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## The Performance Effects of Strategy, Top-Management Characteristics, and Environment: An Integrative Study of Firm Decline and Turnaround.

Franz Theodore Lohrke  
*Louisiana State University and Agricultural & Mechanical College*

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THE PERFORMANCE EFFECTS OF STRATEGY,  
TOP-MANAGEMENT CHARACTERISTICS, AND ENVIRONMENT:  
AN INTEGRATIVE STUDY OF FIRM DECLINE AND TURNAROUND

A Dissertation

Submitted to the Graduate Faculty of the  
Louisiana State University and  
Agricultural and Mechanical College  
in partial fulfillment of the  
requirements for the degree of  
Doctor of Philosophy

in

The Interdepartmental Program in  
Business Administration

by  
Franz Theodore Lohrke  
B. A. Flagler College, 1988  
M. B. A. University of Iowa, 1990  
August 1996

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This dissertation is dedicated to my parents, Dr. and Mrs. Gene Lohrke. Their love, inspiration, and support helped make all my efforts and success possible.

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## **ABSTRACT**

Despite accumulating evidence, unresolved issues remain as to how the components of strategy, top-management characteristics, and environment, as independent variables, combine to affect a firm's success or failure in turning around declining performance. To address such issues, this dissertation developed and tested a series of hypotheses that investigates the effects of strategy, top-management characteristics, and environment on performance. Findings show that turnaround strategy alone is insufficient to explain differences in performance among firms. They also provide some support for the importance of TMG-strategy interaction and show a limited role for the environment in a firm's turnaround. Additionally, the findings show some limited support for the importance of all three factors taken in tandem. Methodological issues related to classifying turnaround strategies and measuring performance are also addressed.

## CHAPTER 1: INTRODUCTION

Increasing global competition, industrial decline, rapid technological change, government deregulation, and managerial complacency have contributed to performance crises in an increasing number of firms (Hoffman, 1989; Loomis, 1993). These crises have prompted numerous investigations into environmental influences on performance decline (Argenti, 1976; Bibeuault, 1982; Lorange & Nelson, 1987; Weitzel & Jonsson, 1989; Zammuto & Cameron, 1985), as well as strategies for halting such decline and turning around a firm's performance (Hambrick & Schecter, 1983; Hofer, 1980; O'Neill, 1986; Robbins & Pearce, 1992). Additionally, limited research has focused on top management's role in turnaround processes (e.g., Barker & Barr, 1994; Stanwick, 1992). Despite accumulating evidence, unresolved questions remain as to how the components of strategy, top-management characteristics, and environment, as independent variables, combine to affect performance as a criterion or outcome (Pearce & Robbins, 1993).

These components, as they influence a firm's performance, comprise the conceptual domain of this dissertation (cf. Summer et al., 1990). It is generally argued that the alignment of a firm's strategy with its prevailing external milieu (i.e., general and task environments) affects its performance (Hofer & Schendel, 1978; Porter, 1980; Summer et al., 1990). In addition, a

firm's resource pool influences its success (Barney, 1991; Diercix & Cool, 1989; Mahoney & Pandian, 1992). From a strategic management perspective, one of the most important resources a firm can draw upon in is the talent of its top-management group (Castanias & Helfat, 1991). Taken in tandem, the thesis of this dissertation is that a firm's turnaround is a function of the alignment among its environmental conditions, strategy, and top management. This conceptual framework is outlined in Figure 1.

The notion of alignment is critical in turnaround research. Firms that do not maintain an alignment among strategy, top-management characteristics, and environment will ultimately decline and eventually fail (Hannan & Freeman, 1977; Zammuto & Cameron, 1985). Further, reestablishing alignment is necessary for firms to turn around (Pearce & Robbins, 1993). Consequently, achieving insight into the turnaround process requires investigating the components that permit firms to regain alignment. A discussion of these components as they relate to a firm's performance -- and, by extension, turnaround -- follows.

### Strategy

Research investigating the turnaround process has focused primarily on the impact that specific turnaround strategies have in reestablishing the aforementioned alignment (e.g., Barker & Duhaime, 1994; Hambrick & Schecter, 1983; Hofer, 1980; Robbins & Pearce, 1992;

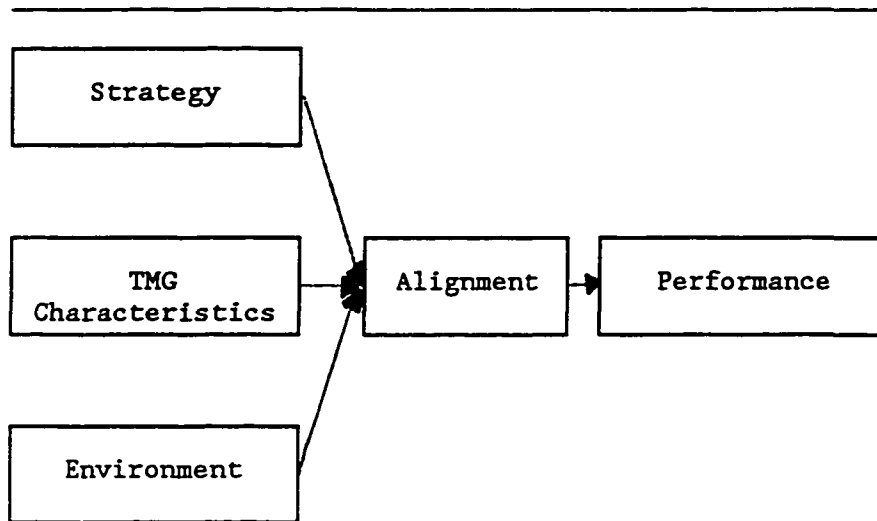


Figure 1.1--A conceptual model of alignment among strategy, TMG characteristics and environment

---

Schendel, Patton, & Riggs, 1976). Investigations have generally studied whether firms should implement retrenchment-oriented strategies (e.g., cutting costs or downsizing operations), innovation-oriented strategies (e.g., introducing new products), or growth-oriented strategies (e.g., diversifying into new domains) to overcome decline. Studies have found evidence both supporting (e.g., Barker, 1992; Morrow & Busenitz, 1993; Robbins & Pearce, 1992) and challenging (e.g., Arogyaswamy, 1992; Hofer, 1980; Zimmerman, 1989) the efficacy of each strategy. These equivocal results suggest that other components along with strategy are important in reestablishing alignment and turning around a firm's performance.

#### TMG Characteristics

A firm's top management is a second component affecting its alignment. Strategic decisions by a top-management group (TMG) bridge the boundary between a firm's internal processes and its environment (Andrews, 1971; Child, 1972; Pfeffer & Salancik, 1978). Research based on the strategic-choice perspective (Child, 1972) and the Carnegie School decision-making framework (Cyert & March, 1963; March & Simon, 1958) proposes that such decisions can be affected by TMG characteristics (e.g., functional background, career experiences, and stock ownership).<sup>1</sup> Varying TMG characteristics provide firms with different talents (Bantel & Jackson, 1989; Dearborn & Simon, 1958; Michel & Hambrick,



1992; Miles & Snow, 1978; Norburn & Birley, 1988), produce different TMG motives (Amihud & Lev, 1981; Eisenhardt, 1989), and may prompt different interpretations of organizational and environmental stimuli (Hambrick & Mason, 1984; Meyer, 1982; Szilagyi & Schweiger, 1984; Thomas, Clark, & Gioia, 1993) that can affect strategic decision making and, thus, a firm's alignment. Additionally, because firms pursue myriad strategies whose implementation may require diverse TMG talents, the extent to which TMG talents match strategies should improve performance (Gupta, 1988; Hambrick, 1987; Michel & Hambrick, 1992; Thomas, Litschert, & Ramaswamy, 1991). The role of TMGs in turnaround has received only limited empirically investigation, but some studies suggest that TMGs may be an important component in realigning firms with their environments (Ford, 1985; Hofer, 1980; O'Neill, 1986; Schendel & Patton, 1976; Stanwick, 1992).<sup>2</sup>

### Environment

A third component affecting alignment is the environment with which firms interact (Andrews, 1971; Hofer & Schendel, 1978; Porter, 1980). The organizational literature varies in its view of environments from totally determining (Hannan & Freeman, 1977; Scherer, 1980) to predominately controlling (Lieberson & O'Conner, 1971; Pfeffer & Salancik, 1977; Schmalensee, 1985) to constraining (Child, 1972; Porter, 1980) a firm's behavior and

performance. It is generally argued (e.g., Astley & Van de Ven, 1983; Child, 1972; Hambrick & Finkelstein, 1988; Haveman, 1992; Hitt & Tyler, 1991; Hrebiniak & Joyce, 1985), however, that a firm has some latitude for adapting to environmental demands. Turnaround studies have investigated some environmental factors affecting performance (e.g., business-cycle or life-cycle stage; Bibeault, 1982; Morrow & Busenitz, 1993). In general, however, most studies have focused on decline resulting from internal causes (e.g., increasing firm inefficiency) rather than from environmental causes (e.g., shrinking industry sales). To regain alignment, however, a firm must achieve fit with critical contingencies in its environment (Zammuto & Cameron, 1985). Thus, gaining insight into the turnaround process requires investigating the impact that environmental factors have on a firm's ability to turn around.

#### Performance

As noted, it is generally argued that increasing alignment among a firm's strategy, top-management characteristics, and environment results in better performance -- and, by extension, turnaround (Andrews, 1971; Summer et al., 1990). Questions remain, however, regarding how to measure performance in turnaround situations (Barker & Mone, 1994; Winn, 1993). Turnaround studies have employed several measures, but little consensus exists on how to exactly gauge "decline" and "turnaround" (Pearce & Robbins,

1993). Thus, conceptual development of turnaround measures is also important for studying the turnaround process.

In this dissertation, therefore, I develop and test a series of hypotheses investigating the effects that turnaround strategy, top-management characteristics, and environment have on turnaround. In doing so, I also examine unresolved methodological issues in turnaround research related to classifying turnaround strategies and measuring performance.

#### Summary of Remaining Chapters

This chapter has noted the increasing incidence of performance crises in firms and highlighted the importance reestablishing alignment in turning around declining performance. To examine issues related to turnaround, the dissertation will investigate the effect that a firm's strategy, top-management characteristics, and environment have on turnaround. The dissertation also examines methodological issues related classifying turnaround strategies and measuring performance.

Chapter 2 (Literature Review) examines previous turnaround research and discusses key findings related to turnaround strategy, TMG characteristics, and environment. It also highlights shortcomings in previous research.

Chapter 3 (Theory Development) begins by developing a strategy classification to overcome two shortcomings in previous research, lack of standardized terminology, and use

of aggregated strategy classification schemes. Hypotheses investigating the effects of turnaround strategy, TMG characteristics, and environment on turnaround are then developed.

Chapter 4 (Methods) describes sample selection, measures, and methods for testing hypotheses. The chapter also details issues related to employing organizational slack as a measure of performance.

Chapter 5 (Results) presents findings relating to individual hypotheses. These findings show that turnaround strategy alone is insufficient to explain differences in performance among firms. They also provide some support for the importance of TMG-strategy interaction and show a limited role for the environment in a firm's turnaround. Finally, the findings show some limited support for the importance of all three factors taken in tandem.

Chapter 6 (Implications and Conclusion) begins by reviewing the dissertation's results. Next, it discusses the implications of the reported results for turnaround research. It also highlights limitations of the dissertation and concludes with a discussion of future research avenues.

## CHAPTER 2: LITERATURE REVIEW

Turnaround is an attempt to halt a performance decline that threatens a firm's long-term viability (Barker & Mone, 1992; Hofer, 1980) and, in turn, to renew its health (Bibeault, 1982; Hambrick & Schecter, 1983; Schendel et al., 1976). Indications that firm viability is threatened and a turnaround is necessary include shrinking profit margins, declining market share, increasing debt, and decreasing working capital (Bibeault, 1982; Winn, 1993).

Previous studies have investigated sundry issues related to the effects of turnaround strategy, TMGs, and environment on a firm's performance. These studies are summarized in Table 2.1.

Table 2.1 prompts several observations. First, despite 20 years' research, the efficacy of various turnaround strategies (e.g., retrenchment) in reestablishing alignment remains equivocal. Second, the importance of matching TMG talents to a proposed turnaround strategy has yet to be empirically investigated. Third, the influence that a firm's environment may have on its turnaround has received limited empirical attention. Finally, empirical turnaround studies have employed various measures to evaluate turnaround. Each of these observations will be discussed, in turn.

Table 2.1--Review of Turnaround Studies

Study	Sample	Decline Definition	Recovery Definition	Key Findings
Schendel, Patton, & Riggs, 1976	54 firms from 40 manufacturing industries, 1952-1971	Four years of uninterrupted decline in net income normalized by GNP	Four years of increasing net income, normalized by GNP, with allowance for a two year deviation between decline and recovery	<p>Often a combination of poor managerial decisions and unfavorable environmental events cause decline.</p> <p>Significant changes in management and organizational processes often occurred during recovery.</p> <p>Major changes were necessary to reverse decline. Over half of turnarounds diversified (product and geographic) and about two-fifths divested divisions. Further, efficiency turnarounds did not cure strategic problems.</p>
Schendel & Patton, 1976	36 matched pairs from 20 manufacturing industries, 1952-1971	Sub-GNP growth in income	Greater-than-GNP growth in income	<p>Turnaround and non-turnaround firms sometimes pursued the same strategy. Thus, strategy must be implemented efficiently and match firms' resources to be successful.</p> <p>Steadily declining performance may be tolerated. Crisis may be necessary to induce action.</p>

(Table con'd)

Graham & Richards, 1979	10 rail-based holding companies (5 heavy diversifiers, 5 limited diversifiers) 1957-76	Return on total assets below return available from long-term U.S. Treasury bonds	Improving return on total assets	Firms that diversified because of poor performance changed top management to bring in managers with experience outside the railroad industry. These firms later divested their railroad operations.
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Firms that did not diversify did  
not change top management.

(table con'd)

Hofer, 1980	Case studies of 10 firms, 1951-1978	Major declines in financial or market position	Regaining financial health or market position	<p>Type of turnaround needed depends on current strategic and operating health as well as industry characteristics.</p> <p>Revenue-increasing, cost-cutting, asset reduction, and combination strategies comprise operating turnaround strategies. Increasing market share or pursuing segmentation/niche strategy comprise strategic turnaround strategies.</p> <p>Top management must almost always be replaced as a precondition to turnaround.</p> <p>Management typically responded to crisis with an operating turnaround strategy.</p>
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(table con'd)



O'Neill, 1981	51 banks, 1959-1978	3 consecutive years of net income growth at a slower rate than average industry net income growth	3 years of net income growth greater than average industry net income growth	<p>Few management changes occurred in either turnaround or non-turnaround firms.</p> <p>Turnaround and non-turnaround firms often implemented the same strategies. Consequently, differences in management's ability to implement the strategy and timing of the turnaround may be important.</p> <p>Decline rates for turnaround and non-turnaround firms did not differ significantly.</p>
---------------	---------------------	---	--	--

(table con'd)

Bibeault, 1982	81 firms, 1967-1976	<p>3 years of sustained, but not necessarily monotonic, decline in net income</p> <p>About 80% of sample also suffered one or more years of losses</p>	<p>Large increase in profit margins and sales</p>	<p>Approximately 80% of declines were caused by internal factors.</p> <p>Firms implemented the following turnaround strategies:</p> <ul style="list-style-type: none"> <li>68% management process turnarounds</li> <li>16% business cycle turnarounds</li> <li>5% competitive environment turnarounds</li> <li>4% product breakthrough turnarounds</li> </ul> <p>About 70% of top managers were replaced. Those that were not replaced remained because decline was caused by external factors, management detected decline early, or (in rare cases) management took bold action.</p>
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(table con'd)

Hambrick &  
Schechter, 1983

260 mature,  
industrial-  
product SBUs  
from PIMS data  
base for 4-year  
period

Average pretax  
ROI less than  
10%

ROI greater than  
20% ( $n=53$  SBUs)

Successful turnaround firms  
pursued one of three strategies:  
(1) Firms cut costs (R&D,  
marketing, inventory), reduced  
receivables, and increased  
employee productivity and market  
share. (2) Firms far below break  
even implemented asset/cost  
surgery. (3) Firms implemented a  
piecemeal strategy of increasing  
employee productivity and capacity  
utilization.

Successful turnaround strategies  
differed from unsuccessful  
turnaround strategies.

Turnaround strategy depended on  
capacity utilization and market  
share.

Firms probably did not implement  
revenue generating strategies  
because maturity stage of life  
cycle does not allow for large  
changes in competitive position.

(table con'd)

Ramanujam,  
1984

64  
manufacturing  
firms from  
COMPUSTAT data  
base, 1962-1979

ROI decline for  
four years and  
ROI at some  
point falling  
below 5%

ROI greater than  
5%

Most successful turnaround firms  
suffered only moderate decline  
whereas most unsuccessful  
turnaround firms suffered severe  
decline.

Successful turnaround firms had  
higher numbers of acquisitions  
during decline phase than  
unsuccessful turnaround firms.

Successful turnaround firms  
increased slack resources  
(retained earnings/equity) more  
than unsuccessful turnaround firms  
during recovery.

Industry growth rate was higher  
for successful turnaround firms  
than for unsuccessful turnaround  
firms during recovery.

Successful turnaround firms were  
larger than unsuccessful  
turnaround firms in terms of  
assets and sales.

(table con'd)

Melin, 1985	6 Scandinavian TV manufacturers, 1970-1980	Severe profit deterioration	Survival of shakeout	<p>Management competence and value structures oriented toward growth were inadequate during shakeout.</p> <p>Centralized structure and autocratic management led to gradual narrowing of management competence as the environment changed.</p>
O'Neill, 1986	Case study of 9 successful and 4 unsuccessful turnaround firms, 1970-1980	Not specified	Not specified	<p>Top management was always replaced. Five of nine firms achieving successful turnaround replaced CEO with insiders while three of four firms not achieving turnaround replaced CEO with insiders.</p> <p>Successful turnaround firms normally had some degree of restructuring.</p> <p>Management should be changed if such a move will increase worker, supplier, or customer confidence. If replacing management will alienate any of these stakeholders, current management should stay.</p>

(table con'd)

Pant, 1986	137 firms from COMPUSTAT data base, 1970-1983, $n = 64$ successful and 73 unsuccessful turnarounds	ROA in lowest 25% of industry for 2 years	ROA in top 25% of industry in years 7 and 8	<p>Successful turnaround firms were generally smaller than unsuccessful turnaround firms.</p> <p>Both successful and unsuccessful turnaround firms had higher debt levels than their industry averages during decline. Successful turnaround firms, however, had lower debt levels during recovery.</p> <p>Successful turnaround firms exhibited some change in ownership from externally controlled to owner controlled.</p> <p>Industry growth rates for successful and unsuccessful turnaround firms were both negative.</p>
Zimmerman, 1986	4 case studies	Financial decline, increasing customer complaints	Return to profitability	<p>Turnaround is a multifaceted process.</p> <p>A new and adaptive view of the environment is essential for turnarounds.</p>

(table con'd)

Zimmerman,  
1989

15 firms in  
automotive and  
agricultural  
equipment  
industries for  
20 year periods  
between 1902  
and 1987, n=8  
successful  
firms and 7  
unsuccessful  
turnaround  
firms

Decline in  
profit, negative  
profit or profit  
below industry  
average, decline  
in revenue,  
increasing  
stakeholder  
concerns

Increase in  
revenue and  
profit, positive  
profit,  
stronger market  
position

Successful firms had more severe  
declines than unsuccessful firms.

Successful firms exhibited better  
performance in terms of efficiency  
(e.g., inventory management, and  
production), and became low cost  
producers in the industry.  
Unsuccessful firms diversified or  
acquired other firms.

Successful firms implemented  
small, incremental improvements to  
increase quality and differentiate  
products. Unsuccessful firms made  
significant and abrupt product  
changes.

Successful firms had CEOs with  
extensive industry experience,  
production or engineering  
background, and long tenures.  
Unsuccessful firms had CEOs with  
limited industry experience, sales  
or marketing backgrounds, and  
short tenures.

(Table: con'd)

Arogyaswamy,  
1992

204  
manufacturing  
firms from  
VALUELINE  
database,  $n=89$   
successful and  
115  
unsuccessful  
turnaround  
firms, 1975-  
1985

Negatively  
sloped  
regression line  
for four years  
for return on  
invested  
capital, net  
income margin,  
and change in  
cash flow

Positively  
sloped  
regression line  
for four years  
for return on  
invested  
capital, net  
income margin,  
and change in  
cash flow

Return on  
invested capital  
in the first and  
last two years  
of study was  
positive

Both successful and unsuccessful  
turnaround firms cutback in terms  
of employees, cost of goods sold,  
inventories, receivables, and  
selling, general and  
administrative expenses.  
Successful turnaround firms,  
however, were able to translate  
cutbacks into higher efficiency  
more often than unsuccessful  
turnaround firms.

Successful turnaround firms  
adopted both efficiency and  
rejuvenation (i.e.,  
entrepreneurial) strategies more  
often than unsuccessful turnaround  
firms.

Adoption of efficiency strategies  
during decline and recovery were  
positively associated with  
performance increases during  
recovery.

(Table con'd)



Barker, 1992	160 low-diversity, manufacturing firms, $n = 46$ successful and 114 unsuccessful turnaround firms, 1975-1989	At least 3 consecutive years of return on investigated capital lower than 6-month U.S. Treasury bill rate, at least one year of negative income, Altman's (1988) $Z$ -score below 3.00 for at least one year	Return on invested capital above U.S. Treasury bill rate  Assets, employees, and normalized sales still greater than 50% of predownturn levels	Change in strategic orientation is positively associated with turnaround success.  Change in CEO (either voluntary or not) alone was not associated with turnaround success.  Level of slack resources is positively associated with turnaround success.  Change in CEO along with strategic orientation is associated with turnaround success.
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(table con'd)

Robbins &  
Pearce, 1992

38 textile  
manufacturers,  
1976-1985

2 years of  
increasing ROI  
and ROS followed  
by:

(1) absolute  
declines in both  
ROI and ROS for  
a minimum of two  
years

(2) rate of  
decline in ROI  
and ROS greater  
than industry  
average over two  
year period

(1) At least two  
consecutive  
years of  
absolute  
increases in ROI  
and ROS at a  
rate greater  
than industry  
average

(2) Return to  
predownturn ROI  
and ROS levels

Firms that retrench outperform  
those that do not.

Asset and cost retrenchment were  
both significantly associated with  
increased turnaround for high  
severity firms but not low  
severity.

External cause led to  
entrepreneurial turnarounds while  
internal cause led to efficiency  
turnarounds.

(table con'd)

Starwick, 1992	39 matched pairs from COMPUSTAT data base, 1970-1989	3 years of decreasing value for Altman's Z-score and a Z-score less than 3.00 for each year	3 years of increasing value for Altman's Z-score and a Z-score of at least 3.00 for the last year of turnaround	<p>CEO succession was not significantly higher in successful turnaround than unsuccessful turnaround firms.</p> <p>Incidence of outside succession were not significantly higher than insider succession in successful turnaround firms.</p> <p>Incidence of operational, strategic, and combination turnaround strategies did not differ significantly across CEOs with different functional backgrounds.</p> <p>CEOs with law, finance, general administration, or accounting backgrounds led significantly more (<math>p &lt; .10</math>) successful turnaround firms than CEOs with other functional backgrounds.</p> <p>Successful turnaround firms implemented combination strategies more often than unsuccessful turnaround firms.</p>
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(table con'd)

Morrow & Busenitz, 1993	32 firms in primary metals (mature firms), 39 firms in surgical, medical, and dental instruments and supplies (growth firms) from COMPUSTAT database, 1980- 1990	3 years of decreasing return on average investment	Absolute change in return on average investment from the year 3 to year 4	<p>Mature firms that retrenched (i.e., cut SG&amp;A expense, interest expense, and total assets) improved performance more than those that did not retrench.</p> <p>Growth firms that retrenched also improved performance more than those that did not retrench, but the performance improvement was not evident until year 4.</p> <p>Firms did not have to follow a "strict" retrenchment strategy to realize performance improvements (e.g., some successful turnaround firms reduced expenses while slightly increasing assets).</p> <p>Lower debt/total asset ratios led to better performance recovery.</p> <p>Size (i.e., net sales in year 0) was not significant in either industry.</p>
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### Strategy

A firm's strategy is a set of decisions that aligns its strengths and weaknesses with environmental opportunities and threats (Andrews, 1971). Establishing and maintaining this alignment should result in higher performance (Summer et al., 1990). Consequently, turnaround research has primarily focused on investigating the efficacy of particular turnaround strategies in reestablishing alignment and turning around performance.

Studies have suggested three general turnaround strategies: retrenchment, innovation, and growth. Empirical attention has predominantly focused on retrenchment strategies (e.g., Barker & Mone, 1994; Hambrick & Schecter, 1983; Morrow & Busenitz, 1993; Pearce & Robbins, 1994; Robbins & Pearce, 1992) whereas theoretical arguments have highlighted rationales for all three strategies (Bibeault, 1982; Hedburg, Nystrom, & Starbuck, 1976; Hofer, 1980; Nystrom & Starbuck, 1984; Pearce & Robbins, 1993). Retrenchment strategies involve cutting costs (e.g., selling, general, and administrative expenses), liquidating assets (e.g., unprofitable products or divisions), and other efficiency-oriented actions to realign a firm with its environment and turn around its performance (Robbins & Pearce, 1992). Innovation strategies involve increasing marketing efforts and expanding markets for current or adapted products (Hofer, 1980; O'Neill, 1986; Zammuto &

Cameron, 1985). Growth strategies involve diversifying into new business segments to reduce dependence on declining business segments or to apply a firm's strengths to other segments (Barker, 1992; Schendel et al., 1976; Zammuto & Cameron, 1985). In addition, studies have investigated whether a firm can implement different strategies simultaneously (e.g., expanding marketing efforts to some segments while eliminating service in other segments; Barker & Duhaime, 1994) or whether some ordering of strategies is necessary for turn around (e.g., retrenchment followed by growth; Bibeault, 1982; Robbins & Pearce, 1992).

#### Retrenchment strategies

The predominant model of the turnaround process contends that firms facing decline must first achieve financial stability through retrenchment actions before implementing other strategies such as innovation or growth (Bibeault, 1982; Pearce & Robbins, 1993). According to this model, firms will require different degrees of retrenchment based on decline severity.

For low severity situations (e.g., declining sales or shrinking margins), firms may regain alignment by becoming more cost efficient (Pearce & Robbins, 1993). For example, firms may reduce research and development (R&D) investment and marketing expenses, as well as drop marginally profitable products to increase efficiency and restore competitiveness (Hambrick, 1985; Hambrick & Schecter, 1983).

For high severity situations (e.g., imminent bankruptcy) firms may have to implement more drastic actions to regain alignment. In this situation, firms may lay off personnel or sell entire divisions (Bibeault, 1982; Pearce & Robbins, 1992) to stem decline. The focus in such situations is to reduce a firm's fixed costs and asset base to improve efficiency and restore competitiveness (Freeman & Cameron, 1993; Hambrick, 1985).

As noted, the majority of empirical turnaround studies have studied the efficacy of retrenchment strategies following performance decline. These studies have generally found that firms pursuing a retrenchment strategy successfully turned around performance (Hambrick & Schecter, 1983; Hofer, 1980; Morrow & Busenitz, 1992; Robbins & Pearce, 1992; Zimmerman, 1989). Consequently, these studies have argued that firms facing decline must initially stabilize their financial health by retrenching prior to making longer term adjustments (Pearce & Robbins, 1993).

Conflicting results, however, also exist. For example, studies have found that retrenchment is inadequate for (Arogyaswamy, 1992) or even detrimental to (Schreuder, Van Cayseele, Jaspers, & De Graff, 1991) a firm's turnaround success. Further, retrenchment may lead a firm to cut key expenses (e.g., marketing) or sell its most valuable assets in times of financial distress. These actions may provide liquidity or increased efficiency in the short term, but

could have adverse effects on a firm's long-term recovery (Barker & Mone, 1994).

### Innovation strategy

In contrast to turning around through retrenchment, firms may be able to innovate as a means of reestablishing alignment. An innovation strategy involves focusing efforts and redirecting investments to areas that will increase market penetration or produce new products (Hofer, 1980; O'Neill, 1986; Zammuto & Cameron, 1985). Firms implementing this strategy attempt to turn around by increasing sales through such actions as increased advertising, redoubling selling efforts, and lowering prices (Hambrick & Schecter, 1983).

To date, studies have also provided conflicting findings regarding the efficacy of an innovation strategy for declining firms. For example, Hambrick and Schecter (1983) found that firms implementing an innovation strategy in situations where market shares are relatively fixed (i.e., mature industries) are unsuccessful in turning around. Some case studies (e.g., Hofer, 1980; O'Neill, 1986), however, have found that an innovation strategy helps some firms reestablish alignment and turn around.

### Growth strategy

A second alternative to retrenchment may be for firms to grow out of decline. A growth strategy involves diversifying firms into new business lines. Firms may



diversify to reduce dependence on shrinking markets (Miles, 1982; Ramanujam & Varadarajan, 1989) or to find industries where a firm's strengths can be employed more profitably (Zammuto & Cameron, 1985).

Conflicting evidence again exists regarding the efficacy of a growth strategy for declining firms. For example, Schendel et al. (1976) found that over half of their sample of successful turnaround firms diversified either in terms of product or geography, and Barker (1992) concluded that changes in strategic orientation were positively and significantly related to turnaround. In contrast, Zimmerman (1989) found that unsuccessful firms followed diversification or acquisition strategies whereas successful firms remained focused on attaining efficiency within their present industries.

Review of turnaround studies indicates that firms may have several viable strategies to help reestablish alignment and, thus, turn around. Conflicting findings, however, present questions regarding the efficacy of each strategy. This ambiguity may exist because previous studies have failed to recognize critical differences across turnaround situations (Arogyaswamy, Barker, & Yasai-Ardekani, 1994; Winn, 1993), have employed different strategy classifications, thus limiting generalizability (Pearce & Robbins, 1993), or have used vague or broad classifications that aggregate different strategies.

First, studies have employed samples that include firms facing different types of decline and turnaround, which may have contributed to ambiguous results. In her review of the turnaround literature, Winn (1993) argued that different turnaround situations exist and failure to control for these types across samples may lead to contradictory results. For example, firms threatened with imminent bankruptcy face different demands than firms that are simply underperforming in an industry or facing moderate decline. Additionally, firms experiencing decline because of internal problems may face different turnaround situations than firms declining because of external factors (Robbins & Pearce, 1992; Staw, Sanderlands, & Dutton, 1981). Few studies, however, have considered these heterogeneity problems.

Second, ambiguous results may derive from previous studies classifying turnaround strategies in different ways. Inconsistent terminology across these classifications has slowed empirical progress in turnaround research as different studies often ignore previous investigations and adopt different terms for similar processes (Pearce & Robbins, 1993). For example, some studies examining the efficacy of turnaround strategies have classified responses as either operating or strategic turnarounds. Operating responses have been defined to include increasing revenues, cutting costs, and selling assets. Studies have also labeled these attempts to gain efficiency as operating

turnarounds (Hofer, 1980), "stopping the bleeding" (Bibeault, 1982), cutback strategies (Arogyaswamy, 1992; O'Neill, 1986), and retrenchment (Robbins & Pearce, 1992). Strategic responses have focused on changing a firm's competitive strategy within the same domain or moving into new domains (Hofer, 1980). Investigations have also labeled these as growth strategies (O'Neill, 1986), rejuvenation strategies (Arogyaswamy, 1992), and recovery strategies (Pearce & Robbins, 1993).

Third, ambiguous results may exist because previous studies have employed broad or vague strategy classifications that obscure turnaround processes. For example, Robbins and Pearce (1992) and Morrow and Busenitz (1993) classified both "cost-cutting measures" and "selling divisions" as retrenchment strategies. These actions, however, may require different management talents and have different performance results. Consequently, they should be considered separately.

Thus, despite accumulating research, questions still remain regarding the efficacy of different turnaround strategies. To answer these questions, an improved strategy classification scheme needs to be developed that incorporates previous research and recognizes specific implementable strategies.

### TMG Characteristics

A firm's top-management group can also affect alignment. A TMG scans its firm's environment, interprets information, and, based on this information, makes strategic decisions that affect alignment (Andrews, 1971; Child, 1972; Daft & Weick, 1984; Hambrick & Mason, 1984). Because TMGs have different talents, motives, and interpretations of organizational and environmental stimuli, they can play a critical role in reestablishing alignment and turning around a firm. The importance of different TMG characteristics has been suggested in case studies of successful turnarounds (e.g., Hofer, 1980; O'Neill, 1986; Zimmerman, 1989), but has yet to be empirically investigated (D'Aveni, 1989; O'Neill, Bedard, Hussein, & Gutharaji, 1990).

Turnaround research has been primarily limited to describing managerial characteristics purportedly needed in turnaround situations (e.g., a "take charge" orientation and good financial skills; Gerstein & Reisman, 1983), or more often to the sweeping conclusion that performance slippage signals the need for a new TMG (Hofer, 1980; Bibeuault, 1982). This last argument also receives support in the strategic management (Chandler, 1962; Miles & Snow, 1978) and organizational change literatures (Helmich & Brown, 1972; Tushman & Romanelli, 1985; Virany, Tushman, & Romanelli, 1992), which argue that as a TMG's average company tenure increases, it falls victim to inertia and

loses its ability to adapt to a changing environment. Consequently, according to these literatures, replacing a long-tenured TMG, particularly with outside managers, represents the most effective way of changing a firm's strategic direction and, ultimately, reversing declining performance.

Research into the performance effect of replacing TMGs in decline situations (with its primary focus on CEOs), however, has yielded equivocal results (Furtado & Karan, 1990; Kesner & Sebor, 1994). Many turnaround studies have concluded that replacing incumbent TMGs represents a necessary first step in turning around a troubled firm. For example, Schendel et al. (1976) found that 44 of 54 firms that effected a turnaround made management changes, and 39 firms changed general managers including their CEOs. These results are supported by other studies that have also found high management turnover in turnaround firms (Bibeault, 1982; O'Neill, 1986; Slatter, 1984). These studies contend that sweeping changes may be necessary because faulty decisions by an incumbent TMG can contribute to a prevailing crisis, and, consequently, new management is needed to revive a firm (Hofer, 1980).

Contrary results, however, also exist. For example, Zimmerman (1989) found that successful turnaround firms retained their current TMGs. He found that these firms were led by long-tenured managers with extensive experience

within each firm's industry. Others have found that replacing TMG members, especially CEOs, has little effect on turning around declining performance (Barker, 1992; Stanwick, 1992).

The role of TMGs in turnaround may be ambiguous because extant studies have focused on retaining or replacing a TMG instead of focusing on how well a TMG's talents match a firm's strategic needs (Castrogiovanni, Baliga, & Kidwell, 1992). A growing body of research has shown, however, that the interaction between TMG talents and a firm's strategy can affect performance (Gupta, 1988; Hambrick, 1987; Thomas et al., 1991). Specifically, to the extent that a firm has a TMG with appropriate talents to implement a particular strategy, its performance will increase (Michel & Hambrick, 1992).

#### TMG-Strategy Interaction

To study TMG-strategy interaction, studies have investigated both business- (Gupta & Govindarajan, 1984; Miller & Toulouse, 1986; Virany & Tushman, 1986; Govindarajan, 1989; Thomas et al., 1991) and corporate-level strategies (Michel & Hambrick, 1992). In terms of business-level strategies (i.e., those strategic decisions involving how a firm will compete within its current domain), research has found that different TMG talents were associated with increased performance for firms implementing an efficiency rather than an innovation strategy. For an efficiency

strategy, TMG backgrounds in production were associated with higher performance (Govindarajan, 1989). For an innovation strategy, TMG backgrounds in marketing and sales were associated with higher performance (Gupta & Govindarajan, 1984; Thomas et al., 1991). In addition, firms having TMGs with talents that did not match their strategies (e.g., marketing backgrounds with an efficiency strategy), suffered decreased performance (Gupta & Govindarajan, 1984).

In terms of corporate-level strategies (i.e., those strategic decisions affecting the choice of domains in which a firm will compete), research has found that different TMG talents are associated with increased performance for firms implementing different types of growth strategies. For example, Michel and Hambrick (1992) posited that different diversification strategies require different levels of integration among a firm's business units, and, consequently, ideal TMG talents will vary based on a firm's strategy. They found that increased fit between TMG characteristics and a firm's strategy was associated with higher performance.

Despite these findings, the performance effects of TMG-strategy interaction have not yet been empirically investigated in terms of turnaround strategies. Findings from studies of declining firms, however, suggest that TMG characteristics may also have an important effect on the success of a firm's turnaround effort. For example, some

bankruptcy studies have found that deficiencies in TMG talents may contribute to performance decline (D'Aveni, 1989; D'Aveni & MacMillan, 1990; Hambrick & D'Aveni, 1992). Previous findings also suggest that TMG characteristics, such as experience in different industries (Dumaine, 1990) and TMG stock ownership (Pant, 1986), may also affect turnaround.

In terms of TMG-strategy interaction, a TMG's talents may aid a firm's turnaround following decline depending on a firm's strategy. For example, Hofer (1980) contended that "a strategist/entrepreneur should be chosen if a high-growth, strategic turnaround is to be pursued, whereas a hard-nosed, experienced cost-cutter would be more appropriate if an operating turnaround with a major cost reduction effort is to be pursued" (p. 26). On the other hand, lack of TMG-strategy alignment may prevent firms from pulling out of decline (e.g., Hambrick & D'Aveni, 1992; Weitzel & Jonsson, 1989). Empirical findings showing that firms following similar turnaround strategies enjoy different degrees of success (e.g., Schendel & Patton, 1976) further suggest the meaningful effect that a TMG may have on a firm's turnaround efforts (Ford, 1985).

Thus, previous research suggests that TMG-strategy interaction is important for improving a firm's performance. Additionally, although limited empirical research has focused on a TMG's role in turnaround, findings suggest that



TMG-strategy interaction may help a firm regain alignment and turn around performance.

### Environment

The impact of environmental factors on firms is well established in the organizational literature (Andrews, 1971; Hannan & Freeman, 1977; Lawrence & Lorsch, 1967; Pfeffer & Salancik, 1978; Porter, 1980), yet few turnaround studies have specifically included such factors in empirical investigations. Studies have noted that environmental factors may contribute to a firm's decline (e.g., Bibeault, 1982; Schendel et al., 1976), but only a few have empirically investigated the effect environmental factors may have on performance (Morrow & Busenitz, 1993; Pant, 1986; Ramanujam, 1984; Robbins & Pearce, 1992). Even studies investigating environmental factors have examined a fairly limited number of general environmental characteristics, such as industry growth rate (Pant, 1986; Ramanujam, 1984) or industry life-cycle stage (Morrow & Busenitz, 1993).

In terms of general environmental factors that might impact performance, Schendel et al (1976) noted declining industry demand as a source of declining performance, and Bibeault (1982) found that 16 percent of the 81 CEOs he surveyed said their firms turned around because of recovery in the business cycle. Other researchers have also noted the positive relationship between industry growth and

successful turnaround (Barker & Duhaime, 1994; Pant, 1984; Ramanujam, 1984; Robbins & Pearce, 1992).

Thus, although some turnaround studies have investigated the role of environmental factors on turnaround, research remains limited. Given the important role that environmental factors can have on performance, this limited research into such factors represents a serious deficiency in turnaround research. Environmental factors, thus, need to be specifically considered to investigate how firms reestablish alignment and, subsequently, turn around.

#### Performance

A final issue involves the definition of performance (the focal dependent variable). Empirical turnaround studies have focused primarily on profitability measures to gauge decline and turnaround, but studies have varied in their temporal definitions of decline and recovery phases and in their selection of profitability measures to gauge performance decline and turnaround. Additionally, few studies have justified the use of their performance measures or set performance benchmarks for determining decline and turnaround (Winn, 1993). Consequently, conceptual development of performance in the context of turnaround has been limited (Pearce & Robbins, 1993).

In terms of defining performance, previous studies have often labeled firms with declining profitability or net income as turnaround candidates. Firms that regained

profitability or increased net income, therefore, have been deemed successful turnaround firms. Even in terms of financial measures, however, disagreement exists regarding an appropriate turnaround definition (Barker & Mone, 1994; Pearce & Robbins, 1993; Winn, 1993).

Some studies have used change in financial performance relative to historical levels to define decline and turnaround. For example, Schendel et al. (1976) used four years of uninterrupted decline followed by four years of increasing net income to select firms that had experienced decline and had turned around. Other studies (Melin, 1985; Morrow & Busenitz, 1993; Zimmerman, 1986) have defined decline as decreasing profitability from historical levels and turnaround as regaining some historical level of profitability.

Problems can arise in terms of defining decline relative to historical levels, however, because without an absolute measure, firms experiencing changes in performance relative to historical levels may be incorrectly classified as declining or turning around (Barker & Mone, 1994; Hambrick & Schecter, 1983). For example, a firm earning a 30 percent ROI that declines to 25 percent over a few years could be defined as declining even though the firm may still be performing well. Conversely, a firm earning -30 percent ROI that recovers to -25 percent ROI could be labeled as

having turned around using only relative performance measures.

Other studies have defined decline and turnaround relative to industry performance. For example, O'Neill (1981) defined banks that had net-income growth lower than the industry average and then higher than the industry average for three consecutive years as having declined and turned around, respectively. Additionally, Pant (1986) defined firms having ROA in the bottom 25 percent of an industry as requiring turnaround and those that had reached the upper 25 percent of an industry in years 7 and 8 as successful turnarounds. Other research (e.g., Pearce & Robbins, 1993) has argued for the importance of defining decline and turnaround relative to a specific industry.

A problem may also arise from using performance relative to a specific industry because a firm may be underperforming its industry, but if it competes in a high growth industry, it could still be performing well (Pant, 1986). In addition, because turnaround research focuses on firms that have experienced decline severe enough to potentially threaten their survival, firms that are simply underperforming their industries may be inappropriate for a turnaround sample (Grinyer, Mayes, & McKiernan, 1988; Winn, 1993).

Another group of turnaround studies has used performance minimums to define decline and turnaround. For

example, Hambrick and Schecter (1983) defined firms that experienced ROI less than 10 percent as being in decline and those that recovered to more than 20 percent as successful turnaround firms. Ramanujam (1984) defined firms similarly setting ROI at 5 percent. Although determining an absolute anchor could be problematic given different average profitability across industries (cf. Dess, Ireland, & Hitt, 1990), setting one overcomes many of the problems from measuring performance relative to historical levels or average industry levels (Hambrick & Schecter, 1983). Further, performance minimums derived from the economics and finance literatures exist that translate across industries. Drawing from the economics literature, Barker and Mone (1994) argued that firms that do not achieve break-even profitability are not covering long-run production costs and can be considered declining. Drawing from the finance literature, Barker (1992) defined firms that had profitability below the risk-free rate of return as declining because firms that cannot obtain at least the risk-free rate will lose investors who can gain better returns simply by investing in risk-free financial instruments (e.g., U.S. Treasury bills).

Besides employing different financial measures, few studies have conceptually justified their performance measures (Winn, 1993), and many have defined performance narrowly in terms of profitability ratios (cf. Steers, 1975;

Venkatraman & Ramanujam, 1986). Profitability measures (e.g., ROI) serve as key measures of performance, but they need to be complemented by other measures to comprehensively gauge performance (Chakravarthy, 1986; Woo & Willard, 1983). For example, Chakravarthy (1986) employed a firm's debt/equity ratio as a performance measure because it reflects a firm's ability to secure additional funds and adapt.

Furthermore, relying solely on profitability measures to gauge performance presents problems both for strategic research in general and turnaround studies in particular. First, strategic management research focuses on fitting firms to their environments and maintaining this fit over time (Andrews, 1971; Hofer & Schendel, 1978; Porter, 1980). Profitability measures adopt an historical perspective whereas strategic management research focuses on future adaptability. In addition, these measures emphasize stockholder interests over that of other stakeholders (Chakravarthy, 1986).

In regards to turnaround research, because TMGs in declining firms may attempt to mask problems by resorting to "creative accounting" (Argenti, 1976; Krueger & Willard, 1990), turnaround results based on profitability may be suspect for two reasons. First, if TMGs can maintain profitability through actions such as manipulating inventory valuation or depreciation rates, then firms that should be

identified as declining may not be if studies rely solely on profitability. Second, even if studies do identify a declining firm, the ability of a firm's TMG to manipulate profitability may result in researchers incorrectly identifying a firm as a turnaround when in fact its TMG has simply manipulated accounting practices. Hence, findings in either instance would be misleading.<sup>3</sup>

#### Summary

This literature review has discussed the importance of strategy, TMG characteristics, and environment in reestablishing a firm's alignment and turning around declining performance. In doing so, it has highlighted equivocal performance results related to different turnaround strategies and problems in previous turnaround strategy operationalizations that may contribute to this ambiguity. Additionally, it has noted the limited empirical attention given to TMG and environmental factors as well as the limited conceptual development of performance in the context of turnaround. These shortcomings are addressed in the next chapter.

### CHAPTER 3: THEORY DEVELOPMENT

This dissertation contends that the equivocal results of previous turnaround studies are a consequence of the incomplete consideration of important components affecting a declining firm's alignment. In doing so, it maintains that strategy, TMG characteristics, and environment, as well as the interaction among these components, may have important effects on reestablishing a firm's alignment and turning around performance. Thus, to develop a complete view of the turnaround process, each of these components must be considered.

To examine these components, the dissertation first adapts a general strategy classification developed by Miles (1982), Ford (1985), and Zammuto and Cameron (1985) for use in classifying turnaround strategies. This adapted classification overcomes problems detailed earlier related to classification schemes used in prior turnaround studies. The dissertation then develops hypotheses pertaining to the performance effects of turnaround strategy, TMG-strategy interaction, and environmental characteristics.

#### Hypotheses

##### Strategy

A firm's strategy is defined as the combination of its present and planned resource deployments, as well as its environmental interactions (Ansoff, 1965; Hofer & Schendel, 1978). Strategies, thus, can be defined both in terms of



resource allocations to critical functions (e.g., R&D investments) and the scope of a firm's interactions with its environment (e.g., number of both products offered and industries served). This definition can be used to develop a scheme for turnaround strategies that overcomes problems with previous classifications.

The dissertation adapts a general strategy classification scheme proposed in previous studies of organizational decline (Miles, 1982; Ford, 1985; Zammuto & Cameron, 1985). According to this classification, firms can implement internal or external response strategies to increase alignment. An internal response strategy includes cost-cutting and asset reduction programs to gain efficiency (Ford, 1985). This strategy focuses on changing resource deployments by cutting expenses/investments (e.g., marketing or R&D) or selling inefficient assets (e.g., obsolete production plants). This strategy is called an "efficiency" turnaround strategy in the present framework, and partially subsumes retrenchment strategies investigated in previous research (e.g., Arogyaswamy, 1992; Hofer, 1980; O'Neill, 1986; Robbins & Pearce, 1992).

By contrast, external response strategies include increasing efforts within a firm's present domains or supplementing efforts in current domains with new domains (Ford, 1985; Zammuto & Cameron, 1985). These responses can focus primarily on changing a firm's resource deployments or

the scope of a firm's interactions with its environment. Accordingly, firms can increase efforts within their present domains. Such efforts focus on changing resource deployments by increasing expenses in areas such as marketing in an attempt to increase sales (Zammuto & Cameron, 1985). This is called a "domain-offense" strategy in the present framework, and it subsumes innovation strategies investigated in previous research (e.g., Hambrick & Schecter, 1983; Hofer, 1980; O'Neill, 1986).

Firms can also alter the scope of their interactions with their environments. Firms can increase their scopes by diversifying into new market niches to reduce dependence on a shrinking industry (Miles, 1982) or to transfer skills to new industries (Zammuto & Cameron, 1985). This strategy is called a "domain-creation" strategy in the present framework, and it subsumes growth strategies investigated in previous research (e.g., Schendel et al., 1976; Zimmerman, 1989).

Alternatively, firms can shrink their scopes by divesting unprofitable products or divisions and refocusing on fewer core activities (Zammuto & Cameron, 1985). This strategy is called a "domain-consolidation" strategy in the present framework, and it subsumes the remaining retrenchment strategies (i.e., those not subsumed by an efficiency strategy) investigated in previous research (Hofer, 1980; Melin, 1985; Morrow & Busenitz, 1993; O'Neill,

1986). Table 3.1 reviews general strategy classifications and measures from previous turnaround studies in terms of this adapted classification scheme.<sup>4</sup>

Although turnaround studies have classified strategies as nominal variables (e.g., Robbins & Pearce, 1992; see also Venkatraman & Grant, 1986), the turnaround strategies discussed in the dissertation are generally consistent with a continuum of strategies (cf. Gupta & Govindarajan, 1984). At one end of the continuum, a domain-consolidation strategy involves divestment of business lines, whereas at the other end, a domain-creation strategy involves adding new business lines. Thus, the continuum reflects possible strategy options from "divest" to "build" (Gupta & Govindarajan, 1984). The midpoint on the continuum is labeled a "status-quo" strategy. This strategy of not making any major adjustments has been implemented successfully by some firms as they simply "wait out the storm" (such as a business cycle downturn; see Barker & Duhaime, 1994; Bibeault, 1982; O'Neill, 1986). Figure 3.1 illustrates this turnaround strategy continuum and positions previous studies in terms of this classification scheme.

This turnaround strategy framework should overcome three problems in previous classifications. First, as illustrated in Figure 3.1, it permits the dissertation to investigate the entire spectrum of possible turnaround

**Table 3.1--Review of previous studies  
in terms of the adapted classification scheme**

<b>Study</b>	<b>Concept Label</b>	<b>Measures Used or Suggested</b>
<b>Efficiency Strategy</b>		
Schendel, Patton, & Riggs, 1976	Operating Responses	Increased P&E
Hofer, 1980	Operating Strategies	Reduced costs
	- Decreased costs	Reduced assets
	- Decreased assets	
	- Combination	
Hambrick & Schecter, 1983	Asset and Cost Surgery	Increased employee productivity Increased capacity utilization Reduced P&E newness Reduced R&D Reduced marketing Reduced receivables Reduced inventory
Robbins & Pearce, 1992	Cost Retrenchment	Reduced SGA Reduced interest Reduced misc.
	Asset Retrenchment	Reduced cash and equivalent Reduced receivables Reduced inventory Reduced P&E
Morrow & Busenitz, 1993	Retrenchment	Reduced SGA Reduced interest Reduced total assets
Barker & Duhaime, 1994	Strategic Change	Reduced production costs Reduced R&D Reduced capital expenditures

(table con'd)

**Domain Offense**

Hofer, 1980	Operating turnaround - Increase revenues	Product reintroductions and Increased advertising
	Strategic Turnaround - one-level increases in share position - two-level increases in share position	Increased R&D New product lines Change in distribution Change in production systems
Melin, 1985	Market Penetration	Increased marketing Decreased prices
Barker & Duhaime, 1994	Strategic Change	Increased distribution Increased R&D

(table con'd)

**Domain Creation**

Schendel, Patton, & Riggs, 1976	Strategic Response	Increased diversification Increased vertical integration
Melin, 1985	Export, New Markets	Increased exports Increased diversification
O'Neill, 1986	Growth Strategies	New products New promotion methods Acquisitions
Barker & Duhaime, 1994	Strategic Change	Acquisitions outside historical lines of business Acquisitions within historical lines of business Entering joint ventures outside historical lines of business Expanding marketing efforts to new customers

(table con'd)

**Domain Consolidation**

Schendel, Patton, & Riggs, 1976	Strategic Response	Reduced business segments
Hofer, 1980	Segmentation or Niche Strategy	Reduced assets Reduced product segments
Hambrick & Schechter, 1983	Selective Product/ Market Pruning	Increased price Increased employee productivity Increased product quality Reduced marketing Reduced receivables Reduced inventory Reduced capacity utilization
Melin, 1985	International Niche	Increased R&D Reduced product segments Reduced capacity
O'Neill, 1986	Cutback Strategies	Reduced inventory Divestment of subsidiaries
Barker & Duhaime, 1994	Strategic Change	Divestment of organizational units Reduced product lines

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Domain Consolidation	Efficiency	Status Quo	Domain Offense	Domain Creation	Turnaround Study
Strategic response				Strategic response	Schendel, Patton, & Riggs, 1976
Segmentation or Niche	Decreased costs/ Decreased assets		Revenue increasing	Strategic turnaround	Hofer, 1980
		Business cycle turnaround			Bibeault, 1982
Selective product/ market pruning	Asset and cost surgery				Hambrick & Schecter, 1983
Cutback strategy				Growth strategy	O'Neill, 1986
	Cost retrenchment Asset retrenchment				Robbins & Pearce, 1992
	Retrenchment				Morrow & Busenitz, 1993
Strategic change			Strategic change		Barker & Duhaime, 1994
Figure 3.1--A continuum of turnaround strategies					



domain creation). Second, the framework is based on previous investigations of how firms overcome environmental misalignment (Miles, 1982; Ford, 1985; Zammuto & Cameron, 1985). Third, the framework positions firms according to specific instead of consolidated strategy classifications. For example, employing this classification, a firm implementing a retrenchment strategy can be classified as implementing an efficiency strategy, which focuses primarily on changing a firm's resource allocations, or a domain-consolidation strategy, which focuses primarily on the changing the scope of a firm's interaction with its environment.

Based on findings from previous turnaround studies, these strategies would be expected to improve a firm's performance. Given the argument that firms must first implement retrenchment strategies prior to implementing innovation- or growth-oriented strategies (Morrow & Busenitz, 1993; Pearce & Robbins, 1994; Robbins & Pearce, 1992), the following general hypothesis is proposed:

H1: Firms implementing retrenchment strategies (i.e., an efficiency strategy or a domain-consolidation strategy) following a performance decline will outperform firms implementing a domain-offense or a domain-creation strategy.

### TMG Characteristics

TMG decision making can have a significant impact on a firm's alignment, and, thus, its performance (Andrews, 1971; Child, 1972). Because managers remain limited by bounded rationality and multiple, conflicting goals when making complex strategic decisions (Cyert & March, 1963; March & Simon, 1958), they will (by necessity) make decisions based on their world views. These views, in turn, can be affected by functional background and other career experiences, such as employment in multiple companies or industries (Hambrick & Mason, 1984). Additionally, because managers do not generally make strategic decisions in isolation, but as members of a TMG, TMG characteristics may provide insights into decision-making processes.

Different TMG characteristics can interact with situational variables to affect a firm's performance. These variables include strategies implemented by firms (Hambrick & Mason, 1984). A growing body of research suggests that aligning TMG skills with particular strategies may improve a firm's performance (Gupta, 1988; Hambrick, 1987). This research has focused on business- and corporate-level strategies, but has yet to investigate turnaround strategies.

A review of previous research suggests that three TMG demographic characteristics (viz., functional background, company experience, and industry experience) are related to

a TMG's ability to implement a turnaround strategy. These characteristics can affect how TMGs make decisions, particularly in terms of how they identify problems and formulate their world views (Dearborn & Simon, 1958; Gupta & Govindarajan, 1984; Lawrence & Lorsch, 1967; Miles & Snow, 1978; Wiersema & Bantel, 1992). Additionally, case studies of turnaround (e.g., Duhaime, 1990; Hofer, 1980) have suggested that all three characteristics affect a TMG's ability to implement turnaround strategies.<sup>5</sup>

To further investigate the effects of these characteristics, the dissertation employs a TMG career-orientation typology developed by White, Smith, and Barnett (1994). This typology accounts for important differences among TMGs in terms of functional background, company experience, and industry experience.<sup>6</sup> The following career specializations are defined in this typology:

**Core:** Top managers who have a functional specialization in production or sales with a single company or production within a single industry.

**Administrative:** Top managers who have a functional specialization in general management, finance, or law within a single company or industry, as well as those who have a functional specialization in production or sales in more than one industry.

**Environmental:** Top managers who have a functional specialization in general management, finance, or law in more than one industry.

TMG members can develop diverse talents from their different functional, company, and industry backgrounds that may be critical to effectively implementing varying strategies (Hitt, Ireland, & Palia, 1982; Miles & Snow, 1978; Snow & Hrebiniak, 1980). For example, Govindarajan (1989) found that TMGs with dominant backgrounds in core functions (e.g., production) effectively implemented efficiency strategies. In addition, TMGs with dominant backgrounds in administrative functions (e.g., sales) have been found to effectively implement domain-offense strategies (Gupta & Govindarajan, 1984; Thomas et al., 1991). Moreover, TMGs with dominant backgrounds in environmental functions (e.g., finance) have been found to effectively implement different domain-creation strategies (Graham & Richards, 1978; Michel & Hambrick, 1992; Song, 1982). Further, firms having TMGs with dominant backgrounds that do not match their strategies have been found to suffer decreased performance (Gupta & Govindarajan, 1984).

Extending these findings to turnaround strategies, the following hypotheses are suggested:

**H2a:** Firms implementing a retrenchment (i.e., an efficiency or domain-consolidation) strategy whose TMGs have a core-function specialization will

outperform those firms whose TMGs have administrative- or environmental-function specializations.

H2b: Firms implementing a domain-offense strategy whose TMGs have an administrative-function specialization will outperform those firms whose TMGs have core- or environmental-function specializations.

H2c: Firms implementing a domain-creation strategy whose TMGs have an environmental-function specialization will outperform those firms whose TMGs have core- or administrative-function specializations.

Other TMG characteristics may also affect organizational outcomes. One such characteristic, stock ownership, has been hypothesized to impact TMG motives for implementing particular strategies such as diversification. Conflicting goals between a TMG and owners (e.g., stockholders) in firms may lead a TMG to make decisions that run counter to maximizing a firm's performance and, thus, shareholder wealth. Conversely, increasing TMG stock ownership may serve to align TMG and owners' goals and prompt a TMG to implement a strategy that increases a firm's performance (Eisenhardt, 1989; Jensen & Meckling, 1976). This suggests the following hypothesis:

H2d: There will be a positive relation between TMG stock ownership and performance in declining firms.

In particular, TMGs may diversify to diffuse their employment risk (e.g., job or reputation loss) rather than to create owner/shareholder value (Amihud & Lev, 1981). In decline situations, the motivation for managers to reduce employment risk may become even more pronounced. Thus, a TMG with low average stock ownership may select a diversification (i.e., domain-creation) strategy in an attempt to maintain job security when other strategies may offer better routes to turnaround. In contrast, a TMG with high average stock ownership may select a domain-creation strategy because TMG members believe doing so will create shareholder value. Therefore, whereas stock ownership is hypothesized to be positively related to a firm's performance across all turnaround strategies (H2d), this positive relation may be stronger in firms implementing a domain-creation strategy because it offers TMGs the highest degree of employment risk diffusion. This difference in TMG motives may help explain conflicting findings in turnaround research showing that a diversification strategy can improve (Barker & Duhaime, 1994; Schendel et al., 1976) or decrease (Zimmerman, 1989) a firm's performance. This suggests the following hypothesis:

H2e: There will be a stronger positive relation between stock ownership and performance for declining firms implementing a domain-creation strategy than for firms implementing either a domain-offense or retrenchment strategy.

### Environment

Environments can be studied along several dimensions (Aldrich, 1979), each of which may have a different impact on a firm's performance (Keats & Hitt, 1988; Porter, 1980). Consequently, to examine the impact a firm's environment can have on turnaround, a multidimensional operationalization of environment should be employed. Dess and Beard (1984) presented a parsimonious environmental classification scheme that defines environments along three dimensions: munificence, dynamism, and complexity. Munificence is the extent of resource availability in an environment and its capacity to support growth (Dess & Beard, 1984; Keats & Hitt, 1988; for a review, see also Castrogiovanni, 1991). Dynamism is the degree to which an environment exhibits instability. Complexity is the heterogeneity of elements (e.g., competitors, suppliers, buyers) within a firm's environment (Child, 1972). Each of these dimensions are expected to affect a firm's turnaround.

Environmental munificence should be positively related to turnaround. A growing industry provides increased

opportunities for firms to find new customers and can reduce the level of competitive intensity within an industry (Hofer, 1975; Porter, 1980). Consequently, firms experiencing performance decline in growing industries should turn around more often than declining firms in stagnant industries or industries experiencing shrinking resource pools (Ramanujam, 1984). Alternatively, declines in environmental munificence may prevent firms from turning around and can ultimately cause declining firms to fail (D'Aveni, 1989; Hambrick & D'Aveni, 1988). The following hypothesis is, therefore, suggested:

H3a: Environmental munificence will be positively related to performance in declining firms.

Environmental dynamism should be negatively related to turnaround. As instability increases, a firm's decision-making routines, established to promote efficient adaptation to environmental shocks, may retard adjustment to new environmental demands (Cyert & March, 1963). Thus, a firm maintaining current routines faces increased difficulty learning quickly enough about its environment to successfully adapt (Hannan & Freeman, 1984). Alternatively, a firm may attempt to develop new routines. In doing so, however, it must sacrifice efficiency (Nelson & Winter, 1982) and expend slack resources at a time when such resources may be depleted from decline (Pearce & Robbins,



1993; Ramanujam, 1984). The following hypothesis is, therefore, suggested:

H3b: Environmental dynamism will be negatively related to performance in declining firms.

Environmental complexity should also be negatively related to turnaround. Increasing complexity increases a TMG's information processing requirements (Dess & Beard, 1984). When faced with a crisis such as performance decline, however, a TMG may experience threat-rigidity in its decision making (Staw et al., 1981). Consequently, the maladaptive effects of threat rigidity may be compounded in environments characterized by increasing complexity.

Such complexity may occur as a result of numerous factors. One factor defining an industry's complexity is the number of firms competing within the industry (Keats & Hitt, 1988). As the number of firms increases, the potential for intense competition also increases (Porter, 1980). As a result, declining firms may face a more hostile competitive environment in which to attempt a turnaround as environmental complexity increases. In contrast, as the number of firms decreases, interdependence among firms increases allowing for more managed, benign competition (Pfeffer & Nowak, 1976). The following hypothesis is, therefore, suggested:

H3c: Environmental complexity will be negatively related to performance in declining firms.

### Integration

The above hypotheses will investigate the effects of strategy, TMG-strategy interaction, and environment on turnaround. To provide a comprehensive view of the turnaround process, this dissertation also studies the effects of these variables as a group.

Hypothesis 3a posits that environmental munificence has a positive relation with turnaround. Not all firms operating in increasingly munificent environments, however, turn around (D'Aveni, 1989; Moulton & Thomas, 1988). This inability to reverse declining performance may result from TMGs with inadequate talents making suboptimal decisions that hinder firms from recovering (Hambrick & D'Aveni, 1992). Thus, to the extent that TMG talents deviate from the profiles posited in Hypotheses 2a through 2c, TMGs may face increasing difficulties in properly implementing turnaround strategies (cf. Michel & Hambrick, 1992; Thomas et al, 1991). These difficulties, in turn, may compound performance problems for firms operating in decreasingly munificent environments. In contrast, a match between TMG talents and turnaround strategy should increase the positive relation between environmental munificence and turnaround. The following hypotheses are, therefore, suggested:

H4a: Environmental munificence will be more positively related to performance for firms implementing a retrenchment strategy whose

TMGs have a core-function specialization than for firms whose TMGs have either an administrative- or environmental-function specialization.

H4b: Environmental munificence will be more positively related to performance for firms implementing a domain-offense strategy whose TMGs have an administrative-function specialization than for firms whose TMGs have either a core- or environmental-function specialization.

H4c: Environmental munificence will be more positively related to performance for firms implementing a domain-creation strategy whose TMGs have an environmental-function specialization than for firms whose TMGs have either a core- or administrative-function specialization.

Hypothesis 3b and 3c posit that environmental dynamism and complexity will both have a negative relation with turnaround. To the extent that TMG talents deviate from the profiles posited in Hypotheses 2a-2c, these negative relations should increase as TMGs encounter increased difficulty in properly implementing turnaround strategies. These difficulties, in turn, may compound performance problems for firms operating in increasingly dynamic or

complex environments. In contrast, a match between TMG talents and turnaround strategy should decrease these negative relations. The following hypotheses are, therefore, suggested:

H5a: Environmental dynamism will be less negatively related to performance for firms implementing a retrenchment strategy whose TMGs have a core-function specialization than for firms whose TMGs have either an administrative- or environmental-function specialization.

H5b: Environmental dynamism will be less negatively related to performance for firms implementing a domain-offense strategy whose TMGs have an administrative-function specialization than for firms whose TMGs have either a core- or environmental-function specialization.

H5c: Environmental dynamism will be less negatively related to performance for firms implementing a domain-creation strategy whose TMGs have an environmental-function specialization than for firms whose TMGs have either a core- or administrative-function specialization.

H6a: Environmental complexity will be less negatively related to performance for firms implementing a retrenchment strategy whose TMGs have a core-function specialization than for firms whose TMGs have either an administrative- or environmental-function specialization.

H6b: Environmental complexity will be less negatively related to performance for firms implementing a domain-offense strategy whose TMGs have an administrative-function specialization than for firms whose TMGs have either an core- or environmental-function specialization.

H6c: Environmental complexity will be less negatively related to performance for firms implementing a domain-creation strategy whose TMGs have an environmental-function specialization than for firms whose TMGs have either a core- or administrative-function specialization.

### Summary

This chapter derived hypotheses investigating the effect that turnaround strategy, TMG characteristics, and environment have on reestablishing a firm's alignment and turning around its performance. To examine the effect of

turnaround strategy, a general strategy classification was adapted for classifying turnaround strategies. How this adapted classification scheme overcomes problems related to classification schemes in prior turnaround studies is detailed. Hypotheses pertaining to the performance effects of TMG-strategy interaction and environmental characteristics, as well as the combined performance effects of strategy, TMG characteristics, and environmental characteristics were then developed. The next chapter presents the methods for testing these hypotheses.

## CHAPTER 4: METHODS

This chapter describes methodological issues related to testing hypotheses developed in Chapter 3. First, the chapter discusses the sample and data sources employed. Second, it describes issues related to employing slack as measure of performance. Third, it presents measures of strategy, TMG characteristics, environmental dimensions, and performance. Finally, it details methods employed for testing each hypothesis.

### Sample

The turnaround sample used for the dissertation was drawn from Standard & Poor's COMPUSTAT Industrial Tapes, a data base that reports financial information for over 6,000 large, public U.S. corporations. The data base was searched for manufacturing firms experiencing performance declines that pose potential threats to their long-term viability (defined below) to meet the definition of decline previously presented.

The COMPUSTAT data base was employed because it provides detailed financial information necessary to select a turnaround sample large enough for statistical analysis, and provides data necessary to operationalize strategy, environment and performance measures. Additionally, several previous turnaround studies have employed COMPUSTAT (e.g., Barker, 1992; Barker & Mone, 1994; Morrow & Busenitz, 1993; Pant, 1986; Ramanujam, 1984) thus permitting comparative

analyses. To reduce concerns about error rates in COMPUSTAT (Rosenberg & Houglet, 1974), data were collected for a random sample of firms from both COMPUSTAT and Moody's Industrial Reports. Information from these two sources was compared to assess data integrity. The Pearson correlation coefficient between data was .999 ( $p < .0001$ ). Thus, concerns about error rates in the data base appear alleviated.

The target sample drawn from COMPUSTAT covered a time period sufficient to assess turnaround. Previous turnaround studies have often employed periods of two to four years to ensure that a performance decline is not just a short-term downturn. Upturn cycles have been operationalized as two- to four-year periods to verify that a firm has indeed turned around (Krueger & Willard, 1991; Robbins & Pearce, 1992; Schendel et al., 1976). Allowing at least two years for firms to implement turnaround strategies (Bibeault, 1982) means that target firms had to be examined for a minimum of six years. Given that firms may decline for more than two years and may need more than two years to recover (Winn, 1993), turnaround situations were examined for up to ten years. This timeframe is consistent with recent empirical turnaround research (e.g., Barker & Mone, 1994; Robbins & Pearce, 1992). Moreover, in contrast to studies that have fixed time periods for decline, recovery, and turnaround (e.g., Pant, 1986), tracking firms for up to ten years permitted the investigation of firms that may have required



different lengths of time to recover (Robbins & Pearce, 1992).

To select a turnaround sample, COMPUSTAT was searched for firms that have suffered decline. To overcome measurement and theoretical shortcomings in turnaround research (see Chapter 2) resulting from exclusive reliance on profitability measures, the dissertation examined decline and turnaround in terms of organizational slack (Bourgeois, 1981; Chakravarthy, 1986; Cyert & March, 1963).

Organizational slack represents a cushion of actual or potential resources that allows firms to adapt to internal or external pressures for change (Bourgeois, 1981: 30). Organizational slack thus provides a theoretically based method for measuring decline and, when used to complement profitability ratios, should make the study of turnaround less susceptible to spurious findings.

Organizational slack may also represent a useful turnaround measure because it overcomes many of the problems noted above as being associated with relying solely on profitability measures by providing a measure of future adaptability. Further, because decline is a "condition in which a substantial, absolute decrease in an organization's resource base occurs over a specified period of time" (Cameron, Kim, & Whetton, 1987: 224), slack represents a measure for determining decline and turnaround that

corresponds with theoretical arguments in the decline literature.

Cyert and March (1963) first defined slack as the difference between resources available to a firm and payments required to keep stakeholder support. Cohen, March, and Olsen (1972) later modified this definition to represent the difference between a firm's resources and the combination of demands made on the firm. Organizational slack thus represents a cushion of actual or potential resources that allows firms to adapt to internal or external pressures for change and, thereby, initiate changes in strategy (Bourgeois, 1981: 30).

Slack resources exist as a margin of error within firms and, therefore, remain essential to smooth functioning (Scott, 1987).<sup>7</sup> Slack also allows for adaptation to unanticipated future events by providing a cushion to absorb environmental variability. Additionally, it provides a buffer to safeguard resources needed for product innovation (Thompson, 1967). Thus, slack plays both stabilizing and adaptive roles (Cyert & March, 1963: 38). Slack likewise allows firms to weather downturns (Ford, 1985). Consequently, slack should provide a useful means for assessing a firm's ability to survive in a changing environment. As slack diminishes, a firm's ability to adapt declines, and failure to adapt can lead to death (Hannan & Freeman, 1984).

Despite its theoretical importance, only a few studies have used slack as a performance measure. One such study, Hambrick and D'Aveni (1988), found that firms that ultimately declared bankruptcy had significantly higher debt levels (i.e., lower potential slack) and lower profitability compared to a matched sample of healthy firms. Declining slack, therefore, may provide advanced warning of difficult times. Additionally, Barker (1992) and Barker and Duhaime (1994) are the only turnaround studies that employ a measure of slack, but both included slack as an independent rather than as a dependent variable.

Pragmatically, slack may represent a useful complement to profitability for measuring decline and turnaround for two reasons. First, TMGs often react to diminishing slack. Bibeault (1982) found that key warning signals used by TMGs included measures of slack such as increasing debt. Second, slack can be operationalized using publicly available financial data (Bourgeois, 1981), so researchers have ready access to data and can replicate findings.

To select a sample of declining firms from COMPUSTAT, the following criteria were employed:

1. At least three years of profitability below the risk-free rate of return
2. At least three years of decreasing slack defined as decreasing available slack with a non-positive change in potential slack or

decreasing potential slack with a non-positive change in available slack

These criteria reflect the definition of decline previously presented. Profitability below the risk-free rate represents a situation where firms are earning an inadequate return to attract investment (Barker, 1992). In the present dissertation, profitability is measured using return on invested capital. Risk free rate is measured using the annual rate of return for 6-month U.S. Treasury bills.

These criteria reflect the availability of different types of slack (Bromiley, 1991). The first type, available slack, reflects a firm's uncommitted liquid resources (Singh, 1986). Available slack was measured as the ratio of current assets (excluding inventory) to current liabilities (i.e., the quick ratio; Kieso & Weygandt, 1986). The second type, potential slack, reflects resources available from a firm's external environment (Bourgeois & Singh, 1983). Potential slack was measured using individual firm's debt/equity ratio.<sup>8</sup>

Employing both profitability and slack measures offers two advantages relative to past operationalizations of decline. First, along with profitability, both measures of slack provide insights into potential financial problems because increases in debt and decreases in liquidity portend increasing bankruptcy risks. Thus, firms meeting these

criteria face potential threats to their long-term viability. Second, although these slack measures are accounting-based, they make decline operationalizations less susceptible to the financial manipulation problems noted earlier. Specifically, values of current assets (i.e., cash, marketable securities, and accounts receivable) and debt are more objective and, thus, less subject to manipulation than profitability measures.

The beginning of a firm's turnaround was measured as the year following its steepest drop in performance (i.e., its largest drop in profitability or slack). The relevant literature argues that pronounced drops in performance are often necessary to prompt turnaround (Schendel et al., 1976). Thus, this measure coincides with recent operationalizations of turnaround inception (Barker & Mone, 1994; Robbins & Pearce, 1992). This first year served as a base period for measuring change in the variables used to operationalize strategy.

Firms that recovered to a return on invested capital (ROIC) above the risk-free rate for three years and increased slack for three years within the timeframe of the study were classified as turnaround firms. Those that did not regain predownturn levels of performance were classified as "continuously declining" firms (D'Aveni, 1989). An initial survey of COMPUSTAT found that since 1974, 218 firms met the definition of decline. Firms that filed for

bankruptcy or were acquired by other firms during their turnaround attempts were removed from the sample because strategic decisions in these firms could either be made by bankruptcy courts or corporate parents. Additionally, firms less than 10-years old were also removed to avoid any potential confounds related to firms experiencing a "liability of newness" (Stinchcombe, 1965). For example, new firms may have low profitability and decreasing slack as they attempt to establish themselves in an industry (Dollinger, 1995). Finally, the sample was limited to U.S. manufacturers. Complete data, including information on TMG backgrounds, resulted in a final sampling frame of 129 firms.

### Measures

#### Strategy Measures

To reflect a firm's resource allocations and scope (Hofer & Schendel, 1978), turnaround strategy was operationalized along three dimensions: costs, assets, and strategic change. Costs and assets measure resource allocation decisions, and both dimensions were necessary to measure a firm's turnaround strategy because each strategy (except the theoretical midpoint, "status quo") could include changes in both these dimensions. For example, implementing an efficiency strategy often involves reducing costs (e.g., marketing) and assets (e.g., number of employees).

Strategic change reflects changes in a firm's scope. This dimension was necessary to measure a firm's turnaround strategy because a strategy could include no change (e.g., domain offense) or a substantial change (e.g., domain creation) in this dimension.

Costs. Resource allocation decisions related to costs were operationalized as a firm's sales, general, and administrative expense.<sup>9</sup>

Assets. Resource allocation decisions related to assets were operationalized as a firm's inventory, number of employees, and plant and equipment. All resource allocation measures were taken from COMPUSTAT.

Strategic change. Firms can also change their scopes while attempting a turnaround. Strategic change measures examined these actions in terms of divestments and acquisitions. Strategic change was operationalized employing two measures, domain initiative and domain reduction. Domain initiative was measured as the number of new 4-digit Standard Industry Classification (SIC) codes added by a firm in each year following decline. Domain reduction was measured as the number of 4-digit SIC codes dropped by a firm in each year following decline. Data for these measures were gathered from two sources, Dun & Bradstreet's Million Dollar Directory and Standard & Poor's Register of Corporations, Directors, and Executives.

Cost, asset, and strategic change variables were operationalized as the percentage change from a base year. These data were then analyzed using cluster analysis to derive strategy clusters.<sup>10</sup> Four major clusters corresponding with the four turnaround strategies were anticipated to provide the best data fit, although smaller clusters were also possible because a firm could implement a "status quo" or a combination strategy (Hambrick & Schecter, 1983; Hofer, 1980, Stanwick, 1992).

When clustering analyzing strategy variables and TMG variables (discussed below), both hierarchical and nonhierarchical methods were employed to overcome potential problems associated with each method (Milligan, 1980). First, the data were analyzed using Ward's method, which has been found to outperform other hierarchical clustering methods (Punj & Stewart, 1983). Because hierarchical methods generally suffer from problems such as poor initial combinations persisting throughout an analysis (i.e., poor early combinations of observations are not reassigned later in an analysis), Ward's method was used only to establish the number of clusters, derive cluster centers, and eliminate outliers (Hair, Anderson, Tatham, & Black, 1992).

Second, after determining the number of clusters with Ward's method (discussed below), a non-hierarchical clustering method was employed. Specifically, the FASTCLUS procedure available in SAS was employed (SAS User's Guide:



Statistics, 1985) The cluster centroids from Ward's method were used as seed points for the FASTCLUS procedure. Employing FASTCLUS permits cluster assignments to be "fine-tuned" by allowing firms to switch cluster membership (Hair et al., 1992).

A major issue in cluster analysis involves selection of a stopping rule to determine an appropriate number of clusters. Two stopping rules, change in the pseudo  $t^2$  statistic and visual inspection of tree diagrams, were employed (Aldenderfer & Blashfield, 1984; SAS Institute, 1985; Hair et al., 1992). The pseudo  $t^2$  is closely related to the  $J_e(2)/J_e(1)$  statistic (Duda & Hart, 1973), which has been shown to derive accurate estimates of the number of clusters in a data set (Milligan & Cooper, 1985). Visual inspection of tree diagrams was used to support the findings of the pseudo  $t^2$  statistic.

#### TMG Measures

TMG variables were chosen to reflect characteristics posited to affect a TMG's ability to implement turnaround strategies. TMG measures were collected from Dun & Bradstreet's Directory of Corporate Management, Standard & Poor's Register of Corporations, Directors, and Executives, Who's Who in Finance and Industry, as well as 10-K financial reports and proxy statements for the following variables: dominant functional background, company tenure, industry

tenure, industry experience, and percentage of stock ownership.

This dissertation defined a TMG as managers holding positions in the top two levels of firm's management hierarchy (Wiersema & Bantel, 1993). This definition included the following top executive positions: Chairman, CEO, President, and Chief Operating Officer (COO). It also included the most senior level of vice presidents in a company, which consisted of the following positions: Executive Vice President, Senior Vice President, or Vice President. This definition permitted classifying TMGs across firms that had similar degrees of responsibility within their respective firms because managers in the top two levels were included even when the titles associated with those levels varied across firms (Wiersema & Bantel, 1993).

Percentage of stock ownership was measured as the number of shares held by a TMG divided by total shares outstanding. This measure, therefore, does not include TMG stock options for additional shares of stock. Options were excluded because estimating the value of options requires crude guesses on such variables as future interest rates, opportunity costs of holding stock options, and future stock prices (Gomez-Mejia, 1994).

### Environmental Measures

Environmental measures were chosen to reflect dimensions posited to affect turnaround. Data were collected from COMPUSTAT for the following variables: munificence, dynamism, and complexity. These variables were measured at the three-digit level in COMPUSTAT (Keats & Hitt, 1988).

Munificence was measured using average growth rates of net sales, employment, and operating income in a firm's primary industry (Dess & Beard, 1984). These growth rates were measured between a firm's decline and its turnaround for successful turnaround firms or between a firm's decline and the end of the focal timeframe for continuously declining firms. Keats and Hitt (1988) adapted Dess and Beard's (1984) environmental measures so that data could be obtained from COMPUSTAT. Following Keats and Hitt (1988), each growth rate was measured as the antilog of the regression slope coefficient from the following regression equation:

$$y = b_0 + b_1t + a_t$$

where

$y$	=	industry sales, employment, or operating income
$t$	=	year
$a$	=	residual

Dynamism was measured as the instability of growth rates in net sales, employment, operating income in a firm's primary industry (Dess & Beard, 1984). This instability was measured between a firm's decline and its turnaround for successful turnaround firms or between a firm's decline and the end of the focal timeframe for continuously declining firms. Following Keats and Hitt (1988), instability was measured as the antilog of the standard error of each regression slope coefficient from the above regression equation.

Complexity was measured as the concentration ratio of a firm's industry between a firm's decline and its turnaround for successful turnaround firms or between a firm's decline and the end of the study's timeframe for continuously declining firms. Concentration was measured as the aggregated market share of the largest four firms in a firm's primary industry. Higher levels of this variable indicate decreased complexity because large firms have more control in an industry (Porter, 1980; Scherer, 1980). All measures were taken from COMPUSTAT.

#### Performance Measures

As noted, performance was measured in three ways. First, a firm's profitability was measured using its return on invested capital, which was computed as the ratio of a firm's income before extraordinary items and interest expense divided by the sum of common equity, preferred

stock, minority interest, and long-term debt. Second, a firm's available slack was measured using its quick ratio, which was computed as the sum of cash, marketable securities, and accounts receivable divided by current liabilities. Third, potential slack was measured using a firm's debt/equity ratio. All measures were taken from COMPUSTAT. All three performance measures were calculated as a percentage change from the base year. Additionally, as previously noted, profitability was also measured as a percentage of the risk free rate, which provides an absolute anchor for performance comparisons.

Because this dissertation is the first turnaround study to employ slack as a dependent variable, it needed to assess the construct validity of the proposed slack measures. Construct validity was tested by assessing dimensionality, as well as testing convergent and predictive validities (Kerlinger, 1986; Venkatraman & Grant, 1986).

To assess dimensionality, performance and environmental characteristics variables were factor analyzed. Performance variables were expected to load highly on two dimensions corresponding to profitability and slack. Additionally, two environmental constructs (i.e., munificence and dynamism) had multiple measures. These measures were expected to load highly on two dimensions corresponding to munificence and dynamism.

Construct validity was also assessed by testing convergent and predictive validities (Venkatraman & Grant, 1986). To check convergent validity, the proposed slack measures were compared to other theoretical measures of slack. First, the quick ratio, which measures a firm's liquid resources, was compared with a firm's retained earnings, which provides another measure of available slack (Bourgeois & Singh, 1983). A positive correlation was expected between these two measures.

Second, a firm's debt to equity ratio, which measures resources available from the environment, was compared with a firm's price/earnings ratio, which provides another measure of potential slack (Bourgeois & Singh, 1983). A negative correlation was expected between these two measures. All measures were taken from COMPUSTAT and Moody's Industrial Reports.

To assess predictive validity, the performance measures were compared with measures of slack that reflect decline outcomes. One such measure is a firm's dividend payout rate. This measure gauges a firm's available slack (Bourgeois, 1981), but because TMGs are often hesitant to adjust dividend payout rates until financial conditions decline dramatically, this measure may not change until after a firm has already experienced decline. Thus, comparing a firm's quick ratio during decline with its dividend payout rate after decline should serve as a measure

of predictive validity. To assess predictive validity, each firm's quick ratio was compared to its dividend payout lagged one year to allow for this delay in adjusting a dividend payout rate. A positive correlation was expected between these two measures.

Another slack measure which may change following decline is a firm's credit rating. Credit agencies (e.g., Standard & Poors and Moody's) may adjust a firm's rating, but again, these changes may not occur until after a firm experiences decline. This measure gauges a firm's potential slack (Bourgeois, 1981). Thus, comparing a firm's debt/equity ratio during decline with its credit rating after decline should serve as a measure of predictive validity. To assess predictive validity, each firm's debt to equity ratio was compared to its credit rating lagged one year to allow time for credit agencies to adjust a firm's rating. A negative correlation between these measures was expected. These measures were taken from COMPUSTAT, Moody's Industrial Reports and Moody's Bond Record.

#### Control Variables

Severity. A firm's decline severity may also affect its turnaround efforts. In general, a firm facing a severe decline in its operating health may have a more difficult time recovering because it lacks the resources to implement a turnaround effort (Barker, 1992; Ramanujam, 1984).

To control for decline severity, Altman's (1988)  $\underline{Z}$ -score was employed. This measure, which has been used in previous turnaround research (e.g., Barker, 1992; Stanwick, 1992), gauges the probability that a firm will declare bankruptcy in the short term.<sup>11</sup> A firm's  $\underline{Z}$ -score is defined as follows:

$$\underline{Z} = 0.012\underline{X}_1 + 0.014\underline{X}_2 + 0.033\underline{X}_3 + 0.006\underline{X}_4 + 0.999\underline{X}_5$$

where

$\underline{X}_1$  = working capital/total assets

$\underline{X}_2$  = retained earnings/total assets

$\underline{X}_3$  = earnings before interest and taxes/total assets

$\underline{X}_4$  = market value equity/book value of total  
liabilities

$\underline{X}_5$  = sales/total assets

$\underline{Z}$  = overall index

Firm Size. The organizational literature suggests two possible relationships between firm size and turnaround. First, larger firms may have more resources to commit to overcoming decline and, thus, may recover more quickly. Alternatively, larger firms may fall victim to inertia and not adjust in time to stave off decline (Morrow & Busenitz, 1993; Pant, 1986; Ramanujam, 1984). Thus, size may affect a firm's turnaround effort. Firm size was operationalized as a firm's average sales during the focal timeframe.

Market share. The impact of market share on a firm's turnaround effort has also been discussed in previous



turnaround studies (Arogyaswamy et al., 1994; Hambrick & Schecter, 1983, Hofer, 1980). A firm with a high market share that experiences decline may have more options than one in a weak position. This measure was operationalized as a firm's average market share in its primary line of business during the study's timeframe.<sup>12</sup>

Management Turnover. Management turnover may also affect a firm's turnaround efforts. As noted, however, the performance effect of management turnover in troubled organizations remains ambiguous (Furtado & Karan, 1990; Kesner & Sebor, 1994). This measure was operationalized as the percentage of TMG members who remained with a firm from the beginning of its decline until its turnaround for successful turnaround firms or between the beginning of its decline until the end of the focal timeframe for continuously declining firms.

### Analysis

Hypotheses 1, 2a through 2e, and 3a through 3c predict that turnaround strategy, TMG-strategy interaction, and environmental factors will each affect turnaround. Hypothesis 1 predicts that firms whose TMGs implement retrenchment strategies will outperform those that do not retrench. To test this hypothesis, firms were classified according to their turnaround strategy. Firms implementing retrenchment strategies following decline were compared to firms that did not retrench following decline. An analysis

of variance was performed comparing turnaround across the three strategies (i.e., retrenchment, domain offense, domain creation).

In studying the effects of strategy on turnaround, both measures of performance (i.e., profitability and slack) were examined because no theoretical basis can be offered to predict which turnaround measure will be associated more with a turnaround strategy. Both measures of performance were similarly employed in the remaining hypotheses.

Hypotheses 2a through 2c predict that interaction between TMG characteristics and specific turnaround strategies is positively associated with turnaround. To test these hypotheses, TMGs were classified according to White et al.'s (1994) three career-orientation specializations. TMG data were collected for TMG members in charge of a firm for at least two years prior to the firm's turnaround for successful turnaround firms or for at least two years prior to the last year of the focal timeframe for continuously declining firms.

To determine TMG specialization, each TMG member was classified as having either a core, administrative, or environmental specialization based on his/her career background. Coding this information was relatively straight forward (Michel & Hambrick, 1992).<sup>13</sup> Next, the percentage of TMG members falling into each classification was computed for each firm. Firms were then cluster analyzed following

the two-step clustering process detailed above. A three-cluster solution was expected to best fit the data.

Hypothesis 2d predicts that TMG stock ownership is significantly related to performance. This hypothesis was analyzed using multiple regression. Separate equations were run to measure the effect of independent variables on each measure of performance as follows:

$$\text{Performance} = \text{Control Variables} + \text{Average Stock Ownership}$$

where

$$\text{Performance} = \text{ROIC, Debt/Equity, or Quick ratio}$$

$$\text{Control}$$

$$\text{Variables} = \text{Decline Severity, Firm Size, Market Share, Percentage of Management Turnover}$$

$$\text{Average Stock}$$

$$\text{Ownership} = \text{Average TMG stock ownership following a firm's decline}$$

Hypothesis 2e predicts that because of different possible motives (Eisenhardt, 1989), TMG stock ownership will have a greater impact on the efficacy of a domain-creation strategy than on the other turnaround strategies. This hypothesis was analyzed using subgroup analysis. To test this hypothesis, firms were classified according to turnaround strategy implemented. Then the correlation between the percentage of TMG stock ownership and

performance was determined for each strategy, and Fisher's z-test was employed to test for significant differences across correlations.

Hypotheses 3a through 3c predict that environmental factors will have a significant impact on performance. These hypotheses were analyzed employing multiple regression. Separate equations were run to measure the effect of independent variables on each measure of performance as follows:

$$\text{Performance} = \text{Control Variables} + \text{Munificence} + \text{Dynamism} + \text{Complexity}$$

where

$$\begin{aligned} \text{Performance} &= \text{ROIC, Debt/Equity, or Quick ratio} \\ \text{Control} & \\ \text{Variables} &= \text{Decline Severity, Firm Size, Market} \\ &\quad \text{Share} \\ \text{Munificence} &= \text{Sales Growth} + \text{Employment Growth} \\ \text{Dynamism} &= \text{Variability in Sales Growth} + \\ &\quad \text{Variability in Employment Growth} \\ \text{Complexity} &= \text{Aggregate market share of largest} \\ &\quad \text{four companies in a firm's primary} \\ &\quad \text{industry} \end{aligned}$$

Hypotheses 4a through 4c, 5a through 5c, and 6a through 6c predict that TMG characteristics-strategy interactions will moderate the effect of environmental factors on performance. These hypotheses, therefore, integrate

strategy, TMG characteristics, and environment. They were tested using subgroup analysis. Firms were first classified according to the turnaround strategy implemented. Next, firms were classified according to TMG career orientation. For each orientation, the correlation between the change in environmental factors and performance was determined, and Fisher's  $z$ -test was employed to test for significant differences across correlations.

#### Summary

This chapter has addressed methodological issues related to testing hypotheses derived in Chapter 3. First, issues related to sample selection using the COMPUSTAT data base were highlighted. Next, issues related to employing slack as a measure of performance were detailed. Additionally, measures of strategy, TMG characteristics, environmental dimensions, and performance were presented. Finally, methods for testing each hypothesis as well as issues related to cluster analysis were discussed. The results of these tests are discussed in the next chapter.

## CHAPTER 5: RESULTS

This chapter reports preliminary analyses investigating the validities of the proposed measures and cluster analyses of strategy and TMG variables. It then presents results for tests examining each stated hypothesis.

### Preliminary Analyses

This section presents the results of preliminary analyses to establish the validity of the proposed performance and environmental measures. It also presents results from cluster analyses of strategy and TMG variables. Correlations and descriptive statistics are shown in Table 5.1. In addition, a list of industries and firms in the sample are shown in Table 5.2.

Note that preliminary analysis showed that three variables, Size, Market Share and Average Stock Ownership, had skewed distributions. These variables, therefore, were transformed by taking the natural logarithm of each. Correlations and descriptive statistics reflect these transformations.

### Validities

To establish the construct validity of variables with multiple measures, factor analysis was employed. Construct validity was assessed for performance measures and environmental measures.

First, to determine the dimensionality of performance measures, a factor analysis with a varimax rotation was

Table 5.1--Correlations and Descriptive Statistics for Study Variables

Variable	Mean	<u>sd</u>	1	2	3	4	5	6	7	8	9
Strategy											
1. P&E	.20	.56									
2. Employees	-.12	.43	.44								
3. Inventory	.14	.60	.42	.61							
4. SGA	.32	.77	.48	.68	.67						
5. Dom. initiative	.36	.51	.10	.02	.08	.07					
6. Dom. reduction	-.28	.37	.26	.24	.23	.27	-.26				
7. Strategy <sup>a</sup>			.33	.40	.45	.57	.44	-.10			
TMG											
8. Number of mgrs.	3.81	1.83	.06	-.16	-.16	-.12	-.07	-.12	-.07		
9. Specialization <sup>a</sup>			-.14	-.06	-.14	.07	-.14	-.10	.09	-.07	
10. Stock ownership	1.17	2.21	.04	.29	.25	.22	-.10	.17	-.09	-.24	.07

(Table con'd)

Variable	Mean	<u>sd</u>	1	2	3	4	5	6	7	8	9
11. Munificence	10.67	9.84	.04	.02	.05	.21	.07	-.08	.01	-.06	-.04
12. Dynamism	2.63	1.74	-.19	-.12	-.08	-.15	-.18	.03	-.28	.17	-.06
13. Complexity	76.15	13.59	-.11	-.13	-.13	.04	.00	-.02	-.10	-.09	-.02
Control											
14. Size	5.33	1.88	-.03	-.18	-.22	-.22	-.03	-.05	-.15	.40	-.20
15. Market Share	.47	2.17	-.09	-.29	-.23	-.28	-.04	-.03	-.29	.24	-.19
16. Severity	1.40	.47	-.09	.26	-.04	.01	.11	.13	.07	-.17	-.06
17. Mgt. turnover	.49	.34	-.07	-.11	-.20	-.13	.02	-.09	.03	-.08	.25
Performance											
18. Profitability	2.09	4.36	.03	.04	.00	.05	.08	-.10	.01	-.07	.06
19. Profitability/ risk-free	1.68	2.65	-.02	.11	.05	.12	.08	-.10	.06	.01	.04
20. Available slack	.21	.77	.20	.25	.07	.28	.06	.15	.23	-.14	.09
21. Potential slack	.36	1.96	.17	-.16	-.03	.04	-.05	-.05	.11	.14	-.04

(Table con'd)



Variable	10	11	12	13	14	15	16	17	18	19	20
Environment											
11. Munificence	.02										
12. Dynamism	-.06	.19									
13. Complexity	.13	.13	.23								
Control											
14. Size	-.37	-.02	.03	-.13							
15. Market Share	-.32	-.03	.26	.32	.26						
16. Severity	.33	.02	-.05	.29	-.15	-.04					
17. Mgt. turnover	-.13	.07	-.15	.13	.01	.02	.20				
Performance											
18. Profitability	-.13	-.12	-.05	-.06	.19	.14	-.00	-.17			
19. Profitability/ risk-free	-.07	-.05	.02	-.05	.04	-.02	.02	-.12	.63		
20. Available slack	-.05	.05	-.07	.07	.03	.00	.04	-.15	.06	.08	
21. Potential slack	-.14	-.02	-.06	.04	.28	.13	-.12	.15	.12	-.02	-.22

Note:  $n=119$  except for Potential Slack where  $n=111$  as well as Stock Ownership and Mgt. Turnover where  $n=99$ . All correlations greater than  $\pm .18$  are significant at  $p < .05$  except for correlations with Potential Slack, Stock Ownership and Management Turnover where correlations greater than  $\pm .19$  are significant at  $p < .05$ .

<sup>a</sup> These are nominal variables. Thus, means and standard deviations are not meaningful.

Table 5.2--Firms in Sample

<u>Industry Code</u>	<u>Company</u>	<u>Industry Code</u>	<u>Company</u>
2092	Farmer Brothers	3420	Amdura Corporation
2200	Concord Fabrics Inc. Dixie Yarn	3442	Instrument Systems Corp.
2211	Crown Crafts Inc.	3443	Mueller (Paul) Company Pitt-Des Moines Inc.
2221	Texfi Industries	3460	Fansteel Inc.
2250	Alba Waldensian Inc	3470	Kinark Corporation
2253	Aileen Inc.	3490	Intermagnetics General
2300	Garan Inc. Hartmarx Corporation	3523	Art's Way Manufacturing
2320	Farah Inc. Munsingwear Inc.	3531	JLG Industries Inc. Portec Inc.
2390	Decorator Industries	3532	Joy Technologies Inc.
2421	La-Pacific Corporation	3540	Salem Corporation
2531	Douglas & Lomason	3541	Cincinnati Milacron Inc. Gleason Corporation Monarch Machine Tool Co.
2621	Boise Cascade Corp. Champion International International Paper Pope & Talbot Inc. Potlatch Corporation Willamette Industries	3559	Katy Industries
2670	Bemis Company	3560	Dresser Industries Inc. Graham Corporation Ingersoll-Rand Company
2721	Playboy Enterprises	3561	Duriron Company Inc.
2732	Courier Corporation	3562	Timken Company
2810	ICN Pharmaceuticals Inc. NL Industries	3567	Bethlehem Corporation
2821	Goodrich (BF) Company	3570	Data General Corporation
2860	Union Carbide	3571	Amdahl Corporation Datapoint Corporation
2890	Hercules Inc.	3575	Wells-Gardner Electric
2911	Crown Central Petroleum Murphy Oil Corporation Tesoro Petroleum Corp.	3577	Cambex Corporation
2990	Triangle Corporation	3578	Par Technology
3080	Hanna (MA) Company	3585	Continental Material Fedders Corporation Kysor Industrial Corp.
3089	Kerr Group Inc.	3612	Thermo Voltek Corp. Waters Instruments Inc.
3140	Suave Shoe Corporation Wellco Enterprises	3621	Kollmorgen Corporation
3310	Matec Corporation National Standard Co.	3640	Aztec Manufacturing Co. ILC Technology Lamson & Sessions Co.
3312	Armco Inc. Bethlehem Steel Corp. Inland Steel Inc. Keystone Consolidated Laclede Steel	3651	Zenith Electronics Corp.
3350	Driver Harris Company Nuclear Metals	3661	Cognitronics Corporation General Datacom Ind. Plantronics Inc.
		3663	Adage Inc. General Instrument Corp. Pico Products Inc.

(Table con'd)

3670 CTS Corporation	3821	Autoclave Engineers
Electronic Associates		Gelman Sciences Inc.
3672 Altron Inc.		Kewaunee Scientific
3674 Advanced Micro Devices	3823	Daniel Industries
Alpha Industries		Fischer & Porter Co.
International Rectifier		Hurco Companies
Semtech Corporation		K-tron International
3678 Robinson Nugent Inc.		Moore Products
3679 Applied Magnetics	3824	Bowmar Instruments
Computer Products Inc.	3825	Datum Inc.
Espey Mfg & Electronic	3826	OI Corp.
3690 Arrow Automotive	3827	Laser Precision
3711 Chrysler Corporation		Optical Coating
Ford Motor Company	3829	Acme-Cleveland
General Motors Corp.	3841	Cordis Cop.
Navistar International		Puritan-Bennett
3714 Trico Products Corp.	3844	American Sci. Eng.
3716 Winnebago Industries	3845	Circon Corp.
3724 Sifco Industries		Datascope Corp.
UNC Inc.	3861	Polaroid Corp.
3790 Kit Mfg.		
3812 Anaren Microwave		
LaBarge Inc.		

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conducted. A varimax rotation was employed to simplify the factor matrix and facilitate interpretation (Hair et al., 1992). The results are shown in Table 5.3.

Results in Table 5.3 show that two factors with eigenvalues greater than 1 were retained (Kaiser, 1970). Measures of profitability loaded highly on Factor 1, and slack measures loaded highly on Factor 2. The negative loading for available slack also conforms with expectations because the slack measures employed should be negatively correlated (i.e., an increase in the potential slack measure, debt to equity, indicates a decrease in overall slack). These results provide evidence that the proposed profitability and slack variables measure distinct constructs.<sup>14</sup> Even though available and potential slack load on the same factor, they were analyzed separately because they have been found to have different effects on organizational outcomes (e.g., risk taking; Singh, 1986).

Construct validity for the proposed performance measures was also assessed by testing convergent and predictive validities (Venkatraman & Grant, 1986). To assess convergent validity, the proposed slack measures were compared to other theoretical measures of slack. First, the quick ratio, which measures a firm's liquid resources, was compared with a firm's retained earnings, which provides

Table 5.3--Rotated Factor Pattern for Performance Measures

---

	Factor 1	Factor 2
Profitability	.8547	.1394
Profitability relative to risk free rate	.8729	-.1178
Available slack	-.0517	-.7222
Potential slack	-.0384	.8174
Eigenvalue	1.4984	1.2211
Proportion of variance	.3746	.3053

---

another measure of available slack (Bourgeois & Singh, 1983). A positive correlation of .3348 ( $p < .001$ ) was found between these two measures. Although this correlation is not high (Nunnally, 1967), it is significant and positive as expected. Thus, it provides some evidence of convergent validity.

Second, a firm's debt to equity ratio, which measures environmental resource availability, was compared with a firm's price/earnings ratio, which provides another measure of potential slack (Bourgeois & Singh, 1983). This correlation was not significant ( $r = .0897$ ,  $p < .40$ ), which may be due in part to the volatility of stock prices for distressed firms (Hambrick & D'Aveni, 1988). Consequently, each firm's debt to equity ratio was compared to a second measure of potential slack, interest coverage ratio (Barker, 1992; Bromiley, 1991). A firm's interest coverage ratio provides a measure of potential slack because firms having a high ratio can afford to take on additional debt. The correlation between these measures was  $-.2210$  ( $p < .05$ ). Although this correlation is not high (Nunnally, 1967), it is significant and negative as expected. Thus, it provides some evidence of convergent validity. All measures were taken from COMPUSTAT and Moody's Industrial Reports.

To assess predictive validity, the proposed performance measures were compared with measures of slack that reflect outcomes of decline. One such measure is a firm's dividend

payout ratio. To assess predictive validity, each firm's quick ratio was compared to its dividend payout lagged one year. The correlation between these measures approached significance ( $r = .1496$ ,  $p < .10$ ). Closer examination of the data, however, showed that over half ( $n = 67$ ) the firms in the focal sample did not pay dividends during the focal timeframe. Removing these firms from the sample resulted in a correlation of  $.2201$  ( $p < .06$ ). Although this correlation is not high (Nunnally, 1967), it approached significance and is positive as expected. Thus, it provides some evidence of predictive validity.

Another slack measure which may change following decline is a firm's credit rating. To assess predictive validity, each firm's debt to equity ratio was compared to its credit rating lagged one year. A negative correlation between these measures was found ( $r = -.1953$ ,  $p < .50$ ). This lack of significance may occur in part because only 19 firms in the sample had debt instruments rated by Moody's during the focal timeframe. The correlation, however, is in the hypothesized direction. These measures were taken from COMPUSTAT, Moody's Industrial Reports and Moody's Bond Record.

To establish the construct validity of the environmental variables, factor analysis was employed. The multiple measures of munificence and dynamism were analyzed using factor analysis with a varimax rotation. Three

factors with eigenvalues greater than 1 were retained (Kaiser, 1970). Sales growth and employment growth loaded highly on Factor 1. Operating income growth and operating income dynamism loaded highly on Factor 2 and appear to be tapping a construct unique to operating income. Sales dynamism and employment dynamism loaded highly on Factor 3. Because the operating income variables loaded on a single factor that is not theoretically meaningful to the current dissertation, they were removed and the remaining variables were factor analyzed again using a varimax rotation. The results are shown in Table 5.4.

Results in Table 5.4 show that two factors with eigenvalues greater than 1 were retained (Kaiser, 1970). Measures of sales growth and employment growth loaded highly on Factor 1, whereas measures of sales dynamism and employment dynamism loaded highly on Factor 2. The two variables for each factor, therefore, were summed to create munificence and dynamism variables, respectively (Hair et al., 1992).

#### Cluster analysis

To classify firms by their respective turnaround strategies and TMGs by their respective career specializations, cluster analysis was employed. The following clustering procedures were performed for both strategy and TMG variables. To obtain an estimate of the number of clusters present in the data and to eliminate



Table 5.4--Rotated Factor Pattern for  
Environmental Variables

---

	Factor 1	Factor 2
Sales growth	.9473	.0425
Employment growth	.9500	.1358
Sales dynamism	-.0517	.8743
Employment dynamism	.2370	.8174
Eigenvalue	2.0328	1.2787
Proportion of variance	.5082	.3197

---

outliers (Hair et al., 1992), the data were analyzed using a hierarchical cluster analysis procedure, Ward's minimum variance method. To determine the number of clusters, two stopping rules, change in pseudo  $\underline{t}^2$  statistic and visual inspection of tree diagrams were employed (Aldenderfer & Blashfield, 1984; Hair et al., 1992; SAS Institute, 1985). These stopping rules indicated that a four-cluster solution provided a good fit for the strategy data and a three-cluster solution provided a good fit for the TMG data. Both solutions are also in line with the number of clusters expected from a priori theory (cf. Ketchen & Shook, in press).

To examine the validity of the resulting cluster solutions, reliability was examined by randomly splitting the sample into two subgroups (Ketchen & Shook, in press). These subgroups were cluster analyzed, and the resulting clusters were then compared with the full sample to assess stability of cluster assignments and make sure the clustering techniques were not taking advantage of random variation (Hair et al., 1992). The average agreement of subgroups with the original sample was .79 for the strategy clusters and .73 for the TMG clusters. Both of these results indicate that cluster assignments were highly reliable (Nunnally, 1967).

To overcome problems with hierarchical cluster analysis discussed above, the cluster centroids from this

hierarchical analysis were then input into an iterative clustering procedure, FASTCLUS, to refine cluster assignments. Means for the resulting four strategy clusters and three TMG clusters are shown in Tables 5.5 and 5.6, respectively.

Table 5.5 shows that three clusters correspond to the strategy hypotheses developed in Chapter 3. Examining the mean values to name the clusters indicated that firms in cluster 1 implemented a domain offense strategy, firms in cluster 2 implemented a retrenchment strategy, and firms in cluster 4 implemented a domain creation strategy. Firms in cluster 3 appear to have implemented a hybrid strategy combining domain offense and domain creation. The three strategies corresponding to the hypotheses were retained for analysis.

Table 5.6 shows that each of three clusters had a dominant TMG specialization. Examining the mean values to name the clusters indicated that TMGs in cluster 1 had a core specialization, TMGs in cluster 2 had an administrative specialization, and TMGs in cluster 3 had an environmental specialization. The average TMG size was 3.81 members ( $sd=1.83$ ).

#### Hypothesis 1

The first hypothesis states that firms following a retrenchment strategy would outperform those following other turnaround strategies. Restated formally:

H1: Firms implementing retrenchment strategies (i.e., an efficiency strategy or a domain-consolidation strategy) following a performance decline will outperform firms implementing a domain-offense or a domain-creation strategy.

To determine each firm's turnaround strategy, firms were classified employing the two-step cluster analysis method described above. Hypothesis 1 was tested using ANOVA. A significant F-statistic would indicate that systematic performance differences exist across turnaround strategies. Results are shown in Table 5.7. When testing all hypotheses, performance measures greater than three standard deviations from the mean were removed.<sup>15</sup>

Results in Table 5.7 do not support Hypothesis 1. No significant differences in performance were found across turnaround strategies for any performance measure. Thus, the hypothesis that firms implementing a retrenchment strategy would outperform firms implementing a domain-offense or domain-creation strategy was not supported.

#### Hypothesis 2

The second hypothesis states that the interaction between TMG characteristics and a firm's turnaround strategy has implications for performance. These TMG characteristics include both specialization and stock ownership.

Table 5.5--Cluster Analysis for Strategy Variables

---

<u>Cluster Means</u>							
	<u>n</u>	P&E	Inv	Emp	SGA	DI	DR
1	70	.26	.20	-.11	.24	.09	-.08
2	48	-.23	-.35	-.44	-.25	.49	-.58
3	12	2.56	1.73	1.02	2.36	.51	-.54
4	26	.79	.96	.37	1.43	.64	-.16

---

P&amp;E= Plant &amp; equipment

Inv= Inventory

Emp= Employees

SGA= Sales, general, and administrative expenses

DI = Domain initiative

DR = Domain reduction

Table 5.6--Cluster Analysis for TMG Variables

---

<u>Cluster Means</u> (standard deviations)				
	<u>n</u>	Core	Administrative	Environmental
1	55	.7178 (.1648)	.1705 (.1701 )	.1117 (.1402)
2	30	.1291 (.1505)	.6573 (.1937)	.2136 (.1888)
3	44	.2093 (.1834)	.1491 (.1519)	.6416 (.2160)

---

**Table 5.7--Performance Differences Among  
Turnaround Strategies**

	<u>df</u>	Mean Square	<u>F</u>	Pr> <u>F</u>
<b>Profitability</b>				
Model	2	2.40	.70	.50
Error	96	3.41		
Total	98			
<b>Profitability/ Risk Free</b>				
Model	2	.08	.03	.97
Error	98	2.25		
Total	100			
<b>Available Slack</b>				
Model	2	.44	1.42	.25
Error	108	.31		
Total	110			
<b>Potential Slack</b>				
Model	2	1.21	2.04	.14
Error	90	.59		
Total	92			

Hypotheses 2a through 2c state that firms whose TMGs have specializations that match particular turnaround strategies will outperform firms whose TMGs do not have this match. Restated formally:

H2a: Firms implementing a retrenchment strategy whose TMGs have a core-function specialization will outperform those firms whose TMGs have administrative- or environmental-function specializations.

H2b: Firms implementing a domain-offense strategy whose TMGs have an administrative-function specialization will outperform those firms whose TMGs have core- or environmental-function specializations.

H2c: Firms implementing a domain-creation strategy whose TMGs have an environmental-function specialization will outperform those firms whose TMGs have core- or administrative-function specializations.

To determine each firm's TMG orientation, TMGs were classified employing the two-step cluster analysis method described above. Hypothesis 2a through 2c were then tested using ANOVA. A significant *F*-statistic would indicate that systematic performance differences exist across TMG specializations for each turnaround strategy. Next, because dividing three TMG specializations by three strategies

resulted in small cell sizes (i.e., mean cell sizes were 13.3, 16.2, and 7.2 for retrenchment, domain offense, and domain creation, respectively), hypotheses 2a through 2c were also tested by performing contrasts between the hypothesized highest performing specialization and the other two specializations.

First, these hypotheses were tested using ANOVA. Results are shown in Tables 5.8 through 5.10.

Results in Table 5.8 do not support Hypothesis 2a. No significant differences in performance were found across TMG specializations for firms implementing a retrenchment strategy. Thus, the hypothesis that TMGs having a core specialization will be able to implement a retrenchment strategy better than TMGs with either an administrative or environmental specialization was not supported.

Results in Table 5.9 do not support Hypothesis 2b. No significant differences in performance were found across TMG specializations for firms implementing a domain offense strategy. Thus, the hypothesis that TMGs having an administrative specialization will be able to implement a domain offense strategy better than TMGs with either a core or environmental specialization was not supported.

Results in Table 5.10 do not support Hypothesis 2c. Only differences in potential slack approach significance ( $p < .10$ ) across TMG specializations for firms implementing a



Table 5.8--Performance Differences Among TMG  
Specializations for Retrenchment Strategy

	<u>df</u>	Mean Square	<u>F</u>	Pr> <u>F</u>
Profitability				
Model	2	.80	.27	.77
Error	29	2.96		
Total	31			
Profitability/ Risk Free				
Model	2	.43	.08	.92
Error	35	5.39		
Total	37			
Available Slack				
Model	2	.18	.73	.49
Error	39	.25		
Total	41			
Potential Slack				
Model	2	.09	.10	.90
Error	32	.88		
Total	34			

Table 5.9--Performance Differences Among TMG  
Specializations for Domain Offense Strategy

	<u>df</u>	Mean Square	<u>F</u>	Pr> <u>F</u>
Profitability				
Model	2	5.45	2.04	.14
Error	40	2.67		
Total	42			
Profitability/ Risk Free				
Model	2	2.74	2.32	.11
Error	46	1.18		
Total	48			
Available Slack				
Model	2	.08	.50	.61
Error	44	.17		
Total	46			
Potential Slack				
Model	2	.00	.01	.99
Error	40	.17		
Total	42			

Table 5.10--Performance Differences Among TMG  
Specializations for Domain Creation Strategy

	<u>df</u>	Mean Square	<u>F</u>	Pr> <u>F</u>
<b>Profitability</b>				
Model	2	.00	.00	.99
Error	17	1.39		
Total	19			
<b>Profitability/ Risk Free</b>				
Model	2	1.86	1.39	.27
Error	20	1.34		
Total	22			
<b>Available Slack</b>				
Model	2	.68	1.66	.21
Error	21	.41		
Total	23			
<b>Potential Slack</b>				
Model	2	1.24	2.68	.10
Error	17	.46		
Total	19			

domain creation strategy. Examining group means using Duncan's Multiple Range Test, however, shows that an administrative specialization outperforms both core and environmental specializations ( $p < .10$ ). These results are contrary to Hypothesis 2c.

One explanation for lack of significant performance difference in the above hypotheses may be the small cell sizes for each strategy after dividing by TMG specialization. Therefore, contrasts were performed between the hypothesized highest performing specialization and the other two specializations. Comparing specializations in this way allows the analysis to conserve one degree of freedom. Results of these contrasts are shown in Tables 5.11 through 5.13.

Results in Table 5.11 again fail to support Hypothesis 2a. No significant differences in performance were found across TMG specializations for firms implementing a retrenchment strategy (Only contrasts between core and other specializations are shown). Thus, the hypothesis that TMGs having a core specialization will be able to implement a retrenchment strategy better than TMGs with either an administrative or environmental specialization was not supported.

Results in Table 5.12 do not support Hypothesis 2b. First, an environmental specialization outperformed other

Table 5.11--Performance Differences Among TMG  
Specializations for Retrenchment Strategy

	<u>df</u>	<u>F</u>	<u>Pr&gt;F</u>
<b>Profitability</b>			
Core vs Others	1	.00	.99
<b>Profitability/ Risk Free</b>			
Core vs Others	1	.02	.90
<b>Available Slack</b>			
Core vs Others	1	.03	.85
<b>Potential Slack</b>			
Core vs Others	1	.03	.87

Table 5.12--Performance Differences Among TMG  
Specializations for Domain Offense Strategy

	<u>df</u>	<u>F</u>	<u>Pr&gt;F</u>
<b>Profitability</b>			
Administrative vs Others	1	1.08	.31
Environmental vs Others	1	3.90	.06
<b>Profitability/ Risk Free</b>			
Administrative vs Others	1	.11	.75
Core vs Others	1	4.47	.04
<b>Available Slack</b>			
Administrative vs Others	1	.87	.36
<b>Potential Slack</b>			
Administrative vs Others	1	.01	.91

Table 5.13--Performance Differences Among TMG  
Specializations for Domain Creation Strategy

	<u>df</u>	<u>F</u>	<u>Pr&gt;F</u>
<b>Profitability</b>			
Environmental vs Others	1	.01	.93
<b>Profitability/ Risk Free</b>			
Environmental vs Others	1	1.67	.21
<b>Available Slack</b>			
Environmental vs Others	1	1.20	.29
Administrative vs Others	1	3.32	.08
<b>Potential Slack</b>			
Environmental vs Others	1	.35	.56
Administrative vs Others	1	4.57	.05

specializations in terms of profitability ( $p < .10$ ). This finding is counter to Hypothesis 2b. Results also show that an administrative and an environmental specialization outperform a core specialization in terms of profitability relative to the risk-free rate. Duncan's Multiple Range Test shows that an administrative specialization outperforms a core specialization on this measure ( $p < .10$ ). Thus, the hypothesis that TMGs having an administrative specialization will be able to implement a domain offense strategy better than TMGs with either a core or environmental specialization was not supported.

Results in Table 5.13 show that significant differences exist across specializations for firms implementing a domain creation strategy. Contrary to expectations, however, an administrative specialization outperformed the other two specializations in terms of potential slack ( $p < .05$ ) and available slack ( $p < .10$ ). Thus, the hypothesis that TMGs having an environmental specialization will be able to implement a domain creation strategy better than TMGs with either a core or administrative specialization was not supported.

Hypotheses 2d and 2e state that TMG stock ownership will affect the successful implementation of a turnaround strategy. Hypothesis 2d states that TMG stock ownership will be positively related to turnaround. Restated formally:



H2d: There will be a positive relation between TMG stock ownership and performance in declining firms.

Hypothesis 2d was tested using multiple regression. Stock data were available for 99 firms. Initial investigation showed that Average Market Share, a control variable, was not significantly related to performance in any analysis. Therefore, this variable was excluded from the analysis and the regression equations were reestimated. Results are shown in Table 5.14.

Results in Table 5.14 show that average stock ownership is significantly related to potential slack ( $p < .05$ ) and approaches significance with available slack ( $p < .10$ ). Contrary to expectations, however, TMG stock ownership is negatively related to performance for both slack measures. First, stock ownership is positively associated with the measure for potential slack, a firm's debt to equity ratio. Thus, the higher a TMG's average stock ownership, the more a firm's debt load increased, and, in turn, the more a firm's slack decreased. Second, stock ownership is negatively related to the measure for available slack, a firm's liquidity ratio. Thus, the higher a TMG's average stock ownership, the more a firm's liquidity decreased, and, in turn, the more a firm's slack decreased. Both these results are counter to Hypothesis 2d.

Hypothesis 2e states that the positive relation between stock ownership and performance will be stronger for firms implementing a domain creation strategy. Restated formally:

**H2e:** There will be a stronger positive relation between stock ownership and turnaround for declining firms implementing a domain-creation strategy than for firms implementing either a domain-offense or retrenchment strategy.

This hypothesis was tested using subgroup analysis. First, firms were classified by turnaround strategy implemented. Then for each strategy, the correlation between average stock ownership and performance was computed. Fisher's  $z$ -test was employed to test for significant differences across correlations (Bruning & Kintz, 1987). Results are shown in Table 5.15.

Results in Table 5.15 do not support Hypothesis 2e. No significant differences in the correlation between stock ownership and performance occur across strategies. Thus, the hypothesis that there will be a stronger positive relation between TMG stock ownership and performance for firms implementing a domain creation strategy than for firms implementing other strategies is not supported.

### Hypothesis 3

The third hypothesis states that a firm's environment will impact its turnaround. Restated formally:

Table 5.14--Relation Between Stock Ownership and Performance

Variables	<u>Profitability</u>		<u>Profitability/ Risk Free</u>	
	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>
Intercept	.07	1.53	1.11	1.07
Size	.43*	.21	.04	.15
Management Turnover	-1.90*	.84	-1.11*	.60
Severity	-.09	.79	.90	.57
Average Stock Ownership	.29	.19	-.13	.14
R <sup>2</sup>	.12*		.06	

Variables	<u>Available Slack</u>		<u>Potential Slack</u>	
	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>
Intercept	.21	.34	-1.33**	.53
Size	-.02	.04	.20**	.07
Management Turnover	-.15	.19	.74**	.29
Severity	.15	.17	-.22	.27
Average Stock Ownership	-.08*	.04	.13*	.07
R <sup>2</sup>	.05		.10*	

\* p < .10, \* p < .05, \*\* p < .01

Table 5.15--Correlations and Differences in Correlations  
Between Stock Ownership and Performance  
for Different Turnaround Strategies

<u>Performance Measure</u>	<u>Stock Ownership</u>	
Retrenchment		
Profitability ( <u>n</u> =32)	.14	
Profitability/Risk Free ( <u>n</u> =28)	-.24	
Available Slack ( <u>n</u> =34)	-.10	
Potential Slack ( <u>n</u> =31)	.07	
Domain Offense		
Profitability ( <u>n</u> =37)		-.01
Profitability/Risk Free ( <u>n</u> =41)		-.13
Available Slack ( <u>n</u> =44)		-.20
Potential Slack ( <u>n</u> =38)		.00
Domain Creation		
Profitability ( <u>n</u> =18)	-.24	-.24
Profitability/Risk Free ( <u>n</u> =19)	.01	.01
Available Slack ( <u>n</u> =17)	-.15	-.15
Potential Slack ( <u>n</u> =17)	.08	.08
* Significance of differences in correlation pairs was $p<.10$ .		
* Significance of differences in correlation pairs was $p<.05$ .		

Table 5.16--Relation Between Environmental Variables  
and Performance

Variables	<u>Profitability</u>		<u>Profitability/ Risk Free</u>	
	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>
Intercept	3.86*	1.83	2.00	1.28
Severity	.26	.63	.61	.45
Size	.06	.15	.10	.10
Munificence	-.06	.03	-.02	.02
Dynamism	.40*	.20	-.03	.14
Complexity	-.04*	.02	-.02	.01
<u>R</u> <sup>2</sup>	.09*		.05	

Variables	<u>Available Slack</u>		<u>Potential Slack</u>	
	<u>b</u>	<u>SE</u>	<u>b</u>	<u>SE</u>
Intercept	-.29	.41	.03	.54
Severity	.02	.15	-.14	.19
Size	.03	.03	.04	.04
Munificence	.01	.01	-.01	.01
Dynamism	.01	.04	.01	.06
Complexity	.00	.00	-.00	.01
<u>R</u> <sup>2</sup>	.02		.05	

\* p < .10, \* p < .05, \*\* p < .01

H3a: Environmental munificence will be positively related to performance in declining firms.

H3b: Environmental dynamism will be negatively related to performance in declining firms.

H3c: Environmental complexity will be negatively related to performance in declining firms.

Hypothesis 3a through 3c were tested using multiple regression. Again, initial analysis showed that Average Market Share was not significant in any equations. Therefore, it was removed and regression equations were reestimated. Results are shown in Table 5.16.

Results in Table 5.16 show that the environmental variables have only a limited relation with performance for firms in a turnaround situation. Dynamism and complexity are significantly related only with profitability and both relations are opposite the ones hypothesized. Additionally, the amount of variance in profitability explained by environmental variables is relatively small ( $R^2=.09$ ). Thus, the hypotheses that environmental characteristics will impact turnaround received only limited support.

#### Hypotheses 4, 5, and 6

Hypotheses 4 through 6 seek to integrate concepts of turnaround strategy, TMG characteristics, and environmental variables. Hypothesis 4 states that firms whose TMGs fit with a firm's strategy will be able to better capitalize on

environmental munificence than firms whose TMGs do not have this fit with strategy. Restated formally:

**H4a:** Environmental munificence will be more positively related to performance for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMG has either an administrative- or environmental-function specialization.

**H4b:** Environmental munificence will be more positively related to performance for firms implementing a domain-offense strategy whose TMG have an administrative-function specialization than for firms whose TMG has either an core- or environmental-function specialization.

**H4c:** Environmental munificence will be more positively related to performance for firms implementing a domain-creation strategy whose TMG have an environmental-function specialization than for firms whose TMG has either a core- or administrative-function specialization.

Hypotheses 4 through 6 were tested using subgroup analysis. First, firms were classified by turnaround strategy implemented. Next, firms were classified by TMG

career orientation. Then for each TMG-strategy combination, the correlation between each environmental characteristic and performance was computed. Fisher's  $z$ -test was employed to test for significant differences across correlations (Bruning & Kintz, 1987). Results for Hypotheses 4a through 4c are shown in Tables 5.17 through 5.19, respectively.

Results in Table 5.17 do not support Hypothesis 4a. No significant differences in the correlation between environmental munificence and performance occur across TMG specializations. Thus, the hypothesis that environmental munificence will be more positively related to turnaround for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMG has either an administrative- or environmental-function specialization was not supported.

Results in Table 5.18 provide mixed support for Hypothesis 4b. The correlation between environmental munificence and performance is significantly higher for an administrative versus environmental specialization and approaches significance ( $p < .10$ ) for an administrative versus core specialization in terms of potential slack (Recall potential slack is reverse-scored). Thus, the hypothesis that environmental munificence will be more positively related to turnaround for firms implementing a domain offense strategy whose TMG have an administrative-function specialization than for firms whose TMG has either a core-



Table 5.17--Retrenchment Strategy:  
Correlations and Differences in Correlations Between  
Environmental Munificence and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Munificence</u>	
Core		
Profitability ( <u>n</u> =10)	-.31	-.31
Profitability/Risk Free ( <u>n</u> =10)	-.51	-.51
Available Slack ( <u>n</u> =10)	-.17	-.17
Potential Slack ( <u>n</u> =10)	-.27	-.27
Administrative		
Profitability ( <u>n</u> =11)	-.34	
Profitability/Risk Free ( <u>n</u> =12)	-.28	
Available Slack ( <u>n</u> =12)	.10	
Potential Slack ( <u>n</u> =10)	-.65	
Environmental		
Profitability ( <u>n</u> =16)		-.65
Profitability/Risk Free ( <u>n</u> =17)		-.25
Available Slack ( <u>n</u> =17)		.29
Potential Slack ( <u>n</u> =16)		-.04
* Significance of differences in correlation pairs was $p<.10$ .		
* Significance of differences in correlation pairs was $p<.05$ .		

Table 5.18--Domain Offense Strategy:  
Correlations and Differences in Correlations Between  
Environmental Munificence and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Munificence</u>	
Core		
Profitability ( <u>n</u> =21)	-.14	
Profitability/Risk Free ( <u>n</u> =25)	-.27	
Available Slack ( <u>n</u> =28)	-.14	
Potential Slack ( <u>n</u> =25)	.14	
Administrative		
Profitability ( <u>n</u> =9)	.38	.38
Profitability/Risk Free ( <u>n</u> =9)	-.39	-.39
Available Slack ( <u>n</u> =9)	.06	.06
Potential Slack ( <u>n</u> =9)	-.54*	-.54*
Environmental		
Profitability ( <u>n</u> =7)		-.17
Profitability/Risk Free ( <u>n</u> =9)		.08
Available Slack ( <u>n</u> =10)		-.41
Potential Slack ( <u>n</u> =9)		.30
* Significance of differences in correlation pairs was $p < .10$ .		
* Significance of differences in correlation pairs was $p < .05$ .		

**Table 5.19--Domain Creation Strategy:  
Correlations and Differences in Correlations Between  
Environmental Munificence and Performance  
for Different TMG Specializations**

<u>Performance Measure</u>	<u>Environmental Munificence</u>	
Core		
Profitability ( <u>n</u> =8)	.74	
Profitability/Risk Free ( <u>n</u> =9)	.55	
Available Slack ( <u>n</u> =9)	.03	
Potential Slack ( <u>n</u> =9)	.02	
Administrative		
Profitability ( <u>n</u> =4)		-.39
Profitability/Risk Free ( <u>n</u> =4)		.31
Available Slack ( <u>n</u> =5)		.16
Potential Slack ( <u>n</u> =5)		.58
Environmental		
Profitability ( <u>n</u> =8)	.71	.71
Profitability/Risk Free ( <u>n</u> =9)	.64	.64
Available Slack ( <u>n</u> =9)	.11	.11
Potential Slack ( <u>n</u> =5)	.52	.52
+ Significance of differences in correlation pairs was $p<.10$ .		
* Significance of differences in correlation pairs was $p<.05$ .		

or environmental-function specialization received mixed support.

Results in Table 5.19 do not support Hypothesis 4c. No significant differences in the correlation between environmental munificence and performance occur across TMG specializations. Thus, the hypothesis that environmental munificence will be more positively related to turnaround for firms implementing a domain creation strategy whose TMG have an environmental-function specialization than for firms whose TMG has either a core or an administrative-function specialization was not supported.

Hypothesis 5 states that firms whose TMGs fit with a firm's strategy will be able to better cope with environmental dynamism than firms whose TMGs do not have this fit with strategy. Restated formally:

H5a: Environmental dynamism will be less negatively related to performance for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMG has either an administrative- or environmental-function specialization.

H5b: Environmental dynamism will be less negatively related to performance for firms implementing a domain-offense strategy whose TMG have an administrative-function

specialization than for firms whose TMG has either an core- or environmental-function specialization.

**H5c:** Environmental dynamism will be less negatively related to performance for firms implementing a domain-creation strategy whose TMG have an environmental-function specialization than for firms whose TMG has either a core- or administrative-function specialization.

Results for these hypotheses are shown in Tables 5.20 through 5.22.

Results in Table 5.20 do not support Hypothesis 5a. The correlation between environmental dynamism and profitability for an administrative specialization is higher ( $p < .10$ ) than for a core specialization. Thus, the hypothesis that environmental dynamism will be less negatively related to turnaround for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMGs have either an administrative- or environmental-function specialization was not supported.

Results in Table 5.21 do not support Hypothesis 5b. No significant differences in the correlation between environmental dynamism and performance occur across TMG specializations. Thus, the hypothesis that environmental

Table 5.20--Retrenchment Strategy:  
Correlations and Differences in Correlations Between  
Environmental Dynamism and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Dynamism</u>	
Core		
Profitability ( <u>n</u> =10)	.03 <sup>+</sup>	.03
Profitability/Risk Free ( <u>n</u> =10)	.01	.01
Available Slack ( <u>n</u> =10)	.03	.03
Potential Slack ( <u>n</u> =10)	-.10	-.10
Administrative		
Profitability ( <u>n</u> =11)	.64	
Profitability/Risk Free ( <u>n</u> =12)	.55	
Available Slack ( <u>n</u> =12)	.44	
Potential Slack ( <u>n</u> =10)	.31	
Environmental		
Profitability ( <u>n</u> =16)		.14
Profitability/Risk Free ( <u>n</u> =17)		-.13
Available Slack ( <u>n</u> =17)		.25
Potential Slack ( <u>n</u> =16)		-.20
<sup>+</sup> Significance of differences in correlation pairs was $p < .10$ .		
<sup>*</sup> Significance of differences in correlation pairs was $p < .05$ .		

**Table 5.21--Domain Offense Strategy:  
Correlations and Differences in Correlations Between  
Environmental Dynamism and Performance  
for Different TMG Specializations**

<u>Performance Measure</u>	<u>Environmental Dynamism</u>	
Core		
Profitability ( <u>n</u> =21)	.03	
Profitability/Risk Free ( <u>n</u> =25)	.28	
Available Slack ( <u>n</u> =28)	-.07	
Potential Slack ( <u>n</u> =25)	.16	
Administrative		
Profitability ( <u>n</u> =9)	-.19	-.19
Profitability/Risk Free ( <u>n</u> =9)	-.02	-.02
Available Slack ( <u>n</u> =9)	.25	.25
Potential Slack ( <u>n</u> =9)	.21	.21
Environmental		
Profitability ( <u>n</u> =7)		-.33
Profitability/Risk Free ( <u>n</u> =9)		-.35
Available Slack ( <u>n</u> =10)		-.37
Potential Slack ( <u>n</u> =9)		-.19
+ Significance of differences in correlation pairs was p<.10.		
* Significance of differences in correlation pairs was p<.05.		

Table 5.22--Domain Creation Strategy:  
Correlations and Differences in Correlations Between  
Environmental Dynamism and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Dynamism</u>	
Core		
Profitability ( <u>n</u> =8)	.16	
Profitability/Risk Free ( <u>n</u> =9)	-.31	
Available Slack ( <u>n</u> =9)	-.09	
Potential Slack ( <u>n</u> =9)	.06	
Administrative		
Profitability ( <u>n</u> =4)		-.77
Profitability/Risk Free ( <u>n</u> =4)		.08
Available Slack ( <u>n</u> =5)		.25
Potential Slack ( <u>n</u> =5)		.23
Environmental		
Profitability ( <u>n</u> =8)	.29	.29
Profitability/Risk Free ( <u>n</u> =9)	.34	.34
Available Slack ( <u>n</u> =9)	.78*	.78
Potential Slack ( <u>n</u> =9)	-.11	-.11
* Significance of differences in correlation pairs was $p<.10$ .		
* Significance of differences in correlation pairs was $p<.05$ .		



dynamism will be less negatively related to turnaround for firms implementing a domain offense strategy whose TMG have an administrative-function specialization than for firms whose TMGs have either a core- or environmental-function specialization was not supported.

Results in Table 5.22 provide mixed support for Hypothesis 5c. The correlation between environmental dynamism and available slack is significantly higher for an environmental specialization than for a core specialization. Thus, the hypothesis that environmental dynamism will be less negatively related to turnaround for firms implementing a domain-creation strategy whose TMG have an environmental-function specialization than for firms whose TMGs have either a core- or administrative-function specialization received mixed support.

Hypothesis 6 states that firms whose TMGs fit with a firm's strategy will be able to better cope with environmental complexity than firms whose TMGs do not have this fit with strategy. Restated formally:

H6a: Environmental complexity will be less negatively related to performance for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMG has either an administrative- or environmental-function specialization.

**H6b:** Environmental complexity will be less negatively related performance for firms implementing a domain-offense strategy whose TMG have an administrative-function specialization than for firms whose TMG has either an core- or environmental-function specialization.

**H6c:** Environmental complexity will be less negatively related to performance for firms implementing a domain-creation strategy whose TMG have an environmental-function specialization than for firms whose TMG has either a core- or administrative-function specialization.

Results for these hypotheses are shown in Table 5.23 through 5.25.

Results in Table 5.23 do not support Hypothesis 6a. The correlation between environmental complexity and potential slack was significantly higher for an administrative versus a core specialization in terms of potential slack (Both potential slack and complexity are reverse-scored). Thus, the hypothesis that environmental complexity will be less negatively related to turnaround for firms implementing a retrenchment strategy whose TMG have a core-function specialization than for firms whose TMGs have

Table 5.23--Retrenchment Strategy:  
Correlations and Differences in Correlations Between  
Environmental Complexity and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Complexity</u>	
Core		
Profitability ( <u>n</u> =10)	-.23	-.23
Profitability/Risk Free ( <u>n</u> =10)	-.16	-.16
Available Slack ( <u>n</u> =10)	.10	.10
Potential Slack ( <u>n</u> =10)	-.36	-.36
Administrative		
Profitability ( <u>n</u> =11)	-.51	
Profitability/Risk Free ( <u>n</u> =10)	-.15	
Available Slack ( <u>n</u> =12)	-.31	
Potential Slack ( <u>n</u> =9)	.57*	
Environmental		
Profitability ( <u>n</u> =19)		-.33
Profitability/Risk Free ( <u>n</u> =18)		-.40
Available Slack ( <u>n</u> =20)		-.01
Potential Slack ( <u>n</u> =16)		-.08
+	Significance of differences in correlation pairs was $p<.10$ .	
*	Significance of differences in correlation pairs was $p<.05$ .	

**Table 5.24--Domain Offense Strategy:  
Correlations and Differences in Correlations Between  
Environmental Complexity and Performance  
for Different TMG Specializations**

<u>Performance Measure</u>	<u>Environmental Complexity</u>	
Core		
Profitability ( <u>n</u> =26)	-.25	
Profitability/Risk Free ( <u>n</u> =29)	-.09	
Available Slack ( <u>n</u> =32)	.04	
Potential Slack ( <u>n</u> =28)	-.09	
Administrative		
Profitability ( <u>n</u> =10)	-.23	-.23
Profitability/Risk Free ( <u>n</u> =11)	.18	.18
Available Slack ( <u>n</u> =11)	-.08	-.08
Potential Slack ( <u>n</u> =10)	-.14	-.14
Environmental		
Profitability ( <u>n</u> =9)		-.31
Profitability/Risk Free ( <u>n</u> =9)		.64
Available Slack ( <u>n</u> =10)		.17
Potential Slack ( <u>n</u> =8)		-.38
* Significance of differences in correlation pairs was $p<.10$ .		
* Significance of differences in correlation pairs was $p<.05$ .		

Table 5.25--Domain Creation Strategy:  
Correlations and Differences in Correlations Between  
Environmental Complexity and Performance  
for Different TMG Specializations

<u>Performance Measure</u>	<u>Environmental Complexity</u>	
Core		
Profitability ( <u>n</u> =9)	.45	
Profitability/Risk Free ( <u>n</u> =10)	.46	
Available Slack ( <u>n</u> =9)	.57	
Potential Slack ( <u>n</u> =9)	-.49	
Administrative		
Profitability ( <u>n</u> =4)		.71
Profitability/Risk Free ( <u>n</u> =4)		.13
Available Slack ( <u>n</u> =4)		.75
Potential Slack ( <u>n</u> =5)		.58
Environmental		
Profitability ( <u>n</u> =9)	-.22	-.22
Profitability/Risk Free ( <u>n</u> =4)	-.01	-.01
Available Slack ( <u>n</u> =9)	.75	.75
Potential Slack ( <u>n</u> =6)	-.63	-.63 <sup>+</sup>
<sup>+</sup> Significance of differences in correlation pairs was $p < .10$ .		
<sup>*</sup> Significance of differences in correlation pairs was $p < .05$ .		

either an administrative- or environmental-function specialization was not supported.

Results in Table 5.24 do not support Hypothesis 6b. No significant differences in the correlation between environmental complexity and available slack occur across TMG specializations. Thus, the hypothesis that environmental complexity will be less negatively related to turnaround for firms implementing a domain-offense strategy whose TMG have an administrative-function specialization than for firms whose TMGs have either a core- or environmental function specialization was not supported.

Results in Table 5.25 do not support Hypothesis 6c. The correlation between environmental complexity and available slack approached significance ( $p < .10$ ) for an administrative specialization compared to an environmental specialization. Thus, the hypothesis that environmental complexity will be less negatively related to turnaround for firms implementing a domain-creation strategy whose TMG have an environmental-function specialization than for firms whose TMGs have either a core- or administrative- function specialization was not supported.

#### Summary

This chapter has presented the results of tests of the dissertation's hypotheses. The relation between turnaround strategy and turnaround was not significant. Therefore, Hypothesis 1 was not supported. The importance of TMG-

strategy interaction received mixed support. Results for Hypothesis 2c showed significant differences across TMG specializations, although this relation was opposite that hypothesized. Additionally, the relation between TMG stock ownership and performance was significant, but this relation was also opposite that hypothesized. Results for Hypotheses 3a through 3c showed only a limited relation between environmental characteristics and performance. Hence, Hypothesis 3a through 3c were not supported. Finally, the combination of strategy, TMG characteristics, and environment showed a few significant relations with performance.

The next chapter discusses these results. It also draws implications for future turnaround research and discusses limitations of the present investigation. Additionally, the chapter offers suggestions for future research.

## CHAPTER 6: IMPLICATIONS AND CONCLUSION

This dissertation examined unresolved issues related to organizational turnaround. To address these issues, it developed and tested a series of hypotheses that investigated the effects of turnaround strategy, TMG characteristics, and environment on turnaround. These components are critical in a firm's alignment and, thus, to its performance. Consequently, resolving issues in turnaround research required gaining insight into these factors affecting alignment.

This chapter discusses the results presented in Chapter 5. First, it summarizes results from each hypothesis. Based on these results, it presents implications for the role of turnaround strategy, TMG characteristics, and environment in organizational turnaround. Then, it discusses limitations of the present investigation. Finally, the chapter outlines possible future research avenues.

### Summary of results

Hypothesis 1 examined the effect that turnaround strategy has on turnaround. Previous literature has focused on the efficacy of particular turnaround strategies and, to date, conflicting results have occurred. As noted, part of this ambiguity may exist because of previous studies have employed different classification schemes or they have used broad classification schemes that aggregate different



strategies. To overcome these problems, the dissertation first developed a continuum of turnaround strategies based on previous studies of decline (Miles, 1982; Zammuto & Cameron, 1985). Next, firms were classified according to the strategy that they implemented, and performance was compared across strategies. Drawing from recent empirical turnaround studies, Hypothesis 1 stated that a retrenchment strategy would outperform both a domain offense and a domain creation strategy. This hypothesis was not supported. This finding suggests that other factors have to be considered along with turnaround strategy in studying how firms regain alignment and turn around.

Another factor impacting a firm's alignment is its TMG. Managers perform boundary-spanning functions between a firm's internal processes and its environment (Andrews, 1971; Child, 1972; Daft & Weick, 1984; Hambrick & Mason, 1984). Additionally, because TMG members have different skills, motives, and interpretations of organizational and environmental stimuli, they play a critical role in reestablishing alignment and turning a firm around. To date, however, investigation of a TMG's role has been limited to studying whether incumbent TMG members should be replaced by new managers following a performance decline (Furtado & Karan, 1990; Kesner & Sebor, 1994). Thus, this dissertation is the first study to move beyond this limited

focus to examine the role that TMG talents have in organizational turnaround.

Hypotheses 2a through 2c examined the role of a TMG's functional, company, and industry background has on its ability to implement particular turnaround strategies. These hypotheses stated that a fit between TMG characteristics and turnaround strategy would lead to higher performance. Hypothesis 2a stated that firms implementing a retrenchment strategy whose TMGs had a core-function specialization would outperform firms whose TMGs had other specializations. This hypothesis was not supported. Hypothesis 2b stated that firms implementing a domain offense strategy whose TMGs had an administrative-function specialization would outperform firms whose TMGs had other specializations. This hypothesis was not supported. Hypothesis 2c stated that firms implementing a domain creation strategy whose TMGs had an environmental-function specialization would outperform firms whose TMGs had other specializations. Contrary to expectations, firms whose TMGs had administrative-function specializations outperformed firms whose TMGs had other specializations.

Another characteristic that may affect TMG motives for implementing particular strategies is stock ownership. Thus, Hypotheses 2d and 2e examined the relation between TMG stock ownership and turnaround. Hypothesis 2d stated that because increased TMG stock ownership can align a TMG's

goals with stockholders (Jensen & Meckling, 1976), higher stock ownership would lead to increased performance. Contrary to expectations, increased TMG stock ownership led to lower performance in terms of available and potential slack.

Additionally, because managers have an incentive to diversify to diffuse their employment risk in decline situations (cf. Eisenhardt, 1989; Jensen & Meckling, 1976), the effect of TMG stock ownership may be most pronounced in the context of a domain creation strategy. Thus, Hypothesis 2e stated that the relation between stock ownership and turnaround would be higher for firms implementing domain creation strategies than for firms implementing other strategies. This hypothesis was not supported.

A third component affecting a firm's alignment is the nature of the environment with which firms interact (Andrews, 1971; Hofer & Schendel, 1978; Porter, 1980). Previous turnaround research had investigated broad environmental characteristics such as industry growth rate (Ramanujam, 1984) or overall economic growth (Schendel et al., 1976). This dissertation moved beyond these narrow views of environment to investigate the effect of environmental munificence, dynamism, and complexity on turnaround. Hypothesis 3a through 3c stated that munificence would be positively related to turnaround,

whereas dynamism and complexity would be negatively related to turnaround. None of these hypotheses was supported.

The above hypotheses investigated the individual effects of strategy, TMG-strategy interaction, and environment on turnaround. To provide a comprehensive view of the turnaround process, the dissertation also studied the combined effects of these variables. Thus, Hypotheses 4 through 6 investigated the effects of environmental variables on turnaround given specific TMG-strategy interactions. These hypotheses posited that firms whose TMGs specializations fit with the firm's turnaround strategy would be better able to take advantage of environmental munificence or better mitigate problems created by environmental dynamism and complexity. Thus, Hypotheses 4a through 4c stated that environmental munificence would be more positively related to performance for firms whose TMG-strategy profiles matched those posited in Hypotheses 2a through 2c than for firms whose TMGs had other profiles. Hypothesis 4b, which stated that environmental munificence would be more positively related to performance for firms implementing a domain offense strategy whose TMGs had an administrative specialization than for firms whose TMGs had other specializations, received mixed support. Hypotheses 4a and 4c were not supported.

Hypotheses 5a-5c stated that environmental dynamism would be less negatively related to performance for firms

whose TMG-strategy profiles matched those posited in Hypotheses 2a through 2c than for firms whose TMGs had other profiles. Hypothesis 5c, which stated that environmental dynamism would be less negatively related to performance for firms implementing a domain creation strategy whose TMGs had an environmental specialization than for firms whose TMGs had other specializations, received mixed support. Hypotheses 5a and 5b were not supported.

Hypotheses 6a through 6c stated that environmental complexity would be less negatively related to performance for firms whose TMG profiles matched those posited in Hypotheses 2a through 2c than for firms whose TMGs had other profiles. Hypothesis 6a stated that environmental complexity would be less negatively related to performance for firms implementing a retrenchment strategy whose TMGs had a core specialization than for firms whose TMGs had other specializations. Contrary to expectations, the opposite relation was found. Hypotheses 6b and 6c were not supported.

Results from these integrative hypotheses, though limited, suggest the importance of studying turnaround in terms of comprehensive alignment among strategy, TMG characteristics, and environment. Investigating each of these three components individually provided only limited insight into turnaround. Examining performance as a function of the alignment among its strategy, and top

management characteristics, and environment, however, offered some additional insights into turnaround.

#### Discussion of significant findings

Several implications can be drawn from these results. These implications will be discussed in terms of strategy, TMG characteristics, environment, and the integration of all three factors.

For research on turnaround strategies, the dissertation provides two important results. First, preliminary analysis showed that three of the strategies on the continuum existed in the sample. Although based on cluster analysis, which can find patterns in random data (Barney & Hoskisson, 1990), these results provide some support for framing turnaround strategies in terms of the continuum proposed in this dissertation. In addition, the continuum is based on previous studies of decline (Miles, 1982; Zammuto & Cameron, 1988), and it is collectively exhaustive (i.e., all turnaround strategies can be placed on the continuum; cf. Chrisman, Hofer, & Boulton, 1988). Thus, the continuum may prove useful for subsequent turnaround studies by standardizing labels given to strategies and by providing specific instead of consolidated strategies that firms can implement to turn around. It should also be noted that one strategy on the continuum, domain consolidation, did not emerge as a discrete strategy. Possible reasons for this will be discussed below.

Second, the lack of support for Hypothesis 1 also has important implications for turnaround research. The finding that none of the turnaround strategies consistently outperformed all other strategies indicates four possible situations--each firm's turnaround process may be too idiosyncratic to generalize, equifinality may be operating, other factors along with strategy may need to be considered, or methodological issues may need to be addressed. The first three possibilities will be discussed next. Methodological issues will be discussed in the Limitations section.

First, the lack of significant results may indicate that turnaround processes may be idiosyncratic for each firm. For example, examining the turnaround at Chrysler, one of the most heralded success stories in U.S. corporate history, shows some unique events. One critical event that helped Chrysler turn around was receiving U.S. government loan guarantees. Thus, part of Chrysler's turnaround involved employing a political strategy instead of the competitive strategies examined in this dissertation (Hofer & Schendel, 1978). Although each firm's turnaround undoubtedly has unique components, certain aspects may generalize. For example, Chrysler's turnaround success also resulted in part from its domain offense strategy which included introducing new products such as the K-car and minivan (Iacocca, 1983).

These results may also indicate that some turnaround strategies may be equally effective in helping firms recover (i.e., equifinality may be operative, Thomas & Venkatraman, 1988). Previous strategy research has found that more than one strategy may lead to high performance in a particular situation (Hambrick, 1983; Snow & Hrebiniak, 1980). This research has also shown, however, that strategies may vary in effectiveness across situations. In terms of turnaround research, the possibility that equifinality may be operative indicates that turnaround studies may need to specify the context within which a particular turnaround strategy will be effective. For example, Pearce and Robbins (1993) found that firms implementing a retrenchment strategy outperformed those not implementing a retrenchment strategy within the context of a declining industry. Results from this dissertation indicate, however, that this strategy is not the most effective strategy across all contexts.

Third, these results may indicate that turnaround research needs to include variables along with a firm's strategy. Reviewing previous studies in Table 1, however, shows that many studies have focused primarily on the relation between a firm's turnaround strategy and its subsequent performance. Results from this dissertation suggest that this focus may be too narrow given that several other factors besides strategy affect a firm's alignment (Summer et al., 1990). Thus, no one "best" strategy exists



for firms in all turnaround situations, and other factors may need to be considered.

Another factor that could be considered is the role of a firm's TMG in turnaround. By focusing on each TMG's functional, company, and industry background (White et al., 1994), the present study moved beyond simply looking at the frequently researched incumbent versus new management distinction to examine the skills that managers need to implement particular turnaround strategies. Thus, the dissertation investigated performance implications of TMG-strategy interaction for the first time in the context of turnaround strategies.

Results show that firms implementing a domain offense strategy whose TMGs have either an environmental or administrative specialization outperform those firms whose TMGs have a core specialization. This result is consistent with previous research that shows TMGs having an internal focus do not implement external-oriented strategies well (Gupta & Govindarajan, 1984). Results also show that firms implementing a domain creation strategy whose TMGs have an administrative specialization outperform firms whose TMGs have other specializations. This result, however, is counter to Hypothesis 2c, which posited that an environmental specialization would fit best with domain creation strategy.

Another important finding is that a core specialization never outperformed other specializations. This specialization had lower performance when matched with domain offense strategy (Hypothesis 2b) and in dealing with environmental complexity (Hypothesis 6a). These results offer some support for earlier research that recommended replacing incumbent managers to overcome organizational inertia. These results, however, only point to the benefit of replacing managers when their experience is limited to one company or to production within one industry.

Analysis of the stock hypotheses (Hypotheses 2d and 2e) also provided interesting results. First, contrary to expectations, increased TMG stock ownership led to decreased performance in terms of slack. Three possible explanations may account for these contrary findings. First, these results may reflect increased risk taking propensity by incumbent or new management in a turnaround situation because of a firm's poor performance. Prospect theory argues that when faced with poor performance, a TMG may engage in risk-seeking behaviors in hopes of reversing a firm's fortunes (Bowman, 1980; Fiegenbaum & Thomas, 1988; Kahneman & Tversky, 1979). Because TMG members that owned stock in a declining firm faced financial risk from declining stock value along with human capital risk from job loss if a firm failed (cf. Zajac & Westphal, 1994), they may have engaged in risk-seeking behaviors in an attempt to

turnaround. Taking on additional debt and lowering liquidity increased the risk of firm, but these actions also provided additional capital for investing in actions that may have led to turnaround.

Second, these results may reflect increasing risk taking propensity of new managers. Average management turnover was 49.27 percent (sd = 34.20) in firms with stock information available. Thus, on average, half of the TMG in each firm consisted of new managers. If these new managers had higher risk-taking propensities than incumbent managers, this could also account for increased debt usage and lower liquidity. This view of new managers as risk takers is consistent with the psychological profile of turnaround managers noted in the practitioner literature (e.g., Bibeault, 1982; Gerstein & Reisman, 1983).

Third, in terms of potential slack, these results may reflect an attempt to increase stockholder wealth by increasing a firm's leverage. Because interest on debt is tax-deductible, TMGs may be able to pass a portion of a firm's cost of capital from stockholders to the government (Lubatkin & Chatterjee, 1994). Consequently, within limits, TMGs can create value for stockholders (including themselves) by taking on additional debt (Kaplan, 1989).

In terms of examining the effect of a firm's environment on its turnaround effort, the present study moved beyond narrow views of the environment such as

industry growth rates to examine a broader view of environmental munificence. Additionally, the role of environmental dynamism and complexity were also examined. Results show that a firm's environment has only a limited relation with its turnaround. Dynamism and complexity were significantly related only to profitability.

Support for this hypothesis would have indicated that environmental determinism plays a major role in organizational turnaround (cf. Hannan & Freeman, 1977, 1984; Scherer, 1980). As with Hypothesis 1, however, the lack of significance for these variables should not be surprising. Although the environment is an important component affecting a firm's alignment, examining only a firm's environmental characteristics may present too narrow of an explanation. Evidence that firms can sustain performance even in industries experiencing decreasing demand (Harrigan, 1980; Zammuto & Cameron, 1984) and that firms can fail even in industries experiencing increasing demand (D'Aveni, 1989) provides additional support for moving beyond a narrow focus on environmental characteristics. Furthermore, previous research has also shown that environmental characteristics have a limited impact on firm performance relative to firm-specific factors such as strategy (Rumelt, 1991). Thus, other factors along with environmental factors need to be considered when examining how firms regain alignment and turnaround.

These results should not be interpreted as indicating that environmental characteristics do not affect a firm's turnaround. The effect of the environment, however, may depend on each firm's situation. For example, additional analysis showed that munificence is significantly related to profitability ( $p < .05$ ) for firms implementing a retrenchment strategy and to profitability relative to the risk free rate ( $p < .01$ ) for firms implementing a domain creation strategy. These results indicate that environmental characteristics can affect turnaround. Focusing only on environmental variables as a factor in a firm's turnaround, however, is too narrow a view and other factors need to be considered.

The integrative hypotheses (Hypotheses 4 through 6) begin to provide insight into the complexity of the turnaround process. Turnaround strategy (Hypothesis 1) was not significant and environmental characteristics (Hypothesis 3) were limited in explaining performance. When the combined effects of turnaround strategy, TMG characteristics, and environment characteristics were examined, however, some differences in performance occurred. Although these results are limited, they provide some evidence of performance benefits gained from achieving fit between a firm's strategy, TMG characteristics, and environment.

Overall, these results indicate that focusing on important components of a firm's alignment may provide

insights into the turnaround process. Moreover, because the dissertation employs a cross-industry sample, these results should be generalizable. This generalizability, however, does trade off specific recommendations for a given industry. This and other limitations will be discussed next.

### Limitations of results

As with all studies, this dissertation has limitations that should be noted. These include limited statistical power, survival bias, limited focus on process variables, and sample characteristics. These limitations will be discussed next. Theoretical and measurement issues will also be highlighted.

#### Statistical power

Even drawing from a large database such as COMPUSTAT, sample size may serve as an explanation for lack of significance for some of the hypotheses. This lack of power became especially problematic for Hypotheses 4, 5, and 6 where the maximum power attained was only .32 (Cohen, 1977) because of the small sample sizes created by dividing firms by strategy and then again by TMG specialization. Thus, results should be viewed as conservative tests of these hypotheses.

One way to overcome this limitation may be to relax the stringent performance definition employed in this dissertation. For the current study, firms had to have

profitability below the risk-free rate and decreasing slack for three years. Thus, firms that were selected were in dire straits. Other recent research (e.g., Robbins & Pearce, 1992) has examined decline employing a two-year time horizon. Given the severity of the present decline definition, relaxing this definition slightly may be warranted. Less stringent criteria would still indicate that a firm was in decline, but these criteria would also allow for a larger sample to be selected to investigate these hypotheses.

#### Survival bias

Another limitation of the reported investigation is that all the firms in the focal sample were still operational at the end of the focal timeframe. What is not apparent from these results is how many firms implemented a strategy or attained a strategy-TMG match and still failed (i.e., declared bankruptcy). Thus, including these failed firms may impact the results found in this dissertation (cf. Barker & Mone, 1994). Additional research is needed to examine the extent of this survival bias especially in turnaround literature where firm survival is such a focal issue.

#### Process variables

A third limitation to the present study is that it examines each firm's realized strategy (Mintzberg, 1978). The process of how a turnaround strategy is decided upon,

the political process involved within a firm facing decline, and issues related to implementing the strategy throughout the firm were not examined. For example, TMG backgrounds may predispose them to selecting a particular turnaround strategy (Michel & Hambrick, 1992). Process issues in a turnaround are undoubtedly critical in the turnaround process (Barker & Mone, 1994) but were beyond the scope of the present dissertation.

#### Sample characteristics

Although this cross-industry sample may be generalizable, it also has some limitations. First, results from this dissertation are general. Specific decline situations in different industries may require that additional variables be considered. Suggestions for some of these variables are discussed below. Second, only U.S. public firms are included in this sample. Private firms may have different turnaround issues because owners may have different goals and different required rates of return than stockholders in public firms (Porter, 1980). Additional research is also necessary to see if these results generalize to non-U.S. firms because of different industry structures and stakeholder relations (Porter, 1990).

#### Measurement issues

Some possible limitations related to measuring strategy, TMG characteristics, and environmental variables should also be noted. In terms of strategy, the lack of a



domain consolidation strategy needs to be addressed. In this study, domain consolidation was grouped together with an efficiency strategy. Although both strategies involve cutting back on assets and expenses, domain consolidation represents a much more drastic strategy. The fact that this strategy did not emerge as a distinct strategy in the present sample is surprising given the recent increased frequency of corporate domain consolidation (Cameron, Freeman, & Mishra, 1993; DeWitt, 1993). Two possible reasons may explain this result. First, firms may only take drastic action such as selling entire divisions when faced with severe decline situations (Bibeault, 1982). Consequently, several firms implementing this strategy may have been eliminated from the sample because they eventually went bankrupt. This possibility again highlights potential survival bias within the sample. Second, the measures employed for domain initiative and domain reduction may need further refinement. Although these measures have been employed in previous research (Hambrick & D'Aveni, 1988) and have been found to be valid measures for assessing changes in a firm's domain (Montgomery, 1982), they may be too coarse to differentiate between retrenchment and domain consolidation. A possible alternative may be to employ an entropy measure of diversification (Palepu, 1985) that weights the relative size of a firm's business segments based on sales. Employing this finer-grained measure would

also allow investigation into whether firms sell major divisions in turnaround attempts or trim peripheral divisions in their attempts to regain alignment and turn around.

Measurement issues related to TMG characteristics also need to be addressed. The limited findings suggest that four issues may be important. First, different TMG characteristics may have only a limited impact on a TMG's ability to implement a turnaround strategy. Some researchers have suggested that TMGs may not be as influenced by functional "blindness" as academics have proposed (Walsh, 1988) or that decision making changes so much at the top level that TMGs must move beyond their functional biases and rely on a wider range of information sources (Waller, Huber, & Glick, 1995). Thus, although TMG characteristics have been shown to impact the strategy-performance relation for some strategies (e.g., diversification strategy, Michel & Hambrick, 1993), this impact may be limited in the context of turnaround strategies.

Second, the TMG specialization typology employed in this dissertation may need to be reconsidered. This typology has several advantages over previous classifications including it is theoretically based and empirically derived, it integrates functional specialization and executive employment within a firm into a single measure, and it overcomes problems in previous research

resulting from using different operationalizations of TMG characteristics. The typology, however, was developed at the individual level of analysis and may not be as applicable at the group level (i.e., TMGs). Specifically, because each TMG was not a "pure" type (i.e., each team consisted of managers with core, administrative, and environmental backgrounds), error may have been introduced. Although hypotheses were developed recognizing that TMGs would have a "dominant background" instead of a "pure background", the fact that some TMGs were classified as having a particular specialization when the TMG had less than half of its members from that specialization may have influenced the results.

Third, the method employed in this dissertation to designate each firm's TMG may not have accounted for all a firm's TMG members. TMGs have been measured in several ways including inside board members (Bantel & Finkelstein, 1994), top two management levels (Wiersema & Bantel, 1993), managers above the level of vice president (Michel & Hambrick, 1992), or managers designated by the CEO (Bantel & Jackson, 1989). Although asking CEOs exactly who was a member of the TMG may have been a preferable method, limited access to top managers and possible problems from recalling TMG members up to 20 years ago precluded employing this approach.

Fourth, the relation between TMG characteristics and strategy may be conceptualized incorrectly. Following the

majority of previous TMG-strategy interaction research (e.g., Gupta & Govindarajan, 1984; Michel & Hambrick, 1992), this dissertation hypothesized that firms whose TMGs have specializations that match particular turnaround strategies would outperform firms whose TMGs do not have this match. This hypothesis was tested by examining performance differences across TMG specializations for each strategy. Thus, the dissertation tested this relation employing a moderation perspective. Although moderation represents one way of examining performance effects of TMG-strategy fit, other perspectives exist (Hambrick, 1989). One alternative conceptualization may be that turnaround strategy and TMG characteristics are only two of several important variables in examining turnaround. Consequently, insights may be possible from examining turnaround from a configurational approach (Miller & Friesen, 1977; Mintzberg, 1990). Under this conceptualization of fit, firms could be classified employing a set of theoretical attributes to derive profiles of successful and unsuccessful turnaround strategies (cf. Hambrick, 1983). This conceptualization would allow expanding beyond the linear, bivariate relation between turnaround strategy and TMG specialization examined in this dissertation to include other potentially important variables such as a TMG's decision processes (Staw et al., 1981) and a firm's external relations (Pfeffer & Salancik, 1978). This conceptualization would also facilitate

assessing the possibility that more than one turnaround configuration can be successful within a particular environment (i.e., equifinality could be investigated; Doty, Glick, & Huber, 1993; Venkatraman, 1989).

Methodological issues related to the stock hypotheses also need to be addressed. Previous research based on agency theory hypothesized a positive relation between TMG stock ownership and a firm's performance (Eisenhardt, 1989). Thus, this relation was also hypothesized to apply in turnaround situations (Hypothesis 2d). Recent empirical evidence has shown, however, that the relation between TMG stock ownership and a firm's performance may not be linear. Specifically, as a TMG increases its stock ownership, a larger percentage of the TMG's income is tied to a firm's performance. Consequently, a TMG may become risk averse and make decisions that run counter to stockholder wealth maximization beyond some ownership point because a greater part of the TMG's income is at risk (Wright, Ferris, Sarin, & Awasthi, 1996). Thus, the linear relation hypothesized in this dissertation may not hold over the entire range of TMG stock ownership.

Additionally, agency theory contends that TMGs have an incentive to implement a domain creation strategy to diversify their employment risk, even if this strategy does not create additional value for stockholders (Jensen & Meckling, 1976). When TMGs own stock in the company, their

interests become more aligned with stockholders and, therefore, it is expected that they would only implement a domain creation strategy if this strategy was expected to create value. Thus, the relation between TMG stock ownership and turnaround should be higher when firms implement a domain creation strategy than under other strategies (Hypothesis 2e). Theoretical and methodological issues may account for a lack of significant findings for this hypothesis. First, in terms of theoretical issues, the findings may result from applying agency theory arguments to a situation where such arguments may not hold.

Specifically, according to agency theory, a TMG may diversify a firm to reduce a firm's risk and, by extension, the TMG's employment risk. This reduction in a firm's risk, however, results from stabilizing (i.e., reducing the variability of) the firm's income stream. Although stabilizing a firm's income stream can reduce the threat of bankruptcy (Lubatkin & Chatterjee, 1994), stabilizing this income stream at a low level of performance could actually increase a TMG's employment risk because TMGs may be fired for a firm's chronic poor performance. Thus, the unique situation faced by TMGs in turnaround situations may limit agency theory arguments.

Additionally, the findings may result from three methodological issues. In this sample, only 18 firms implementing a domain creation strategy had stock data

available. Thus, a larger sample may have yielded stronger results. A second methodological issue occurs because the stock data were collected over the entire decline and turnaround process. Some firms, however, experienced dramatic changes in the amount of stock ownership (e.g., the departure of a founder). Thus, a shorter timeframe may be required to investigate the effect of stock ownership. Third, from a measurement perspective, these results could have also occurred because a TMG's stock options were not included. Because of the theoretical difficulties in valuing these options presented above, the hypotheses were tested without including options. Options, however, may substantially alter a TMG's stock holdings and, thus, TMG members' motives. For example, during Chrysler's performance nadir in 1981, the company's CEO, Lee Iacocca, only owned 1000 shares of Chrysler stock. He held options, however, that gave him the right to acquire up to an additional 320,000 shares (Chrysler's 10-K, 1981). Consequently, additional research may be warranted to determine if stock options impact the results found in this study.

Measurement issues may also have impacted the environmental hypotheses. Three possible explanations exist for the limited significant results for these hypotheses. First, the variables employed may have inadequately measured environmental characteristics. For example, Dess and Beard

(1984) define dynamism as change that is difficult to predict and that heightens uncertainty for TMGs. The measure of dynamism employed in this dissertation does gauge variability of sales and employment, but these measures may not tap into the "unpredictability" of this variability. Although this measurement issue may provide a partial explanation for the limited results, previous research (e.g., Keats & Hitt, 1988; Palmer, 1994) supports the use of these variables to measure environmental characteristics. Second, these results may have occurred because of the timeframe employed by the study. Two environmental variables, munificence and dynamism, were measured as changes in these characteristics over a firm's entire decline. Previous research has shown, however, that an environment's impact on a firm in financial trouble may be sudden and dramatic. For example, Hambrick and D'Aveni (1988) found that firms experiencing a downward performance spiral often failed following a sudden environmental shift. Environmental variables, therefore, may have to be measured employing a shorter timeframe. Third, the results may have occurred because of the characteristics of the particular sample employed. The mean sales growth rate for industries was 8.91 ( $sd = 5.16$ ), which indicates that most firms were operating in mature industries (Anderson & Zeithaml, 1984). These industries are characterized by slow growth and established market shares (Hambrick & Schechter, 1983).



Consequently, most firms in the sample operated in fairly predictable environments. The relation between environmental variables and turnaround may be stronger in emergent or growth industries (cf. Eisenhardt & Schoonhoven, 1991).

#### Future research

The results and limitations of this dissertation also indicate possible future research opportunities. These possibilities will be discussed in terms of turnaround strategy, TMG characteristics, and environmental variables.

In examining turnaround strategies, future research could adopt a resource-based view of the firm (Barney, 1991; Wernerfelt, 1984) and examine the implications that resources have on the relation between turnaround strategy and performance. This dissertation examined TMG backgrounds, which can serve as resources for firms (Castanias & Helfat, 1991). Other variables that future research could examine include a firm's brand name and organizational culture (Barney, 1991).

In terms of examining TMG issues, future research could also examine the role of other key stakeholders and their influence on a TMG's actions. First, institutions with large stock holdings (e.g., pension funds) in a declining company may exert important influence on TMG's actions (Bethel & Liebeskind, 1993). Second, from a resource dependence perspective (Pfeffer & Salancik, 1978), other

stakeholders may play an important role in turnaround. For example, the role of a firm's board of directors may be an important variable because outside directors may be able to provide access to capital (Johnson, Hoskisson, & Hitt, 1993; Stearns & Mizruchi, 1993).

Future research could also investigate other aspects of TMG-strategy interaction. This dissertation is the first to investigate the effects of TMG-strategy interaction on turnaround, and future studies could build on findings in this study. For example, hypotheses in this dissertation examining domain creation looked only at this strategy in general as expanding beyond a firm's current industry scope. Another factor to consider would be whether this domain creation results in related or unrelated diversification (Ramanujam & Varadarajan, 1989). The TMG specializations may have different interaction effects for these different types of domain creation. For example, for related diversification, an administrative specialization may fit better with the strategy whereas for unrelated diversification, an environmental specialization might provide a better match (cf. Michel & Hambrick, 1992).

Future research could also examine additional environmental characteristics that impact turnaround. This dissertation investigated environmental variables munificence, dynamism, and complexity to examine industry variables, but other industry variables may also warrant

future research. One such variable is the amount of managerial discretion present in an industry (Finkelstein & Hambrick, 1992; Hambrick & Abrahamson, 1995; Hambrick & Finkelstein, 1987). Managerial discretion represents the degree of latitude managers have in making organizational decisions (Hambrick & Finkelstein, 1987). For example, a utility company's TMG has to contend with regulatory constraints that allow fewer strategic choices than the TMG of a computer company (Finkelstein & Hambrick, 1992). In a turnaround context, this ability to make strategic decisions may also be critical. For example, although domain consolidation represents a possible turnaround strategy, some firms may face barriers to exiting an industry such as severance contracts, nonmarketable assets, emotional attachment, or relationship with other business units within the firm (Duhaime & Grant, 1984; Porter, 1980). Leaving an industry or major segment, therefore, may be prohibitively expensive for firms facing these barriers even if the firm's performance within a particular industry has declined substantially. Consequently, the performance implications of turnaround strategies such as domain consolidation may vary with different levels of managerial discretion.

#### Summary

This dissertation has examined issues related to organizational turnaround. It has examined the role of strategy, TMG characteristics, and environment and found

that employing an integrative view provided insight into the turnaround process. In addition, the dissertation developed a continuum of turnaround strategies and highlighted important performance measurement issues that should be considered in future research. Finally, it discussed some limitations and presented ideas for future research.

In conclusion, this dissertation begins to provide insights into important aspects of the turnaround process and provides the basis for future research. It shows that there are no simple answers in turnaround (e.g., implement one best strategy or simply replace all the managers), and it offers a broader conceptualization of the turnaround process.

## NOTES

1. Top management groups have been defined differently across studies. In general, the term top-management group refers to the upper tier of management that is responsible for formulating and implementing strategic direction. A firm's chief executive officer (or president), chief operating officer, and vice presidents in charge of major corporate divisions are generally included in the definition.
2. Stanwick (1992) is the only study that empirically examines management characteristics in turnaround situations. In this study, he investigated the impact that the source (i.e., insider versus outsider) and functional background of a newly-hired CEO has on turnaround strategy selection and subsequent performance. The dissertation will build on these results by investigating how TMG characteristics interact with particular turnaround strategies and how this interaction affects turnaround performance.
3. Ramanujam's finding that 90.3 percent of manufacturing firms in the COMPUSTAT data base experienced three or more years of declining ROI from 1962-1979 raises further doubts about the adequacy of employing only profitability to measure decline and turnaround.
4. The Miles/Zammuto/Cameron classification scheme also includes "domain defense" and "domain substitution" strategies. Domain defense involves political strategies and building external support. Domain substitution involves moving into a totally new business in situations where a firm's current niche totally collapses. Both of these strategies fall outside the scope of this dissertation and, therefore, are reserved for future research.
5. Research on TMGs has also examined the role of other characteristics such as age or educational background. Little evidence exists, however, in the decline and turnaround literature that would suggest that these characteristics affect implementation of a turnaround strategy.
6. White et al.'s (1994) framework for classifying TMGs according to career experiences offers three major benefits relative to previous operationalizations. First, their typology is theoretically based and empirically derived from a sample of 544 Fortune 1000 executives. Second, their typology integrates functional specialization and executive employment with a company (i.e., insider versus outsider) into a single measure. This measure allows researchers to

make important distinctions such as differentiating among executives who have spent their entire career with one company from those who have spent their entire career within one industry, but with several companies from those who have career experiences in several industries. Third, the typology overcomes problems in previous research resulting from different operationalizations of TMG characteristics. For example, previous studies have defined TMG functional specializations using classification schemes ranging from 2 possible functions (Thomas et al., 1991) to 12 possible functions (Bantel & Jackson, 1989). These different operationalizations have made comparisons across studies difficult.

7. Bourgeois (1981) argues that slack can also represent inefficiency within an organization. He contends that the correlation between slack and effectiveness may be inverted U-shaped because too much slack may indicate severe inefficiency. Given the proposed study's focus low slack situations, however, problems associated with excess slack are unlikely to be a problem. Future research should also explore problems and remedies for firms that have too much slack which could build on the "success breeds failure" argument (Nystrom & Starbuck, 1984).

8. Other measures of slack have also been suggested. For example, Bourgeois and Singh (1983) and Singh (1986) used selling, general, and administrative expenses/sales as a measure of slack. This measure, however, may reflect inefficiency more than slack (Hambrick & D'Aveni, 1988).

9. Although examining expenses such as advertising separately would have been preferable, COMPUSTAT often aggregates these expenses under sales, general, and administrative (SGA) expenses. SGA includes marketing and advertising expenses, however, and, thus, provides a suitable measure for expenses.

10. The data were not standardized prior to cluster analysis for two reasons. First, standardization may reduce or eliminate meaningful differences among variables (Edelbrock, 1979; Ketchen & Shook, in press). Second, because all variables were measured as a percentage change from a base year, the ranges did not markedly differ across variables (Hair et al., 1992).

11. The severity of firm's financial health can be determined employing Altman's (1988) Z-score by comparing it to the following scale:

Z = 3.00 or above indicates that a firm will not go bankrupt.

$\underline{Z}$  = 1.81 or below indicates that a firm will go bankrupt.

$\underline{Z}$  = between 1.81 and 3.00 falls into a "zone of ignorance" for predicting whether the firm will go bankrupt.

<sup>12.</sup> The market share measure precluded considering focus strategies in the regression equation. Although this is a limitation, it may not be a major concern given that the sample is comprised of large, public firms and each firm's market share is measured in its primary industry. These large firms are unlikely to employ a focus strategy in their primary markets.

<sup>13.</sup> For example, employing the same source for TMG data as this dissertation, Barbosa (1985) found 82 percent of a random sample of corporate officers identified their own dominant functional background as the same as he had identified from Dun and Bradstreet's Reference Book of Corporate Management.

<sup>14.</sup> Note that an analysis employing a Harris-Kaiser orthogonal rotation, which accounts for correlations among factors, yielded similar results.

<sup>15.</sup> Note that analyses including the outliers obtained similar results.

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## VITA

Franz Theodore Lohrke was born the son of Gene and Joan Lohrke on September 19, 1966 in Norman, Oklahoma. He earned his Bachelor of Arts degree with a major in Business Administration and minor in Spanish from Flagler College in 1988. He received his Master of Business Administration degree from the University of Iowa in 1990. He then fulfilled the requirements for a Doctor of Philosophy degree in Business Administration (Management) at Louisiana State University in 1996.

Franz has published two articles, presented several meeting papers, and co-authored two cases. His research interests include organizational turnaround, global strategies, international issues for small businesses, strategic alliances, and organizational configurations. Franz will join the faculty of the Department of Management and Management Information Systems at the University of Southern Mississippi in Long Beach, Mississippi, in June 1996.

## DOCTORAL EXAMINATION AND DISSERTATION REPORT

**Candidate:** Franz Theodore Lohrke

**Major Field:** Business Administration (Management)

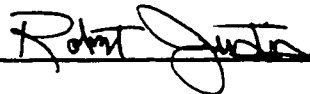
**Title of Dissertation:** The Performance Effects of Strategy,  
Top-Management Characteristics, and Environment: An Integrative  
Study of Firm Decline and Turnaround

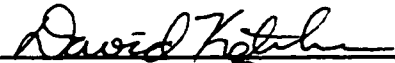
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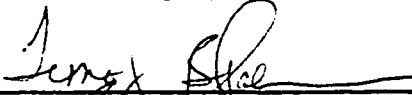
  
Major Professor and Chairman


  
Dean of the Graduate School

### EXAMINING COMMITTEE:











**Date of Examination:**

May 16, 1996