Whetton. Cambridge, Mass.: Harper and Row.
- Cameron, K., D. A. Whetton, and M. U. Kim (1987). "Organizational Dysfunctions of Decline," *Academy of Management Journal* 30(1), 126-138.
- Covin, J., and D. Slevin (1989). "Strategic Management of Small Firms in Hostile and Benign Environments," *Strategic Management Journal* 10(1), 75-87.
- D'Aveni, R. A. (1989). "The Aftermath of Organizational Decline: A Longitudinal Study of The Strategic and Managerial Characteristics of Declining Firms," *Academy of Management Journal* 32(3), 577-605.
- Dumaine, B. (1990). "The New Turnaround Champs," *Fortune* (July), 36-44.
- Ewaldz, D. D. (1990a). "Managing in an Economic Downturn," *Across the Board* 27(6), 16-18.
- (1990b). "Managing in an Economic Downturn," *Small Business Reports* 15(12), 20-25.
- Finkin, E. (1992). "Using Cost Management Effectively in the Turnaround Process," *Journal of Business Strategy* 13, 62-64.
- Hall, W. K. (1980). "Survival Strategies in a Hostile Environment," *Harvard Business Review* (September-October), 75-85.
- Hambrick, D. (1985). "Turnaround Strategies," in *Handbook of Business Strategy*, Ed. W. H. Guth. Boston, Mass.: Warren, Gorham, and Lamont.
- Hambrick, D., and S. Schecter (1983). "Turnaround Strategies for Mature Industrial-Product Business Units," *Academy of Management Journal* 26(2), 231-248.
- Hamel, G., and C. K. Prahalad (1994). *Competing for the Future*. Boston, Mass.: Harvard Business School Press.
- Heany, D. F. (1985). "Business in Profit Trouble," *Journal of Business Strategy* 5(4), 4-12.
- Hofer, C. W. (1980). "Turnaround Strategies," *Journal of Business Strategy* 1, 19-31.
- McCallum, J. S. (1991). "Perspectives For Managers On Recession," *Business Quarterly* 55(4), 34-39.
- Mills, D., and Schumann, L. (1985). "Industry Structure with Fluctuating Demand," *American Economic Review* 75 (September), 758-767.
- National Bureau of Economic Analysis. U.S. Department of Commerce (May 1992). *Survey of Current Business*. Washington, D.C.: U.S. Government Printing Office.
- New York Times* (1992). June 18, C1-C2.
- O'Neill, H. M. (1986). "Turnaround and Recovery: What Strategy Do You Need?" *Long Range Planning* 19(1), 80-88.
- Pearce, J. A. II (1983). "The Relationship of Internal Versus External Organizations to Financial Measures of Strategic Performance," *Strategic Management Journal* 4(3), 297-306.
- Pearce, J. A. II, and D. K. Robbins (1993). "Toward Improved Theory and Research on Business Turnaround," *Journal of Management* 19(3), 613-636.

Robbins, D. K., and J. A. Pearce II (1992). "Turnaround: Recovery and Retrenchment," *Strategic Management Journal* 13(4), 287-309.

Schendel, D. E., and G. R. Patton (1976). "Corporate Stagnation and Turnaround," *Journal of Economics and Business* 16(3), 236-241.

Shrader, Charles B., Lew Taylor, and Dan R. Dalton (1984). "Strategic Planning and Organizational Performance: A Critical Appraisal," *Journal of Management*, 10(2), 149-171.

Slatter, S. (1984). *Corporate Recovery: Successful Turnaround Strategies and Implementation*. Singapore: Penguin.

Smart, C., and I. Vertinsky (1984). "Strategy and The Environment: A Study of Corporate Responses to Crises," *Strategic Management Journal* 5, 199-213.

Steiner, M., and O. Solem (1988). "Factors for Success in Small Man-

ufacturing Firms." *Journal of Small Business Management* (January), 51-55.

Touby, L. A. (1991). "Eight Lessons from the Bad Times for the Good Times: Finding a Business Edge that Works Before, During, and After a Recession," *Working Woman*, 16(12), 40-44.

Venkatraman, N., and Vasudevan Ramanujam (1986). "Measurement of Business Economic Performance: An Examination of Method Convergence," *Journal of Management*, 13(1), 109-122.

Want, J. (1990). "Managing Business Change Cycle," *ABA Banking Journal* 82(4), 78-81.

Warwick, D. P., and C. A. Lininger (1975). *The Sample Survey: Theory and Practice*. New York: McGraw-Hall.

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