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**New and small venture performance: The interactive effects
of entrepreneurial growth propensity, strategic management
practices, and industry growth**

Johnson, Bradley Rand, Ph.D.

Saint Louis University, 1989

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**NEW AND SMALL VENTURE PERFORMANCE: THE INTERACTIVE
EFFECTS OF ENTREPRENEURIAL GROWTH PROPENSITY,
STRATEGIC MANAGEMENT PRACTICES, AND
INDUSTRY GROWTH**

Bradley R. Johnson, B.S., M.B.A.

A Dissertation Presented to the Faculty of the Graduate
School of Saint Louis University in Partial
Fulfillment of the Requirements for the
Degree of Doctor of Philosophy

1989

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1989

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**NEW AND SMALL VENTURE PERFORMANCE: THE INTERACTIVE
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The purpose of this study was to attempt to identify the traits that differentiate the relatively few small businesses that generate significant growth (entrepreneurial firms) from low-growth small businesses.

In this study firm performance was studied as a function of three interacting sets of variables: the growth propensity of the owner/manager, strategic management practices, and the industry growth rate. The objective was to test and refine a model of small firm growth and overall performance.

A survey containing the Business Management Practices Survey (BMPS) developed by the author and the Miner Sentence Completion Scale-Form T (MSCS) was mailed to the population of firms in two small business dominated industries in Missouri, Iowa, Kansas, and Nebraska. This yielded 293 responses, 187 from the dry cleaning industry, and 106 from the video rental industry.

The analysis of the data revealed a significant positive relationship between owner/manager growth propensity, as measured by the MSCS, and perceived firm performance. Although MSCS scores did not differ significantly by industry, it was found that trade association members in the video industry scored significantly higher than did non-members. In

addition, it was found that trade association members were significantly higher on three of four perceived performance measures.

Little support was found for the hypothesized positive relationship between planning formality and firm performance. The total sample analysis yielded a set of identifiable competitive strategies consistent with Porter's three generic strategies. Significant differences in perceived performance were found across strategic clusters in the total sample and in each of the industry sub-samples when analyzed separately. Specifically, differentiation strategies emerged as superior to low-cost strategies. Multiple regression analysis indicated that industry was significantly related to growth in sales, and that both industry and strategic orientation were significantly related to growth in employees for the total sample.

TO MY WIFE, JAN,
WITHOUT WHOSE LOVE, PATIENCE,
AND ENCOURAGEMENT THIS PROJECT
COULD NOT HAVE BEEN COMPLETED

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CHAPTER 1

RESEARCH PROBLEM

The study of entrepreneurship has been gaining momentum over the past few years. This growing interest can be explained in part by an element of mythology and legend associated with the romantic notion of "rags to riches" as individuals fight against the odds to achieve the "American Dream" of financial independence and material success (Kets de Vries 1977). It has also been suggested that the entrepreneur contributes disproportionately to the economy of a nation through innovation and new enterprise formation. In the words of David Birch (1979, 31):

Small firms, despite their difficulties in obtaining capital and their inherently higher death rates are still, on balance, the major generators of new jobs in our economy and, in slower growing areas, the only significant provider. Any economic development policy aimed at stimulating job growth must come to grips with this reality. It is not the relatively few large corporations, about which we hear so much in the press, that are bringing stability to older areas. It is the thousands of anonymous smaller firms that are carrying all the burden in the older sections of our country--and the lion's share in the growing areas as well.

Entrepreneurial activity is not only the stuff of legends, but is also a critical factor in the generation of economic growth.

There exists, at the present, no generally accepted definition of entrepreneurship. It has become imperative for every researcher to clearly identify the "entrepreneurs" being studied and to set the dimensions of "entrepreneurship" as conceived in a given study. The operational definition of entrepreneur to be used in this study will be a combination of several recently articulated definitions.

Carsrud, Olm, and Eddy (1986, 368) define the entrepreneur as follows:

An entrepreneur is an individual who is willing and able to engage in personal risk taking and responsibility while at the same time combining the means of production and credit, in the expectation of realizing profits and/or other specific objectives such as power and prestige.

The act of creating a new venture is considered to be an essential aspect of entrepreneurship. Therefore, the entrepreneur must possess both the desire and the capability to bring about the combination of the means of production and credit.

Sexton and Bowman (1985, 136) stress a different aspect of entrepreneurship in their definition:

In essence, the entrepreneur is different from street hawkers, independent operators, and small business owners with regard to a planned approach toward growth and profit. The planned approach toward growth and profit is essentially strategic management coupled with innovative approaches to the marketplace and firm.

The essential idea here is that of planned growth beyond the income substitution level. While the creation of a new business enterprise is almost

certainly an entrepreneurial act, entrepreneurship as defined in this study requires something more. Entrepreneurship as conceived here implies the conscious effort to grow the firm through innovative, strategic management practices. The assumption is that growth is not inevitable, but reflects a conscious decision on the part of the entrepreneur. From an economic development standpoint the justification for focusing on growth orientation is that it is the relatively small number of rapidly growing entrepreneurial firms that generate the majority of the new jobs (Sexton and Bowman 1986b).

The entrepreneur as conceptualized in the present study is similar to the those studied by Sandberg (1986). According to Sandberg an entrepreneur is "someone who undertakes to initiate and aggrandize a profit-oriented business unit, with financial returns the measure of success" (1986, 34, emphasis added). This entrepreneur is similar to the "opportunistic" type identified by Smith (1967).

This definition requires the initiation of a new business unit where none existed before. This is a necessary but not a sufficient condition. To be considered a "true" entrepreneur here, one must be not only a founder, owner, and manager, but must also explicitly plan to grow a profit-oriented enterprise. This somewhat narrow definition excludes many business

owner/managers who would be considered entrepreneurs elsewhere. It excludes the "marginal" business established primarily to provide income substitution for the owners and professionals who go into business only to sell their own expertise and further personal goals. It also excludes the "intrapreneur" or the corporate innovator. While corporate innovation is clearly an important and challenging process, and may involve similar success criteria, it is the performance of "independent" business enterprises which will be the focus of this study.

For purposes of this study an entrepreneur is considered to be someone who is involved in the initiation, ownership, and management of a business and is explicitly growth oriented as demonstrated by strategic management practices intended to generate growth. However, the initiation process will not be explicitly considered. In essence this study will attempt to differentiate between the characteristics and practices of growth-oriented venture owner/managers ("entrepreneur") and income substitution ("Mom and Pop") business owner/managers.

The possibility exists that non-founder business owner/managers who pursue innovative, growth-oriented strategies will be found in the sample taken for this study. These owner/managers could also be classified "entrepreneurial" even though not having been involved

the founding of the enterprise. This potential subset of "entrepreneurial" owner/managers will also be carefully studied if found to exist in the sample.

Models of Entrepreneurship

The definitional problems which have plagued the development of entrepreneurship as a field of academic inquiry have been paralleled by the lack of a unifying research paradigm. Gartner (1985) criticized much of the previous research on entrepreneurship as being unidimensional in nature. That is, most entrepreneurship research to date has focused on one dimension or another to show how entrepreneurs differ from non-entrepreneurs based on the assumption that all entrepreneurs and their ventures are basically the same. Gartner suggests a multidimensional framework for new venture creation under the assumptions that entrepreneurship is a function of complex interactions of four sets of factors and that there is as much variation among entrepreneurs and their ventures as there is between entrepreneurs and non-entrepreneurs. Entrepreneurship (new venture creation) is conceptualized as a complex interaction of 1) variables associated with the individual, 2) variables associated with the environment, 3) variables associated with the organization, and 4) variables associated with the process of entrepreneurship. The entrepreneurial event

is seen as the appropriate focal point of research efforts.

Martin (1984) puts forth another useful multi-dimensional model of new venture initiation. In this model are four major decision factors. They are, 1) a readiness to act (partial social alienation, psychological/physical predisposition, demonstration effects), 2) a precipitating event during a free-choice period, 3) a supportive environment, and 4) the identification of a venture opportunity. The assumption is that if enough of these interacting variables are present in a given situation, a person will be likely to initiate a new venture.

The previously described models focus on the initiation process. While new venture initiation is considered to be critical to entrepreneurship, it is not the primary focus of this research. Another conceptualization of the multidimensional nature of entrepreneurship was presented by Carsrud, Olm, and Eddy (1986).

This research paradigm moves beyond the initiation stage and is more applicable to the current research project. There are four general categories of causal factors: psychological, personal/demographic, organizational/ sociological, and situational/ environmental. These factors interact on the secondary predictor variables identified as current business

stage, type of business operation, and industrial sector. These primary and secondary factors exert both direct and indirect influence on various potential outcome measures of success. This research paradigm is proposed as a means of directing entrepreneurship research toward a common operational definition of entrepreneurial success and toward a more systematic approach to the study of entrepreneurship and the accumulation of research results. The present research fits quite well within this framework. Psychological variables (propensity to grow the firm) interact with organizational factors (strategic management practices), and environmental factors (growth opportunities) to effect outcome variables (firm performance).

It is the premise of this study that entrepreneurship (new venture creation and growth) is, without question, a function of a great number of interacting variables. In order to understand better this complex phenomenon it seems wise to design research from within a multidimensional framework. However, that does not imply that every variable should be considered in every study. To attempt to do so would almost certainly lead to hopelessly complex research designs which would be virtually impossible to interpret.

This study will place a primary focus on the entrepreneur as one dimension of a multidimensional research model. Several authors have recently suggested that the entrepreneurial event, not the entrepreneur should be the focus of research efforts (e.g., Gartner 1985, Shapero and Sokol 1982). Others insist that even if the entrepreneur is considered, it is the overt behaviors and activities of the individual that should be studied not the underlying personality traits (e.g. Sandberg and Hofer 1987). While it is accepted that the entrepreneurial event is of primary interest, it is maintained that the entrepreneur remains the key energizing force, the catalyst, of the event. Opportunities remain dormant if not exploited by individual entrepreneurs. Furthermore, it is asserted that overt behaviors are a manifestation of pre-existing personality and psychological traits. Clearly innovative behavior is essential to entrepreneurship. But gaining a clearer understanding of the motives and psychological states behind the behavior would seem to be essential in understanding and encouraging new venture creation (McClelland, 1965b).

The Psychological Characteristics of Entrepreneurs

Numerous studies have focused on the identification of the characteristics of entrepreneurs

based on the assumption that the identification and encouragement of potential entrepreneurs is of significant value in promoting economic growth in capitalistic systems. However, these studies, for the most part, have failed to clearly identify those characteristics that distinguish entrepreneurs from non-entrepreneurs. In the words of Brockhaus and Horwitz (1986, 34):

The research results seem to indicate that there are few psychological characteristics that distinguish the entrepreneur from business managers. This perception is true whether the studies are dealing with the intention to begin an enterprise or with examining those entrepreneurs who have successfully opened their own business. The research studies seldom take into consideration the type of business the entrepreneur is involved in or the business's success.

Sexton and Bowman (1984, 513) suggested five possible reasons for the failure of research on the psychology of the entrepreneur to yield more valid and consistent results:

1. Lack of a clearly defined definition, or of a comparative sample, of an entrepreneur.
2. Sample population either too small to be of statistical significance or representative of entrepreneurs as a total population.
3. Measured primarily demographic or sociological variables rather than psychological variables.
4. Utilized test instruments which measured traits with the same names but not the same definition.
5. Utilized test instruments that have not been validated with regard to accuracy, or validity.

The lack of consistency in the research results has moved some writers to suggest that researchers should avoid the study of psychological characteristics and focus instead on the situational factors that

affect the behavior of the entrepreneur (e.g., Stevenson 1985). This view, according to Sexton and Bowman (1986), is based on research studies plagued with the problems listed above. It is argued that adequately designed and executed studies which use valid test instruments will yield a unique set of psychological characteristics for entrepreneurs at levels which are significantly different from other people.

Need for Achievement

A review of the literature reveals that there are three psychological variables that have been studied most often with respect to entrepreneurs. They are need for achievement, locus of control, and risk taking propensity (Brockhaus and Horwitz 1986). Of particular interest here is the need for achievement construct. The need for achievement (n Ach) owes its prominence to the seminal work of David McClelland (1961). A more complete discussion and critique of McClelland's work will be handled later in this paper. For now it is sufficient to indicate briefly how McClelland's theory of n Ach fits into the scheme of this study.

In basic terms, McClelland used the Thematic Apperception Test (TAT) to develop a n Ach score for individuals studied. The TAT is a projective test which requires subjects to create stories stimulated by the presentation of a series of pictures. McClelland

identified, through laboratory experiments, a set of characteristics that those high in n Ach seemed to possess. These characteristics were: 1) a preference for personal responsibility in decision making; 2) a moderate risk taking propensity as a function of skill not chance; and 3) a desire for concrete feedback of results (i.e., money as a measure of success for entrepreneurs). McClelland determined that these characteristics were best embodied in the role of the entrepreneur, although he tended to use the term "entrepreneur" without any explicit reference to new venture creators. It is correctly stated by Brockhaus and Horwitz (1986, 27) that "The causal link between ownership of a small business and a high need for achievement has not yet been proven." This is due, in part, to the fact that McClelland did not study small business owners or new venture creators specifically. His sample of "entrepreneurs" included businessmen engaged in sales, fund raising, management consulting, and managing large companies, as well as founders of their own businesses (McClelland, 1965a).

Another reason for the failure to either prove or disprove the validity of n Ach as a characteristic of the entrepreneur is that a wide variety of instruments other than the TAT have been used to test for the presence of achievement motivation in entrepreneurs by researchers other than McClelland. There is a real

question as to whether these various tests are all measuring the same construct even if they can all be assumed to be valid and reliable. Sexton and Bowman (1984) conclude, based on a review of the different measures of n Ach, that the different tests do not measure the same construct and, therefore, cannot be used interchangeably.

Miner Sentence Completion
Test-Form T

Even though there are real problems with McClelland's theory and with the administration and scoring of his instrument to measure n Ach, the concept remains plausible and worthy of continued study. Achievement motivation has been conceptualized and measured in wide a variety of different ways by researchers attempting to study what appears to be the same construct. The n Ach terminology, it would appear, has become a hindrance to progress in research on the attributes of business founders. It has become a generic term to describe anything related to achievement striving even though the operationalization and measurement of the motive in a given study could differ dramatically from McClelland's approach. This is not to say, however, that the characteristics of the entrepreneurial role as put forth by McClelland are necessarily invalid. What is needed is a test which is more easily administered and scored than the TAT and

which directly measures the prevalence of these characteristics in the individuals under study.

Such a test has recently been developed and used in a study of high-tech entrepreneurs (Smith and Miner 1984, 1985). John Miner has restated McClelland's theory of n Ach in somewhat different terms. The resulting theory of task inducement systems specifies five role characteristics and five types of motivational patterns related to them as follows:

1. Role. The individual achievement role.
Motivational Base. A desire to achieve through own efforts and to be able to attribute any success to personal causation.
2. Role. The risk taking role.
Motivational Base. A desire to avoid risk whenever possible.
3. Role. The seeking results of behavior role.
Motivational Base. A desire for some clear index of the level of performance.
4. Role. The personal innovation role.
Motivational Base. A desire to introduce novel, or innovative, or creative solutions.
5. Role. The planning and goal-setting role.
Motivational Base. A desire to think about the future and anticipate future possibilities (Smith and Miner 1984, 1985).

Miner (1984) has also developed a test to measure these attributes called the Miner Sentence Completion Scale-Form T (MSCS-Form T). MSCS-Form T represents a test of the attributes of entrepreneurs as identified by McClelland while apparently avoiding some of the problems associated with the TAT. McClelland's TAT is a projective measure of achievement orientation.

Miner's test is a projective measure designed to directly tap inclination to perform the specified roles of entrepreneurship in task systems. In addition, as a sentence completion test, the MSCS-Form T possesses the benefits of a projective test while apparently reducing the inter-scorer and test-retest reliability problems associated with the TAT. To date there has been only one reported study in which the MSCS-Form T has been used (Smith and Miner 1984, 1985). In this study the MSCS-Form T effectively distinguished the successful, growth-oriented entrepreneurial type from the slow-growth, income substitution type of business owner and the non-entrepreneur.

While much testing remains to be done, a new instrument has been developed which shows promise of the capability of correctly identifying entrepreneurial orientation based on psychological factors. More specifically, in limited testing the MSCS-Form T has shown promise of identifying the growth-oriented entrepreneur, the subject of interest in this study.

Growth Orientation and Strategic Management Practices

A basic premise of this study is that sustained growth of a new enterprise is not a simple function of the continued existence of the firm. It is a social, controllable phenomenon not a natural, uncontrollable one. This is evidenced by the fact that significant

growth at the level of the individual firm that leads to meaningful economic growth at the aggregate level occurs is less than 1 million of the 13 million firms in the United States (Sexton and Bowman 1986b).

Sexton and Bowman (1986b) suggest a growth model which includes three major factors, all of which exert an impact on the ultimate level of growth achieved by the firm. The three factors are: 1) the capability and propensity of the business owner toward firm growth; 2) the limitations of the market niche and the opportunity "window"; and 3) the ability of the entrepreneur to successfully implement growth strategies.

This model suggests the basic relationships to be tested in the present study. In fact, the present study could well be considered a test of Sexton and Bowman's three dimensional growth model. It is hypothesized that growth is a function of the interaction of the entrepreneurs growth propensity (as measured by the MSCS Form-T), the level and type of strategic management practiced to achieve growth (as measured by self-description questions), and growth opportunities (as measured by industry growth rate).

Because the growth rate of a new enterprise is, at least in part, a function of the strategic management practices of the firm, this term will be defined and discussed here. There are almost as many definitions of strategic management as there are

authors writing on the subject. A useful definition is given by Smith, Arnold and Bizzell (1985, 4):

Strategic management is the process of examining both present and future environments, formulating the organization's objectives, and making, implementing, and controlling decisions focused on achieving these objectives in the present and future environments.

Implicit in this definition is the idea that strategic management requires an external view, an analysis and diagnosis of relevant environmental factors to identify opportunities to be exploited and threats to be counteracted or avoided. When matched with the internal goals and objectives, and strengths and weaknesses of the firm, these environmental factors lead to strategies or plans "designed to adapt the small firm to its external environment in a manner perceived to achieve sales and profit goals" (Sexton and Van Auken 1982).

It is hypothesized that conscious attempts to practice strategic management will be positively correlated with successful growth, if growth is an explicit goal of the firm in question. Although the positive impact of strategic planning in small firms has received only limited research support, many writers have assumed the relationship to be positive and have proceeded to prescribe effective strategic practices for small firms (Robinson and Pearce 1984). Because the relationship between strategic planning and small business success has not been clearly

established, it is posed here as a hypothesis to be examined. More specifically, this study will attempt to address one of the questions posed by Robinson and Pearce in their excellent review of the literature on small firm strategic planning:

Is the application of planning the main ingredient that separates the growing (entrepreneurial) business from the small, static (Mom and Pop) business? (1984, 135)

Thus the process of strategic management (planning) will be examined in this study in an attempt to provide valid data bearing on the impact of the degree of structure or formality in the planning process on the performance of new and small firms.

Along with process issues, the content of strategic management is also of interest. In other words, what are the specific strategies utilized by successful growing firms? Dess and Davis (1982), for example, determined that the competitive methods use by 22 small firms paralleled the three generic strategies suggested by Porter (1980) (cost leadership, differentiation, and focus) in fragmented industries. This study will examine both the process and content of strategic management practice as it relates to successful growth of the small firm.

The third dimension of the small firm growth model is that of market opportunity. This factor could take a number of different forms depending on the economy, industry, demand for a given product or

service, etc. for a given firm at a particular point in time. This is a difficult dimension to measure adequately if firms in a wide variety of industries are included in the sample. In this study, therefore, an attempt will be made to control for inter-industry variation by studying homogeneous samples of firms from two different industries--one rapid, and one slow growth industry. Thus it is anticipated that variation among firms within a given industry will be a function of entrepreneurial orientation and strategic management practices. Variation between industries can be studied as a function of industry characteristics and growth rates.

The purpose of this study, then is to explore the dynamics of the interaction of the psychological/personality traits, and the behaviors and practices of owner/managers of small business ventures from within the broader environmental context (i.e., industry and geographic region).

CHAPTER 2
LITERATURE REVIEW

McClelland's n Achievement Theory

The need for achievement (n Ach) has been associated with entrepreneurship since David McClelland (1961) linked Protestantism, the need for achievement, and economic development. McClelland hypothesized that Protestantism (self-reliance values, etc.) led to independence and mastery training by parents which led to high n Ach in sons and resulted in the spirit of modern capitalism. Support for this hypothesis was given by demonstrating that a group of predominantly Protestant countries showed significantly greater economic development as measured by consumption of electricity in kilowatt-hours per capita than did in group of predominantly Catholic countries (1961, 51).

McClelland then tested the broader hypothesis that high n Ach would predispose any society to vigorous economic activity. To test this hypothesis in preliterate societies, McClelland analyzed the orally transmitted folk tales collected by various anthropologists under the assumption that these oral traditions represented a kind of average level of motivation among the members of a given tribe. These

stories were coded for n Ach and compared to economic activity as reflected by entrepreneurial activity by adult males in the tribe. An entrepreneur was defined as "someone who exercises control over the means of production and produces more than he can consume in order to sell (or exchange) it for individual (or household) income" (1961, 65). A significant relationship was found to exist between the n Ach level in the folk tales and the presence or absence of fulltime entrepreneurial activity in the culture. In the words of McClelland (1961, 70):

Despite many flaws in the collection of such cross-cultural data, they confirm the hypothesis that the n Ach level of a society is a variable significantly related to entrepreneurial economic activity in a culture, despite wide variations in social structure, in climate, means of subsistence, and level of technological development.

To test the impact of n Ach on economic development in contemporary society, McClelland analyzed children's stories from 1925 and 1950 for selected countries. His hypothesis that high n Ach would lead to subsequent high economic growth rates was confirmed by the data collected, according to his analyses. Those countries highest in n Ach in 1925 experienced greater economic growth than those low in n Ach. Again, the consumption of electrical energy was used as the measure of economic growth. In conclusion McClelland (1961, 105) stated that:

...a concern for achievement as expressed in imaginative literature--folk tales and stories for

children--is associated in modern times with a more rapid rate of economic development. The generalization is confirmed not only for Western, free-enterprise democracies like England and the United States but also for communist countries like Russia, Bulgaria or Hungary, or primitive tribes that are just beginning to make contact with modern technological society. It holds in the main whether a country is developed or underdeveloped, poor or rich, industrial or agricultural, free or totalitarian...These results serve to direct our attention as social scientists away from an exclusive concern with the external events in history to the 'internal' psychological concerns that in the long run determine what happens in history.

Definition of Achievement Motivation

In his writings, McClelland has not been inclined to give a detailed definition of the concept of achievement motivation. He has stated that it is a measurable factor in groups and individuals and is a function of the degree to which an individual thinks about competing with a standard of excellence, or doing something better than before (McClelland 1965b). Elsewhere he has indicated that the need for achievement is "a desire to do well, not so much for the sake of social recognition or prestige, but for the sake of an inner feeling of personal accomplishment" (McClelland 1971, 110).

Other authors, colleagues of McClelland, have provided more detailed definitions of the achievement motivation construct. According to Heckhausen:

Achievement motivation can...be defined as the striving to increase, or to keep as high as possible, one's own capability in all activities in

which a standard of excellence is thought to apply and where the execution of such activities can, therefore, either succeed or fail. (1967, 5)

In the words of Atkinson:

The theory of achievement motivation attempts to account for the determinants of the direction, magnitude, and persistence of behavior in a limited but very important domain of human activities. It applies only when an individual knows that his performance will be evaluated (by himself or by others) in terms of some standard of excellence and that the consequences of his actions will be either a favorable evaluation (success) or an unfavorable evaluation (failure). It is, in other words, a theory of achievement oriented behavior (1964, 240).

Measuring Individual n Achievement

McClelland used a version of the Thematic Apperception Test (TAT), a projective test in which subjects write brief (5-minute) stories based on a series of pictures. It is designed to tap unconscious motives as manifested by the subject's fantasies. The n Ach scores are obtained by counting the number of achievement-related ideas expressed in the fantasy-based stories. Other motives (n Pow, n Aff) were also identified but are not of primary concern here.

McClelland chose to measure achievement motivation indirectly by content analysis of imaginative stories because "motives are formed early in life and may therefore be imperfectly verbalized or symbolically represented in the subject's consciousness. This suggests that those who do verbalize their achievement desires may have developed

such conscious needs somewhat later in life, possibly in response to adult pressures for becoming successful" (DeCharms, Morrison, Reitman, and McClelland 1955, 415). In other words, what people say motivates them may be a result of training and social desirability. The real motive may remain unknown even to the individual. Furthermore, in fantasy anything is possible while overt action is constrained by limits set by reality and the person's ability. In addition, motivation cannot always be accurately inferred from behavior. That is, achieving behavior may result from the fear of failure or a strong desire to please another person (boss, teacher, experimenter, etc.). "It is the fantasies of the person, his thoughts and associations, which give us his real 'inner concerns' at the time he is working" (McClelland 1961, 41).

McClelland and his associates used modified forms of the TAT developed by Murray (1943). However, instead of using the original twenty pictures, only four were typically used. The four slides suggested a work situation, a study situation, a father-son situation, and a young boy possibly dreaming of the future. In the administration of the test each picture is exposed briefly and the subject asked to write a story within a brief (usually five minute) interval in answer to the following questions:

1. What is happening? Who are the people?

2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought? What is wanted? By whom?
4. What will happen? What will be done?

Scoring is accomplished by counting the number of statements containing "achievement imagery" defined as "any imagery (e.g., statement in the story) which suggests competition with a standard...In its simplest terms this means that someone in the story is trying to do better in relation to some achievement goal such as doing a better job or getting ahead in the world" (McClelland 1955, 404).

McClelland (1955) reported an inter-scorer correlation between two trained scorers to be 0.95. However, the test-retest reliability was not so favorable. A test-retest correlation for two three-picture measures taken a week apart was only .22. The two measures agreed significantly (72.5 per cent), however, in placing subjects above or below the mean on the two occasions, and the split-half reliability for a six- or eight-picture test runs over .70. It was concluded that the TAT n Ach measure is adequate for classifying individuals into high, middle, and low achievement categories but that this projective technique does not lend itself to high test-retest reliability because the subjects are asked for imaginative stories which may cause the subject to shift away from a story (and motive) previously given and remembered. On a second administration a story is

created that manifests a different motive to show originality.

After summarizing the evidence, Miner concluded that there is little question that the TAT measures are not very reliable, most likely because only four pictures were typically used. However, "the current, too short, measures have served to discriminate between arousal and nonarousal conditions and between certain different groups of subjects. For such an unstable instrument to do this, some very powerful forces would have to be at work" (Miner 1980, 60).

Individual Entrepreneurial Behavior

In discussing individual entrepreneurial behavior, McClelland distinguished between status and role. Status refers to position in society, and role to the behavior required of an occupant of that state. This is said to be an important distinction because "entrepreneurs, or those in entrepreneurial status, need not show entrepreneurial behavior...furthermore, it is quite possible for individuals occupying other statuses to behave in an entrepreneurial way..." (1961, 207). McClelland concluded this discussion with the following statement:

Our primary interest is in entrepreneurial role behavior as an ideal or analytical type and that it is a secondary problem, although one of great importance, to discover whether holders of the entrepreneurial status in a given country do, in fact, behave as they should according to the ideal type analysis (1961, 207).

Given the distinction between entrepreneurial status and role, McClelland identified the components of the entrepreneurial role behavior as follows:

1. Moderate risk-taking as a function of skill, not chance
2. Energetic and/or novel instrumental activity
3. Individual responsibility
4. Knowledge of results of decisions; money as a measure results
5. Anticipation of future possibilities (1961, 207)

The above characteristics of the entrepreneurial role are derived from the theory of n Ach. That is, through correlation analysis, individuals scoring high in n Ach were found to possess the above characteristics.

It remained for McClelland to establish the link between entrepreneurial status in a society and n Ach. It would be theoretically possible for boys high in n Ach in a Buddhist society to become Monks and behave like entrepreneurs within the limits of Buddhist monastic life, but not affect the overall economic development of the country significantly. The question, then, was whether those possessing high n Ach (as expressed by entrepreneurial role behavior) will come to occupy entrepreneurial status (business leadership).

McClelland first tested the assumption that boys with high n Ach would tend to be attracted to business occupations because of a perception that business

occupations call for the characteristics associated with high n Ach. Boys from the U.S., India, Brazil, Germany, and Japan were asked to record their attitudes toward twelve occupations divided into three groups as follows:

- A. Business
 - 1. Stockbroker
 - 2. Buyer of merchandise
 - 3. Factory manager
 - 4. Advertiser

- B. Traditional
 - 1. Civil service employee
 - 2. Clergyman
 - 3. Poet
 - 4. Lawyer

- C. Other (risky)
 - 1. Scientific research worker
 - 2. Explorer
 - 3. Auto racer
 - 4. Politician

The results of these studies indicate that boys with high n Ach do tend to be drawn to business occupations in the U.S. and Japan, but to more traditional occupations in Germany and India. Boys from Brazil showed no clear trend. There was no indication that boys with high n Ach were more attracted to risky occupations. According to McClelland:

The most obvious conclusion is that the hypothesis that guided the research is wrong: boys with high n Ach do not universally like business occupations because they perceive these occupations as involving characteristics like moderate risk-taking, which they like (1961, 243).

Using the same data, McClelland tested the hypothesis that the prestige of the occupation determined whether people with high n Ach would be attracted to it. Although no direct measure of prestige was available, it was reasoned that the degree of industrialization would be positively correlated with the attractiveness or prestige of business occupations. No consistent relationships were found. In fact, McClelland's analysis led him to conclude that "boys with high n Ach...prefer business occupations more when those occupations are in general less well liked" (1961, 246).

McClelland then studied occupational preference as a joint function of prestige, n Ach, and class status. He concluded that:

The picture suggested by these findings is one that makes good sense in terms of the general understanding of the business community and how it recruits. In countries like the United States...there appears to have been a recruitment pattern that in ideal form ran somewhat as follows. The father moved from the country to the city and established himself perhaps as a skilled or semiskilled worker. This was one of the 67 percent of such people who not only wanted to, but succeeded in establishing a small business, possibly because he had high n Ach. He reached the lower middle class. The grandson, if he too had high n Ach, expanded the business and eventually moved up into the business elite. But his son, the great-grandson, is now part of what we call the student elite. He goes to an Ivy League college and if he has high n Ach, he aspires to one of the professions. If not, or if his school work is not good enough, or if he is made to go into the family firm, he goes into business and takes with him a much more conservative ideology than his upwardly mobile father or grandfather had. The reasons for having a conservative ideology are strong, much

stronger than in his father's case, for he must maintain the family position, the capital, the business that his father established (McClelland 1961, 255-6).

This approach is used to explain the lack of economic development of countries low in n Ach. They tend to get caught in a vicious cycle because of the lack of a steady flow of upwardly mobile entrepreneurs possessing high n Ach.

n Ach, based on McClelland's analysis, promotes behavior particularly suited to the entrepreneurial role for young men in the middle or lower class but not from the upper class.

Achievement Motivation and Entrepreneurship

McClelland next undertook research to demonstrate that individuals with high n Ach more often become entrepreneurs (businessmen), and that they are more successful. Research conducted in three countries provided strong support for this relationship. In the U.S. unit managers at G.E. showed higher n Ach than did a matched sample of staff specialists at the same company. In Italy, middle level executives from various companies were significantly higher in n Ach than were students of law, medicine, and theology. In Poland the same pattern held as managers tended to score higher than professionals. It was noted that ownership of the means of production is not crucial to people with high n Ach. In fact, "the psychological

situation of a manager working for a very large company like General Electric...would not appear to be very different from that of a Polish manager working for the state" (1961, 264).

McClelland (1965a) described a longitudinal study designed to discover whether men who ended up in entrepreneurial occupations had higher η Ach before embarking on their professional careers than men who ended up in other occupations of equal prestige. Follow-up data were obtained on 58 Wesleyan University alumni who had been tested for η Ach as undergraduates in 1947, some 14 years earlier. Occupational status was determined and then classified as business entrepreneurs (sales, real estate and insurance, fund raising, founder of own business, management consulting, officers of larger companies), business non-entrepreneurs (credit, traffic, personnel, treasurers), and professionals. It was found that business entrepreneurs as defined in this study had significantly higher η Ach scores as college sophomores than did the non-entrepreneurs. It was noted as an aside that the one person in the group who struck out on his own to found a business far from home happened to have had the highest η Ach score as a sophomore in college.

The operational definition of an "entrepreneurial" occupation was one in which the

individual had responsibility for initiating decisions; had individual responsibility for decisions and their effects; received objective feedback of accurate data indicating the success of decisions; and had a job which entailed some risk of challenge in that it was likely that a serious wrong decision would be observed.

It was concluded that "n Ach is a fairly stable personality characteristic which, given certain characteristics of the social system, predisposes young men to enter entrepreneurial occupations or to function in traditional occupations in entrepreneurial ways" (McClelland 1965a, 392).

Achievement Motivation Training

According to McClelland all motives are learned (1965c). As people grow and develop they learn to associate positive and negative feelings with experiences that occur. If achievement situations, such as a challenging task, lead to feelings of pleasure an individual will tend to become achievement oriented. That is, achievement will become established at or near the top of the motive hierarchy. Thus, situations leading to achievement opportunities are sought and pleasure derived through successful accomplishment of achievement goals.

One of the prevailing hypotheses of McClelland's theory has been that the proper training can increase achievement motivation or at least move it higher in

the motive hierarchy. Inasmuch as McClelland linked economic development and n Ach the implications of this belief are clear. Economic development can be fostered through increasing achievement striving in entrepreneurs and business managers in under-developed countries. McClelland (1965b) made the point that policy makers of both the liberal and conservative orientation join in a "curious alliance" against the view that the development of achievement motivation ought to be an integral part of policies aimed at promoting economic progress in developing countries. The liberals feel that it is the adverse conditions in the environment that must be changed through the infusion of massive amounts of capital, building institutions and so on. The conservatives, while agreeing with McClelland that it is individual drive that makes the difference, not just the presence of opportunities, generally believe that people either have it (the desire to achieve) or they do not. And if they do not, it cannot be developed.

In spite of the above objections and the fact that psychologists of the psychoanalytic school generally believe that basic personality traits are established relatively early in life and can be changed, if at all, only through intensive psychotherapy, McClelland and his colleagues developed a training program which they believed could result in

increased achievement motivation which would be translated into greater economic activity.

The training courses have typically been intensive, seven to ten day sessions including games, paper and pencil exercises, outside readings, and tests integrated under four main headings based on specific propositions described by McClelland and Winters (1969) as follows:

1. The Achievement Syndrome (A)

Proposition A-1. The more thoroughly an individual develops and clearly conceptualizes the associative network defining a motive, the more likely he is to develop the motive.

Proposition A-2. The more an individual can link the newly developed associative network to related actions, the more the change in both thought and action is likely to occur and endure.

Proposition A-3. The more an individual can link a newly conceptualized association-action complex (or motive) to events in his every-day life, the more likely the motive complex is to influence his thoughts and actions in situations outside the training experience.

These propositions refer to the establishment of the relationships among motivation, behavior, and personal performance.

2. Self-Study (S)

Proposition S-1. The more an individual perceives that developing a motive is required by the demands of his career and life situation, the more educational attempts designed to develop that motive are likely to succeed.

Proposition S-2. The more an individual can perceive and experience the newly conceptualized motive as consistent with the ideal self-image, the more the motive is likely to influence his future thoughts and actions.

Proposition S-3. The more an individual can perceive and experience the newly conceptualized motive as consistent with prevailing cultural values and norms, the more the motive is likely to influence his future thoughts and actions.

The self-study propositions deal with the assessment of the nature of each participant's achievement motivation and its appropriateness to his personal goals.

3. Goal Setting (G)

Proposition G-1. The more reasons an individual has to believe that he can, will, or should develop a motive, the more educational attempts designed to develop that motive are likely to succeed.

Proposition G-2. The more an individual commits himself to achieving concrete goals in life related to the newly formed motive, the more the motive is likely to influence his future thoughts and actions.

Proposition G-3. The more an individual keeps a record of his progress toward achieving goals to which he is committed the more the newly formed motive is likely to influence his future thoughts and actions.

The goal setting portion of the training program provides the opportunity for each participant to practice the approaches and skills characteristic of superior entrepreneurial performance.

4. Interpersonal Supports (I)

Proposition I-1. Changes in motives are more likely to occur in an interpersonal atmosphere in which the individual feels warmly but honestly supported and respected by others as a person capable of guiding and directing his own future behavior.

Proposition I-2. Changes in motive are more likely to occur the more the setting dramatizes the importance of self-study and lifts it out of the routine of everyday life, thereby creating an in-group feeling among the participants.

Proposition I-3. Changes in motives are more likely to occur and persist if the new motive is a sign of membership in a new and continuing reference group (McClelland and Winter 1969, 48-78).

These propositions suggest that a warm, supportive interpersonal atmosphere and membership in an important reference group increase the likelihood that the motive changes will persist beyond the training period.

Research Support for Achievement Motivation Training

Various attempts have been made to apply the above mentioned techniques to increase achievement motivation and spur business growth with varying degrees of success. This section will summarize these studies. The first systematic program of entrepreneurial training was tried in Andhra Pradesh, India in 1963 (McClelland and Winter 1969). Two years after the completion of the training program a follow-up study showed that businesses managed by the trained men grew faster in sales, and number of employees than did businesses run by men who had not undergone the training program. In a follow-up seven years after the training program it was found that the city of Andhra Pradesh manifested considerably higher business employment than did a comparison city with similar economic and demographic characteristics. No reliable profit figures were obtained so the effect of achievement motivation training on this key variable was not discovered. It should be noted that the

findings of this study are extremely tentative due to the large number of extraneous, uncontrolled variables that could have biased the results.

Timmons (1971) conducted a program in which achievement training was given to actual and potential black businessmen in Washington D.C. and white small businessmen in Oklahoma. According to a Business Activities Check List developed by Timmons, the trained group was significantly more active than the control group after six months. After four years the 31 who had received training in Washington D.C. had started a total of eleven new businesses with an average profitability of \$12,500. In the control group only one business had been started and it had experienced a loss. The average income of the experimental group had risen from \$9,000 in 1967 to \$12,000 in 1971. In the control group income rose from \$9,000 to only \$9,800 during the four year time span. In Oklahoma the trained businessmen realized an average income level of \$17,600 compared to \$13,700 for the controls. However, the difference was not statistically significant and there was doubt as to the representativeness of the follow-up sample.

Miron and McClelland (1979) report a 1974 study of the impact of an achievement motivation training program on 207 minority entrepreneurs and potential entrepreneurs in nine U.S. cities. Six months

following the training, financial data were gathered for 65 of the 78 participating businessmen. Four out of five indicators had increased significantly more than could be expected from economic conditions alone. They were gross sales, profits, owner's income, and number of employees. However, the validity of these findings might be questioned due to the short time period between training and follow-up, and the lack of a control group. Another potentially troublesome aspect of this and other studies of achievement training is the impact of self-selection to the training program. Those who are inclined to respond may well be high achievers who already possess the desired attributes.

In a study reported by Miron and McClelland (1979) undertaken by the Irish Industrial Development Authority (IDA), the self-selection variable was controlled for by choosing participants and controls at random from among IDA grant recipients. Of the 32 invited, 14 attended and 18 declined. Fourteen grant recipients were randomly assigned to the control group. Fifteen to eighteen months after the training program ended all grant recipients selected to participate were interviewed extensively. It was found that there were no significant differences between those assigned to the control group and those who declined to participate in the training program. However, the trained group

outperformed the controls on ten of twelve dimensions evaluated. These included sales, fixed assets, and working capital. Statistically significant differences were found between the experimental and control groups in the areas of new product development; joint or cooperative ventures with other business owners in marketing, transportation, or use of consultants; business development planning; and overall business planning versus day-to-day operating activities.

A problematic aspect related to the adequate evaluation of achievement motivation training programs is that of the degree of availability of opportunities to practice the skills and attitudes learned. It seems clear that training without opportunities would not only fail to produce economic growth, but could lead to extreme frustration as the level of aspiration is increased then unfulfilled. Miron and McClelland report a study of a training program conducted in Uganda which addressed this issue. In this case achievement motivation training was given to 84 Africans with the objective of preparing them to take higher level jobs in the European-managed companies in which they worked. The course was also given to twelve small businessmen. After one year 69% of those who ran their own businesses or worked for firms in favor of Africanization showed increased business activities

while only 32% of those working in less favorable conditions showed similar activity.

In 1969 McBer and Company embarked on a program to develop black businesses on the island of Curacao. The ambitious goal was to increase achievement motivation in the entire society. People from all walks of life were trained, not only businessmen. The specific intent was to train 1060 businessmen who would, according to projections, create an additional 5215 jobs over the five year period 1969-74. However, due to a lack of support from the government and private banks only thirty new businesses were started in which sixty-nine new jobs were created. Nine of the new businesses failed within the first year. It was concluded that without external support and real opportunities to use the skills and attitudes developed, achievement motivation has little impact (Berlew and LeClere 1974, Miron and McClelland 1979).

Another important relationship that has been examined to some extent is that of the interaction of achievement motivation training and training in the traditional business skills. Durand (1975) attempted to measure the impact of these two types of training separately and in combination, for a group of black small businessmen in St. Louis. One experimental group received achievement motivation training only (n=5); another received achievement motivation training plus

management training (n=11), another received management training only (n=10); and the control group received no training (n=9). After 18 months the performance of the members of each group was evaluated using Timmons' Business Activities Index with the following results:

1. Those receiving only management training scored no higher than the control group.
2. Those receiving achievement training only scored slightly but not significantly higher than the control group.
3. Those receiving both achievement and management training scored considerably and significantly higher than the control group.

It cannot be concluded from this study, however, that achievement plus management training is the best because the achievement training only group was very small and included only those who chose not to receive management training when given the opportunity. Furthermore, only one of the eight economic variables measured--number of employees--showed significant differences among groups.

Miron and McClelland (1979) reported on three previously unreported studies which provide additional evidence on the joint effectiveness of management and achievement motivation training, and more detailed information on the impact of achievement motivation training on indicators of small-business performance. The first program was conducted at the Business School at Southern Methodist University (SMU); the second by the Small Business Administration (SBA) in eight cities

in the U.S.; and the third with black businessmen in Seattle (Pep Up). The achievement motivation training was provided by McBer and Company and was similar in each setting. The SMU and Pep Up programs included management as well as achievement motivation training. Data was gathered on four indicators of business success (monthly sales, monthly profits, monthly personal income, and number of employees) eighteen months before and after the training in the SMU and SBA programs, and twelve months before and after training in the Pep Up program. Changes in the four indicators were compared to changes in general economic conditions during the period studied for each program.

Results of these programs showed that those participating in the SMU program experienced significant increases in monthly sales, monthly profits, and number of employees. It was asserted that economic conditions alone could not have accounted for these increases. In the SBA program increases in monthly sales, monthly profits and personal income were significant and larger than would have been expected given the general economic conditions. The Pep Up program showed statistically significant increases in monthly profits only. This finding seemed logical given the fact that in this program participants had been selected because they were in trouble. The other

measures showed improvement but not at a significant level.

In analyzing the effects of the two types of training, it is concluded that "achievement motivation training leads to increased energy in establishing, expanding, and improving small businesses. Business training improves understanding of business practices and can help resuscitate established but ailing businesses, but may lead to slowing early business growth as the entrepreneur realizes the complexity of the manager's job and the need for additional staff" (1979, 25).

Overall it was concluded that these studies provide strong evidence that achievement motivation training has a significant positive impact on small business performance assuming that appropriate support is present in the environment in the form of loans, market opportunities, and labor force. The role of management training, however, was said to be "problematic" in that when combined with achievement training in established but ailing businesses it added to the effectiveness of the firm while it also led to slowed growth as entrepreneurs become more conservative by being made aware of the complexities of good management practice.

Criticisms of McClelland's n Ach Theory

McClelland's theory of n Ach is not without its critics and legitimate criticisms. The criticisms fall into five general categories each of which will be treated briefly here.

n Ach and Economic Growth

Schatz (1971), while acknowledging the ambition and ingenuity of McClelland's work, criticized it on the grounds that McClelland apparently became so attached to his own hypothesis that he unconsciously selected and used data in a way designed to support rather than test his theory. Schatz, as an economist, focuses on the relationship between n Ach and economic development and states five general criticisms. The first deals with McClelland's choice of electrical output over national product as the indicator of economic growth even though national product is generally accepted as the superior measure. An explanation of this choice may be that growth of kilowatt hours showed a much higher correlation with measures of n Ach (.53) than did growth of national product (Schatz 1971, 25).

The second criticism deals with the way in which McClelland chose to analyze his data. McClelland did not use percentage increases but used as his index of economic growth variation around a regression equation

relating n Ach to electric power output. When the data are analyzed in a straight-forward way, according to Schatz, the results are not nearly as convincing as McClelland's analysis would indicate. The third criticism relates McClelland's claim for a causal relationship between n Ach and economic growth. When using percentage increases as a measure of growth Schatz finds little support for the claim that high n Ach causes economic growth.

McClelland makes the claim that the deficiencies in his samples, and the unreliable nature of his data make his results more rather than less convincing. This constitutes Schatz's fourth criticism. Does this mean that "the worse the data one has to support a hypothesis, the stronger is the hypothesis?" asks Schatz (1971, 189). Finally, McClelland seemed to shift his explanations to fit the data at hand, sometimes contradicting earlier statements.

Overall Schatz concluded that, although McClelland's attempt to cross the conventional boundaries is laudatory, he needs stronger and more objective support than he has provided to substantiate the suggested relationship between n Ach and economic growth.

TAT: Reliability and Validity

As an economist Schatz assumed McClelland's measures of n Ach to be valid and reliable. He leaves

to the psychologist the task of criticizing the measures. Not surprisingly, psychologists have taken on the task. For example, Klinger (1966) calls into question the predictive validity of fantasy-based measures such as McClelland's TAT based on a review of the research. Entwisle (1972) suggests that the low predictive validity is a result of low reliability (estimated to be typically in the range .30 to .40). Although inter-scorer reliability has been reported as typically ranging from .80 to .90 for experienced scorers (Heckhausen 1967), test-retest reliability is low primarily because of the small number of pictures used (four) and because the instructions ask for imaginative stories causing subjects to shift from a story and motive previously given when participating in a second administration (Miner, 1980).

Another problem is related to McClelland's use of achievement imagery in primary school textbooks to determine the level of achievement motivation in whole societies. In the first place this measure shows a negative correlation with TAT derived n Ach scores (McClelland 1961, 77-79). Furthermore, the achievement imagery scores for the under-developed countries in 1950 exhibited higher achievement scores than developed countries. By using the children's readers McClelland seems to directly contradict the basic premise underlying his use of the fantasy-based TAT--that what

people say in interviews or write for public consumption does not reflect their spontaneous inner needs but rather the normative social expectations pertaining to the particular situation (Kilby 1971).

Definition of the Entrepreneur

McClelland's conceptualization of entrepreneurship is extremely broad. In fact, it is more accurate to say that in his early theory development he used the term "entrepreneur" to mean businessman in a general sense. "Entrepreneurial" occupations included sales (real estate and insurance), management consulting, officer in large companies, as well as operators of small businesses (McClelland 1965a). McClelland does not explicitly consider the new venture creation process as an essential element of entrepreneurship in his theory building stage. However, as he and others began to develop and apply his theories to the task of promoting economic growth, it was the small business owner and prospective owner that became the primary targets of the programs (Durand 1975, Miron and McClelland 1979, Timmons 1971). This is meant to suggest not that the theoretical approach and the resultant applications are necessarily invalid, but that there appear to be some unexplained gaps calling into question the internal consistency of the theory. In an earlier section of this paper the results of training programs implemented to increase n Ach and,

subsequently, economic development were summarized. Kilby (1971) calls into question the reported success of these programs by suggesting that the self-report performance measures often used were subject to strong bias in a favorable direction. This is because a primary emphasis of the training program was to create a strong "Hawthorne effect" or, in other words, an increased self-esteem and positive mental attitude. It also seems clear that, even when more objective measures of performance were used, there were so many potential intervening variables related to business outcomes as to make the statement of causality between n Ach motivation training and business growth extremely tentative.

Causal Link Between n Ach and Entrepreneurship Not Established

McClelland's writings present a uniformly positive picture regarding the link between n Ach and entrepreneurship. However, as noted in the criticisms discussed above there are legitimate doubts. In the words of Brockhaus and Horwitz, "The causal link between ownership of a small business and a high need for achievement has yet to be proven" (1986, 27). The results of studies conducted by researchers other than McClelland which were designed to test the n Ach--entrepreneur link will be considered in the next section.

Research Studies of Achievement Motivation and Entrepreneurship

The popularity of the achievement motivation construct has led to the development of numerous different measures (Table 2.1). Some of these measures are projective in the tradition of the TAT, some are subscales of comprehensive, objective personality tests, and some have been developed as specific, objective measures of achievement motivation. The popularity of the study of achievement motivation in a variety of settings and the influential nature of McClelland's work have led to the use of at least eight different measures in research studies of achievement motivation and entrepreneurship (Table 2.2). The researchers who have studied achievement motivation in entrepreneurs have, without exception, used the work of McClelland as the foundation upon which to build. Many, however, chose to use a measure other than the TAT because of the difficulties associated with the TAT in administration and scoring. This has led to considerable difficulty in interpreting the research results, a point which will be discussed later.

Table 2.3 presents the primary attributes of the different studies which have used one of the measures

Table 2.1.--Measures of achievement motivation*

<u>Projective Measures</u>	<u>Source</u>
McClelland's Thematic Apperception Test (TAT)	McClelland et al.(1953)
Heckhausen's Thematic Apperception Test (TAT)	Heckhausen (1967)
French Test of Insight (FTI)	French (1958)
Iowa Picture Interpretation Test (IPIT)	Hurley (1955)
Graphic Expression Technique (Graphic)	Aronson (1958)
Knapp Tartan Test (Tartan)	Knapp (1958)
Miner Sentence Completion Scale-Form T (MSCS-Form T)	Miner (1986)
<u>Comprehensive Personality Measures</u>	
Edwards Personal Preference Schedule (EPPS)	Edwards (1959)
California Psychological Inventory (CPI)	Gough (1957)
Personality Research Form (PRF)	Jackson (1967)
Self-Description Inventory (SDI)	Ghiselli (1971)
Adjective Check List (ACL)	Gough (1960)
Survey of Personal Values (SPV)	Gordon (1976)

Table 2.1.--Measures of achievement motivation (continued)

<u>Specific Questionnaire Measures</u>	<u>Source</u>
Mehrabian Achievement Scale (MAS)	Mehrabian (1968)
Costello's Achievement Motivation Questionnaire (CAMS)	Costello (1967)
Lynn's Achievement Motivation Questionnaire (LAMQ)	Lynn (1969)
Hermans' Achievement Motive Questionnaire (HAMQ)	Hermans (1970)
The <u>y</u> Achievement Measure (<u>y</u> Ach)	de Charms et al. (1955)
Mukjerhee's Sentence Completion Test (SCT)	Mukjerhee (1965)
Robinson's Achievement Motivation Questionnaire (RAMQ)	Argyle & Robinson (1962)
The Achievement Risk Scale (ARPS)	O'Conner & Atkinson (1962)
Sherwood Achievement Scale (SAS)	Sherwood (1966)
Aberdeen Academic Motivation Inventory (AAMI)	Entwisle (1968)
Smith's Achievement Motivation Inventory (SAMM)	Smith (1973)
Work and Family Orientation Inventory (WOFO)	Spence & Helmreich (1978)

* Adapted from Fineman (1977)

Table 2.2.--Achievement measures used in entrepreneurship research

<u>Measure</u>	<u>Type</u>	<u>Design</u>
1. TAT (McClelland 1955)	Projective: imaginative stories	4 pictures: work situation, study situation, father-son situation, young boy.
2. MSCS-Form T (Miner 1982, 1986)	Projective: sentence completion	40 sentence stems. 8 for each of five subscales 1) self achievement, 2) avoiding risks, 3) feedback of results, 4) personal innovation, 5) planning for the future.
3. EPPS (Edwards 1959)	Comprehensive personality scale	225-item inventory: achievement one of 15 needs measured.
4. PRE-F (Jackson 1974)	Comprehensive personality scale	352-item inventory: achievement one of 20 personality traits measured.
5. LAMQ (Lynn, 1969)	Achievement questionnaire	8 yes-no questions, e.g.: Do you find it easy to relax completely when you are on holiday? Have you always worked hard in order to be among the best in your own line?
6. MAS (Mehrabian 1968, 1969)	Achievement questionnaire	26-item scale measuring extent of agreement or disagreement on such items as: "I worry more about getting a bad grade than I think about getting a good grade."

Table 2.2.--Achievement measures used in entrepreneurship research (continued)

<u>Measure</u>	<u>Type</u>	<u>Design</u>
7. SCT (Mukjerhee 1968)	Achievement questionnaire	50 forced-choice triads measuring achievement values, e.g.: I like A. to be faithful to my friends and colleagues. B. to be very systematic in my work. C. to do my best in whatever work I undertake.
8. WOFO (Spence and Helmreich 1978)	Achievement questionnaire	3 achievement scales: 1) mastery needs, 2) work orientation, 3) inter-personal competitiveness.

Table 2.3.--Studies of achievement motivation and entrepreneurship

<u>Study</u>	<u>Instrument</u>	<u>Sample</u>	<u>Results</u>
1. McClelland (1961)	TAT	Boys from U.S., India Brazil, Germany, & Japan	Boys high in \bar{n} Ach were drawn to business occupations in the U.S. and Japan, but not in Germany and India. Brazilian boys showed no clear trend.
2. McClelland (1961)	TAT	Managers vs. staff specialists in the U.S.; Middle level executives vs. students of law, medicine & theology in Italy; Managers vs. professionals in Poland.	Managers scored significantly higher \bar{n} Ach than staff specialists. Executives scored significantly higher in \bar{n} Ach than did students. Managers scored higher in \bar{n} Ach than did professionals.
3. McClelland (1965a)	TAT	55 college graduates	Graduates scoring high in \bar{n} Ach 14 years earlier were significantly more likely to choose entrepreneurial careers.
4. Schrage (1965)	TAT	22 R&D scientists	High \bar{n} Ach led to increased profit or loss.
5. Wainer & Rubin (1969)	TAT	51 technical entrepreneurs	High \bar{n} Ach associated with high performance.

Table 2.3.--Studies of achievement motivation and entrepreneurship (continued)

<u>Study</u>	<u>Instrument</u>	<u>Sample</u>	<u>Results</u>
6. Meyer, Walker, TAT & Litwin (1961)	TAT	31 managers of 'entrepreneurial' jobs; 31 non-entrepreneurial specialists.	'entrepreneurs' scored significantly higher in <u>n</u> Ach than did specialists.
7. Turner (1970)	TAT	639 adolescent males	Adolescents with high <u>n</u> Ach came from homes where fathers engaged in entrepreneurial role behavior in occupational status.
8. Nandy (1978)	TAT	67 entrepreneurs; 48 non-entrepreneurs	High <u>n</u> Ach positively related to entry into business, but not to business success.
9. Durand & Shea (1974)	TAT	29 black small business owners	Those high in <u>n</u> Ach were significantly more active than those low in <u>n</u> Ach.
10. Hornaday & Bunker (1970)	EPPS	20 entrepreneurs	Scored significantly higher in <u>n</u> Ach than norms.
11. Hornaday & Aboud (1971)	EPPS	60 entrepreneurs	Scored significantly higher in <u>n</u> Ach than norms.

Table 2.3.--Studies of achievement motivation and entrepreneurship (continued)

<u>Study</u>	<u>Instrument</u>	<u>Sample</u>	<u>Results</u>
12. DeCarlo & Lyons (1979)	EPPS	122 female entrepreneurs: 77 non-minority, 45 minority.	Entrepreneurs scored significantly higher than norms. Non-minority scored significantly higher than minority in \bar{n} Ach.
13. Begley & Boyd (1986)	EPPS	239 small business founders & non-founder managers	Founders significantly higher in \bar{n} Ach. No significant relationship between \bar{n} Ach and financial success.
14. Mescon & Montanari (1981)	PRF-E	51 real estate brokers	\bar{n} Ach of broker did not differ significantly with type and location of the enterprise.
15. Sexton & Bowman (1983)	PRF-E	401 students	Entrepreneurship majors not significantly higher than other students in \bar{n} Ach.
16. Hull, Bosley, & Udell (1980)	LAMQ	307 U of Oregon alumni	\bar{n} Ach not useful in distinguishing between high and low likelihood of starting a business.
17. Hines (1973)	LAMQ	80 entrepreneurs; 74 engineers; 68 accountants; 93 middle managers.	Entrepreneurs scored significantly higher on \bar{n} Ach than did each of the other groups.

Table 2.3.--Studies of achievement motivation and entrepreneurship (continued)

<u>Study</u>	<u>Instrument</u>	<u>Sample</u>	<u>Results</u>
18. Lachman (1980)	MAS	29 entrepreneurs; 25 managers	Achievement motivation & orientation correctly discriminated entrepreneurs from managers.
19. Pandey & Tewary (1979)	SCT	44 small business loan applicants	Successful loan applicants showed significantly higher \bar{y} Ach than did unsuccessful applicants.
20. Smith & Miner (1984; 1985)	MSCS- Form T	134 high-tech owners & managers	High-growth entrepreneurs scored significantly higher than did low-growth business owners and non-entrepreneurs.
21. Carsrud & Olm (1986)	WOFO	103 male business owners; 246 female business owners	3 scales of achievement motivation were major contributors to success prediction in the 1-49% ownership category for male business owners.

of achievement motivation and have looked at some dimension of entrepreneurship.

We will first examine those studies which most closely followed McClelland by using the TAT as the measure of n Ach, followed by those using the other measures.

TAT

Schrage (1965) found that, for research and development business owners, high n Ach led to either increased profit or increased loss. It was concluded that achievement motivation leads the business owner to try harder to succeed, but that another factor--his ability to accurately perceive--leads to success or failure, depending on whether the perception is accurate or inaccurate. Wainer and Rubin (1969) found that high n Ach in technical entrepreneurs was associated with high company performance.

In a study involving managers in entrepreneurial jobs and non-entrepreneurial specialists, Meyer, Walker, & Litwin (1961) found that those holding "entrepreneurial" jobs scored significantly higher in n Ach than did the specialists. It should be noted that the use of the word "entrepreneur" in this context did not refer to business owners but to managers holding jobs with high degrees of autonomy. This conceptualization is similar to that used by McClelland in most of his studies. Turner (1970) studied over 600

adolescent males and found that those high in n Ach came from homes where fathers were involved in occupations requiring entrepreneurial role behavior.

In a comparative study of Indian entrepreneurs and non-entrepreneurs, Nandy (1978) found that high n Ach was positively related to the decision to start a business, but not to the ultimate success of the business. Durand and Shea (1974) found that black small business owners who scored higher in n Ach were significantly more active in their businesses than those who scored low.

On the whole the evidence presented by the studies just cited would suggest that there is indeed link between n Ach as measured by the TAT and some sort of entrepreneurial behavior. Studies using other measures of achievement motivation will now be examined to see what additional light has been shed on the link between n Ach and entrepreneurship.

EPPS

Other than the TAT, the achievement scale of the Edwards Personality Preference Schedule has been used most frequently. The EPPS is a 225-item inventory designed to measure 15 needs, one of which is achievement. Each item in the test is a personally descriptive pair of statements which are matched according to their average social desirability ratings. A typical achievement item is: "I like to: (a) help my

friends when they are in trouble; or (b) do my best in everything I under-take. Achievement is defined as follows:

To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play. (Edwards 1959, 10)

Although this definition appears to share common ground with McClelland's view of n Ach, it cannot be taken for granted that the EPPS is measuring the same construct.

The first two studies to use the EPPS (Hornaday and Bunker 1970, Hornaday and Aboud 1971) both indicated that entrepreneurs (defined as someone who started a business, had at least eight employees, and had been in business at least five years) scored significantly higher than the norms for the EPPS as established by Edwards (1959). It was concluded that the achievement scale of the EPPS shows promise of providing an objective measure of achievement motivation which can differentiate between successful entrepreneurs and the general population (Hornaday and Aboud, 1971).

DeCarlo and Lyons (1979) used the achievement scale of the EPPS as part of a larger questionnaire in a study of minority and non-minority female entrepreneurs. They found that both minority and non-minority female entrepreneurs scored significantly

higher than the female general population norms, and that the non-minority group scored significantly higher than the minority group.

More recently, Begley and Boyd (1986) discovered that founders of firms scored significantly higher than non-founder managers on the achievement scale of the EPPS. They did not, however, find any relationship between achievement motivation and financial performance of the firm.

PRF-E

The Personality Research Form-E (Jackson, 1974) was designed to assess 20 personality traits, one of which is achievement. It is a 352-item, bipolar (questions are in a true-false format) inventory. According to Lanyon and Goodstein the scales of the PRF-E have "high content validity, and item homogeneity, relatively low correlations with social desirability, and relatively low correlations with each other" (1982, 52).

The achievement scale was constructed based on Murray's need theory (Fineman 1977). Murray (1943, 9) defines n Ach as the need "to work at something important with energy and persistence. To strive to accomplish something credible. To get ahead in business, to persuade or lead a group, to create something. [It] is ambition manifested in action."

Two studies have used the PRF-E to measure achievement motivation in entrepreneurs. Mescon and Montanari (1981) studied 51 residential real estate brokers (31 independents, 20 franchisees) and found that need for achievement of the brokers did not vary significantly with either type of enterprise (independent vs. franchise) or location of the enterprise (rural, midsize, or urban).

Sexton and Bowman (1983) studied 401 students who were partitioned into four groups: Business majors (n=115); business majors that had taken an elective entrepreneurship course (n=115); entrepreneurship majors (n=63); and, non-business majors (n=113). Students majoring in entrepreneurship (budding entrepreneurs) scored significantly different on a number of scales (autonomy, change, dominance, endurance, energy level, innovation, risk-taking, self-esteem, anxiety, cognitive structure, and conformity) than the other groups. However, achievement motivation was not a discriminating variable. As a result, the achievement scale was deleted from the test subsequently developed to assess entrepreneurial traits.

LAMQ

The Lynn Achievement Motivation Scale represents a specific questionnaire measure of achievement motivation (Lynn 1969a). It is a factor analytically

derived scale which asks eight yes-no questions as follows:

1. Do you find it easy to relax completely when you are on holiday?
2. Do you feel annoyed when people are not punctual for appointments?
3. Do you dislike seeing things wasted?
4. Do you like getting drunk?
5. Do you find it easy to forget about your work outside normal working hours?
6. Would you prefer to work with a congenial but incompetent partner, rather than with a difficult but highly competent one?
7. Does inefficiency make you angry?
8. Have you always worked hard in order to be among the best in your own line? (Lynn 1969, 529)

This measure was constructed specifically to provide a questionnaire measure of McClelland's concept of achievement motivation (Lynn 1969).

Borland (1974) used the LAMQ as well as a measure of locus of control (Levinson 1973) to study the characteristics of students who intended to become entrepreneurs (budding entrepreneurs). The results of this study suggested some interaction between internal locus of control and n Ach. Specifically, among those with low n Ach, those with higher internal locus of control were found to have a greater expectancy than others of starting a company. It was also discovered that for those high in achievement motivation, the level of internal locus of control made no difference in the expectancy of starting a company.

Hull, Bosley, and Udell (1980) used the LAMQ as part of larger survey instrument in a study of University of Oregon alumni. They found that n Ach was

not useful in distinguishing between high and low probability of starting a business within three years of graduation.

SPV

The Gordon Study of Personal Values has seen limited use in entrepreneurship research. The SPV is a forced-choice test in the sense that the subject picks the statement from a triad of statements that is felt to be the most important and the one that is viewed as least important. There are six categories of which achievement is one. Those high in achievement motivation are defined as desiring "to work on difficult problems, to have a challenging job to tackle, to strive to accomplish something significant, to set the highest standards of accomplishment for oneself, to do an outstanding job in anything one tries" (Komives 1972, 240). Komives (1972) found that 20 high-tech entrepreneurs scored higher than the norms on the SPV achievement scale (no test of significance was performed).

MAS

The Mehrabian Achievement Scale (Mehrabian 1968, 1969) was designed to measure achievement motivation alone. There are both male and female versions of a 26 item scale where extent of agreement or disagreement with items such as "I worry more about getting a bad

grade than I think about getting a good grade" are recorded. A nine-item shortened version has also been constructed. Mehrabian defined high achievers as those who have a stronger motive to achieve relative to their motive to avoid failure, while low achievers have a stronger motive to avoid failure relative to their motive to achieve. This view is based on Atkinson's (1964) conceptualization of achievement motivation.

Lachman (1980) employed the MAS to study entrepreneurs in Israel. In his study of 29 entrepreneurs and 25 non-entrepreneurs (managers) the measure of achievement motivation provided by the MAS correctly discriminated between the two groups. Lachman concluded that entrepreneurs can be differentiated from non-entrepreneurs by personality characteristics and that the MAS provides a potentially useful tool for doing so.

SCT

Mukjerhee's Sentence Completion Test (Mukjerhee, 1968) has been used in at least one study of entrepreneurial traits. Mukjerhee differentiates between achievement motivation and achievement values. Achievement values (v Ach) are viewed as "those principles that guide one's conduct in making substantive contribution to the field or profession in which one is engaged" (Mukjerhee 1968, 145). Achievement values represent a verbalized desire for

upward striving and are, therefore, less susceptible to change than the need for achievement as conceptualized by McClelland. Because achievement value is measured at the verbal level, the issue of fantasy versus behavior does not arise. Thus, it should be a better predictor of entrepreneurship than the fantasy-based TAT measure of achievement motivation (Pandey and Tewary 1979).

The SCT consists of 50 forced-choice triads (one item reflecting achievement-related sentiment and the other two pertaining to different aspects of manifest needs) constructed to minimize social desirability bias. An example of the type of triad found in the SCT is given below:

I like...

- A. to be faithful to my friends and colleagues.
- B. to be very systematic in my work.
- C. to do my best in whatever work I undertake (Mukjerhee 1968).

There is one known study in which the SCT has been used to investigate the traits of entrepreneurs. Pandey and Tewary (1979) studied 44 small business loan applicants in Northern India. The results of the study indicated that successful loan applicants demonstrated significantly higher y Ach than did the unsuccessful applicants. While the study did not consider the actual start-up of the new business, the authors assert that achievement values as measured by the SCT may well be related to successful entrepreneurship. This is,

however, an empirical question not addressed by this study. The traits required to successfully secure a loan may well be very different substantially from those required to make a business a success.

WOFO

In the Work and Family Orientation Inventory (Spence and Helmreich 1978, Spence 1983) achievement motivation is conceived as a multidimensional construct. It contains three subscales each of which focuses on a different dimension of achievement striving. The three subscales are termed "Mastery Needs", "Work Orientation", and "Interpersonal Competitiveness." These dimensions of achievement are assessed through questions such as "There is satisfaction in a job well done" (Work Orientation); "Once I undertake a task, I persist" (Mastery Needs); and "I try harder when I'm in competition with other people" (Competitiveness). There are eight items in the Mastery category, six items in the Work category, and five items in the Competitiveness category. Each item is accompanied by a 5-point rating scale ranging from "strongly agree" to "strongly disagree."

Carsrud and Olm (1986, 150) noted that:

...a series of studies have shown that the quality and quantity of academic and vocational performance are predicted by varying combinations of the WOFO scores. These studies indicate that the 'best' performance is typically exhibited by those individuals scoring high in mastery needs and work

orientation, but low in interpersonal competitiveness.

It was also noted that the inconsistent results of previous studies of n Ach in entrepreneurs may be due to a reliance on unidimensional measures. It was suggested that achievement motivation is a multidimensional construct and should be studied as such if research is to yield consistent and valid results.

Carsrud and Olm (1986) reported the results of two studies designed to investigate the relationship between achievement motivation, as measured by the WOFO, other personality traits of the entrepreneurs, and firm performance. The first study involved 96 male owners of retail building and supply firms. Hierarchical regression was used to assess the effects of multidimensional achievement motivation factors on entrepreneurial success (sales/# of employees). The independent variables were 1) % ownership of the firm by the entrepreneur, 2) WOFO, 3) the degree to which purchases of materials were made through a cooperative, 4) verbal aggression, 5) instrumentality, 6) expressivity, 7) hostility, 8) influence, and 9) power. Across all owners the regression analysis produced non-significant results. However, when the model was broken down by percentage of ownership of the firm, significance was found. Specifically, in the 1-49

percent ownership category, significant predictive ability was found when all the variables were entered (with the three scales of achievement motivation being major contributors to obtained significance). However, for the 50-100 percent ownership group the model did not demonstrate significant predictive ability.

The second study involved the responses of 108 females who owned more than 50% of their businesses. The results of the regression analysis of the sample were comparable to the male respondents in the 50-100 percent ownership range. That is, the model did not demonstrate significance in predicting gross sales. However, when a self-report measure of market share was used as a criterion variable the personality/motivational variables were significant predictors.

The authors concluded that motivational factors seem to have an effect on the success of the firm only when the owner has a minority interest. This finding is tentatively attributed to the existence of a "try harder" syndrome for the minority owner. It is also suggested that more precise measures of success such as a historical growth pattern of sales for each firm, a three or five year record of net operating profit margins and gross profit margins, or a five year record of return on total investment could yield more significant results.

Self-Report and External Observer Measures

Two additional studies exist in which achievement motivation has been included as a variable in an entrepreneurial setting, without benefit of a formal measurement instrument. In the first, (Schwartz 1976), 25 female small business owners were simply asked to rank from "insignificant" to "considerably strong" several motivating factors, one of which was achievement. In the words of the author, "most of the respondents...seemed to be motivated by achievement and self-actualizing needs" (Schwartz 1976, 53). Although McClelland is quoted to legitimize the study of n Ach as a characteristic of entrepreneurs the imprecise nature of the self-report measure used in this study makes it impossible to state with any certainty that McClelland's n Ach construct was being measured. At best it can be said that the majority of female entrepreneurs in this study perceived themselves to be achievement oriented.

In an imaginative study of entrepreneurial tendencies of school children, Kourilsky (1980) found that students who manifested entrepreneurial tendencies in simulated economies were higher in achievement motivation than non-entrepreneurial students. Again McClelland is cited to justify the inclusion of n Ach as an experimental variable in the study, but no formal

instrument was used to measure it. In this study, achievement motivation was defined as that quality

...reflected in the students' seeking of recognition for and overt exhibition of his/her performance abilities and skills....A student with high need for achievement will seek recognition for good work, will solicit opportunities to perform good work, and perform better in situations requiring 'good work' (Kourilsky 1980, 182).

Achievement motivation, then, was assessed by teacher observation and evaluation. While the definition of achievement motivation noted above would seem to be roughly comparable to the n Ach variable as defined and studied by McClelland, there is reasonable doubt as to whether the same construct was measured.

Summary and Conclusions

The research just reviewed seems, on the whole, to support the notion that there is a positive relationship between n Ach and entrepreneurship. However, the results are mixed and there are enough problems with many of the studies that have shown a positive relationship to prevent the unequivocal statement that the case has been proven.

One of the major problems with the research has to do with operationalization of the n Ach construct and its subsequent measurement. As has been demonstrated in this review of the literature, numerous tests have been employed to measure what on the surface appears to be a similar construct. However,

considerable doubt remains as to whether each test is, indeed, measuring the same construct (Sexton and Bowman 1984) even if the operational definition is similar.

In the words of Fineman (1977, 2):

Intuitively, the achievement motive concept appears very plausible. It seems to account for a particular type of commonly observed behavior--striving to do well, desiring to fully utilize one's capabilities to succeed and to be judged by oneself and others on this success. It is therefore understandable that it should have held the attention of applied researchers interested in organizations where achievement goals are explicit--such as schools, universities and industrial concerns. But while there is some variability in describing n Ach, there is far more disagreement about its measurement.

A fundamental area of disagreement revolves around issue of projective versus objective tests. McClelland (1955) has maintained that achievement motivation should be treated as an unconscious variable and thus is measurable only with a fantasy-based projective technique. However, according to Fineman (1977) McClelland's TAT is also measuring something different from other projective techniques, in addition to the questionnaire instruments measuring something different from each other.

Does the lack of consistency in the operationalization and measurement of the achievement motive construct suggest that it should be rejected as worthless as a research topic? According the Fineman, the answer is no. The plausibility and worth of the construct remain undiminished. However, care must be

taken to develop and use measures that are reliable and valid, and to avoid the use of n Ach as a generic category for all motives related to achievement striving. It is simply not possible to generalize across the different studies of entrepreneurship and achievement motivation when there is so little consistency in operational definitions and measurement instruments. It is incumbent upon every researcher to clearly establish the operational definition of the motive being studied and to demonstrate to a reasonable degree the validity and reliability of the test instrument being used in relationship to the specific operationalization of the motive being studied. Far too many researchers in the field of entrepreneurship have cited McClelland to justify the inclusion of n Ach as a characteristic of the entrepreneurs in the study, only to use an objective or self-report approach to measure a vaguely defined achievement motive.

Despite the inconsistencies in the research on achievement motivation and entrepreneurship, a reasonably clear relationship has been established between entrepreneurial endeavors and some sort of achievement striving however imprecisely defined and measured. Much of the confusion stems from the broad use of the n Ach terminology in ways not consistent with McClelland's theory. For research to go forward it would seem useful to move away from the n Ach label

and terminology. While the terminology has outlived its usefulness, the construct has not. It simply must be more precisely defined and measured in a way consistent with the definition. Furthermore, researchers must avoid the temptation to generalize results of studies using different operational definitions and/or different measures to their own research under the erroneous assumption that achievement motivation is a unitary construct.

Miner's Limited Domain Theories of Motivation

The term "achievement motivation" (n Ach) has come to mean too many things to too many different people to be of continued usefulness as a research concept. As was shown in the previous sections, achievement striving has been operationalized and measured in such a wide variety of ways in entrepreneurship research that the terminology of n Ach has outlived its ability to enlighten and now serves primarily to confuse. While researchers continue to rely on McClelland's rather specific definition and operationalization of n Ach to justify their own study of achievement motivation in entrepreneurs, it seems to have taken on a generic connotation which is being operationalized differently (sometimes vaguely) and measured by a wide variety of instruments which cannot be assumed to be testing the same construct as

McClelland's TAT. The convergent validity of the various instruments has been found to be low--they do not appear to be measuring the same construct (Fineman 1977).

In his review of the n Ach measures Fineman concluded with the following remarks:

In the realm of questionnaire measures of n Ach there appears to have been an all-too-ready eagerness to develop new devices without sufficient thought about (a) the richness of the n Ach construct, (b) other measures in the field, (c) response biases, and (d) face validity. A simplistic 'tidy' measure may initially satisfy the psychometrician but can often strike the respondent as naive, inappropriate and alienating. The problem for the test constructor is to balance the structured nature of the questionnaire with the more ambiguous 'real' world of the respondent. If measures are designed with specific populations in mind this balance will more likely be achieved (Fineman 1977, 18-19).

An underlying premise of the present study is that it is the terminology of n Ach that has outlived its usefulness but not the construct itself. While the results of the research are mixed, there is evidence that the relationship between entrepreneurship and the construct of n Ach (particularly as defined by McClelland) has been reasonably well supported. What is needed is a way to recast the construct to avoid the confusion of the past research, and the construction of a valid test instrument with the target population in mind (entrepreneurs) so that a program of systematic research can be undertaken.

Miner (1982) has outlined an inducement system theory of organizational functioning. The essence of his approach is that different systems possess different role requirements and that individuals must exhibit appropriate motivational patterns to be successful in a given system or domain. The four systems or limited domains of Miner's theory are 1) Hierarchic, 2) Professional, 3) Group, and 4) Task. Oliver (1981, 1982) has developed an instrument, the Oliver Organization Description Questionnaire (OODQ), which serves to classify organizations or subunits thereof according to Miner's limited domain theory.

The Task System is hypothesized to be descriptive of the entrepreneurial domain and will be of primary interest in this study. However, since all four systems share common ground in theoretical development and in measurement instrument development, they will all be described here.

Managerial Role Motivation in Hierarchic Inducement Systems

Managerial role motivation in hierarchic systems is the most fully developed theoretically and the most fully tested domain in Miner's theory (Miner 1965, 1977, 1978b). The focus is on managerial effectiveness in firms organized according to the scalar principle which are sufficiently large, formalized, and

rationalized to function in the bureaucratic manner.

Given this premise it follows that:

The theory would predict that those individuals who repeatedly associate positive rather than negative emotion with various role prescriptions which have been identified as generally characteristic of managerial positions, would tend to meet existing organizational criteria of effectiveness. Those in whom negative emotional reactions predominate should be defined as relatively ineffective. This does not mean that motivational factors are the only ones which operate to determine a person's performance level in managerial work. Verbal ability, specific job knowledge, typical emotional patterns and physical factors, among other things, are without question important. But motivational factors of the type described should be of sufficient significance to consistently yield reliable correlations with appropriate organizational criteria of effectiveness (Miner 1965, 43).

The six managerial role prescriptions identified as generally characteristic of bureaucratic organizations are as follows:

1. Managers are expected to behave in ways that do not provoke negative reactions from superiors; ideally they will elicit positive reactions. Thus, a manager should have a generally positive attitude toward those in authority over him. Any tendency toward generalized hatred, distaste, or anxiety in dealing with people in positions of authority will make it difficult to meet job demands.
2. Due to the competitive nature of managerial work it is necessary that a manager be favorably disposed toward engaging in competition for position, status, advancement, ideas and resources. An unwillingness to fight for these things will likely result in ineffectiveness. Any generalized tendency to associate unpleasant emotions such as anxiety and depression with performance in competitive situations will almost inevitably result in behavior which falls short of role demands.
3. Behaving in an active, assertive manner is a common requirement of management. Managers are

expected to take charge, to make decisions, and take disciplinary action as required. This role prescription requires one who enjoys performing the traditional father role in our society. Even women are expected to follow an essentially masculine behavior pattern to be successful in managerial positions. Those who become disturbed (male or female) at the prospect of behaving in a masculine way would not be expected to possess the type of motivation necessary for managerial success.

4. The exercise of power through the appropriate use of positive and negative sanctions is an important part of the manager's job. The manager who finds it disturbing to impose his will on others is not likely to meet this role prescription.
5. A manager must deviate from his immediate group and behave in ways which will call attention and perhaps invite criticism for his actions. A person who enjoys being the center of attention, who has many characteristics of an actor is most likely to meet the demands of the job in this area.
6. A manager must deal with many routine administrative tasks. An effective manager must at least be willing to face this type of routine, and ideally gain some satisfaction from it (Miner 1965, 43-46).

It is hypothesized that those individuals whose traits match the requirements of managerial effectiveness will move more rapidly to higher levels in the hierarchy of a bureaucratic organization. If advancement is blocked they will seek greater opportunities elsewhere. Although certain people may be predisposed to fill the required roles more naturally, it is also hypothesized that it is possible to increase the level of managerial role motivation through the implementation of appropriate training programs.

The instrument developed to measure hierarchic role motivation is the Miner Sentence Completion Scale-Form H (MSCS-Form H). There are seven subscales in the MSCS-Form H which are consistent with the role prescriptions described above. They are authority figures, competitive games, competitive situations, masculine role, imposing wishes, standing out from the group, and routine administrative functions (Miner 1964). The test is constructed in a sentence completion format with five sentence stems for each of the seven subscales and five filler items. The open-ended nature of the test allows for the projection of answers in accordance with the attitudes and personality traits of the respondent. It is a projective or indirect method of personality assessment. Many of the sentence stems refer to situations outside the work environment and subjects, as a result, have little or no idea of what the MSCS measures and cannot consciously construct a particular (socially desirable) picture of their motivational patterns.

Scoring is accomplished by evaluating each response as positive (+1), neutral (0), or negative (-1). Computation of the Item Score involves totalling all positively scored responses across the 35 scored items and subtracting the number of negatively scored items. The possible scoring range is +35 to -35. A

similar procedure may be followed to obtain subscale item scores with a possible range of +5 to -5 for each subscale (Miner 1964).

In determining the usefulness of the MSCS measures at least three areas must be examined: validity, psychometric soundness, and reliability. Because all three scales (Form H, Form P, and Form T) were constructed in much the same way and utilize structured stems of a type that have been found to be useful in sentence completion measures, the a properties of the three scales should be similar. That is not, however, necessarily true for validity since each scale measures different properties and uses different items accordingly (Miner 1985).

Because the MSCS-Form H has been around the longest, most of the research results relative to validity and reliability deal with this scale. A reasonably thorough discussion of the MSCS-Form H will follow to lay the groundwork for a discussion of Form T, the scale which will be used in this study.

The validity of the MSCS-Form H, both concurrent and predictive, has been well established through a program of systematic research over a period of almost thirty years (Miner, 1965, 1977, 1978a, 1978b, 1985). That is, high scores on the MSCS-Form H have been positively correlated with managerial success in large, bureaucratic organizations, while studies conducted

outside this domain have generally failed to yield significant results. When comparisons have been made between managers, or those desiring to become managers, or those picked as having management potential based on their observed performance in bureaucratic settings, and other groups, significant differences in the expected direction have typically been found. In addition, correlations between MSCS-Form H and measures of similar constructs such as the Kinder Performance Record, Strong Vocational Interest Blank, Gough Adjective Check List, Myers-Briggs Type Indicator, Ghiselli Self Description Inventory, California Psychological Inventory, and assessment center research at AT&T have supported the motivation to manage interpretation of Miner's measure (Miner 1978b). The MSCS thus appears to possess high construct validity.

In terms of reliability there are three points to consider: inter-scorer reliability, test-retest reliability and internal consistency. Miner (1985) addresses each of these issues with respect to Form H. In summarizing the results of all known scorer reliability studies it was found that for experienced scorers (defined as having received training or in the case of Miner having developed the scoring system) inter-scorer correlations ranged from .86 to .97, with a median of .92. For less experienced scorers (using only the scoring guide with no formal training) a

median of .80 was estimated. There appears to be a tendency for less experienced scorers to introduce a positive bias by failing to give negative scorings as often as is appropriate. Overall it appears that very good scorer agreement can be achieved. However, care must be taken to ensure that scorers receive adequate training and practice.

Studies carried out to evaluate the test-retest reliability of Form H indicate that total score reliability coefficients range from .68 to .84., with a median of .83. Subscale coefficients range from .44 to .63, with a median of .48. The above coefficients derive from control groups used in studies carried out to evaluate training programs intended to raise the levels of motivation to manage. Overall, it is concluded that the test-retest reliability for the total score is acceptable although subscale reliabilities are not sufficient to justify individual, clinical interpretations of specific scores (Miner, 1985).

The internal consistency reliability of the MSCS-Form H has not fared so well. The few studies that have analyzed the internal reliability have come up with low coefficients (ranging from .00 to .41, with a median of .16 for the subscales). The reason for this finding is "that the item selection process concentrated on discrimination between external

criterion groups, rather than between high-scoring and low-scoring groups on the internal measures themselves. In short, the measures have been constructed with reference to external validity but not internal consistency. It is not surprising that the overall outcome reflects this same distribution of foci" (Miner 1985, 168). Miner asserts that for projective techniques there is an increasing body of evidence and theory that indicate that internal consistency reliability is not an essential condition, and that it could actually inhibit validity by reducing the number of aspects of a construct that are tapped by the instrument.

Given Miner's generally positive evaluation of his own instrument it would seem wise to look at a dissenting view. Brief, Aldag, and Chacko (1977) call into question the MSCS-Form H on several counts. They question the construct validity, psychometric soundness, and inter-scorer reliability of the MSCS. In comparison with the Personal Values Questionnaire (PVQ) and the Self-Description Inventory (SDI), they found that the subjects' MSCS item scores and rare scores were not related to the personal value system as assessed by the PVQ. They also found that the masculine role, imposing wishes, and competitive situation subscales of the MSCS-Form H did not converge with the analogous scales drawn from the SDI. The

authors seriously question the construct validity and a soundness of the MSCS and argue against the use of the open-ended, sentence completion format due to the subjectivity involved in the scoring process leading to lack of inter-scorer reliability.

Miner responded with the following rebuttal:

The data brought to bear in reaching this conclusion suffer from serious shortcomings in conceptualizations, differ sharply from the results obtained in other studies of similar phenomena are not adequately integrated with published literature, and raise certain questions regarding the authors' objectivity (Miner 1978a, 283).

More specifically, Miner (1978a) indicated that inter-scorer reliability for experienced scorers has been well substantiated to be above .90 and that Brief et al. found lower correlations because the scorers were not experienced. The problem was with the scorers not the test. With regard to construct validity Miner questions "whether a failure to find significant relationships between the MSCS and the PVQ has anything to do with the construct validity of either instrument. One is a measure of motives, the other of values--two clearly distinct types of hypothetical constructs" (Miner 1978a, 288). Furthermore, Miner presents data which show that the MSCS-Form H does appear to possess convergent and discriminant validity with the managerial talent scales of the SDI. The correlations are not particularly high, but they are significant. In terms of a soundness Miner presents data that show

that the MSCS is at least as psychometrically sound as the PVQ and SDI. Brief et al. do admit that "the evaluation of the MSCS involving the PVQ and SDI could, of course, be taken as providing evidence concerning both the latter scales rather than the MSCS" (Brief, Aldag, and Chacko 1977, 641).

While Miner's measure is not without problems, on the evidence presented one must agree with Miner that the pluses outweigh the minuses. Brief et al. do not present convincing arguments to the contrary.

In conclusion Miner (1985) notes several pros and cons of this sentence completion approach:

Pros

1. Very good scorer agreement can be obtained, so this factor need not be a detriment in the use of sentence-completion measures.
2. Good test-retest reliability can be expected if the measures are long enough. Ideally, for individual interpretation of scores, the subscale of the MSCS would contain more items than they currently do.
3. It appears that unconscious motives are tapped, given the score inflation with a shift to multiple-choice measurement, and even the multiple-choice version of Form-H appears to be independent of meaningful social desirability bias.
4. Most important of all, the approach works (yields validity) as hypothesized by the underlying theory, and has continued to do so for a number of years. That is the basic reason why the writer [Miner] became involved in a program of research extending over a professional lifetime. Each new success seems to open up a whole new set of questions.

Cons.

1. It has not been possible to devise a scoring guide that in itself assures adequate scorer reliabilities. Some people cannot obtain an acceptable level, and some simply do not. Training does appear to help, but as long as a scoring guide cannot guarantee success, there are going to be some failures in data interpretation.
2. On the subscales we are currently caught between practical usefulness and desirable levels of reliability. At present a much longer measure would meet considerable resistance, but longer subscales offer substantial advantages.
3. Like all projectives, sentence completion methods remain somewhat cumbersome, because they have to be scored. Resorting to multiple-choice alternatives solves one set of problems, only to introduce a new set. A great deal needs to be learned in this area (Miner 1985, 171).

Role Motivation in Professional
Inducement Systems

The second domain into which Miner's theory has moved is that of professional inducement systems. The basic hypothesis is that "the theory of professional inducement will more effectively predict professional career accomplishment than will the hierarchic inducement theory" (Miner 1980a, 487). As with managerial role theory, role prescriptions have been developed to describe the motivational inducements of professionals in professional organizations. These role prescriptions are as follows:

1. Acquiring knowledge. In a profession technical expertise and knowledge must be developed, transmitted, and used in the service of clients. Thus, a professional should desire to learn and acquire the knowledge that permits providing an expert service.

2. Independent action. In a profession the individual has a private and personally responsible relationship with clients of a kind that typically requires autonomous action based on individual professional judgement. Thus, a professional should be an independent person and desire to act independent of others.
3. Accepting status. In a profession the successful provision of services to clients is predicated on client recognition of the existence of expert status. Thus, a professional needs to desire status in the eyes of others and the symbols of status in order that the available services be utilized. Involved here is a particular kind of visibility that not only attracts attention but also yields recognition and respect of a kind that will attract and retain clients.
4. Providing help. In a profession the client-professional relationship is central, and within that relationship the client should be assisted in achieving desired goals, or on occasion that which is considered by the professional to be in the client's best interest, even if not actually desired by the client. Thus, a professional must possess a desire to help others achieve their best interests. This type of motivation, although normally described as a desire to serve others, is conceived as being conceptually comparable to the "helping power" construct as elaborated by McClelland (1975).
5. Professional commitment. In a profession there needs to be a strong tie to the profession of a kind that keeps members responsive to ethical norms, and this tie typically is mediated through a sense of personal identification or commitment. Thus, a professional should possess a high level of value-based identification with the profession and commitment to it (Miner 1980a, 488).

The basic hypothesis that flows from the professional role theory is that those who possess the identified motivational patterns at a high level will attain higher levels of professional success than those who lack the necessary motives.

The MSCS-Form P has been developed to measure motivation in the professional domain (Miner, 1981). It contains 40 sentence completion items, eight for each of the five subscales: acquiring knowledge, independent action, accepting status, providing help, and professional commitment. Scoring is carried out in the same manner as for the Form H described earlier. The total item score may vary from +40 to -40 and each subscale from +8 to -8. Extensive analyses of the properties of Form P have not been carried out yet, but it is believed that it should be comparable in terms of psychometric soundness to Form H due to the virtually identical formats and scoring procedures used (Miner 1980a, 1982).

To date there has been only one reported study of professional role motivation (Miner, 1980a). In this study 112 business school faculty members of the Academy of Management completed both the MSCS-Form H and the MSCS-Form P. The scores of each of these measures were then correlated with success criteria derived from the following categories: compensation, academic rank, publications, professional organization activity, position type, and doctoral education. "The results obtained provide strong support for the hypothesis of the study and for the limited domain theory of professional inducement systems: managerial role-motivation theory does not work outside its own

domain, in the professional arena, but the more appropriate professional theory does" (Miner 1980a, 504). In other words, a strong relationship was found between professional success criteria and motivation as measured by Form P, but no such relationship was discovered between professional success and Form H. This is as the theory would predict.

Role Motivation in Group Inducement Systems

This domain of Miner's theory has not been fully developed. However, the theoretical focus will be on the autonomous work groups of sociotechnical systems theory as put forth by Emery and Trist (1965) and Trist (1977). Some preliminary work has been done. Oliver (1982) found that autonomous work groups describe their organizational context as that of a group-based system. The underlying hypothesis is that "in group systems, group motivation should be at a high level among emergent leaders, and it should be positively correlated with other group-determined success indexes: group motivation should not differentiate in these ways within other types of systems" (Miner 1985, 298). The MSCS-Form G has not yet been developed.

Role Motivation in Task Inducement Systems

The forth domain of Miner's theory is that of task inducement systems characterized primarily by

entrepreneurial endeavors, although not exclusively so. This domain differs somewhat from the hierarchic, professional, and group systems in that in this case it is the task itself that provides the motivational inducements, not some outside individual or group. The entrepreneur who founds a new business is motivated to expend effort by the threat of bankruptcy if unsuccessful, and the possibility of sizable rewards if successful. Although there are sometimes agents who administer the processes, it is primarily the way in which the task is structured that serves to induce effort (Miner 1985). The basic hypothesis is that "in task systems, task (achievement) motivation should be at a high level among task performers (entrepreneurs for example), and it should be positively correlated with task success indexes: task motivation should not differentiate in these ways within other types of systems" (Miner 1985, 298). Although the focus has been on entrepreneurs, it is hypothesized that the task domain also includes such occupational groups as commission sales representatives, profit center managers, and real estate sales personnel. The essential factor is that success and failure derive directly from task performance, not from evaluations made by others using some set of norms--organizational, professional, or group (Miner 1986).

The role prescriptions of task inducement systems are based on McClelland's (1961) theory of n Ach. However, Miner makes it clear that his theory of task inducement systems has taken on unique characteristics of its own and that research efforts designed to test Miner's theory cannot be considered to represent tests of McClelland's theory of n Ach (Smith and Miner 1985).

The role prescriptions of task motivation are as follows:

1. Self achievement. A desire to achieve through one's own efforts and to be able to attribute any success to personal causation.
2. Avoiding risks. A desire to avoid taking risk whenever possible. (Originally a moderate risk taking propensity was posited (Smith and Miner 1984)).
3. Feedback of results. A desire for some clear index of the level of performance.
4. Personal innovation. A desire to introduce novel, or innovative, or creative solutions.
5. Planning for the future. A desire to think about the future possibilities (Smith and Miner 1985).

The instrument for measuring motivation in task systems is the MSCS-Form T. There are eight sentence stems for each of the of five subscales. The subscales correspond to the five role prescriptions noted above. As with Form H and Form P scoring is accomplished by identifying each item as a +, ?, or - depending on whether the response is consistent with the theory's concept of successful entrepreneurship, theoretically neutral or unrevealing, or antithetical to the theory's

position. The possible range of the total score is +40 to -40 and is +8 to -8 for each subscale (Miner, 1986).

Concerning the relationship between McClelland's TAT and Miner's MSCS-Form T, Miner makes the following comment:

A final point relates to David McClelland's concept of achievement motivation and the various measures of that concept including McClelland's own Thematic Apperception Test (TAT) measure. The MSCS-Form T has much in common with the McClelland construct and measure; there is a clear theoretical debt. Both the TAT and the MSCS are projective measures and accordingly can tap unconscious motives. McClelland's theory of achievement motivation and the present theory of task motivation have much in common, although there are differences as well, especially in the area of risk taking. It may well be that Form T yields a close approximation to the McClelland measure of achievement motivation. However, empirical data on this point are lacking. Were Form T to show such a relationship it would provide a much more easily determined index of the same construct. However, it is not possible to make any statement in this regard short of conducting the research needed to relate Form T to the TAT achievement motivation index, and to the numerous other measures of achievement motivation that currently exist as well (Miner 1986, 55).

There has been one study designed to test the applicability of Form H to entrepreneurial motivation (Smith and Miner 1983). In this study the MSCS Form-H was administered to a sample of entrepreneurs in Oregon. The scores were then compared to data gathered through interviews of the entrepreneurs regarding personal characteristics and type of firm. Several hypothesis were tested, of particular interest here is the hypothesis that the average level of managerial motivation is relatively low in comparison to managers

in large bureaucratic organizations. In summarizing the results, the authors stated that the,

...entrepreneurs do not possess a degree of managerial motivation (as measured by MSCS-Form H) as high as that of the average corporate middle manager. Overall the data suggest that the average entrepreneur falls toward the low end of the distribution for first level supervisors in large companies (Smith and Miner 1983, 335).

In other words, the role requirements of entrepreneurship represent a different domain of motivational inducements than do the roles requirements of bureaucratic management.

In Smith and Miner (1984, 1985), the development of the theory regarding the entrepreneurial role is extended to include the five role prescriptions of the task inducement system as measured by MSCS-Form T. In this study Form T and an innovative technology survey questionnaire were administered to 71 National Science Foundation grant applicants in the state of Oregon. Seventy one useable responses were received (13% response rate). The sample was partitioned into three groups: 1) individuals involved in founding their own firms with a firm growth rate of over 1.5 employees per year (entrepreneurs heading rapid growth firms, n=23), individuals involved in founding a firm with a firm growth rate of less than 1.5 employees per year (entrepreneurs heading slow growth firms, n=28), and

individuals who submitted grant requests who were not involved in the founding of the firm (non-entrepreneurs, n=20). The primary finding was that the entrepreneurs heading faster growing firms showed significantly higher task motivation as measured by the MSCS-Form T than the other two groups.

The significance of this finding, according to the authors, is that simply founding a business is not the key attribute of entrepreneurship. Building a successful, growth-oriented business is the true measure of successful entrepreneurship. If the MSCS-Form T is indeed a valid predictor of entrepreneurial growth propensity, it could become a useful tool in the early identification of entrepreneurial talent and be useful as a policy tool in channeling resources to those who demonstrate high entrepreneurial task motivation (Smith and Miner 1984).

This study was subsequently extended to include a total of 134 National Science Foundation grant applicants (Smith and Miner 1985). As before these respondents were divided into groups of entrepreneurs heading faster growing firms (N=50), entrepreneurs heading slow growth firms (N=47), and non-entrepreneurs who were predominantly manager-scientists (N=37) and compared on scores achieved on the MSCS-Form T. As before, the entrepreneurs scored significantly higher on task motivation than did the other two groups. An

additional finding was that those who responded to the first round of the survey scored higher on the risk taking subscale than those who did not respond until the second round.

For purposes of present study it will be assumed, based on the evidence discussed above, that Miner has effectively recast McClelland's n Ach theory in such a way that the integrity of the basic construct is maintained while using a new measure in a somewhat different theoretical framework--task inducement systems. Furthermore, Miner's measure (MSCS-Form T), as a projective technique, retains the advantages associated with the measurement of unconscious motives, while providing the potential for greater inter-scorer and test-retest reliability than is often present with the TAT. In addition, the sentence completion format allows for the specific assessment of each of the five role requirements, rather than the more general, overall measure of achievement motivation provided by the TAT. Finally, the MSCS-Form T has, in limited testing to date, shown the potential for correctly identifying growth-oriented entrepreneurs, one of the three dimensions of the new enterprise growth model to be tested in this study.

Strategic Management in New and Small Firms

The study of strategic management in small businesses has, in the words of Cooper, tended to be "primarily discursive, wisdom-based, and prescriptive in character....Systematic, formal, empirical research of the sort that has helped move other fields forward, has been notable by its absence" (1979, 326). There are some inherent problems associated with strategic management research in small and new ventures which Cooper noted as follows:

1. There is little published data about individual smaller firms.
2. Small firms generally have little formalized record keeping on past decisions or procedures. The researcher must gather data through interview and observation.
3. Performance data for small firms, when available, is difficult to interpret.

However, strategic management research on any level offers significant challenges and there are certain characteristics of small firms that lead to advantages when compared to researching larger, publicly-held corporations:

1. The large number of small businesses makes it easier to establish larger samples.
2. Direct access to the CEO is much easier.
3. Smaller companies are much simpler and easier to comprehend.
4. Small firms tend to be less diversified, thus performance may be more directly related to specific product/market strategies.

In conclusion, Cooper notes that "strategic management in new and smaller firms appears to operate with both constraints and opportunities different from those in large organizations. As a field of research, the potential is great and the benefits, in terms of improved economic performance, can be substantial" (1979, 327).

Although progress has been made since Cooper's review of the state of small business strategic management research, many of the opportunities, questions, and problems remain. In the sections that follow, the research literature on strategic management in small business will be reviewed to determine what has been discovered to date. The primary objective of this review will be to discover measures of both the process and content of strategic management in new and small business suitable for use in this study.

Strategic Planning Process

Robinson and Pearce (1984) reviewed the literature related to strategic planning in small firms and discovered four primary research thrusts: 1) to confirm empirically the presence or absence of strategic planning practices; 2) to provide empirical evidence of the value of strategic planning; 3) to examine directly or indirectly the appropriateness of specific features of the planning process; and 4) to examine empirically the content of the strategies.

For purposes of the present study the existence, value, and process issues will be considered together as they are all very closely related.

The basic finding of the research to confirm the existence of strategic planning has been that comprehensive planning is generally absent in small firms. Rather, planning is more accurately characterized as "unstructured", "irregular", and "uncomprehensive" with a tendency to be reactive rather than proactive. This is not to say that managers of small businesses do not engage in "strategic thinking", but that it tends to be informal and remain in the mind of the strategist (Robinson and Pearce 1984).

With respect to the value of strategic planning, Robinson and Pearce found only limited research support for the widely accepted causal relationship between systematic, thorough planning and small firm success. One of the problems with this research has been the tendency to view small firms as "little big businesses" and erroneously prescribe scaled-down versions of techniques that have been used successfully in large corporations. It seems logical to suggest that because of relative "resource poverty", formalized strategic planning could overload the small firm's capacity and actually be dysfunctional (Welsh and White 1981a). As a matter of fact, the benefits of strategic planning in

larger corporations has been questioned as well (Bresser and Bishop 1983).

It seems clear that the value of strategic planning is a function of contingency relationships. Van Hoorn suggested that for very small firms (below 50 employees) systematic strategic planning is not only impractical due to resource limitations, but unnecessary. He asserted that a small business "is usually so close to the market and so flexible that there is less demand for systematic strategic planning, on the other hand the strategic choice will probably manifest itself" (1979, 86).

Strategic process refers to the activities undertaken by the strategists and/or the firm to develop and implement appropriate strategies. Many normative models have been put forth which purport to lead to greater organizational effectiveness. Shuman and Seeger (1986, 12-15) described such a model developed specifically for small business. The major elements of the model address the important issues and concerns relative to strategic process as viewed by the authors. These are as follows:

1. Decision to Plan. The process cannot begin unless the decision is made to allocate resources to planning.
2. Situation Analysis. This step allows the strategist to gain a better understanding of the current business situation by analyzing internal strengths and weaknesses, and then aligning those strengths and weaknesses with external

opportunities and threats in the present and future competitive environment.

3. **Personal Objectives.** In smaller companies the personal objectives of the owner(s) tend to intertwine with those of the firm. It is therefore important for the strategist to develop a list of specific objectives that are related to identified important personal needs.
4. **Company Objectives.** Objectives selected with regard to strengths and weaknesses of the firm and opportunities and threats in the competitive environment should be set in at least three specific categories--sales volume, financial performance, and physical resources.
5. **Issue Specification.** Based on the situational analysis management should identify the key strategic issues. Issue identification will lead to the formulation of strategic alternatives.
6. **Option Generation.** All possible alternatives should be identified along with the financial implications of each.
7. **Evaluation and Selection.** The alternatives must be compared in terms of relative effectiveness in solving key strategic issues, the degree to which each matches the company's competence and resources, their relative competitive advantage, the extent to which they satisfy management's preferences, and their relative ability to minimize the creation of new strategic problems. Most often, one primary strategy will be selected as satisfying the factors of overriding importance.
8. **Implementation.** As the company's plan becomes more clearly defined, there will be an increasing need to establish in greater detail who will do what according to a timetable. Access to necessary resources must be identified before implementation begins.
9. **Control and Feedback.** The most important variable influencing the outcome of a planning process is how well the planning is done, not how much. By providing a feedback mechanism, management allows for the continuous reappraisal of the company's strategy and the learning and improvement that results from experience in using the process.

Strategic Process Research

In their literature review, Robinson and Pearce (1984), found that in spite of the limited research support for the value of systematic planning, most researchers of strategic process appear to accept as given the positive relationship between planning and effectiveness, and proceed to search for the best planning process. Four basic conclusions emerged from the body of research reviewed by Robinson and Pearce. The first was that the planning time horizon should be shorter (under two years) in small firms than for larger corporations. The second main finding was that planning should be relatively informal. Third, the use of outsiders to augment the limited time and resources of small firm managers should improve the effectiveness of the planning process. Finally, starting the process with extensive objective setting may be detrimental in getting the process started. Several additional studies dealing with small business strategic planning processes have appeared since the Robinson and Pearce review article. These findings will be discussed next (see Table 2.4).

Bracker and Pearson (1985). In a study of 555 dry cleaning establishments, the authors found that the use of outside consultants in the planning process did not significantly improve performance of the firms.

Table 2.4.--Planning process research in small firms

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Planning</u>	<u>Performance Measures</u>	<u>Results</u>
Bracker & Pearson (1985, 1986)	188/555 (34%) dry cleaners	Planning sophistication: Structured strategic plans (SSP) Structured operational plans (SOP) Intuitive plans (IP) Unstructured plans (UP)	5 year financial: 1. revenue growth 2. entrepreneurial compensation growth. 3. labor expense/ revenue growth.	SSP firms out- performed other three types.
Bracker, Keats & Pearson (1987)	73/219 (33%) electronics firms	Planning sophistication: Structured strategic plans (SSP) Structured operational plans (SOP) Unstructured plans (UP)	5 year financial: 1. revenue growth 2. net income before taxes 3. present value 4. CEO cash compensation	SSP firms out- performed other two types.

Table 2.4.--Planning process research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Planning</u>	<u>Performance Measures</u>	<u>Results</u>
Shuman & Seeger (1986)	220/500 (44%) Inc. 500	61 questions addressing: 1. planning philosophy 2. planning process 3. planning areas 4. planning org.	1. sales growth 2. profitability growth 3. productivity growth	1. 50% did not have formal plan at start-up but majority adopted some sort of strategic plan. 2. Growth in sales positively related to formal structured, participatory planning systems. 3. Plans tended to be short-term, updated regularly and operationally oriented. 4. No significant differences between planning process and sales or productivity growth.

Table 2.4.--Planning process research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Planning</u>	<u>Performance Measures</u>	<u>Results</u>
Robinson & Pearce (1983)	50/85 (59%) small banks	Formality of planning process according to level of written documentation: 1. formal planners 2. non-formal planners	3 years' financial: 1. profit margin 2. return on assets 3. return on equity 4. loan growth	No significant difference in performance between formal planners and non-planners.
Robinson & Pearce (1986)	97/609 (16%) 77/690 (13%) small manufacturing firms	Changes in strategic decision making over growth through stages of life cycle.	No performance measures	No significant stage specific contingency relationships found.
Pearce, Robbins, & Robinson (1987)	97/609 (16%) manufacturing firms.	Level of planning formality assessed with 6-point Guttman scale.	5 year financial Objective: 1. sales 2. return on sales 3. return on assets Subjective: above 3 plus overall firm performance	Planning formality significantly related to measures of performance.

Table 2.4.--Planning process research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Planning</u>	<u>Performance Measures</u>	<u>Results</u>
Robinson, Salem, Logan, & Pearce (1988)	81/800 (10%) food retail firms	47 types of planning activities grouped into four functional areas: 1. marketing 2. finance 3. inventory 4. personnel	Financial data (3 years) Objective: 1. total sales 2. return on sales 3. # of employees 4. sales per employee Subjective: 1. total sales growth 2. net profit after taxes 3. total employ- ment growth 4. overall firm performance	Six of the 47 planning act- ivities posi- tively related to return on sales and "Man- ager's Perceived Performance."
Gable & Topol (1987)	179/489 (37%) small-scale retailers	Planners Non-planners	Financial data (3 years): 1. sales growth 2. profit growth	No statistically significant differences in performance be- tween planners & non-planners.

This finding is in direct contrast to Robinson's (1982) finding. It was also found that there were no significant differences in performance due to differences in planning orientation (degree of structure in the planning process).

Bracker and Pearson (1986). The same sample as was used in the above study was analyzed to examine the relationship among planning process sophistication, entrepreneurial type, and financial performance. Planning process sophistication was operationalized as follows:

Structured strategic plans (SSP). Formalized, written, long-range plans covering the process of determining major outside interests focused on the organization: expectations of dominant inside interests; information about past, current, and future performance; environmental analysis; and determination of strengths and weaknesses of the firm and feedback. Typically 3-5 years in nature.

Structured operational plans (SOP). Written short-range operation budgets and plans of action for current fiscal period. The typical plan of action would include basic output controls such as production quotas, cost constraints, and personnel requirements.

Intuitive plans (IP). These informal plans are developed and implemented based on the intuition and experience of the owner of the firm. They are not written and are stored in the memory of the firm's owner. They are of a short-term duration, no longer than 1 year in nature. They depend on objectives of the owner and the firm's present environment.

Unstructured plans (UP). No measurable structured planning in the firm. (Bracker and Pearson 1986, 507)

Of the 188 usable responses for this study, 38 were classified as SSP, 39 as SOP, 42 as IP, and 69 as NP.

Entrepreneurial type was based on the craftsman/opportunistic distinction suggested by Smith (1967). Financial performance was measured by assessing revenue growth, entrepreneurial compensation growth, and labor expense/revenue ratio growth .

In summarizing the results of this study, the authors state that "Firms that conformed to the structured strategic planning categorization outperformed all other planning categorizations with regard to overall financial performance. The fact that the other three levels of planning failed to discriminate among themselves provides further evidence that the process, not the plan itself, is a key component in performance" (Bracker and Pearson 1986, 512).

Bracker, Keats, and Pearson (1987). In this study, 219 members of the American Electronics Association (AEA) were surveyed to assess the relationship between planning process sophistication, entrepreneurial type, and firm performance in a growth industry (greater than 10% annually). As in the previous studies (Bracker and Pearson 1985, 1986) planning process was operationalized according to the multiple cutoff classification system. In this case, however, only three categories were used: structured strategic, structured operational, and unstructured planners. Entrepreneurial orientation was again

determined according to Smith's (1967) craftsman/opportunistic scale. The dependent variables in the study were: (1) growth in revenue, (2) net income before taxes, (3) present value (including book value, patents and goodwill) of the firm, and (4) CEO cash compensation over a five year time frame.

Of the 219 firms surveyed, 73 usable responses were obtained (34%). The average age of the respondent firms was 9.2 years, average revenue per year was \$4,250,000, average net income was \$300,000 and average number of employees was 71. According to the authors the respondents constituted a representative sample.

In terms of results, it was discovered that firms using structured strategic planning demonstrated significantly higher financial performance than the other two planning categories. This finding is consistent with their previous research (Bracker and Pearson 1986) and again suggests that the level of planning sophistication, or quality of planning is the most important determinant of financial performance. Type of entrepreneur, size of firm, prior planning history were not found to be significantly related to financial performance.

Shuman and Seeger (1986). In this study the Inc. 500 was surveyed in order to assess strategic planning processes in a larger, more diversified sample than had been studied previously. A survey consisting of 61

questions was mailed to the 500 companies. The questions explored management's planning philosophy, the planning process, planning areas, and the planning organization. The findings were then tested against the normative model of strategic planning noted earlier in this paper.

In terms of planning processes it was found that 50% of the companies did not have a "formal" plan at start-up, but the majority adopted some sort of strategic planning once the company was in operation. The second finding was that growth in size was positively related to more formal, structured, and participatory planning systems. Even so, the planning processes remained less sophisticated than the prescriptive model of large firm strategic planning. Thirdly, the planning process tended to be short-term, updated regularly, and operationally oriented. Finally, these firms generally included in the planning process an analysis of competition, identification of customer requirements, development of detailed resource allocation plans, analysis of operational strengths and weaknesses, consideration of contingency plans, allowance for control and feedback, and procedures for implementation.

It was concluded that, in general, the normative model survived comparison with actual practice although

with somewhat less formality and sophistication than would be expected in larger firms.

Robinson and Pearce (1983). This study examined the relationship between planning formality and financial performance in small banks. The sample included all federal- and state-chartered commercial banks in South Carolina. Of the 85 banks sampled, 50 returned usable responses.

Planning formality was based on a categorization of the degree to which sophisticated written documentation emanated from the planning process. Accordingly, the CEO of each bank was asked to indicate which of the following statements was most true of his bank:

1. The bank had no written plan covering at least three years into the future.
2. The bank had a written strategic plan which:
 - (a) covers at least three years into the future
 - (b) included the specification of objectives and goals
 - (c) included the selection of long-range strategies and
 - (d) included the determination of the future resources required.
3. The bank had a written strategic plan which incorporated all four elements of answer 2(a-d) above plus:
 - (e) procedures for anticipating or detecting error in, or failures of, the plan and for preventing or correcting them on a continuing basis and
 - (f) some attempt to account for factors outside of the immediate environment of the bank (1983, 199).

Of the 50 responses, 38 fell into category 1 (non-formal planners, 11 into category 2 (formal planners)

and 1 into category 3. Categories 2 and 3 were collapsed into a single category (formal planners) for purposes of analysis.

Questions were also asked regarding the degree of emphasis in the strategic decision making process on environmental scanning, goal and objective setting, establishment of distinctive competencies, determination of authority and influence relationships, deployment of financial and physical resources, and monitoring and controlling strategy implementation.

Performance measures were profit margin, return on assets, loan growth, and return on equity. Performance data for three years (1977-1979) were obtained from the bank regulatory body.

Analysis of the data revealed no significant differences in performance between formal planners and non-formal planners. In addition, no significant differences were found between planners and non-planners on five of the six strategic decision making dimensions (scanning the environment, identifying distinct competencies, aligning organizational structure, deploying internal resources, and monitoring/controlling implementation). Only concern for formulating goals and objectives differentiated formal planners and non-formal planners. Formal planners placed significantly greater emphasis on this dimension.

Robinson and Pearce (1986). Seventy seven entrepreneurial manufacturing firms were studied to identify the key factors associated with the evolving strategic decision making process in growing firms. The basic underlying theoretical model used was the product/market life cycle under the assumption that the complexity of strategic decision making increases as a firm grows. It was hypothesized that the nature of successful strategic planning processes would change over the evolutionary product life cycle. Of particular interest for the present study was the finding that three process related factors (value of strategic planning, demand on the CEO's time, and speed of decision making) were consistently seen as the most important factors affecting performance in each stage. There was no stage specific contingency relationship with respect to the process factors incorporated into this study. It should be noted that the factors classified as "process" are significantly different from those categorized under the same heading in the Shuman and Seeger study.

Robinson, Salem, Logan, and Pearce (1986). This article presents the findings of a study of the relationship between planning activities and financial performance in independent food retail firms. The data base for the study was the Food Retailers' Association of South Carolina. It was limited to a single industry

to control for industry, technology, and environmental variations that would likely be present in a sample that cuts across industry lines. Usable responses were provided by 81 of the 800 stores surveyed (10%).

The questionnaire measured levels of involvement in 47 types of planning activities which were grouped into four functional areas: marketing, finance, inventory, and personnel. The degree of emphasis on each planning activity was measured by using a five-point Likert scale ranging from "to a very little extent" to "to a very great extent." Firm performance was assessed in two different ways. One set of questions asked for total sales, return on sales, number of employees, and sales per employee at the beginning and end of the three year period (1981-1983). However, because of the reluctance of many small business owners to reveal specific financial data, subjective measures (five-point Likert scales) of perceived relative performance were included (Dess and Robinson 1984). Four variables were studied: 1) total employment growth; 2) net profit after taxes; 3) total sales growth; and 4) overall firm performance/success. The average of these four measures was then combined into a measure called "Manager's Perceived Performance."

Results of this study indicated that six of the planning activities studied were positively related to

positive variation in both return on sales and "Manager's Perceived Performance." Three of these activities were in the marketing area--analyzing changes in target customers, competitive analysis, and making sales projections. One was in the financial area--preparing monthly cashflow analysis. Another was in the personnel area--reviewing and setting labor cost standards. The final item was that of ensuring the adequacy of inventory levels.

The authors concluded by noting that the findings of this study are generalizable only to the retail food industry but that replication studies are called for in different industries. It is also suggested that future research should continue to examine process related variables and, in addition, more attention should be paid to strategic content to get a clearer understanding of strategic management practices and performance in small firms

Pearce, Robbins, and Robinson (1987). This study investigated the relationship between strategic planning formality, grand strategy, and firm performance. Six hundred and nine manufacturing firms in a single eastern state were surveyed. This resulted in 97 usable responses (16%). The average sales for the respondents was \$19,500,000 and the mean number of employees was 152.

The level of planning formality was assessed with a Guttman scale comprised of six statements which corresponded to a progression from less to more formality in the planning process:

Which of the following best describes your company's strategic planning activities?

1. The company has a short-range (approximately one year) profit plan.
2. The company has a planning process such that the final plans are accepted by those responsible for attainment.
3. There is a person or group whose main responsibility is to coordinate a company-wide strategic planning effort.
4. The company's top management has developed a climate in the company which supports the planning effort.
5. The company's top management has developed a formal statement of what business the company is in or wants to be in.
6. The company's plans are used to judge managerial performance (1987, 128).

The four grand strategies were 1) stability (e.g. concentration), 2) internal growth (innovation, market and product development), 3) external acquisitive growth (vertical and horizontal integration, concentric and conglomerate diversification, joint venture), and 4) retrenchment (turn-around, divestiture, liquidation).

As in a previous study, performance was assessed by asking the CEO to provide both objective and subjective data (Robinson, Salem, Logan, and Pearce 1986). The objective performance measures were sales, return on assets, and return on sales for the beginning and ending years of the 5-year period studied. The

subjective performance measure asked the CEO to compare the performance of his company to similar size companies in the industry on the same performance measures plus overall firm performance.

Analysis of the data revealed that planning formality was significantly related to all four indicators of performance. This relationship was particularly strong between formality and growth in sales. Of the four grand strategies, only retrenchment showed significant differences from the other strategies on the performance measures. Firms involved in retrenchment strategies had significantly lower performance levels, as would be expected. Overall this study provided empirical support for formalized planning as a means for improving a firm's financial performance.

Gable and Topol (1987). For this study, questionnaires were mailed to 489 small-scale retailers in the Northeast region of the United States. Responses were received from 209 firms of which 179 were usable (37%). Five types of data were solicited: demographic, firm objectives, type of forecasts used, problem areas and performance measures. Of primary interest here are those questions dealing with the planning process.

Participants were asked to state whether their firms engaged in planning. Those who answered "yes" to

the question, "Does your firm engage in planning?" were classified as "planners" (n=102). The remainder were termed "non-planners" (n=77). In addition, all respondents were asked whether they commit their plans to writing, and were asked to indicate on a five-point scale the extent to which they engaged in the following planning activities:

1. Goals set for each part of the business
2. Goals set for the entire firm
3. Firm's strengths and weaknesses considered
4. Plans based on forecasts
5. Alternative plans considered
6. Budgets prepared
7. Contingency plans prepared
8. Control systems used to monitor plans
9. Plans updated

For each of the above planning activities, t-tests were run between planners and non-planners. For each activity the planners scored significantly higher than did the non-planners corroborating the self report used to distinguish planners from non-planners.

Two performance measures were used to detect the effect of planning on performance: change in sales and change in profits for the previous three period. Although sales increased more rapidly and profits decreased less rapidly for planners than for non-planners, the differences were not statistically significant.

The authors noted, in conclusion, that the exercise of planning does not seem to assure better

performance. That finding could be due, in part, to the proposition that,

While small-scale retailers indicate that they plan, analysis of the data suggests that they merely purport to plan. For instance, only a very small percentage of small-scale retailers committed their plans to writing....The findings indicate that small-scale retailers in this sample are probably on the verge of, or on the periphery of planning and its implementation (1987, 30).

Discussion

The research on strategic planning processes in small firms is largely exploratory and the results are sometimes contradictory. The relationship of major interest for the present study is the degree of formality of the planning process and performance of small firms. As noted by Robinson and Pearce, the research has pointed to the conclusion that small firms should engage in informal planning practices. However, this prescription begs the following research questions:

1. What specifically does "informal" mean?
2. In what specific ways should small firm planning systems work to achieve the appropriate level of formality?
3. Does the answer vary by firm, location, entrepreneurial characteristics, or other means? (1984, 136)

The "other means" could well be the size and/or growth rate of the firm. While it has been concluded that, in general, small firms should engage in relatively informal planning, it has also been found that successful growth may require somewhat more

formalization of the process (Shuman and Seeger 1986). This leads to a key research question to be addressed by the present study as posed by Robinson and Pearce:

Is the application of planning the main ingredient that separates the growing (entrepreneurial) business from the small static (Mom and Pop) business? (1984, 135)

Inasmuch as the focus of this study is to attempt to distinguish entrepreneurial, rapid-growth firms from income-substitution (Mom and Pop) firms, the above question will form the basis of one of the central hypotheses of this study. The specific operationalization of the variable and the associated hypothesis will be developed in the research methodology chapter.

Strategy Content

Relatively little research has been undertaken to identify the content of strategy related variables in new and small ventures. Strategy content, as distinguished from strategic process, refers to the specific strategies formulated and implemented to attain firm objectives. Strategy content is an outcome of the strategic process--the alternative strategies generated and implemented to gain competitive advantage. Although the literature is not extensive, it is growing. In the words of Sandberg:

The dearth of theory and research is most apparent in the area of venture business strategy, which is considered only infrequently, rarely explicitly, and never in conjunction with the entrepreneur or industry structure (1986, 47).

Although new and small venture strategy theory remains at an early stage of development, several potentially useful conceptual schemes have been developed. Vesper (1980, 177) suggested three primary "entry wedges" for new ventures which serve to establish a strategic competitive advantage. These three entry wedges are:

1. The new product or service. Among the three main wedges this is the least often used but can also be the most powerful.
2. Parallel competition. Here the product or service already exists, and the company's advantage derives from minor variations in what is offered and/or in how it is provided. This is the most often used entry approach.
3. Franchise entry. This employs a proven product or service without variations but in new geographic areas under license.

Vesper also suggested eleven other entry wedges classified into four categories. These are more specialized and less frequently used than the three primary wedges but can be just as valuable in the right contexts, according to Vesper. These additional entry wedges are as follows:

Exploiting partial momentum:

1. Geographical transfer
2. Supply shortage
3. Tapping unutilized resources

Customer sponsorship:

4. Customer contract
5. Becoming a second source

Parent company sponsorship:

6. Joint ventures
7. Licensing
8. Market relinquishment
9. Selloff of division

Government sponsorship:

10. Favored purchasing
11. Rule changes

These additional entry wedges can be cross-classified with the main entry wedges and used in combination to increase their effectiveness. Although Vesper's classification scheme is useful in generating ideas for potential sources of competitive advantage for new ventures, it stops short of specifying contingency relationships supported by empirical research. The support for Vesper's scheme is primarily anecdotal in nature.

The search for a more concise, integrated model leads to Michael Porter's work. Porter (1980) suggested that effective competitive strategies are created by appropriately aligning a company with its environment. The most important component of the firm's environment is the industry structure. More specifically, there are, according to Porter, five basic competitive forces: industry competitors, suppliers, substitutes, buyers, and potential new entrants. These five forces affect all firms within an industry in basically the same way and the collective strength of these forces determines the ultimate profit potential in the industry. The key for an individual firm is to develop strategies for more effectively dealing with the forces in the industry, i.e. gaining competitive advantage.

Porter identified:

...three internally consistent generic strategies (which can be used singly or in combination) for creating...a defensible position in the long run and for outperforming competitors in the industry....The generic strategies are approaches to outperforming competitors in the industry; in some industries structure will mean that all firms can earn high returns, whereas in others, success with one of the generic strategies may be necessary just to obtain acceptable returns in an absolute sense" (Porter 1980, 35).

The first of the generic strategies is overall cost leadership. This strategy requires "aggressive construction of efficient-scale facilities, vigorous pursuit of cost reductions from experience, tight cost and overhead control, avoidance of marginal customer accounts, and cost minimization in areas like R & D, service, sales force, advertising, and so on" (Porter 1980, 35). A successfully implemented low-cost strategy can provide some protection to the firm from all five types of competitive forces as the firm is able to earn higher profit margins and/or charge a lower price than competitors.

The effectiveness of a cost leadership strategy is, as is the case with the other generic strategies, a function of the nature of the competitive environment. In particular, the low-cost producer strategy is likely to be successful when:

- (1) demand is price elastic;
- (2) all firms in the industry produce essentially standardized, commodity-type products so that the marketplace is dominated by price

competition and the 'name of the game' is cost efficiency;

- (3) there are not many ways of achieving product differentiation that has value to buyers;
- (4) most buyers utilize the product in the same ways; and
- (5) buyers incur few (if any) switching costs in changing from one seller to another and thus are strongly inclined to shop for the best price (Thompson and Strickland 1987, 108).

There are, however, various disadvantages associated with a cost-leadership strategy even when the above conditions are satisfied. Technological changes could nullify past efficiency gains; rivals could imitate the low-cost methods; tunnel vision could cause the firm to miss changes in the marketplace which would nullify low-cost as a primary competitive advantage; and heavy investments in cost-minimization could lock the firm into its present technology and strategy in spite of changes in the competitive environment. In addition, success in becoming the overall cost leader in an industry usually requires the ability to be the cost leader, not one of several lower cost producers. This could result in some extremely fierce, potentially cut-throat competition as rivals seek to increase market share at one another's expense (Porter 1985).

The second generic strategy in Porter's framework is differentiation. The ultimate manifestation of this strategy is the creation of a product or service that

is unique in the industry. Possible approaches to achieving differentiation are: design or brand image; technology; special features; customer service; and dealer network. It should be noted that differentiation does not allow the firm to ignore cost, just as low-cost strategies do not allow the firm to ignore quality, service, etc. However, competitive advantage is achieved by seeking to control costs while successfully differentiating, not by becoming the overall cost leader (Porter 1980).

Differentiation strategies tend to work best when the following conditions exist:

- (1) There are many ways to differentiate the product or service and these differences are perceived by buyers to have some value;
- (2) buyer needs and uses of the item are diverse; and
- (3) not many rival firms are following a differentiation strategy (Thompson and Strickland 1987, 110).

This strategy can lead to above average returns in the industry for the following reasons:

Differentiation provides insulation against competitive rivalry because of brand loyalty by customers and resulting lower sensitivity to price. It also increases margins, which avoids the need for a low-cost position. The resulting customer loyalty and the need for a competitor to overcome uniqueness provide entry barriers. Differentiation yields higher profit margins with which to deal with supplier power, and it clearly mitigates buyer power, since buyers lack comparable alternatives and are thereby less price sensitive. Finally, the firm that has differentiated itself to achieve customer loyalty should be better positioned vis-a-vis substitutes than its competitors (Porter 1980, 38).

As opposed to cost leadership where high market share is usually a key objective, differentiation strategies may preclude gaining high market share because of the perception of exclusivity that it establishes. The most effective differentiation strategies are those that are least subject to imitation by competitors.

There are some specific risks associated with differentiation strategies, noted as follows:

- (1) The cost differential between low-cost competitors and the differentiated firm becomes too great for differentiation to hold brand loyalty. Buyers thus sacrifice some of the features, services, or image possessed by the differentiated firm for large cost savings;
- (2) buyers' need for the differentiated factor falls. This can occur as buyers become more sophisticated; or
- (3) imitation narrows perceived differentiation, a common occurrence as industries mature (Porter 1980, 46).

The final generic strategy suggested by Porter is the focus or specialization strategy. The distinguishing feature of a focus strategy is that the firm specializes in serving only a portion of the total market. The focus may be on a particular buyer group, segment of the product line, or geographic market. "The strategy rests on the premise that the firm is thus able to serve its narrow strategic target more effectively or efficiently than competitors who are competing more broadly" (Porter 1980, 38). The focus strategy attempts to achieve low-cost or

differentiation for the narrow market segment rather than the industry as a whole. Thus it is used in conjunction with one or both of the other generic strategies.

A competitive strategy based on focus or specialization has merit when one or more of the following factors are present:

- (1) There are distinctly different groups of buyers who either have different needs or utilize the product in different ways;
- (2) when no other rival is attempting to specialize in the same target segment;
- (3) when a firm's resources do not permit it to go after a wide segment of the total market; or
- (4) when industry segments differ widely in size, growth rate, profitability, and intensity of the five competitive forces, thereby making some segments much more attractive than others (Thompson and Strickland 1987, 111).

It should be noted that the focus strategy always limits overall market share because its main competitive advantage lies in specializing in particular market segments. As with the other generic strategies there are certain risks inherent in focus strategies. These are:

- (1) The cost differential between broad-range competitors and the focused firm widens to eliminate the cost advantages of serving a narrow target or to offset the differentiation achieved by focus;
- (2) the differences in desired products or services between the strategic target and the market as a whole narrow; or

- (3) competitors find submarkets within the strategic target and outfocus the focuser (Porter 1980, 46).

Strategy Content Research

Research on the content of new and small business strategy is sparse but growing. Robinson and Pearce (1984) included only two studies in their review of the literature on small business strategic planning practices--Sineath, Hand, and Robinson (1982), and Dess and Davis (1980). Since 1984 several additional studies have appeared and will be reviewed here (see Table 2.5).

Sineath, Hand, and Robinson (1982). In this study multiple regression was employed to model the strategies of small retail firms. It was found that the specific strategy variables of pricing, advertising, credit, location, customer traffic, and selection accounted for 70 percent of the profitability variance. It should be noted that the strategy variables listed are functional-level rather than business-level variables and are, therefore, not pertinent to the present study.

Dess and Davis (1980). This exploratory study was performed to ascertain the degree to which Porter's (1980) three generic strategies described the strategies employed by 22 firms in the paint manufacturing industry. Responses concerning the extent to which 21 different competitive methods were

Table 2.5.--Strategy content research in small firms

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Strategy</u>	<u>Performance Measures</u>	<u>Results</u>
Dess & Davis (1980)	22/28 (79%) paint manufact- uring industry	21 competitive methods	None	Factor analysis of 21 competitive methods yielded three basic factors: Low-cost; Differentiation; and Focus.
Davig (1986)	60/250 (24%) small firms in apparel, foundry, & fabricated metal products	Strategic type: 1. Defender 2. Prospector 3. Analyzer 4. Reactor	Financial data (3 years): 1. revenue growth 2. profit growth	Firms following pros- pector or defender strategies showed sig- nificantly higher profit growth.
Stoner (1987)	46 small firms: 20 service; 18 retail; 8 manufacturing	Means of achiev- ing distinctive competence and sustainable comp. advantage.	None	Three most frequently occurring areas of distinctive competi- tive advantage: 1) experience/knowledge/ /skill of owners; 2) unique/special/ original product or service; 3) better customer service.

Table 2.5.--Strategy content research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Strategy</u>	<u>Performance Measures</u>	<u>Results</u>
Sandberg (1986)	17 new ventures from files of venture capitalists	3 substrategy classifications: 1. competitive 2. political 3. business definition	Based on survival & compound return on equity classified as: 1. highly successful 2. successful 3. marginal 4. unsuccessful 5. highly unsuccessful	The conditional impact of strategy on new venture performance was greater than unconditional. The interactive impact of industry structure, strategy, and the entrepreneur greater than the effect of any variable in isolation.
Miller & Toulouse (1986)	97/131 (74%) small firms in Quebec, Canada	Two types of differentiation 1. innovative 2. marketing	Financial data (5 Years) Absolute: 1. ROI 2. sales growth 3. profit growth Relative to Industry: 1. long run profitability 2. sales growth	Relative growth and profits related strongly with innovative product-market position and a more aggressive mode of decision making guided by an explicitly codified strategy.

Table 2.5.--Strategy content research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Strategy</u>	<u>Performance Measures</u>	<u>Results</u>
McDougall & Robinson (1987)	269/2552 (11%) new or potential new businesses in computer and communications peripheral industries.	26 item questionnaire dealing with venture's overall strategy	None	Factor analysis revealed 9 underlying factors. Cluster analysis yielded 8 new venture strategies.
Steiner & Solem (1988)	22(30) (73%) small manufacturing firms.	Competitive strategy assessed by comparison of firm to competitors on: 1. cost/price; 2. dist. product; 3. cus. spec.; 4. market niche.	Financial data (3 years): Sales growth of firm compared to ave. industry sales growth.	Successful firms(sales growth > industry average) had identifiable competitive advantage. Narrow scope of operation reflecting market, product, or customer specialization most common.

Table 2.5.--Strategy content research in small firms (continued)

<u>Study</u>	<u>Sample</u>	<u>Operationalization of Strategy</u>	<u>Performance Measures</u>	<u>Results</u>
Robinson & Pearce (1988)	97/609 (16%) manufacturing firms.	Degree of emphasis on 27 different competitive methods	Financial data (5 years): Objective: 1. sales 2. return on sales 3. return on assets Subjective: above 3 plus Overall Firm Performance	Factor analysis yielded four distinct strategic behaviors: 1) efficiency; 2) service; 3) product innovation; 4) brand/channel influence. Cluster analysis grouped sample firms into four clusters of strategic orientation: 1) efficiency & service; 2) no clear strategy; 3) service/high priced markets, brand channel influence; 4) product innovation/development; 5) brand ident/channel influence and efficiency. Clusters 4 & 5 performed better than 2 & 3.

used in the firms in the sample were factor analyzed. This analysis yielded three basic factors that paralleled Porter's strategies of low cost, differentiation, and focus although the evidence was less conclusive for the focus strategy.

More specifically, factor one, the differentiation strategy, consisted of the following competitive means: brand identification; innovation in marketing techniques and methods; control of channels of distribution; advertising; and forecasting market growth. The competitive means for the second factor, overall low cost, were operating efficiency, product quality control, experienced/trained personnel, developing/refining existing products, procurement of raw materials, reputation within the industry, and innovation in manufacturing process. The competitive means for the final factor, focus, were found to be new product development, capability to manufacture specialty products, and products in high priced market segments.

Stoner (1987). This study investigated the means through which 46 small (most employed fewer than 10 workers) businesses in the midwest attempted to achieve distinctive competence and sustainable competitive advantage. It was found that the three most frequently occurring areas of distinctive competence were 1) experience/knowledge/skill of the owner/workers, 2)

unique/special/original product or service, and 3) better/more complete customer service. Although not mentioned by the author, all three of these sources of competitive advantage seem consistent with Porter's (1980) differentiation strategy. This was an exploratory study and no attempt was made to assess the relationship between strategy and performance. Longitudinal studies of this sort are recommended by the author to investigate these relationships.

Davig (1986). This study looked at the relationship between strategy and performance of 60 small firms in the apparel, foundry, and fabricated metal products industries. The research model was based on Miles and Snow's four strategic categories as described below:

1. Defender Strategy. A firm following this strategy attempts to locate and maintain a secure niche in a relatively stable product or service area. It focuses on a more limited range of products or services than its competitors, and it tries to protect its domain by offering higher quality, superior service, lower prices, or the like. It does not attempt to be at the forefront of the industry.
2. Prospector Strategy. A firm following this strategy typically operates within a fairly broad product or market definition and the products or services it offers may change periodically. It values being one of the first to offer new products, even if not all of these efforts prove to be highly profitable.
3. Analyzer Strategy. A firm following this strategy attempts to maintain a stable, somewhat limited line of products while at the same time moving to follow the more promising new developments in the industry. In many respects

it is intermediate between Defender and Prospector strategies.

4. Reactor Strategy. Firms following a Reactor strategy exhibit a more inconsistent approach than the other three types--a kind of "non-strategy." Such firms do not take risks on new products or services unless threatened by the competition. The typical approach is to "wait and see" and to respond only when forced to by competitive pressure to avoid losing key customers and/or maintain profitability (Davig 1986, 38-9).

Strategic type was determined by asking each owner/manager which of the above four strategies best described the approach taken by the firm. Performance was measured by assessing growth in revenues and growth in profits over the previous three years. In addition, the size of each firm was determined based on annual sales and number of employees.

It was found that firms following the Prospector and Defender strategies achieved the best performance in terms of growth in profits. The author suggested that this indicates that there is more than one way to successfully compete in an industry. However, it should be noted that the firms in the study were not analyzed by industry, but were aggregated. Firms which followed the Reactor strategy performed most poorly. In terms of specific competitive devices, it was found that firms following Defender strategies tended to rely more on lower prices, quality products, and customer service. Prospectors also tended to focus on price competitiveness. They were concerned with uniqueness

as well. Analyzers focused on product quality and wider trade area, and Reactors were characterized by emphasis on customer service, dependence on one customer, and a relatively large number of direct competitors.

Sandberg (1986); Sandberg and Hofer (1987).

These publications present the results of an exploratory study intended to examine the relationship between the entrepreneur, industry structure, and firm strategy. It was hypothesized that new venture performance (NVP) is a function of the characteristics of the entrepreneur (E), the structure of the industry entered (IS), and the strategy of the venture involved (S), i.e., $NVP=f(E,IS,S)$.

The sample for this study was drawn from the files of four venture capitalists. Ultimately 17 ventures were studied. The size of this sample demands caution in generalizing the results, but, from a theory building standpoint, Sandberg's study represents a major step toward the building of an integrated, multidimensional model of new venture performance. Because Sandberg's work is particularly applicable to the present study it will be described in some detail.

The characteristics of the entrepreneurs examined were 1) prior entrepreneurial experience, 2) start-up experience, 3) managerial experience in related industries, 4) age, and 5) education. The industry

structure was examined in terms of 1) its sector in the economy, 2) its stage of evolution, 3) its structure, 4) the presence or absence of disequilibrium, and 5) its barriers to entry.

The venture business strategies were operationalized by combining the classification schemes of Vesper (1980) and Porter (1980) for the political and competitive substrategies. The business definition substrategies were derived from Abell (1980). The substrategy classification was specified as follows:

Competitive Substrategies

1. Reduce production costs:
 - new process
 - economies of scale
 - production technology improvement
2. Buy in with low price
3. Offer superior product
4. Discover segment or niche
5. Marketing innovation
6. Imitative entry:
 - geographic transfer
 - supply shortage
 - market relinquishment

Political Substrategies

1. Customer contract
2. Favored purchasing
3. Rule change

Business Definition Substrategies

1. Differentiated
2. Focused
3. Undifferentiated (Sandberg and Hofer 1987, 11)

Venture performance was measured as a function of the firm's survival and compound return on equity.

Firms were classified according to five performance

categories: 1) highly successful; 2) successful; 3) marginal; 4) unsuccessful; and 5) highly unsuccessful.

Overall, support was found for the model. The most important findings according to the authors were:

1. The interactive effects of industry structure, strategy and the entrepreneur had a far greater impact on new venture performance than any of these variables in isolation.
2. Disregarding interactive effects, industry structure had a greater impact on new venture performance than either strategy or the characteristics of the entrepreneur.
3. The conditional impact of strategy on new venture performance was far greater than its nonconditional support.
4. The biographical characteristics of the entrepreneur had little impact on new venture performance.
5. Venture capitalists have, in general, been right in disregarding traditional academic research in entrepreneurship (Sandberg and Hofer 1987, 5-7).

One conclusion drawn by Sandberg and Hofer of particular interest here is that the personal characteristics of the entrepreneurs in their study had little impact on the performance of their ventures. This was said to be surprising given the importance attached to this set of variables by both academic researchers and venture capitalists, albeit from different perspectives. It was suggested that if the personal characteristics of the entrepreneur do indeed have an impact on the success of the venture (and it is accepted by the authors that they do in spite of the finding that biographical data did not reflect that

assumption in this study) there are four possible explanations: 1) that the entrepreneur's psychological profile affects new venture success; 2) that the entrepreneur's behavioral traits affect venture success; 3) that both factors affect venture success; and 4) that the entrepreneur has no impact on venture success. It was concluded by these researchers that the second possibility is the most plausible by process of elimination. The key assumption is that research on the psychological characteristics of entrepreneurs has, to date, failed to yield definitive results and that the future holds little promise of that changing. This conclusion, however, ignores recent research results that show promise of the development of psychological tests that do indeed have the capability of establishing a profile that differentiates entrepreneurs from non-entrepreneurs (Sexton and Bowman 1983a, 1983b, 1984b, 1986) and successful, growth-oriented entrepreneurs from low growth small business owners (Smith and Miner 1984, 1985).

The third explanation suggested by Sandberg and Hofer may well offer the most promise, despite of their conclusion to the contrary. The premise that the behavioral traits of the entrepreneur affect venture success is accepted. However, it is asserted here that an individual's psychological profile and motivational

patterns are inseparably connected to behavior. Therefore, the use of valid psychological tests holds forth the promise of much richer data with the promise of greater explanatory and predictive power than comes from simply observing (or asking about) behavior alone.

Miller and Toulouse (1986). In this study the impact of strategy, structure, decision making style, and CEO personality on growth and profitability was investigated. Because no sophisticated model based on previous research was tested the authors put forth several "conjectures" rather than hypotheses to summarize the relationships to be tested. Of particular interest from the perspective of the present study is the conceptualization and operationalization of the strategy dimension. Porter's (1980) three generic strategies formed the conceptual base for the study of strategic content. In the words of the author:

It is believed that small firms will rarely succeed as cost leaders since their size often prevents their attaining meaningful manufacturing economies of scale. But the differentiation strategy may be pursued with some success. Large size and market share will be major advantages where differentiation entails an aggressive, mass-marketing effort, employing intensive advertising, and market segmentation to create brand consciousness. Consequently, small firms may not be able to succeed at mass marketing differentiation. In contrast, small firms may do very well where the strategy involves product innovation, high quality, or novel design. They can be in an excellent position to adapt quickly and stay in close contact with a select group of customers. It is predicted therefore that in small firms a strategy of focussed differentiation via

innovation will correlate positively with performance (Miller and Toulouse 1986, 49).

Specifically, strategic content was operationalized by measuring two types of differentiation--marketing and innovative. Marketing differentiation was assessed by measuring advertising intensity, market segmentation, and prestige pricing. Product innovation, R & D and new product development expenditures as a % of sales, and strategic aggressiveness toward competitors were the variables used to assess innovative differentiation. Cost leadership was gauged by assessing cost control, price cutting, minimization of marketing and product development costs, and conservatism in responding to markets. The degree of strategic focus was not explicitly assessed.

Performance was assessed with both absolute and relative measures. Absolute values of ROI, growth in sales, and growth in net income were acquired but were considered to be of questionable value because of the wide variety of industries represented by the firms in the study. Therefore, each CEO was also asked to report, on a 7-point scale, how his firm performed over the past five years relative to the industry in a) long run profitability, and b) growth in sales and revenues.

The CEO's of 97 "small" firms were surveyed. In this study companies with fewer than 382 employees were considered small (382 was the mean number of employees

for the firms in the sample). The findings of interest were summarized in the authors' words as follows:

The relative growth and profitability of small firms correlated strongly with an innovative product-market position and a more aggressive mode of decision making guided by an explicitly codified strategy (Miller and Toulouse 1986, 59).

McDougall and Robinson (1987). For this study surveys were mailed to the CEO's of 2552 potential new venture businesses or business units in the computer and communications peripheral industries using addresses obtained from Dun and Bradstreet. A total of 269 surveys were returned for an 11% response rate. The questionnaire contained 26 items describing key aspects of a venture's overall strategy.

The responses were subjected to factor analysis which yielded nine underlying factors with eigenvalues greater than one. They were identified as follows:

Factor 1

Many channels of distribution
 Develop new channels of distribution
 Developing brand identification & name recognition
 High level of advertising & promotion expense
 Sell product to numerous segments
 Large number of customers

Factor 2

Providing a broad range of products
 Large number of customers
 Manufacturing commodity type products
 Sell products to numerous market segments

Factor 3

Entered the market(s) on a large scale with rapid immediate growth objectives
 Generate capital through outside investors
 Excess capacity tolerated in anticipation of future growth
 Sub-contracting or sourcing of production

Factor 4

Continuing, overriding concern for lowest cost per unit

Lowest price offering

Continuous concern with minimizing general and administrative expenses

Minimal advertising and promotion expense

Maintaining current products

Factor 5

Long-term buyer contracts

Extensive backward integration toward raw materials

Fully integrated production

Factor 6

Innovative manufacturing processes

Emphasis on superior product quality

Providing high level of customer service

Factor 7

Extensive forward integration toward consumer

Reliance on public domain processes & technologies

Factor 8

Average customer order large

Continued new product development

Providing high level of customer service

Factor 9

Customers make infrequent purchases

Serving broad geographical markets

Having identified the factors or patterns of strategic behavior, the respondent firms were "clustered" according to similarity of emphasis. Eight clusters of new venture strategies emerged:

1. Aggressive growth via commodity-type products to numerous markets with small customer orders.
2. Aggressive growth via price competitive new products to large customers.
3. Aggressive entry with narrow, special products priced competitively to a few larger buyers.
4. Controlled growth with broad product range to many markets and extensive backward integration.
5. Controlled growth via premium priced products sold directly to consumers.
6. Limited growth in small niches offering a superior product and high customer service.

7. Average growth via steady development of new channels, brand/name identification, and heavy promotion.
8. Limited growth selling infrequently purchased products to numerous markets with some forward integration.

The authors concluded by stating that their research supports the conclusion that distinct and different entry strategies exist among new ventures and that the new venture strategies identified in this study serve to substantiate previously suggested taxonomies of new venture strategies.

Steiner and Solem (1987). The sample for this study included 30 small manufacturing companies in northwest Wisconsin. Data was gathered through personal interviews with the business owners regarding management characteristics, operating characteristics, and competitive strategy. Usable data were obtained from 22 firms, all of which were privately owned proprietorships, partnerships, or corporations with less than 200 employees. Firm performance was measured by growth in sales for the previous three years compared to average sales growth for firms in the same industry (by seven digit SIC). The sample was dichotomized into successful firms (sales growth rates greater than or equal to the industry average) and unsuccessful firms (sales growth rate less than the industry average).

The competitive strategy variable was identified by asking the owner/manager to compare his firm to

competitors in terms of cost/price advantage, distinctive product properties, customer specialization, and market niche specialization. The results indicate that all of the successful firms had an identifiable competitive advantage, the most common being narrow scope of operations reflecting market, product and customer specialization. (It should be noted that only percentage figures were given, no statistical tests were performed.) The authors concluded by noting that:

The results of the present study suggest that the development of competitive advantage through specialization in products, markets, and/or customers is a key factor in the success of small manufacturing firms. A planned approach to specialization through the formal or informal development of strategy in response to technological changes and customer demands is the foundation of the establishment and maintenance of a competitive advantage for a small manufacturing company (Steiner and Solem 1987).

Robinson and Pearce (1988). These researchers examined the relationship between strategic content, strategic process and firm performance. Of primary interest here is the strategic content aspect of this study. Strategic process and performance of this sample have been discussed earlier (Pearce, Robbins, and Robinson 1987, Robinson and Pearce 1986). The original sample of 609 manufacturers in North Carolina yielded 97 responses (16%).

The "strategy" (strategy content) was measured by asking the CEO's to indicate on a 5-point scale the

degree of emphasis placed on each of 27 different competitive methods over the past five years. These competitive methods were reduced to the 22 displaying an acceptable reliability coefficient ($P > 0.90$). Factor analysis revealed four distinct factors with eigenvalues greater than two. The four factors or "strategic behavior patterns" with associated competitive methods were:

1. Efficiency
 - Seek to insure trained personnel
 - Pursue strict quality control
 - Emphasize lowest cost per unit
 - Push innovation in manufacturing processes
 - Innovation in marketing techniques
2. Service
 - No concern for pricing below competitors (negative loading)
 - Extensive customer service
 - Build reputation in industry
 - Serve high-priced market segments
 - Avoid low-priced market segments (negative loading)
3. Product innovation and development
 - New product development
 - Develop and refine existing products
 - Emphasize specialty products
 - Process-oriented R & D
4. Brand/channel influence
 - Build brand identification
 - Influence channels of distribution
 - New product development
 - Innovation in marketing techniques

Cluster analysis was then applied to the data to group the sample firms according to strategic orientation. This analysis yielded a five-cluster solution across the four factor patterns. These are described as follows:

- Cluster 1: efficiency and service
- Cluster 2: no clear strategy
- Cluster 3: service/high-priced markets and brand/channel influence
- Cluster 4: product innovation/development
- Cluster 5: brand identification/channel influence and efficiency

An analysis of the strategy content--performance relationship revealed that firms in clusters 4 and 5 had significantly higher overall performance means than did the firms in clusters 2 and 3. Firms in cluster 1 emerged as average performers, not significantly higher than clusters 2 and 3, nor significantly lower than 4 and 5. In the words of the authors:

The results of this second phase establish a clear content-performance 'baseline' that product innovation-oriented strategies or strategic orientations combining a differentiation pattern of strategic behavior (e.g. brand identification/channel influence) and a low cost pattern of strategic behavior (e.g. efficiency) are the most effective strategic orientations (Robinson and Pearce 1988, 55).

The final phase of this study examined the extent to which the firm's planning process moderated the content--performance relationship. Using the six-step Guttman scale described earlier, the sample firms were categorized into three levels of planning sophistication: 'high' (n=14), 'moderate' (n=34), and 'low' (n=27). A three-way ANOVA analysis revealed that strategic orientation (content) was the most significant source of overall performance differences, planning formality and the planning--strategic orientation interaction were both significant at the

0.05 level. This suggests that planning process sophistication does moderate the strategic orientation-performance relationship. The authors conclude by noting that "the findings in this study suggest a process-content relationship with performance implications that deserve expanded research attention" (Robinson and Pearce 1988, 59).

Discussion

Although The research and theory relating to strategic management practices in new and small firms is still in its infancy, some promising work has been done in both the process and content areas which may serve as a foundation upon which to build.

For purposes of the present study, an appropriately modified version of Bracker and Pearson's (1985, 1986) multiple cut-off classification scheme will be used to assess the degree of formality and structure in the planning process of the small firms studied. This approach moves beyond the simple planner/non-planner dichotomy that many studies have used and, therefore, should allow for better discrimination among planning types.

Strategy content will be assessed with a modified version of the approach used by both McDougall and Robinson (1987) and Robinson and Pearce (1988). That is, the degree of emphasis placed on a variety of different competitive methods by the sample firms will

be assessed. The study of strategy content in new and small firms is in its infancy and this approach allows for exploratory techniques such as factor analysis to be used to attempt to derive identifiable strategic types which can then be analyzed with respect to performance outcomes.

CHAPTER 3
RESEARCH METHODOLOGY

Research Model

The basic research question focuses on the determinants of overall performance and growth in new and small enterprises. The two basic causal or independent variables to be investigated in this study are 1) the entrepreneurial growth propensity of the owner/manager, and 2) the strategic management practices (process and content) used to attain growth and enhance performance. The nature of the industry (slow growth and stable versus rapid growth and volatile) will be considered primarily as a variable which moderates the impact of the primary independent variables on the dependent variables is the model.

Sample

One of the criticisms of previous research in this area is the lack of control of extraneous, confounding variables (Bracker and Pearson 1986, Robinson and Pearce 1983). Many studies have failed to control for such factors as inter-industry differences, general market or economic conditions, and government related taxation and regulation issues. This has led

to inconsistent and unreliable findings. The present study seeks to control for extraneous, independent variables by (1) studying a specific geographic region (four midwestern states) in which the underlying economic conditions are similar, and (2) by studying firms in only two service industries similar in many respects but different in ways of interest as independent variables in the study. The intent is not to generate findings that can be generalized to all small firms regardless of geographic location or industry. It is, rather, to generate results that are valid for the specific industries in the specific geographic region under study.

Samples will be taken from two small-business dominated industries: 1) dry cleaning and 2) videotape rental/retail stores. These two industries display some interesting differences as well as similarities. The dry cleaning industry is mature and stable with a large number of small, relatively homogeneous firms. Its annual growth rate is substantially less than ten percent. This will be classified as the stable, low-growth industry in this study.

The videotape rental industry, on the other hand, is a new, rapidly growing industry characterized by a high degree of volatility. Changing technology, consumer habits, and potential regulatory legislation represent a few of the external forces which impact

this industry. The growth of this industry is considerably greater than ten percent. Although hard data on industry sales are difficult to come by, it is estimated that sales are increasing by 20-30% annually.

At the same time, both industries fall into the service category, limited technical training is required to get into business, and growth is accomplished primarily through the addition of outlets, rather than expanding the capacity of an existing store.

A mail survey of all dry cleaning and video rental stores appearing in the yellow pages of the telephone directories of Iowa, Kansas, Missouri, and Nebraska will be taken. It is assumed that the general underlying economic variables of these four mid-western states are similar. Since one of the basic research questions to be explored in this study deals with the differences between rapid-growth entrepreneurial firms and marginal, income-substitution small businesses, it is important to obtain samples that contain both categories of firms. The yellow pages listings have emerged as the best unbiased source under the assumption that virtually every small business of this sort lists in the yellow pages while a much more select group (perhaps the "entrepreneurial" firms) join and are listed with a trade associations. Previous studies (Bracker and Pearson 1986, Bracker, Keats, and Pearson

1987) have been based on the assumption that "opportunistic" or entrepreneurial types are attracted to join trade associations. However, no control groups of non-trade association members were included in these studies to adequately test this assumption. The design of the present study will allow the validity of this assumption to be tested as both trade association member firms, and firms not affiliated with a trade association will be included in the sample.

Independent Variables

Industry Growth Rate

As described above this variable will be operationalized by considering the dry cleaning industry to be stable and low-growth (less than 10% per year), and the video rental/retail industry to be volatile and rapid-growth (greater than 10% per year).

Entrepreneur's Growth Propensity

This variable will be measured as a function of the respondent's scores on the Miner Sentence Completion Scale-Form T (MSCS-Form T). This test yields five subscale scores (self achievement, avoiding risks, feedback of results, personal innovation, and planning for the future), and a total score. It is anticipated that the total score will be the primary analytical input as it has, in limited testing to date, shown promise of correctly differentiating growth-

oriented entrepreneurs from non-growth oriented small business owners and managers (the MSCS is not included in Appendix 1 due to copyright considerations).

Strategic Management Practices

This factor will be divided into two related variables: 1) the process, and 2) the content of strategic management.

The primary aspect of the strategic planning process to be studied will be the degree of formality of the planning system as measured by a modified version of the multiple cut-off classification system developed by Bracker and Pearson (1986). The pattern of response to questions 21 through 28 (Appendix 1) will allow firms to be classified into four categories: 1) Structured Strategic Planners, 2) Structured Operational Planners, 3) Unstructured Operational Planners, 4) Non-planners. This categorization will allow the samples to be partitioned in such a way that t-tests and ANOVA can be employed to test for differences in the other variables being studied along the dimension of planning process sophistication or planning types.

In order to assess the content of the strategies employed to gain competitive advantage, a slightly modified version of Robinson and Pearce's (1988) competitive methods questionnaire will be used (Appendix 1, question 29). Exploratory statistical

techniques will be used to attempt to identify distinct strategic patterns and groupings of firms employing specific methods. Factor analysis will be used to attempt to identify distinct factors or "strategic behavior patterns" (Robinson and Pearce found four: efficiency, service, product innovation and development, and brand/channel influence). In addition, cluster analysis will be used to attempt to group sample firms according to strategic orientation (Robinson and Pearce found five: efficiency and service, no clear strategy, service/high-priced markets and brand/channel influence, product innovation/development, and brand identification/channel influence and efficiency).

Dependent Variables

The dependent variables of interest in this study will be those associated with organizational performance, primarily measures of firm growth. Specific operationalization of variables will be based on Robinson's (1983) observation that there are two basic financial measures that are most appropriate for evaluating small business performance. These are 1) growth in sales, and 2) return on sales. According to Robinson, these measures are the most easy to obtain, particularly sales figures which are closely monitored by small firm owner/managers. Return on sales requires only a measure of profitability combined with the sales

figure to be calculated. Return on investment is the traditional measure of organizational performance but is difficult to measure in small firms for the following reasons:

1. Investment is not consistently and meticulously monitored in small firms.
2. The owner's personal assets used for the business are not included in the firm's investment figures.
3. Investment (ROI) figures do not come as immediately to mind for the owner/manager as sales and profitability figures (Robinson 1983, 27).

In addition to the above measures, number of employees has also been used often as a measure of firm size and the growth rate of employment within the firm as a measure of firm growth (Birley 1987, Davig 1986, Robinson 1982, Robinson, Pearce, Vozikis, and Mescon 1984, Robinson, Salem, Logan, and Pearce 1986, Shuman and Seeger 1986, Smith and Miner 1984, 1985). Of particular interest is the finding of Birley (1987) that firms that increased sales did so by increasing the customer base without generating additional jobs. If firm growth is being studied as it relates to economic growth, increase in the employment base is a crucial variable. Because growth in the above measures is of primary interest, respondents will be asked to list number of stores, number of employees, sales, and return on sales for the beginning year (1983) and the ending year (1987) of the most recent five year period (Appendix 1, question 19). From this information,

changes in these four variables over the five year period can be calculated.

Because many small business owners are hesitant to divulge objective performance information, another measure of firm performance will be taken which will not require the owner/manager to reveal specific operational data. Dess and Robinson (1984) found that objective measures of firm performance and subjective or comparative measures were significantly correlated. They proposed, therefore, that it is acceptable to use subjective, perceptual measures of firm performance if objective data are not available. In other words, it is preferable to use objective performance measures, but if unavailable it is better to use subjective measures if the alternative is to remove consideration of firm performance from the research design.

The above approach has been used in several other studies to date (Pearce, Robbins, and Robinson 1987, Robinson and Pearce 1988, Robinson, Salem, Logan, and Pearce 1986). Based on the approach in the above studies, each owner/manager in this study will be asked to compare his/her firm with other firms of similar sales in the same industry in terms of total sales growth, after-tax return on total sales, total employment growth, and overall firm performance/success on a five point scale (Appendix 1, question 20). This approach will help insure that some measure of

performance will be acquired. It has been found that while less than half of the respondents are inclined to give objective performance data, virtually all who return surveys respond to subjective, comparative performance questions (Pearce, Robbins, and Robinson 1988).

Research Hypotheses

H1: Firm performance (sales growth, profit margin, and employee growth) will be positively related to the owner/manager's growth propensity as measured by the MSCS-Form T.

This hypothesis is based on the findings of Smith and Miner (1984, 1985) that entrepreneurs heading rapid-growth firms scored significantly higher on task motivation as measured by the MSCS-Form T than did either owner/managers of low-growth firms or manager/scientists of high-tech firms.

Statistical analysis: A correlation analysis will be performed between the MSCS-Form T score of the owner/manager of each firm and each of the three performance measures:

Y1= 5 year change in sales
 Y2= 5 year change in profit margin
 Y3= 5 year change in number of employees
 Y3= 5 year change in number of stores

Each of the above performance measures will be correlated with the scores on the MSCS as the "X" variable to determine the relationships between entrepreneurial growth propensity and firm performance.

H2: Firm performance will improve with increased planning formality.

The level of planning formality for each firm will be determined with a multiple cut-off classification system. Based on responses to a series of questions on planning practices within the firm, each firm will be classified as either structured strategic planner (SSP), structured operational planner (SOP), unstructured planner (UP), or nonplanner (NP).

The research to date has shown mixed results with respect to performance and planning formality. In two studies which employed the same basic approach being used here (Bracker and Pearson 1986, Bracker, Keats, and Pearson 1987) structured strategic planners were found to outperform all other categories. This suggests that a higher degree of formality is significantly and positively related to firm performance. Pearce, Robbins, and Robinson (1987) also found a significant positive relationship between planning formality and firm performance. However, neither Robinson and Pearce (1983) nor Gable and Topol (1987) found significant differences in firm performance between formal and non-formal planners.

The inconsistent results in studies of planning formality and performance may be due to differences in operationalization and measurement of the planning formality dimension. Because the present study is following very closely the definition and

operationalization used by Bracker and Pearson, the hypothesized relationship is stated consistent with their findings.

Statistical analysis: Multivariate analysis of variance (MANOVA) is a technique that allows for the study of the effects of independent variables on two or more dependent variables. MANOVA provides a means for rejecting the null hypothesis that all sample means are equal. However the assessment of specific differences also requires a multiple comparison test on planning levels and univariate ANOVA on each individual dependent variable. These tests will also be performed. The variables in the MANOVA model will be as follows:

	Independent variables (planning formality)			
	SSP	SOP	UP	NP
Dependent variables:				
Sales growth				
Employee growth				
Profit margin				
Store growth				

H3: Firm performance will differ significantly across distinct patterns of strategic behavior (orientation).

This hypothesis is based on Robinson and Pearce's (1988) finding that strategic orientation was significantly related to firm performance. For their study, strategic orientations characterized by 'brand identification/channel influence' and 'efficiency' or a

primary emphasis on 'product innovation/specialty' with a secondary emphasis on the 'service/high price' had significantly better overall performance than did the other strategic orientation clusters. Although the present study is utilizing Robinson and Pearce's approach by analyzing degree of emphasis on competitive methods to derive identifiable strategic orientations, H3 is stated as a non-directional hypothesis because of the exploratory nature of this aspect of the study and because different industries are being studied. It is not at all certain that the same factors or clusters will emerge in this study, although differences in performance across clusters are expected.

Statistical analysis: For this portion of the analysis, factor analysis will first be used to attempt to group the 21 competitive methods into distinct factors of strategic behavior in the firms surveyed. Cluster analysis will then be employed to group the sample firms into different strategic orientations based on the nature of their emphasis on patterns of strategic behavior as identified in the factor analysis. Assuming the above analyses yield identifiable factors and clusters, MANOVA will be used to test for significant differences among the clusters of firms along performance measures. If a significant difference exists, univariate ANOVA on each dependent

variable and a multiple comparison test will be utilized to discover where specific differences lie.

The MANOVA model will appear as follows:

Independent variables (strategic orientation)				
1	2	3	4	5

Dependent variables:

Sales growth
Employee growth
Profit margin
Store growth

H4: Firm performance will differ significantly according to the planning formality/strategic orientation interaction.

According to Robinson and Pearce (1988) it is necessary to consider the interactive effect of the process of planning (planning formality) and the specific content of the strategies implemented (strategic orientation) to get a clear picture of the impact of strategic management practices on firm performance. They, therefore, investigated the extent to which a firm's planning process tended to moderate the strategy content--performance relationship. By using a two-way ANOVA procedure to examine the variations in overall performance attributable to strategic orientation, planning sophistication, and the interaction effect, it was determined that while strategic orientation was the most significant source of overall performance differences, planning formality

and the formality--strategic orientation interaction were both significant at the .05 level.

Statistical analysis: Two-way ANOVA and, if significance is found, multiple range tests will be employed

H5: Firm performance can be predicted as a function of the owner/manager's growth propensity, level of planning formality, strategic orientation, and industry growth rate.

This hypothesis represents a test of the explanatory and predictive ability of the underlying determinants of new and small business growth being tested in this study. It is hypothesized, based on this model, that firm performance (sales growth, employee growth, and profit margin) can be explained and predicted as function of the owner/manager's growth propensity, strategic management practices instituted to attain growth, and the nature of industry growth rate.

Statistical analysis: To assess the impact of the independent variables on each dependent variable, multiple regression on each dependent variable will also be performed according to the following models:

Sales growth = $a + b_1 \text{ MSCS} + b_2 \text{ PT} + b_3 \text{ SO} + b_4 \text{ I}$
 Employee growth = $a + b_1 \text{ MSCS} + b_2 \text{ PT} + b_3 \text{ SO} + b_4 \text{ I}$
 Profit margin = $a + b_1 \text{ MSCS} + b_2 \text{ PT} + b_3 \text{ SO} + b_4 \text{ I}$
 Store growth = $a + b_1 \text{ MSCS} + b_2 \text{ PT} + b_3 \text{ SO} + b_4 \text{ I}$

Research Questions

In addition to the above research hypotheses, there are several interesting research questions for which there is no previous research upon which to base hypotheses.

Research Question 1

It seems probable that entrepreneurs with the inclination to grow a firm rapidly would tend to be attracted to more rapid growth industries. It is therefore conjectured that the MSCS scores for the owner/managers of video stores (rapid-growth industry) will be higher than those of the owner/managers in the dry cleaning industry (slow-growth). This can be assessed by performing a t-test of the differences between mean scores on the MSCS for owner/managers in each industry.

Research Question 2

It also seems probable that the owner/manager's growth propensity as measured by the MSCS-Form T will vary significantly across levels of planning formality, especially since one of the subscales measures planning and goal setting. This will be analyzed by performing a one-way ANOVA with the MSCS total score as the dependent variable and the levels of planning formality as the independent variables. In addition, each of the five subscales of the MSCS (individual achievement,

risk taking, feedback, innovation, and planning) will serve as the dependent variables with the levels of planning formality as the independent variables in a MANOVA model to assess the relationship of each of the subscales and planning formality.

Research Question 3

It has been assumed by other researchers (Bracker and Pearson 1986) that firm owner/managers who join trade associations can be classified as more "entrepreneurial" or opportunistic than their counterparts who do not choose these affiliations. To explore this possibility, two tests will be run on the data gathered for this study. First, trade association members will be compared to non-members on the scores of the MSCS. In addition, performance of the trade association members will be compared to non-members. In each case simple t-tests will be used to ascertain significant differences between the two groups on each set of variables.

CHAPTER 4

DATA ANALYSIS AND RESULTS

Data Gathering Procedure

As was indicated in the previous chapter, the Yellow Pages listings of the telephone directories were deemed to be the best unbiased source for the population of dry cleaning and video rental firms in the four state region being studied. Accordingly, address lists were obtained from American Business Lists, an Omaha, Nebraska based firm which compiles and sells such lists. These lists were obtained on computer diskettes allowing the researcher to make desired edits and to print address labels for the mailings. The address lists were edited to remove all but the main office or branch of multiple store operations. A random sample of 201 was taken to be used in the pilot study. After the deletion of the firms used in the pilot study, there remained 1561 dry cleaners and 1064 video stores for a total of 2625 firms representing the population of these establishments in the four state region.

After having refined the survey instrument, a pilot study was conducted beginning in late October, 1988. A cover letter, Business Management Practices

Survey (BMPS), and the Miner Sentence Completion Scale (MSCS) were mailed to 201 randomly selected firms (119 dry cleaners and 82 video stores). The first mailing yielded 13 responses, 11 of which included a completed MSCS. It was expected that the inclusion of the MSCS would reduce the overall response rate because of the time and effort required to complete it. Therefore, the MSCS was excluded from second mailing of the pilot study to test that expectation. The second mailing drew 20 responses for a total of 33 BMPS (16%) and 11 MSCS (5%).

No major problems in the survey instrument surfaced during the analysis of the pilot study data. Therefore, only minor modifications were made in the questionnaire to better facilitate the coding of the data. The initial mailing of the study containing a cover letter, the BMPS, and the MSCS went out during the first week of December, 1988. A total of 116 at least partially usable surveys were received, including 90 completed MSCS's.

The second mailing, which went out the first week of January, 1989, contained only the BMPS. The MSCS was not included because of the expense (approximately \$1000 to purchase the additional number required) and to improve the response rate. The second mailing yielded 177 at least partially usable responses. The total for both mailings combined was 293 BMPS and 90

MSCS (see Table 4.1 for the breakdown of responses by industry and state). After adjusting for undeliverable surveys, 293 of 2547 surveys were returned for an overall response rate of 11.5%. Although a greater response was desired, this response rate is in line with several recently published studies of this type (McDougall and Robinson 1987, Pearce, Robbins, and Robinson 1987, Robinson and Pearce 1986, and Robinson, Salem, Logan, and Pearce 1988). Small business owner/managers are usually pressed for time and not inclined to answer surveys. In view of this, a relatively low response rate was to be expected.

Table 4.1.--Survey response rates

State	Dry Cleaners		Video Stores	
	Surveys Mailed	Responses Received	Surveys Mailed	Responses Received
Iowa	306	49 (16%)	204	26 (15%)
Kansas	316	34 (11%)	215	23 (11%)
Missouri	756	67 (9%)	533	39 (7%)
Nebraska	147	37 (25%)	70	18 (26%)
Industry Totals	1525	187 (12%)	1022	106 (10%)
OVERALL TOTALS			2547	293 (11.5%)

Respondent Characteristics

A summary of the data received through the returned questionnaires is presented in Table 4.2. In terms of the characteristics of the respondents and

their firms, it will be noted that vast majority of respondents held an ownership position (88%). Some 33% were involved in the founding of the firm and virtually all (99%) were actively involved in decision making in the firm. A little more than half (56%) held membership in a trade association. Sixty-six per cent of the respondents were male. The average age of the respondents was 44 and 84% were married.

The dominant form of organization was sole proprietorship (53%) followed by privately-held corporation (37%) and partnership (10%). The average number of stores operated by the respondents was 2.3 while the median for the sample was 1. Very few (6%) of the sample firms were franchisees of larger operations and even fewer (1%) were franchisors. Average sales for 1987 was \$538,524 with median sales for the sample of \$150,000 in 1987. For this sample the median figures probably more accurately represent the tendencies of the sample as there were a few relatively large operations that tended to pull the averages upward. Overall, the sample appears to be more heavily represented by the relatively small, one store, "Mom and Pop"-style operation than the rapidly growing, "entrepreneurial" type. The implications of this fact will be explored in following sections of this chapter and in the following chapter.

Table 4.2.--Data summary

Variables	Dry Cleaners	Video Stores	Total Sample
Q1 (Position)			
1. owner	175	83	258
2. manager	10	21	31
3. other	2	2	4
Total	187	106	293
Q2 (% ownership)			
Mean	81%	76%	79%
Median	100%	100%	100%
	(n=174)	(n=85)	(n=259)
Q3 (# owners)			
Mean	1.654	1.910	1.745
Median	1.0	2.0	1.0
	(n=182)	(n=100)	(n=282)
Q4 (How ownership?)			
1. founder	21	45	66
2. co-founder	10	10	20
3. inherited	7	0	7
4. purchased (family)	41	6	47
5. purchased (non-family)	95	25	120
6. other	2	1	3
Total	176	87	263
Q5 (Emp. objective)			
1. self-part time	9	5	14
2. self-full time	45	31	76
3. family	26	16	42
4. non-family (<10)	55	24	79
5. grow (>10)	49	25	74
Total	184	101	285
Q6 (Degree of control)			
1. short & long	149	83	232
2. short--not long	24	14	38
3. not short--long	13	7	20
4. none	1	1	2
Total	187	105	292
Q7 (Trade Ass. Mem.)			
1. Yes	115	48	163
2. No	72	56	128
Total	187	104	291
Q8 (Sex)			
1. Male	131	60	191
2. Female	55	45	100
Total	186	105	291

Table 4.2.--Data summary (continued)

Variables	Dry Cleaners	Video Stores	Total Sample
Q9 (Age)			
Mean	48	33	44
Median	48	38	43
	(n=186)	(n=106)	(n=292)
Q10 (Marital Status)			
1. Married	157	86	243
2. Single	10	13	23
3. Divorced	11	6	17
4. Widow/Widower	6	0	6
Total	184	105	289
Q11 (Education)			
1. Some HS	12	3	15
2. HS diploma	43	21	64
3. Some college	68	43	111
4. college degree	44	25	71
5. some grad school	8	5	13
6. Masters degree	5	2	7
7. Some post-masters	2	2	4
8. Doctorate	2	2	4
Total	184	105	289
Q12 (Year founded)			
Mean	1951	1983	1978
Median	1950	1985	1970
	(n=176)	(n=103)	(n=279)
Q13 (Year current mgmt)			
Mean	1976	1983	1978
Median	1980	1985	1983
	(n=184)	(n=104)	(n=288)
Q14 (Org. Form)			
1. Sole Proprietorship	102	51	153
2. Partnership	22	7	29
3. Private Corp	59	46	105
4. Public Corp	0	0	0
Total	183	104	287
Q15 (# of Stores)			
Mean	2.2	2.5	2.3
Median	1.0	1.0	1.0
	(n=184)	(n=105)	(n=289)
Q16 (Franchisee?)			
1. Yes	6	12	18
2. No	178	93	271
Total	184	105	289

Table 4.2.--Data summary (continued)

Variables	Dry Cleaners	Video Stores	Total Sample
Q17 (Franchisor?)			
1. Yes	0	4	4
2. No	181	101	282
Total	181	105	286
Q18 (Use consultants?)			
1. Yes	23	19	42
2. No	159	86	245
Total	182	105	287
Q19A2 (# stores-87)			
Mean	2.32	2.63	2.44
Median	1.0	1.0	1.0
	(n=160)	(n=95)	(n=255)
Q19B2 (# emp-87)			
Mean	11.23	16.18	13.08
Median	4.0	4.0	4.0
	(n=158)	(n=94)	(n=252)
Q19C2 (sales-87)			
Mean	342187	921848	538524
Median	124000	245000	150000
	(n=123)	(n=63)	(n=186)
Q19D2 (Return on Sales-87)			
Mean	20.43	12.75	17.62
Median	19.0	10.0	16.0
	(n=83)	(n=48)	(n=131)
STRGRO			
Mean	.109	.239	.163
Median	.000	.000	.000
	(n=120)	(n=84)	(n=204)
EMPGRO			
Mean	.266	.554	.381
Median	.000	.167	.025
	(n=114)	(n=76)	(n=190)
SALGRO			
Mean	.227	1.207	.596
Median	.091	.364	.153
	(n=91)	(n=55)	(n=146)

Table 4.2.--Data summary (continued)

Variables	Dry Cleaners	Video Stores	Total Sample
Q20A (Per Sales growth) (5--Top 20%;..1--Lowest 20)			
Mean	3.368	3.543	3.434
Median	3.0	3.0	3.0
	(n=155)	(n=94)	(n=249)
Q20B (Per ROS)			
Mean	3.059	3.217	3.119
Median	3.0	3.0	3.0
	(n=152)	(n=92)	(n=244)
Q20C (Per EmpGro)			
Mean	2.753	2.904	2.811
Median	3.0	3.0	3.0
	(n=150)	(n=94)	(n=244)
Q20D (Per Performance)			
Mean	3.615	3.702	3.648
Median	4.0	4.0	4.0
	(n=156)	(n=94)	(n=250)
Q21 (Objectives)			
1. Yes	44	41	85
2. No	138	65	203
Total	182	106	288
Q22A (Written Plan?)			
1. Yes	37	42	79
2. No	146	64	210
	183	106	289
Q22B (Time horizon?)			
1. 0-1 years	7	9	16
2. 1-3 years	14	14	28
3. 3-5 years	7	14	21
4. 5+ years	8	4	12
Total	37	42	79
Q23A (Unwritten plan?)			
1. Yes	135	84	219
2. No	43	22	65
Total	178	106	284
Q23B (Time horizon?)			
1. 0-1 years	25	15	40
2. 1-3 years	39	34	73
3. 3-5 years	39	14	53
4. 5+ years	28	20	48
Total	131	83	214

Table 4.2.--Data summary (continued)

Variables	Dry Cleaners	Video Stores	Total Sample
Q24 (Environmental Scanning)			
A. Population trends	80/185	43/104	123/289
B. Family income	85/185	46/104	131/289
C. Tech breakthroughs	10/185	20/104	30/289
D. Nat. income trends	40/185	45/104	85/289
E. Threats & Opp.	83/185	63/104	146/289
F. Past Perf.	74/185	62/104	136/289
G. Current Perf.	97/185	78/104	175/289
H. Political developments	11/185	12/104	23/289
I. Social trends	24/185	39/104	63/289
J. Labor attitudes	67/185	36/104	103/289
K. Envir. analysis	59/185	17/104	76/289
L. Outside interests	24/185	26/104	50/289
M. Key employee exp.	68/185	45/104	113/289
N. Strengths & weaknesses	98/185	75/104	173/289
O. Future Performance	82/185	73/104	155/289
Q25A (Projected financials?)			
1. yes	66	59	125
2. no	97	44	141
Total	163	103	266
Q25B (How many?)			
1. one	25	25	50
2. two	17	17	34
3. three	10	7	17
4. four	14	10	24
Total	66	59	125
Q26 (Procedures)			
A. Hiring & training	70/185	50/104	120/289
B. New p/s dev	44/185	55/104	99/289
C. Resource allocation	30/185	39/104	69/289
D. Production quotas	34/185	14/104	48/289
E. R & D	10/185	11/104	21/289
F. Business expansion	75/185	66/104	141/289
G. Equipment acquisition	96/185	38/104	134/289
H. Advertising	89/185	70/104	159/289
I. Securing resources	20/185	19/104	39/289
J. Management succession	43/185	35/104	78/289
K. Staffing	47/184	46/104	93/288
Q27A (Control)			
1. yes	70	57	127
2. no	95	44	139
Total	165	101	266

Table 4.2.--Data summary (continued)

Variable	Dry Cleaners	Video Stores	Total Sample
Q27B (How often)			
1. monthly	47	35	82
2. quarterly	14	8	22
3. semi-annually	3	5	8
4. Annually	6	9	15
5. every 1-3 years	0	0	0
Total	70	57	127
Q28 (Performance measures)			
A. ratio analysis	54/186	36/103	90/289
B. performance eval.	60/186	36/103	96/289
C. inventory levels	35/186	63/103	98/289
D. accounts payable	48/186	39/103	87/289
E. equipment maint.	46/186	6/103	52/289
F. employee turnover	20/186	8/103	28/289
G. accounts receivable	67/186	33/103	100/289
H. other	20/186	11/103	31/289
Q29 (Competitive Methods: item means)			
A. pricing < comp.	2.442	2.814	2.584
B. new p/s dev.	2.937	3.775	3.264
C. broad p/s range	3.321	3.515	3.395
D. Customer service	3.925	4.196	4.027
E. competent personnel	3.106	3.465	3.245
F. quality control	3.706	3.297	3.548
G. lowest cost	2.926	3.167	3.019
H. high inventory	2.058	3.363	2.547
I. limited p/s range	1.953	2.394	2.129
J. brand/name ident.	2.817	3.152	2.948
K. dev & refine p/s	3.390	3.449	3.412
L. channels of distr.	2.174	2.396	2.261
M. raw materials	1.779	2.054	1.888
O. specific geographic areas	2.703	2.604	2.664
P. Pro/ad > industry	2.487	2.418	2.461
Q. specialty p/s	3.071	3.455	3.222
R. reputation in industry	4.031	4.020	4.027
S. innovation in delivery	3.090	2.899	3.016
T. high-priced segments	2.534	2.355	2.465
U. low-priced segments	1.918	2.415	2.112
V. marketing innnovation	2.630	3.111	2.818

Table 4.2.--Data summary (continued)

Variable	Dry Cleaners	Video Stores	Total Sample
SO (Strategic Orientation)			
Cluster 1			92
Cluster 2			50
Cluster 3			24
Cluster 4			14
Cluster 5			11
Cluster 6			8
Total			199
Plantype (PT)			
1. Non Planners (NP)	68	22	90
2. Unstructured Planners (UP)	88	50	138
3. Structured Planners (SP)	30	34	64
Total	186	106	292
MSCS			
Self achievement:			
Mean	2.370	1.556	2.044
Median	2.0	1.0	2.0
Avoiding risks:			
Mean	1.333	.833	1.133
Median	1.0	1.0	1.0
Feedback of results			
Mean	.481	-.250	.189
Median	1.0	-.50	.0
Personal innovation			
Mean	1.278	1.306	1.289
Median	2.0	1.5	2.0
Planning for future			
Mean	.111	.167	.133
Median	.0	.0	.0
Total Score:			
Mean	5.556	3.639	4.789
Median	4.50	4.000	4.000

Industry Effects

This study was designed to take into account the potential effects of different industrial contexts on firm performance. Thus, the sample was chosen to represent firms in two industries in which there are notable similarities at the firm level, but substantial differences with respect to overall volatility and growth rate at the industry level. Given the nature of the sample, the hypotheses posed for this study could be tested by combining respondents from both industries into one sample under the assumption that the similarities at the firm level overshadow the differences at the industry level. Alternatively, the respondents could be partitioned according to industry and analyzed separately. This approach would be based on the assumption that differences between industries outweigh the similarities at the firm level and requires separate analysis and testing of the hypotheses by industry.

All statistical analyses were performed on the total sample and then on each industry sub-sample to assess the impact, if any, of industry effects on the results. Overall, there were relatively few substantial differences in the outcomes of the tests of the hypotheses when industry sub-samples were analyzed separately as compared to the total sample analysis. It was determined, therefore, to include the complete

results of the analysis of the total sample in the following presentation. In instances where notably different results were obtained by partitioning the total sample by industry, as in Hypothesis 3, these results will be included and discussed. The fact that the results of the analysis by industry were generally consistent with the analysis of the total sample appears to imply that, for this sample, similarities at the firm level tended to overshadow the differences associated with the dynamics of each industry.

A detailed analysis of the performance measures obtained in this study is presented in the next section. However, it would seem fruitful to examine differences in the performance measures obtained from each industry sub-sample within the context of this discussion on industry effects. It is interesting to note that there were no significant differences between the respondents in the dry cleaning industry and those in the video industry on the perceived performance measures (Table 4.3). This is not surprising given that respondents were asked to compare themselves with other firms of similar size in the same industry. Perceptions of relative performance within an industry should incorporate the industry growth rate for firms with a common point of reference within that industry and, therefore, not result in inter-industry differences.

The comparison of mean actual performance between industries yielded a different result (Table 4.4). Here we see that statistically significant differences exist between the respondents from each industry on all four actual performance measures. Growth in sales (SALGRO), growth in employees (EMPGRO) and growth in the number of stores (STRGRO) all were significantly higher in the video industry. This was expected given the dramatically greater rate of growth in video rental/retail relative to dry cleaning. Return on sales for 1987 (ROS-87), on the other hand, was significantly higher in sample of dry cleaning firms than it was in the video firms. This seems logical given the stability and maturity of the dry cleaning industry compared to the volatility of the newly emerged video rental industry which could easily lead to higher returns for the more established firms (dry cleaners).

Although the performance measures obtained for this study possess some limitations, the fact that the actual performance measures seem to capture the differential growth rates between industries, while the perceived measures do not, provides one external validity check on the performance measures obtained, at least with respect to the probable impact of overall industry growth on the growth of the individual firm within the industry.

Table 4.3.--Comparison of dry cleaners versus video stores on perceived performance

Mean Scores				
Variable	Dry Cleaners	Video Stores	T Value	Two-tailed Prob.

SALGRO	3.3677	3.5426	-1.15	.252
ROS	3.0592	3.2174	-1.03	.305
EMPGRO	2.7533	2.9043	-.88	.381
OVERALL	3.6154	3.7021	-.60	.551

Table 4.4.--Comparison of dry cleaners versus video stores on actual performance

Mean Scores				
Variable	Dry Cleaners	Video Stores	T Value	Two-tailed Prob.

SALGRO	.2274	1.2065	-2.14	.037
ROS-87	20.4337	12.7500	2.31	.022
EMPGRO	.2659	.5542	-2.04	.043
STRGRO	.1093	.2393	-2.24	.026

Performance Measures

The design of this study anticipated reluctance on the part of the respondents to divulge financial performance data. The survey, therefore, requested not only actual performance data regarding firm growth and profitability, but also a subjective or perceived evaluation of the firm's performance relative to other comparable firms. Although there is no true substitute for actual performance measures, it was felt that participants would be more likely to respond to the

comparative evaluation questions and, as a result, provide at least some measure of performance. Based on previous research in which actual performance showed a strong positive correlation with the perceived performance data, it was expected that the perceived performance data would emerge as reliable proxy for actual performance measures and serve as the dependent variables in the data analysis.

Table 4.5 contains the intercorrelation matrix of the actual or "objective" performance measures obtained for the total sample. It will be noted that only 102 (35%) of the respondents provided all of the requested actual performance data. The intercorrelations of these performance measures are consistent with reasonable expectations regarding their possible relationships. It would be expected that sales growth (SALGRO), employee growth (EMPGRO) and store growth (STRGRO) would be positively related. That was found to be true in this study with statistically significant positive correlations between the three variables. On the other hand, return on sales for 1987 (ROS-87) is negatively correlated with SALGRO and EMPGRO, and shows a weak positive correlation with STRGRO. This seems reasonable inasmuch as profitability does not necessarily follow growth. This appears to be the case here. It should also be added that the ROS figure was the least frequently given, and when reported it was

often in round figures (e.g. 10%, 20%) suggesting lack of precision (or understanding) on the part of the respondents. The validity of the actual ROS figures submitted by the respondents is, therefore, open to some doubt.

Table 4.5--Intercorrelations: Actual performance measures--Total sample

	SALGRO	ROS-87	EMPGRO
ROS-87	-.0532 n=106 P=.294		
EMPGRO	.3957 n=134 P=.000	-.0095 n=102 P=.462	
STRGRO	.3534 n=142 P=.000	.0025 n=107 P=.490	.6760 n=189 P=.000

(P is one-tailed significance level; correlations significant at $P < 0.05$ in bold face)

The intercorrelations of the perceived performance measures show a much stronger positive association than do the actual performance measures (Table 4.6). It will be noted that all of the correlations are positive and statistically significant ($p < 0.001$). A substantially greater number of respondents provided this information than provided the actual performance data (82% compared to 35%).

Table 4.6.--Intercorrelations: Perceived performance measures--Total sample

	Perceived SALGRO	Perceived ROS	Perceived EMPGRO
Perceived ROS	.7262 n=243 P=.000		
Perceived EMPGRO	.6767 n=243 P=.000	.6324 n=239 P=.000	
Perceived Overall Performance	.7655 n=248 P=.000	.7223 n=242 P=.000	.5219 n=244 P=.000

(P is one-tailed significance level; correlations significant at $P < 0.001$ in bold face)

For purposes of the present study the correlation matrix presented as Table 4.7 is of primary importance. The relationship between the reported "actual" performance measures and the reported "perceived" relative performance measures establishes the validity of the perceived measures as a proxy for actual performance data. It can be seen that the positive relationships are generally weak and that some correlations are statistically significant in the negative direction. Actual ROS displays a significantly negative correlation with perceived SALGRO and perceived EMPGRO, and a negative, although not significant, correlation with OVERALL PERFORMANCE. These negative relationships may be explained, in part, by the unreliable nature of the actual ROS figures, as was noted earlier.

On the other hand, actual ROS shows a weak positive correlation with perceived ROS; actual SALGRO shows a weak positive correlation with perceived SALGRO; actual EMPGRO and perceived EMPGRO are significantly positively correlated; actual EMPGRO is significantly correlated with OVERALL PERFORMANCE; and actual STRGRO shows a statistically significant positive correlation with all four perceived performance measures.

Based on previous research, it was expected that the subjective or perceived measures would be significantly related to the objective or actual measures and could, therefore, be used as the dependent variables in the testing of the hypotheses. However, because of the negative correlations found and because even the statistically significant positive correlations do not approach the 0.42 to 0.92 correlations reported by Robinson and Pearce (1988) using a similar approach, no claim will be made that the perceived measures are valid proxy for actual performance data in this study. In subsequent data analysis, therefore, both the actual and the perceived relative performance measures will be used as the dependent or outcome variables in separate analyses. Where differences in results between the two sets of performance measures are found to exist, the possible underlying reasons will be explored.

The separate analysis of the two types of performance measures is required by the lack of agreement between the two sets of measures. Clearly actual performance outcomes are important and their inclusion needs no justification. Even though relatively few of the respondents provided all the actual performance data, a sufficient number did so for purposes of statistical analysis.

The lack of strong convergence of the actual and perceived measures in this study point to the possibility that an owner/manager's perceptions of relative performance and firm performance may not represent one and the same thing. This suggests the possibility that perceptions of relative performance may well be as significant as actual performance in understanding owner/manager behavior and firm performance if one accepts the premise that an individual's behavior is largely a function of enacted or recreated realities constructed of perceptions, not necessarily the objective facts. Thus it is suggested that the owner/manager's perception of relative performance measures bears investigation in its own right, not necessarily only as a proxy for actual performance.

Table 4.7.--Correlation Matrix: Actual with perceived performance measures--Total Sample

Perceived Performance	Actual Performance			
	SALGRO	ROS	EMPGRO	STRGRO
SALGRO	.0941 n=137 P=.137	-.1627 n=120 P=.038	.1712 n=174 P=.012	.2020 n=187 P=.003
ROS	.0891 n=135 P=.152	.0375 n=120 P=.342	.1013 n=171 P=.094	.1456 n=184 P=.024
EMPGRO	.1114 n=137 P=.097	-.1970 n=120 P=.016	.2348 n=171 P=.001	.2557 n=184 P=.000
OVERALL PERFORMANCE	.0537 n=137 P=.266	-.0822 n=120 P=.186	.1559 n=174 P=.020	.1785 n=187 P=.007

(P is one-tailed significance level; correlations significant at $P < 0.05$ in bold face)

The relationship between actual and perceived performance measures obtained in this study is one area in which notable differences emerged when the sample was partitioned and analyzed by industry. Table 4.8 contains the correlation matrix of perceived with actual performance measures for the respondents from the dry cleaning industry. It will be noted that the positive correlations are weaker (only two statistically significant positive correlations emerged) and that there is one additional statistically significant negative correlation. Again, as with the overall sample, all the significant negative correlations are associated with actual ROS.

Table 4.8.--Correlation Matrix: Actual with perceived performance measures--Dry Cleaners

Perceived Performance	Actual Performance			
	SALGRO	ROS	EMPGRO	STRGRO
SALGRO	.1749 n=84 P=.056	-.3642 n=76 P=.001	.0891 n=103 P=.205	.1457 n=109 P=.065
ROS	-.0294 n=83 P=.396	-.0192 n=76 P=.435	-.0719 n=101 P=.238	.0162 n=107 P=.434
EMPGRO	.1909 n=84 P=.041	-.3411 n=76 P=.001	.1636 n=100 P=.052	.2302 n=1106 P=.009
OVERALL PERFORMANCE	.1044 n=84 P=.172	-.2931 n=76 P=.005	.0697 n=103 P=.242	.1162 n=109 P=.115

(P is one-tailed significance level; correlations significant at $P < 0.05$ in bold face)

In contrast to the results of the correlation matrix for the dry cleaning firms, the responses from the video industry reveal a much stronger positive relationship between perceived and actual performance measures (Table 4.9). There are ten statistically significant positive correlations and no negative correlations. It would appear that the firm owner/managers in this emerging industry possess a more accurate sense of comparative performance than their counterparts in the stable, established industry. However, even the stronger positive correlations found in the video industry still do not approach the 0.42 to 0.92 correlations reported by Robinson and Pearce

(1988). This suggests caution in assuming that the perceived measures are valid proxy for actual measures, even with the stronger positive correlations found in the video industry sample.

Table 4.9.--Correlation Matrix: Actual with perceived performance measures--Video Stores

Perceived Performance	Actual Performance			
	SALGRO	ROS	EMPGRO	STRGRO
SALGRO	.0674 n=53 P=.316	.3511 n=44 P=.010	.2985 n=71 P=.006	.2983 n=78 P=.004
ROS	.1275 n=52 P=.184	.2281 n=44 P=.068	.3601 n=70 P=.001	.3726 n=77 P=.000
EMPGRO	.1206 n=53 P=.195	.1648 n=44 P=.143	.3412 n=71 P=.002	.3049 n=78 P=.003
OVERALL PERFORMANCE	.0405 n=53 P=.387	.3960 n=44 P=.004	.3071 n=71 P=.005	.3011 n=78 P=.004

(P is one-tailed significance level; correlations significant at $P < 0.05$ in bold face)

Hypothesis 1

Hypothesis 1: Firm performance will be positively related to the owner/manager's growth propensity as measured by the MSCS-Form T.

Perceived Performance Measures

Hypothesis one received limited support based on the total sample analysis (Table 4.10). Except for minor variations, there were no differences in the

outcome when this hypothesis was tested by industry sub-sample. Therefore, only the total sample data will be included and discussed here.

The Self Achievement (SA) scale of the MSCS showed the strongest positive relationship with the perceived performance measures. Statistically significant correlations were found between SA and all of the perceived performance measures. Among the remaining subscales only one other significant correlation appeared. Planning for the Future (PF) was significantly correlated with Return on Sales (ROS). There were no significant correlations between the Avoiding Risks (AR), Feedback of Results (FR), and Personal Innovation (PI), and any of the perceived performance measures.

The Total Score (TS) of the MSCS was significantly correlated with Sales Growth (SALGRO) and Return on Sales (ROS) at the 0.05 level and approached significance on Employee Growth (EMPGRO) and OVERALL PERFORMANCE. These results provide limited support for the existence of a positive relationship between perceived firm performance and entrepreneurial growth propensity as measured by the MSCS.

Table 4.10.--Correlation matrix: Perceived performance by MSCS scales--Total Sample

Perceived Performance Measures	MSCS Scales					
	SA	AR	FR	PI	PF	TS
SALGRO	.3266 n=79 P=.002	-.1149 n=79 P=.157	.1138 n=79 P=.159	.1430 n=79 P=.104	.1558 n=79 P=.085	.2256 n=79 P=.023
ROS	.2366 n=77 P=.019	.0692 n=77 P=.275	.0924 n=77 P=.212	-.0108 n=77 P=.463	.2377 n=77 P=.021	.2068 n=77 P=.036
EMPGRO	.2078 n=76 P=.036	-.1124 n=76 P=.167	.0246 n=76 P=.416	.1519 n=76 P=.095	.1552 n=76 P=.090	.1666 n=76 P=.075
OVERALL PERF	.1885 n=79 P=.048	-.0392 n=79 P=.366	.1829 n=79 P=.053	.0435 n=79 P=.352	.0641 n=79 P=.287	.1514 n=79 P=.092

(P is one-tailed significance level; correlations significant at P<0.05 in bold face)

Actual Performance Measures

The correlation analysis (Table 4.11) of actual performance with the MSCS scales resulted in two statistically significant positive correlations (Planning for the Future (PF) with EMPGRO and STRGRO). However, in contrast to the perceived measures, there are four statistically significant negative correlations (AR with EMPGRO; PI with ROS-87; PF with ROS-87; and TS with ROS-87). In addition, all but one of the actual performance measures (SALGRO) correlates negatively with the MSCS Total Score (TS).

Although these results do not offer strong support for the hypothesis being tested, it should be

noted that all but one of the significant negative correlations are associated with the return on sales measure (ROS-87), which is, as was noted earlier, the least often reported and least reliable of the performance measures.

Table 4.11.--Correlation matrix: Actual performance by MSCS scales--Total Sample

Actual Performance Measures	MSCS Scales					
	SA	AR	FR	PI	PF	TS
SALGRO	.0125 n=54 P=.464	.0084 n=54 P=.476	-.0867 n=54 P=.267	.1945 n=54 P=.079	.1611 n=54 P=.122	.1111 n=54 P=.212
ROS-87	-.1310 n=49 P=.185	.0886 n=49 P=.272	-.2012 n=49 P=.083	-.3282 n=49 P=.011	-.3349 n=49 P=.009	-.3352 n=49 P=.009
EMPGRO	-.1347 n=69 P=.135	-.2141 n=69 P=.039	-.1606 n=69 P=.094	.1483 n=69 P=.112	.2078 n=69 P=.043	-.0334 n=69 P=.393
STRGRO	-.0184 n=73 P=.438	-.1445 n=73 P=.111	-.1548 n=73 P=.095	-.0221 n=73 P=.427	.2906 n=73 P=.006	-.0078 n=73 P=.474

(P is one-tailed significance level; correlations significant at $P < 0.05$ in bold face)

Hypothesis 2

H2: Firm performance will improve with increased planning formality.

To test this hypothesis it was first necessary to categorize the firms in the total sample according to the degree of formality or structure in the planning process. The same approach described below was used to analyze each industry sub-sample separately, but

because no notably different results emerged, the total sample analysis only will be presented and discussed.

The approach used was based on the multiple cutoff classification scheme developed by Bracker and Pearson (1986). Accordingly, an attempt was made to classify firms as being one of four planning types: Structured Strategic Planners (SSP), Structured Operational Planners (SOP), Unstructured Planners (UP), and Non-Planners (NP). The sample was partitioned into four groups according to the criteria set forth in Table 4.12.

Table 4.12.--Planning type classification criteria

Variables	Planning Type			
	SSP	SOP	UP	NP
Written Objectives	yes	yes	--	--
Written Plan	yes	yes	--	--
Time Horizon of Plan	>2 yrs	<3 yrs	--	--
Unwritten Plan	--	--	yes	--
Projected Financials	yes	--	--	--
Control Procedure	yes	--	--	--
Environmental Scanning (15)	>5	>2	>1	--
Budgets and Procedures (11)	>4	>1	>0	--
Performance Measures (8)	>3	>1	>0	--

The respondents were classified as SSP (n=13), SOP (n=51), UP (n=138), and NP (n=90). Relatively few of the respondent firms engage in structured planning

and even fewer in strategic or long-term planning. This was not particularly surprising given the fact that most of the respondent firms could be classified as typical "Mom and Pop" style operations, as was noted earlier.

An examination of the above planning type classification suggests a more useful classification for subsequent analysis. By combining the SSP group and the SOP group into one group called Structured Planners (SP), the problem of a small n in the SSP category is overcome. This is particularly important in order to insure an adequate number of cases in each cell of the two-way ANOVA performed for Hypothesis 4.

The combination of SSP and SOP into a single category can be justified conceptually in that written objectives and a written plan are the primary components of the "structure" construct in this study. The nature of the sample is such that very few of the respondents meet the requirements of the "strategic" or long-term planners. Accordingly, the fine distinction between structured strategic and structured operational planning will not be maintained and all subsequent analysis will utilize a classification of planning based on three rather than four types: 1) Non-Planners (NP), 2) Unstructured Planners (UP), and 3) Structured Planners (SP). The following analysis of the hypothesized relationship between planning formality

and firm performance will include only the total sample data as the analysis by industry did not yield any notable differences in outcomes.

Perceived Performance Measures

Table 4.13 contains the results of a MANOVA analysis in which the perceived performance measures are compared across the three planning types. No significant differences across planning types were found, although the univariate F for perceived EMPGRO approached significance at the 0.05 level.

Table 4.13.--Comparison of perceived SALGRO, ROS, and EMPGRO for three planning types (SP, UP, NP)--Total Sample

MANOVA results						

Test	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F	
Pillais	.02756	1.09451	6.00	470.00	.365	
Hotellings	.02834	1.10057	6.00	466.00	.361	
Wilks	.97244	1.09757	6.00	468.00	.363	

Univariate F-tests with 1(2,236) D.F.						
	Hypoth. SS	Error SS	Hypoth MS	Error MS	F	Sig. of F
SALGRO	2.37	318.73	1.18	1.35	.88	.418
ROS	1.12	323.86	.56	1.37	.41	.666
EMPGRO	10.12	398.50	5.06	1.69	3.00	.052

A look at the one-way ANOVA results (Tables 4.14 through 4.17) reveals a significant difference ($P < 0.05$) across planning types for the EMPGRO variable (Table 4.16). According to Duncan's multiple range test Structured Planners (SP) and Unstructured Planners (UP)

are each significantly higher ($P < 0.05$) in perceived EMPGRO than Non-Planners (NP). It should also be noted that, while not statistically significant, the differences in means of the other performance variables are all in the expected direction. This finding lends limited support to Hypothesis 2.

Table 4.14.--Comparison of perceived SALGRO for three planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	3.0452	1.5226	1.1248	.3264
Within groups	245	331.6484	1.3537		
Total	247	334.6935			

Group	Count	Mean
NP	64	3.2500
UP	124	3.4597
SP	47	3.5500
Total	248	3.4274

Table 4.15.--Comparison of perceived ROS for three planning types (SP, UP, NP)--Total Sample

ANOVA RESULTS

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	1.6251	.8126	.5972	.5512
Within groups	241	327.9281	1.3607		
Total	243	329.5533			

Group	Count	Mean
NP	62	2.9839
UP	122	3.1475
SP	60	3.2000
Total	244	3.1189

Table 4.16.--Comparison of perceived EMPGRO for three planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	10.8033	5.4017	3.2181	.0418
Within groups	241	404.5246	1.6785		
Total	243	415.3279			

Group	Count	Mean
NP	62	2.4677
UP	122	2.8770 *
SP	60	3.0333 *
Total	244	2.8115

* UP and SP each significantly different from NP at the 0.05 level according to Duncan's multiple range test.

Table 4.17.--Comparison of perceived OVERALL PERFORMANCE for three planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	2.8919	1.4459	1.1767	.3100
Within groups	246	302.2969	1.2288		
Total	248	305.1888			

Group	Count	Mean
NP	65	3.4615
UP	124	3.7016
SP	60	3.7167
Total	249	3.6426

Actual Performance Measures

The MANOVA analysis (Table 4.18) comparing actual performance across planning types yields results similar to those found for the perceived measures, although the F tests come closer to significance at the 0.05 level. The univariate F for actual EMPGRO is significant ($P < 0.05$). This finding is born out by the one-way ANOVA (Table 4.21) which shows that Structured Planners (SP) reported significantly higher employee growth (EMPGRO) than did Non-Planners (NP). This finding is consistent with the results of the analysis using perceived EMPGRO and is not surprising given the relatively strong correlation between perceived and actual EMPGRO (Table 4.7).

Even though statistical significance was not achieved in the other ANOVA analyses, the differences in mean performance on each of the actual measures is in the expected direction with higher performance associated with greater planning formality.

Table 4.18.--Comparison of actual SALGRO, ROS, EMPGRO and STRGRO for three planning types (SP, UP, NP)--Total Sample

MANOVA results

Test	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	.14911	1.87309	8.00	186.00	.066
Hotellings	.16276	1.85139	8.00	182.00	.070
Wilks	.85580	1.86234	8.00	184.00	.068

Univariate F-tests with 1(2,95) D.F.

	Hypoth. SS	Error SS	Hypoth. MS	Error MS	F	Sig. of F
SALGRO	21.95	566.95	10.97	5.96	1.84	.165
ROS	755.29	28146.27	377.64	296.28	1.27	.284
EMPGRO	6.46	85.03	3.23	.89	3.61	.031
STRGRO	1.05	22.31	.52	.23	2.24	.112

Table 4.19.--Comparison of actual SALGRO for three planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	24.3913	12.1956	2.7136	.0697
Within groups	143	642.6833	4.4943		
Total	145	667.0745			

Group	Count	Mean
NP	30	.1948
UP	72	.3896
SP	44	1.2083
Total	146	.5963

Table 4.20.--Comparison of actual ROS-87 for three
planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	465.0995	232.5498	.6661	.5155
Within groups	128	44687.8165	349.1236		
Total	130	45152.9160			

Group	Count	Mean
NP	35	16.4286
UP	59	16.4407
SP	37	20.6216
Total	131	17.6183

Table 4.21.--Comparison of actual EMPGRO for three
planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	7.3746	3.6873	4.0981	.0181
Within groups	186	167.3564	.8998		
Total	188	174.7311			

Group	Count	Mean
NP	46	.1293
UP	96	.3562
SP	47	.6870 *
Total	189	.3833

* SP is significantly different from NP at the 0.05 level according to Duncan's multiple range test.

Table 4.22.--Comparison of actual STRGRO for three planning types (SP, UP, NP)--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	.6880	.3440	2.0338	.1335
Within groups	200	33.8280	.1691		
Total	202	34.5160			

Group	Count	Mean
NP	49	.0605
UP	104	.1979
SP	50	.1934
Total	203	.1636

Hypothesis 3

H3: Firm performance will differ significantly across distinct patterns of strategic behavior (orientation).

Total Sample Analysis

The analysis of the industry sub-samples revealed additional significance for this particular hypothesis. As a result, following the presentation of the analysis of the total sample data, the analysis of each industry sub-sample will be presented.

The first step taken to test this hypothesis was the factor analysis of the 21 items in the competitive methods scale. Table 4.23 displays the results of the factor analysis. A varimax rotation of the initial factor matrix yielded five distinct factors with eigenvalues greater than one.

The factors displayed in Table 4.23 are rank-ordered (left to right) according to proportion of

explained variance. All of the 21 competitive methods exhibited loadings of greater than or equal to .46 on at least one of the factors. A .46 factor loading was used as the minimum level because an item factor loading of .46 is considered a conservative criterion for inclusion (Kim and Mueller 1978) and it seemed to represent a natural cut-off point as each item loaded at least .46 on at least one factor. One item, extensive customer service, loaded on two factors, Factor 1 and Factor 4. This indicates that it might be relevant to more than one pattern of strategic behavior. Table 4.24 displays the five factors and the competitive methods associated with each.

An agglomerative hierarchical clustering procedure was then used to group the sample firms according to patterns of strategic behavior to test for performance differences across strategic orientation. Table 4.25 shows the cluster means (based on the regression factor scores for the members of each cluster) associated with each of the six patterns of strategic behavior.

An examination of the cluster means in Table 4.25 suggested two additional steps to be taken to improve the groupings. First, it was determined to drop cluster 6 from further analysis because of the small number of cases; because, as the last cases in sample to group together, these eight cases did not represent a strong association; and because cluster 4

Table 4.23. Competitive methods factor structure--Total Sample

Competitive methods	Factor loadings					Communality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	
Pricing below comp.	-.07703	-.00725	-.02554	.08088	.86013	.75300
New p/s development.	.11303	.00829	.10208	.76244	.08042	.61105
Broad product/service range	.18283	.22723	-.11798	.74653	-.01101	.65641
Extensive customer service	.51099	-.04861	-.06364	.53119	-.05611	.55283
Ensure competent personnel	.54063	-.01791	.27170	.16740	-.06199	.39829
Strict quality control	.67512	.05019	-.06186	.13424	.04122	.48185
Lowest cost per unit	.24017	.07729	.20631	-.10564	.66267	.55651
High inventory	-.02402	-.09374	.66630	.34367	.18010	.60386
Limited range of p/s	-.07332	.07748	.52577	-.14582	.23849	.36595
Build brand/name ident.	.57700	.27822	.13319	-.09046	.05805	.43962
Dev.& refine existing p/s	.55017	.29234	.15335	.17138	-.01323	.44121
Influence dist. channels	.16848	.36870	.54922	-.01039	.06495	.47030
Ensure raw material avail.	.17777	.09481	.71252	-.02671	-.04151	.55071
Specific geo. markets	-.00962	.64148	.00582	-.02193	.13441	.43016
Pro/ad above industry ave.	.12269	.69254	-.00284	.03448	.11910	.51005
Emphasize specialty p/s	.21193	.35662	.14963	.46023	-.00827	.40636
Build rep.in industry	.69998	.12499	-.08913	.20156	.03231	.55520
Inn. in delivery process	.35084	.46234	.29670	.13130	-.16385	.46896
High-priced market seg.	.15862	.63474	.15315	.22758	-.11823	.51728
Low-priced market seg.	-.12558	.16370	.41859	.15914	.55284	.54875
Inn. in marketing tech.	.31034	.48862	.34004	.33113	.06607	.56469
Eigenvalues	4.80391	2.24999	1.47035	1.20290	1.15591	
Percent of Variance	22.9	10.7	7.0	5.7	5.5	
Cumulative Variance Per.	22.9	33.6	40.6	46.3	51.8	

Table 4.24.--Patterns of strategic behavior derived
from factor analysis of competitive
methods--Total Sample

Factor 1: Differentiation--prestige, quality, service
Extensive customer service
Ensure highly competent employees
Emphasize product/service quality control
Build brand/name identification
Develop and refine existing products/services
Build reputation within the industry

Factor 2: Focused differentiation--marketing
Serve specific geographic markets
Promotion/advertising above industry average
Innovation in product/service delivery process
Products/services in higher priced market segments
Innovation in marketing techniques and methods

Factor 3: Operational efficiency
Maintain high inventories
Narrow, limited range of products/services
Influence channels of distribution
Ensure availability of raw materials

Factor 4: Differentiation--product innovation, service
New product/service development
Broad product/service range
Extensive customer service capabilities
Emphasize specialty product/services

Factor 5: Low cost
Pricing below competitors
Concern for lowest cost per unit a
Products/services in lower priced market segments

Table 4.25.--Six cluster solution: cluster means--
Total Sample

Cluster	Cluster Means				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1 (n=92)	-.057	.196	.106	.013	.565
2 (n=50)	.294	-.925	-.695	-.020	-.521
3 (n=24)	1.048	1.467	-.353	-.136	-.475
4 (n=14)	-.620	-.299	.497	1.574	-1.056
5 (n=11)	-1.815	-.781	.158	-1.255	-.566
6 (n=8)	-.494	-.714	2.506	-.251	.305

seemed to capture the strategy represented by factor 3. Second, the cluster means in Table 4.25 indicate that cluster 2 and cluster 5 possess a high degree of similarity across factors. Neither cluster suggests an identifiable strategic orientation with four of five means negative and only one relatively low positive mean for each cluster. It was, therefore, decided to combine these two clusters for subsequent analysis inasmuch as neither cluster evidences an identifiable strategic orientation. Table 4.26 contains factor means for the firms in each cluster of the revised cluster groupings.

Table 4.26.--Four cluster solution: cluster means--
Total Sample

Cluster	Cluster Means				
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1 (n=92)	-.057	.196	.106	.013	.565
2 (n=61)	-.087	-.899	-.541	-.243	-.529
3 (n=24)	1.048	1.467	-.353	-.136	-.475
4 (n=14)	-.620	-.299	.497	1.574	-1.056

In accordance with the strategy associated with each of the five factors, each cluster is defined as emphasizing a specific strategic orientation as follows:

- Cluster 1: Low cost
- Cluster 2: No identifiable strategy
- Cluster 3: Differentiation: prestige, quality, customer service; marketing

**Cluster 4: Differentiation: product/service
innovation, customer service;
operational efficiency**

Table 4.27 contains the means for each of the four strategic clusters or groups for each of the four perceived performance measures. It will be noted that Cluster 3 has the highest perceived performance mean for each of the four dependent variables. For the actual performance means Cluster 1 generally has the highest scores (Table 4.28). The difference between the n's for each cluster in Table 4.27 and 4.28 compared to those in Table 4.23 is a result of the fact that not all of firms in the sample provided the performance data and were, therefore, dropped from the analysis of the strategic orientation--performance relationship.

Table 4.27.--Mean perceived performance scores for four strategic groups--Total Sample

Dependent Variables	Independent Variables			
	Cluster 1 (n=86)	Cluster 2 (n=47)	Cluster 3 (n=22)	Cluster 4 (n=12)
SALGRO	3.41	3.64	4.00	3.17
ROS	2.94	3.38	3.64	3.00
EMPGRO	2.84	3.00	3.27	2.33
OVERALL PERF	3.52	3.81	4.09	3.50

Table 4.28.--Mean actual performance scores for four strategic groups--Total Sample

Dependent Variables	Independent Variables			
	Cluster 1 (n=53)	Cluster 2 (n=28)	Cluster 3 (n=18)	Cluster 4 (n= 8)
SALGRO	.9226	.3034	.3695	.1648
ROS	15.4400	16.4783	10.0625	28.5714
EMPGRO	.5951	.3529	.2396	.1254
STRGRO	.2170	.1518	.1273	.1167

Perceived Performance Measures

Table 4.29 contains the results of the MANOVA analysis of differences in perceived performance across the clusters of different strategic orientation for the total sample. The MANOVA analysis does not provide support for Hypothesis 3, although the the univariate F ratio for ROS is significant at the 0.05 level.

The one-way ANOVA's (Tables 4.30 through 4.33) performed on each dependent (perceived performance) variable across the four strategic groups show that no significant differences exist except for the ROS variable (Table 4.26). The F ratio is significant at the 0.05 level for ROS and Duncan's multiple range test indicates Cluster 3 is significantly different from Cluster 1. This provides limited support for the superiority of the strategic orientation (Differentiation: prestige, quality, customer service; marketing) of the firms in Cluster 3 at least with

respect to the low cost strategic approach taken by those firms in Cluster 1.

Table 4.29.--Comparison of perceived SALGRO, ROS, and EMPGRO for four strategic groups--
Total Sample

MANOVA results						
Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F	
Pillais	.07680	1.42749	9.00	489.00	.173	
Hotellings	.08036	1.42567	9.00	479.00	.174	
Wilks	.92446	1.42865	9.00	391.89	.174	

Univariate F-tests with 5,167 D.F.						
	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	8.30	203.27	2.77	1.25	2.22	.088
ROS	11.73	210.91	3.91	1.29	3.02	.031
EMPGRO	7.72	272.75	2.57	1.67	1.54	.207

Table 4.30.--Comparison of perceived SALGRO for four strategic groups--Total Sample

ANOVA results					
Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	6.418	2.140	1.707	.168
Within groups	168	210.576	1.253		
Total	171	216.994			

Group	Count	Mean			
1	86	3.4070			
2	50	3.5600			
3	24	3.9167			
4	12	3.1667			
Total	172	3.5058			

Table 4.31.--Comparison of perceived ROS for four strategic groups--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	10.351	3.4535	2.667	.0495
Within groups	166	214.963	1.295		
Total	169	225.323			

Group	Count	Mean
1	86	2.9419
2	49	3.3265
3	23	3.6087*
4	12	3.0000
Total	170	3.1471

* Cluster 3 is significantly different from Cluster 1 at the 0.05 significance according to Duncan's multiple range test.

Table 4.32.--Comparison of perceived EMPGRO for four strategic groups--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	7.353	2.451	1.4707	.225
Within groups	166	276.740	1.667		
Total	169	284.094			

Group	Count	Mean
1	86	2.8372
2	49	3.9592
3	23	3.2609
4	12	2.3333
Total	170	2.8941

Table 4.33.--Comparison of perceived OVERALL
PERFORMANCE for four strategic groups--
Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	4.9963	1.6654	1.5891	.194
Within groups	168	176.0735	1.0481		
Total	169	181.0698			

Group	Count	Mean
1	86	3.5233
2	50	3.7400
3	24	4.0000
4	12	3.5000
Total	172	3.6512

Actual Performance Measures

The results of the MANOVA analysis (Table 4.34) and the one-way ANOVA's (Tables 4.35 through 4.38) reveal no statistically significant differences in actual performance across strategic orientations. This analysis lends no support to Hypothesis 3 and is generally consistent with the analysis using perceived performance measures.

Table 4.34.--Comparison of actual SALGRO, ROS-87, EMPGRO and STRGRO for four strategic groups--Total Sample

MANOVA results

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F
Pillais	.09990	.57698	12.00	201.00	.859
Hotellings	.10546	.55952	12.00	191.00	.872
Wilks	.90247	.56773	12.00	172.27	.866

Univariate F-tests with 3,68 D.F.

	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	12.22	558.03	4.07	8.21	.50	.686
ROS-87	1014.64	21024.23	338.21	309.18	1.09	.358
EMPGRO	1.37	70.85	.46	1.04	.44	.726
STRGRO	.69	19.83	.23	.29	.78	.507

Table 4.35.--Comparison of actual SALGRO for four strategic groups--Total Sample

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	10.439	3.480	.626	.600
Within groups	103	572.645	5.560		
Total	106	583.085			

Group	Count	Mean
1	53	.9226
2	28	.3034
3	18	.3695
4	8	.1648
Total	107	.6109

Table 4.36.--Comparison of actual ROS-87 for four strategic groups--Total Sample

ANOVA results					
Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	1685.289	561.763	1.5235	.214
Within groups	92	33922.711	368.725		
Total	95	35608.000			

Group	Count	Mean
1	50	15.4400
2	23	16.4783
3	16	10.0625
4	7	28.5714
Total	96	15.7500

Table 4.37.--Comparison of actual EMPGRO for four strategic groups--Total Sample

ANOVA results					
Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	3.453	1.151	1.002	.394
Within groups	127	145.850	1.148		
Total	130	149.303			

Group	Count	Mean
1	62	.5951
2	50	.3529
3	24	.2396
4	12	.1254
Total	172	.4354

Table 4.38.--Comparison of actual STRGRO for four strategic groups--Total Sample

ANOVA results					
Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	.220	.0735	.364	.779
Within groups	136	27.448	.2018		
Total	139	27.669			

Group	Count	Mean
1	67	.2170
2	43	.1518
3	24	.1273
4	12	.1167
Total	172	.1770

Dry Cleaning Industry Analysis

The partitioning of the total sample into industry sub-samples yielded substantially greater significance, particularly for the dry cleaning industry sample, than for the total sample. To analyze the impact of strategic orientation on performance within each industry the same analysis that was performed on the total sample was followed for each industry sub-sample.

The varimax rotation of the initial factor matrix yielded seven distinct factors with eigenvalues greater than one (Table 4.39). The factor loading of .41 was used as the minimum for inclusion as each competitive method loaded at least that highly on one of the seven factors. The seven factors with associated competitive methods are presented in Table 4.40. Although there

are two additional factors than emerged in the total sample analysis, essentially the same breakdown of strategic orientations results. Several differentiation strategies emerge, as do the low cost and operational efficiency strategies.

The agglomerative hierarchical clustering procedure yielded four groups or clusters of firms each with different strategic orientations. Table 4.41 contains the cluster means (based on the regression factor scores for members of each cluster) associated with each pattern of strategic behavior.

In accordance with the strategy associated with each of the five factors, each cluster is defined as emphasizing a specific strategic orientation as follows:

- Cluster 1: Differentiation: prestige, quality, service, innovation; marketing
- Cluster 2: Low cost; narrow focus
- Cluster 3: No identifiable strategy
- Cluster 4: Differentiation through specialized product/service line

Table 4.42 contains the means for each of the four strategic groups or clusters for each of the four perceived performance measures. Cluster one has the highest mean perceived performance among the clusters on all but Overall Performance in which it is second highest. Table 4.43 reveals no clear pattern of dominance by any one cluster in terms of actual performance means.

Table 4.39. Competitive methods factor structure--Dry Cleaners

Competitive methods	Factor loadings							Commun- ality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	
Pricing < comp.	-.03873	-.08243	.04266	.84920	-.00597	.11581	.04479	.74672
New p/s dev.	.11473	.03876	.79723	-.02987	-.00744	.03932	-.02413	.65332
Broad p/s range	.24761	-.00459	.76099	.10019	.11872	-.12968	.14821	.70335
Ext. cus. service	.65809	.02075	.37558	.02074	-.05290	-.02563	.04315	.58032
Competent personnel	.44636	.26674	.05981	-.21911	.10824	.28949	.18308	.45102
Quality control	.67293	.18229	.18963	.05253	.03614	-.27061	-.07498	.60494
Lowest cost/	.11497	.30172	-.06074	.61925	.36781	-.15652	-.10435	.66209
High inventory	-.20574	.66217	.12868	.17591	.22126	.14373	-.31757	.69877
Limited p/s range	-.08216	.23954	-.18532	.19503	.08149	.67755	.02869	.60305
Build brand/name	.39395	.09729	-.09107	-.11108	.65372	.15989	.03270	.63927
Refine existing p/s	.47516	.23693	.15025	.01323	.39001	.12729	-.12769	.48928
Inf. dist. channels	.04085	.59875	.06078	.17948	.18969	.15403	.14811	.47773
Raw material avail.	.11246	.78256	-.10651	.02154	-.06070	.08148	.09184	.65561
Specific geo. markets	-.07720	.06978	.18123	.12523	.67556	.03044	.28597	.59845
Pro/ad > industry ave.	.06873	.17642	.09156	.09485	.20470	.01560	.82396	.77428
Specialty p/s	.29980	.09706	.43100	.03752	.16154	.60327	-.06516	.68074
Rep. in industry	.75996	-.12683	.03690	.04688	.16321	.20730	.16901	.69537
Inn. in p/s delivery	.37731	.53253	.13230	-.12942	.02577	-.01008	.25856	.52783
High-priced market seg.	.15387	.22868	.41289	-.16406	.32281	.28372	.26430	.52792
Low-priced market seg.	.01114	.35030	.03201	.63089	-.30013	.31533	.20082	.75172
Inn. in marketing tech.	.23046	.48031	.28085	-.02979	.37518	.13291	.28827	.60510
Eigenvalues	4.869	2.405	1.494	1.188	1.153	1.018	1.000	
Percent of Variance	23.2	11.5	7.1	5.7	5.5	4.8	4.8	
Cumulative Variance Per.	23.2	34.6	41.8	47.4	52.9	57.7	62.5	

Table 4.40.--Patterns of strategic behavior derived
from factor analysis of competitive
methods--Dry Cleaners

Factor 1: Differentiation--prestige, quality, service

Extensive customer service
Ensure highly competent employees
Emphasize product/service quality control
Develop and refine existing products/services
Build reputation within the industry

Factor 2: Operations/distribution efficiency

Maintain high inventories
Influence channels of distribution
Ensure availability of raw materials
Innovation in product/service delivery process
Innovation in marketing techniques

Factor 3: Differentiation--prestige product innovation

New product/service development
Broad product/service range
Products/services in higher priced market segments

Factor 4: Low cost

Pricing below competitors
Concern for lowest cost per unit a
Products/services in lower priced market segments

Factor 5: Narrow Focus

Brand/name identification
Serve specific geographic markets

Factor 6: Differentiation through specialized product
line

Narrow range of products/services
Specialty product/service

Factor 7: Marketing

Promotion/advertising above industry average

Table 4.41.--Four cluster solution: cluster means--
Dry Cleaners

Cluster	Cluster Means for Each Factor						
	1	2	3	4	5	6	7
1 (n=22)	.619	.207	.818	-.651	.090	.430	.651
2 (n=33)	-.329	.094	.088	.777	.567	-.111	.025
3 (n=28)	-.051	-.592	-.374	-.402	-.837	-.909	-.203
4 (n= 8)	.441	-.885	-.907	-1.058	-.142	1.170	-.927

Table 4.42.--Mean perceived performance scores for four
strategic groups--Dry Cleaners

Dependent Variables	Independent Variables			
	Cluster 1 (n=21)	Cluster 2 (n=31)	Cluster 3 (n=22)	Cluster 4 (n= 7)
SALGRO	4.24	3.10	3.18	3.86
ROS	3.85	2.74	3.00	3.57
EMPGRO	3.75	2.58	2.67	3.43
OVERALL PERF	4.10	3.26	3.36	4.14

Table 4.43.--Mean actual performance scores for four
strategic groups--Dry cleaners

Dependent Variables	Independent Variables			
	Cluster 1 (n=15)	Cluster 2 (n=18)	Cluster 3 (n=15)	Cluster 4 (n= 5)
SALGRO	.2217	.2270	.0997	.0863
ROS	16.7778	13.8947	19.2941	17.5000
EMPGRO	.2843	.3800	.0362	.0000
STRGRO	.2401	.0780	.0414	.0179

Perceived Performance Measures

The MANOVA analysis of differences in perceived performance across the clusters of different strategic

orientations reveals statistically significant differences ($P < 0.05$) in the overall model and for each of the three dependent variables in the univariate analysis ($P < 0.01$). The one-way ANOVA's performed on each of the dependent variables (perceived performance) yield statistical significance ($P < 0.01$) across strategic orientation for each perceived performance variable (Tables 4.45 through 4.48). In each case Cluster 1 is significantly higher than Clusters 2 and 3. This indicates the superiority of the differentiation strategy featuring emphasis on prestige, quality, service, innovation and marketing over both the low cost strategy and the "no identifiable strategy" approaches, at least on the perceived performance measures.

Table 4.44.--Comparison of perceived SALGRO, ROS, and EMPGRO for four strategic groups--Dry Cleaners

MANOVA results

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F
Pillais	.21705	1.89778	9.00	219.00	.054
Hotellings	.26865	2.07957	9.00	209.00	.033
Wilks	.78591	1.99952	9.00	172.95	.042

Univariate F-tests with 3, 73 D.F.

	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	21.48	89.74	7.16	1.23	5.83	.001
ROS	16.84	97.24	5.61	1.33	4.21	.008
EMPGRO	19.83	118.17	6.61	1.62	4.08	.010

Table 4.45.--Comparison of perceived SALGRO for four strategic groups--Dry Cleaners

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	19.573	6.5244	5.3078	.0022
Within groups	77	94.649	1.2292		
Total	80	114.222			

Group	Count	Mean
1	21	4.2381*
2	31	3.0968
3	22	3.1818
4	7	3.8571
Total	81	3.4815

* Cluster 1 is significantly different from Clusters 2 and 3 at the 0.05 significance level according to Duncan's multiple range test.

Table 4.46.--Comparison of perceived ROS for four strategic groups--Dry Cleaners

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	16.688	5.5626	4.219	.0082
Within groups	76	100.200	1.3184		
Total	79	116.887			

Group	Count	Mean
1	20	3.8500*
2	31	2.7419
3	22	3.0000
4	7	3.5718
Total	80	3.1625

* Cluster 1 is significantly different from Clusters 2 and 3 at the 0.05 significance level according to Duncan's multiple range test.

Table 4.47.--Comparison of perceived EMPGRO for four strategic groups--Dry Cleaners

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	20.270	6.757	4.1646	.0088
Within groups	75	121.679	1.622		
Total	78	141.949			

Group	Count	Mean
1	20	3.7500*
2	31	2.5806
3	21	2.6667
4	7	3.4286
Total	79	2.9747

* Cluster 1 is significantly different from Clusters 2 and 3 at the 0.05 significance level according to Duncan's multiple range test.

Table 4.48.--Comparison of perceived OVERALL PERFORMANCE for four strategic groups--Dry Cleaners

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	3	12.035	4.012	3.691	.0154
Within groups	77	83.693	1.0869		
Total	80	95.728			

Group	Count	Mean
1	21	4.0952*
2	31	3.2581
3	22	3.3636
4	7	4.1429
Total	81	3.5802

* Cluster 1 is significantly different from Clusters 2 and 3 at the 0.05 significance level according to Duncan's multiple range test.

Actual Performance Measures

The MANOVA analysis of actual performance across strategic orientation yielded no statistical significance in the overall model (Table 4.49). Although the univariate F ratio for STRGRO is significant at the 0.05 level, the one way ANOVA did not confirm that result. This analysis did not reveal any significant difference in reported actual performance across strategic orientation for the dry cleaners in the sample.

Table 4.49.--Comparison of actual SALGRO, ROS-87, EMPGRO and STRGRO for four strategic groups--Dry Cleaners

MANOVA results						

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F	
Pillais	.32576	.88316	12.00	87.00	.567	
Hotellings	.42910	.91780	12.00	77.00	.534	
Wilks	.68924	.90280	12.00	71.73	.548	
Univariate F-tests with 3,30 D.F.						
	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	.12	1.98	.04	.07	.61	.611
ROS-87	258.46	9844.16	86.15	328.14	.26	.852
EMPGRO	.19	1.34	.06	.04	1.41	.260
STRGRO	.57	1.58	.19	.05	3.63	.024

Video Industry Analysis

The factor loadings of the varimax rotation of the factor analysis for the 21 competitive methods for the video industry sample are presented in Table 4.50. As with the dry cleaning industry, this analysis

yielded seven distinct factors with eigenvalues greater than one. Each of the competitive methods loaded at least .44 on at least one factor. The competitive methods associated with each factor are displayed in Table 4.51. Although there are some variations in the ordering of the competitive methods among the factors, the overall outcome is quite similar to that found for the total sample and for the dry cleaners in that several variations on the differentiation theme are present as well as low cost, and operational efficiency. The only notable difference is that focus (Factor 7) emerged as a separate strategy.

The agglomerative hierarchical clustering technique yielded five distinct clusters based on strategic orientation. The cluster means of the regression factor scores suggest the following basic strategic orientations for the video store sample:

- Cluster 1: Differentiation: competent employees, industry reputation
- Cluster 2: No identifiable strategy
- Cluster 3: Operations/distribution efficiency
- Cluster 4: Differentiation
- Cluster 5: Focus

Table 4.50. Competitive methods factor structure--Video Stores

Competitive methods	Factor loadings							Commun- ality
	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	
Pricing < comp.	-.01200	.01340	-.13192	-.19697	.10989	.86146	.04288	.81255
New p/s dev.	.74631	-.03867	.19777	.04576	-.01541	.21175	.00558	.64479
Broad p/s range	.70829	.28088	-.01106	.04029	.02152	-.14217	-.14918	.62525
Ext. cus. service	.64156	-.03691	.13323	-.10329	.32947	-.18822	-.10031	.59542
Competent personnel	.14299	.04740	-.04911	.14842	.74617	.07524	-.20297	.65077
Quality control	.44857	.01028	.27054	.17329	.44471	.08730	.27639	.58633
Lowest cost/	-.05707	-.08427	.25168	.17362	.08239	.55450	.21257	.46329
High inventory	.44274	.12750	-.40086	.39640	.14610	.10365	.04651	.56435
Limited p/s range	-.10720	-.11505	-.04239	.22720	-.05735	.12781	.76585	.68429
Build brand/name	-.04190	.19623	.52232	-.04416	.48929	.08751	.09675	.57145
Refine existing p/s	.33472	.19929	.71211	.16220	.11391	-.03373	.01295	.69944
Inf. dist. channels	-.14890	.43053	.08571	.54686	.29477	-.02896	.10885	.61350
Raw material avail.	.06977	-.01743	.11980	.75944	.08255	.04244	.11172	.61736
Specific geo. markets	-.01856	.41838	.04036	-.06505	-.10303	.04166	.64987	.61592
Pro/ad > industry ave.	-.02057	.73515	.14082	-.09929	.24065	.17575	-.03437	.66054
Specialty p/s	.37233	.56290	.08642	-.10523	.12751	-.24941	.20130	.59301
Rep. in industry	.46646	.16941	.14818	.09766	.51353	-.09913	-.03248	.55237
Inn. in p/s delivery	.17345	.53412	.42855	.40568	.02345	-.07142	-.03832	.67072
High-priced market seg.	.13174	.66569	.10043	.33607	-.06551	.02221	.06869	.59303
Low-priced market seg.	.05024	.34363	.03216	.35202	-.26205	.56567	-.04169	.63595
Inn. in marketing tech.	.37230	.38605	.56689	.22508	-.05445	.20177	-.11244	.71599
Eigenvalues	4.781	2.277	1.550	1.240	1.227	1.068	1.023	
Percent of Variance	22.8	10.8	7.4	5.9	5.8	5.1	4.9	
Cumulative Variance Per.	22.8	33.6	41.0	46.9	52.7	57.8	62.7	

Table 4.51.--Patterns of strategic behavior derived
from factor analysis of competitive
methods--Video Stores

Factor 1: Differentiation--product/service innovation,
quality, service

New product/service development
Broad product/service range
Extensive customer service
Emphasize product/service quality control
Maintain high inventories

Factor 2: Differentiation--prestige, marketing

Promotion/advertising above industry average
Specialty product/services
Innovation in the product/service delivery process
Products/services in higher priced market segments

Factor 3: Differentiation

Build brand/name identification
Develop and refine existing products/services
Innovation in marketing techniques and methods

Factor 4: Operations/distribution efficiency

Influence channels of distribution
Ensure availability of raw materials

Factor 5: Differentiation

Ensure highly competent employees
Build reputation within industry

Factor 6: Low cost

Pricing below competitors
Concern for lowest cost per unit
Products/services in lower priced market segments

Factor 7: Focus

Narrow range of products/services
Serve specific geographic markets

Table 4.52.--Five cluster solution: cluster means--
Video Stores

Cluster Means for Each Factor							
Cluster	1	2	3	4	5	6	7
1 (n= 9)	.389	-1.057	-.499	-.818	.909	-.823	-.644
2 (n=36)	.183	.258	.266	-.150	.140	.273	-.255
3 (n=10)	-.134	-.163	.260	1.337	-.938	.104	-.295
4 (n= 7)	.048	.287	.813	-.972	-1.256	-1.340	.611
5.(n= 9)	-1.950	-.450	-.866	-.503	.032	.179	.797

The mean perceived performance scores for each of the five strategic groups (clusters) are presented in Table 4.53. Cluster 1 emerges as highest on all four perceived performance variables. No clear pattern of superiority emerges for the actual performance measures, although Cluster 1 is highest on both EMPGRO and STRGRO (Table 4.54).

Table 4.53.--Mean perceived performance scores for five
strategic groups--Video Stores

Independent Variables					
Dependent Variables	Cluster 1 (n= 9)	Cluster 2 (n=34)	Cluster 3 (n= 9)	Cluster 4 (n= 6)	Cluster 5 (n= 8)
SALGRO	4.11	3.71	3.22	3.16	3.13
ROS	3.89	3.35	2.56	3.20	3.00
EMPGRO	3.56	3.15	2.33	2.33	2.25
OVERALL PERF	4.44	3.79	3.33	3.00	3.37

Table 4.54.--Mean actual performance scores for five strategic groups--Video Stores

Dependent Variables	Independent Variables				
	Cluster 1 (n= 9)	Cluster 2 (n=33)	Cluster 3 (n= 6)	Cluster 4 (n= 5)	Cluster 5 (n= 4)
SALGRO	.8527	1.4531	2.2442	.4856	1.2255
ROS	11.6667	17.0417	16.0000	-20.6667	6.0000
EMPGRO	1.2083	.5381	.1833	.3214	.6771
STRGRO	.3225	.2309	.0833	.2571	.2188

Perceived Performance Measures

The MANOVA analysis of the perceived performance measures across strategic orientations reveals no statistically significant differences for the overall model (Table 4.55). However, the univariate F ratio is significant ($P < 0.05$) for EMPGRO.

The one-way ANOVA and Duncan's multiple range test (Table 4.56) for EMPGRO show a statistically significant difference between Cluster 1 and Clusters 3 and 5. This implies superiority of the differentiation strategy employed by firms in Cluster 1 over the strategies emphasizing operations/distribution efficiency and narrow focus. In addition, the ANOVA analysis of OVERALL PERFORMANCE across strategic orientations yields a statistically significant difference between clusters (Table 4.57). Specifically, Cluster 1 is significantly higher than Clusters 3, 4, and 5 according to Duncan's multiple range test. The differentiation strategy employed by

the firms in cluster 1 emerges as superior to three of the four other strategic orientations with respect to perceived performance.

Table 4.55.--Comparison of perceived SALGRO, ROS, and EMPGRO for five strategic groups--Video Stores

MANOVA results

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F
Pillais	.21364	1.25512	12.00	180.00	.249
Hotellings	.26483	1.25058	12.00	170.00	.253
Wilks	.78083	1.25585	12.00	153.70	.250

Univariate F-tests with 4,60 D.F.

	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	6.02	67.58	1.51	1.13	1.34	.267
ROS	8.88	61.68	2.22	1.03	2.16	.084
EMPGRO	14.66	84.79	3.67	1.41	2.59	.045

Table 4.56.--Comparison of perceived EMPGRO for five strategic groups--Video Stores

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	4	14.134	3.534	2.5263	.0497
Within groups	61	85.320	1.399		
Total	65	99.454			

Group	Count	Mean
1	9	3.5556*
2	34	3.1471
3	9	2.3333
4	6	2.3333
5.	8	2.2500
Total	66	2.9091

* Cluster 1 is significantly different from Clusters 3 and 5 at the 0.05 significance level according to Duncan's multiple range test.

Table 4.57.--Comparison of perceived OVERALL PERFORMANCE for five strategic groups-- Video Stores

ANOVA results

Source	D.F.	Sum of Squares	Mean Square	F Ratio	Prob
Between groups	4	10.283	2.571	3.2907	.0166
Within groups	61	47.656	.781		
Total	65	57.939			

Group	Count	Mean
1	9	4.4444*
2	34	3.7941
3	9	3.3333
4	6	3.0000
5	8	3.3750
Total	66	3.6970

* Cluster 1 is significantly different from Clusters 3 4 and 5 at the 0.05 significance level according to Duncan's multiple range test.

Actual Performance Measures

The MANOVA analysis of actual performance across categories of strategic orientation reveals no statistically significant differences in the overall model and none in the univariate F tests (Table 4.58).

Table 4.58.--Comparison of actual SALGRO, ROS-87, EMPGRO and STRGRO for five strategic groups--Video Stores

MANOVA results

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F
Pillais	.30414	.67689	12.00	72.00	.768
Hotellings	.35346	.60874	12.00	62.00	.827
Wilks	.72081	.64210	12.00	58.50	.798

Univariate F-tests with 3,25 D.F.

	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SALGRO	7.48	522.68	2.49	20.91	.12	.948
ROS-87	345.21	8822.03	115.07	352.88	.33	.806
EMPGRO	2.82	28.10	.94	1.12	.84	.487
STRGRO	.25	4.61	.08	.18	.46	.712

Hypothesis 4

H4: Firm performance will differ significantly according to the planning formality/strategic orientation interaction.

Perceived Performance Measures

Analysis by industry sub-sample yielded no important differences from the total sample analysis. Therefore, the analysis of the total sample data only is presented in this section.

To test this hypothesis a two-way ANOVA was run on each of the four perceived performance variables with three planning Type (PT) and the four strategic orientations (SO) as the independent variables (Tables 4.59 through 4.62). These results do not support the hypothesis that perceived performance differs significantly according to the planning type/strategic orientation interaction. None of the interaction F

ratios approach statistical significance. The F ratios that show significance at the 0.05 level are for main effects and are generally consistent with results shown earlier in the one-way ANOVA analyses for planning type and strategic orientation.

Table 4.59.--Comparison of perceived SALGRO for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	11.502	5	2.300	1.824	.111
PT	3.207	2	1.603	1.271	.283
SO	9.795	3	3.265	2.589	.055
2-way interaction	4.596	6	.766	.607	.724
Explained	16.098	11	1.463	1.160	.319
Residual	195.471	155	1.261		
Total	211.569	166	1.275		

Table 4.60.--Comparison of perceived ROS for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	16.606	5	3.321	2.527	.031
PT	4.877	2	2.439	1.855	.160
SO	13.880	3	4.627	3.520	.017
2-way interaction	2.302	6	.384	.292	.940
Explained	18.908	11	1.719	1.308	.225
Residual	203.727	155	1.314		
Total	222.635	166	1.341		

Table 4.61.--Comparison of perceived EMPGRO for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	13.698	5	2.740	1.657	.148
PT	5.982	2	2.991	1.809	.167
SO	9.419	3	3.140	2.899	.132
2-way interaction	10.516	6	1.753	1.060	.389
Explained	24.214	11	2.201	1.331	.212
Residual	256.253	155	1.653		
Total	280.467	166	1.690		

Table 4.62.--Comparison of perceived OVERALL PERFORMANCE for three planning types (PT) and four strategic orientations (SO)-Total Sample

Two-way ANOVA

Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	9.509	5	1.902	1.792	.117
PT	2.518	2	1.259	1.187	.308
SO	8.510	3	2.837	2.674	.049
2-way interaction	2.569	6	.428	.404	.876
Explained	12.078	11	1.098	1.035	.419
Residual	164.461	155	1.061		
Total	176.539	166	1.063		

Actual Performance Measures

The results of the two-way ANOVA's (Tables 4.63 through 4.66) using each actual performance measure as the dependent variable are consistent with those found using the perceived performance data. No significant interaction effects between planning type and strategic orientation were found, giving no support to Hypothesis 4. This is not surprising given the general lack of

support for Hypotheses 2 and 3 where the impact of planning type and strategic orientation on performance were tested separately.

Table 4.63.--Comparison of actual SALGRO for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	27.360	5	5.472	.616	.688
PT	15.137	2	7.568	.852	.432
SO	5.071	3	1.690	.190	.903
2-way interaction	9.743	6	1.624	.183	.981
Explained	37.103	11	3.373	.380	.959
Residual	533.148	60	8.886		
Total	570.251	71	8.032		

Table 4.64.--Comparison of actual ROS-87 for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	1384.989	5	276.998	.827	.536
PT	370.348	2	185.174	.553	.578
SO	923.593	3	307.864	.919	.437
2-way interaction	552.910	6	92.152	.275	.947
Explained	1937.899	11	176.173	.526	.878
Residual	20100.976	60	335.016		
Total	22038.875	71	310.407		

Table 4.65.--Comparison of actual EMPGRO for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	6.281	5	1.256	1.236	.304
PT	4.909	2	2.454	2.415	.098
SO	1.982	3	.661	.650	.586
2-way interaction	4.967	6	.828	.815	.563
Explained	11.248	11	1.023	1.006	.452
Residual	60.979	60	1.016		
Total	72.227	71	1.017		

Table 4.66.--Comparison of actual STRGRO for three planning types (PT) and four strategic orientations (SO)--Total Sample

Two-way ANOVA					
Source of Variation	Sum of Squares	DF	Mean Square	F	Sig of F
Main Effects	1.433	5	.287	.918	.476
PT	.747	2	.374	1.196	.309
SO	.807	3	.269	.861	.466
2-way interaction	.349	6	.058	.186	.980
Explained	1.782	11	.162	.519	.883
Residual	18.735	60	.312		
Total	20.517	71	.289		

Hypothesis 5

H5: Firm performance can be predicted as a function of the owner/manager's growth propensity, level of planning formality, strategic orientation and industry growth rate.

Perceived Performance Measures

Separate industry analysis revealed no differences in the analysis of this hypothesis. As a result the following presentation is based on the total sample analysis.

This hypothesis was tested first using stepwise multiple regression analysis on each perceived performance variable. No support was found when using the perceived measures. None of the independent variables met the minimum requirements for entry into the regression equation on any of the four dependent variables. Tables 4.67 through 4.70 contain the results of the multiple regression analysis for each dependent variable when each independent variable was forced to enter the equation. The data in these tables substantiate the generally poor explanatory power of the independent variables in the equation. With the exception of ROS, the *F* ratio does not approach statistical significance.

Table 4.67.--Regression of perceived SALGRO on Industry(I), Strategic orientation(SO), Planning type(PT), and MSCS Total Score(TS)--Total Sample

Variables in the Equation:					
Variable	B	SE B	Beta	T	Sig T
I	.411039	.332478	.174094	1.236	.2220
SO	.220781	.148532	.196014	1.486	.1433
PT	.041150	.207306	.026833	.198	.8434
TS	.051457	.022070	.324542	2.332	.0237
(Constant)	2.221862	.697670		3.185	.0025
Multiple R	.35904				
R Square	.12891				
Adjusted R Square	.06059				
Standard Error	1.13599				
Analysis of Variance:					
	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	9.73969	2.43492	1.89	.1270
Residual	51	65.813887	1.29047		

Table 4.68.--Regression of perceived ROS on I, SO, PT and TS--Total Sample

Variables in the equation:					
Variable	B	SE B	Beta	T	Sig T
I	.064215	.333544	.026731	.193	.8481
SO	.319348	.149009	.278660	2.143	.0369
PT	-.215505	.207971	-.138113	-1.036	.3050
TS	.045735	.022141	.283505	2.066	.0440
(Constant)	2.697214	.699909		3.854	.0003
Multiple R	.39133				
R Square	.15314				
Adjusted R Square	.08672				
Standard Error	1.13962				
Analysis of Variance:					
	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	11.97745	2.99436	2.306	.0708
Residual	51	66.23683	1.29876		

Table 4.69.--Regression of perceived EMPGRO on I, SO, PT and TS--Total Sample

Variables in the Equation:					
Variable	B	SE B	Beta	T	Sig T
I	-.024316	.392632	-.009096	-.062	.9509
SO	.235516	.175406	.184675	1.343	.1853
PT	.094887	.244814	.054646	.388	.6999
TS	.025144	.026063	.140062	.965	.3392
(Constant)	2.112951	.823899		2.565	.0133
Multiple R	.22887				
R Square	.05238				
Adjusted R Square	-.02194				
Standard Error	1.34152				
Analysis of Variance:					
	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	5.07364	1.26841	1.07	.3818
Residual	51	91.78350	1.79968		

Table 4.70.--Regression of perceived OVERALL
PERFORMANCE on I, SO, PT and TS--
Total Sample

Variables in the Equation:					
Variable	B	SE B	Beta	T	Sig T
I	.034585	.311487	.015854	.111	.9120
SO	.252633	.139155	.242753	1.815	.0753
PT	-.083468	.194218	-.058906	-.430	.6692
TS	.035002	.020677	.238928	1.693	.0966
(Constant)	3.213903	.653624		4.917	.0000
Multiple R	.32311				
R Square	.10440				
Adjusted R Square	.03410				
Standard Error	1.06427				
Analysis of Variance:					
	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	6.73388	1.68347	1.49	.2201
Residual	51	57.76612	1.13267		

Actual Performance Measures

The regression of the actual performance measures on the independent variables yielded significant explanatory power for SALGRO and EMPGRO, but not for ROS and STRGRO.

For ROS and STRGRO no variables entered the equation when the stepwise procedure was used. This indicates no statistically significant relationship between the each dependent and the independent variables (Tables 4.72 and 4.73). However, for SALGRO (Table 4.71), Industry (I) entered the equation in step one with an F ratio significant at the 0.05 level and an R square of .16. I was the only variable to enter in the stepwise procedure for SALGRO and indicates that

differences between industries account for a significant amount of the variance in SALGRO. This was expected given the fact that the industries were chosen, in part, for the differences in growth rates with the video rental/retail industry designated rapid growth and the dry cleaning industry as slow growth.

The stepwise multiple regression of actual EMPGRO on the independent variables resulted in Industry (I) entering in step one and Strategic Orientation (SO) entering in step two (Table 4.74). These two variables accounted for approximately 34% of the variance in actual EMPGRO.

These results tend to indicate that industry growth rate is the strongest influence on the growth in sales and growth in employees in this sample of small ventures.

Table 4.71.--Regression of actual SALGRO on
 Industry(I), Strategic orientation(SO),
 Planning type(PT), and MSCS Total(TS)--
 Total Sample

 Stepwise entry of variables:

Variable	B	SE B	Beta	T	Sig T
I	.337116	.148939	.399356	2.263	.0319
(Constant)	-.137748	.228068		-.604	.5509

Multiple R	.39936
R Square	.15949
Adjusted R Square	.12836
Standard Error	.39888

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	1	.81512	.81512	5.12	.0319
Residual	24	4.29584	.15911		

 All variables forced to enter the equation:

Variable	B	SE B	Beta	T	Sig T
I	.288589	.163407	.341871	1.766	.0901
SO	.013177	.056828	.043130	.232	.8186
TS	.006584	.011509	.110119	.572	.5726
PT	.151577	.112248	.263524	1.350	.1895
(Constant)	-.461927	.341666		-1.352	.1890

Multiple R	.49351
R Square	.24355
Adjusted R Square	.11748
Standard Error	.40136

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	1.24479	.31120	1.93	.1377
Residual	24	3.866177	.16109		

Table 4.72.--Regression of actual ROS on I, SO, PT
and TS--Total Sample

Variables in the equation:

Variable	B	SE B	Beta	T	Sig T
I	2.204341	5.268453	.085669	.418	.6794
SO	-.203935	1.832211	-.021899	-.111	.9123
TS	-.544803	.371067	-.298941	-1.468	.1150
TS	4.386778	3.619037	.250205	1.212	.2373
(Constant)	7.091149	11.015770		.644	.5259

Multiple R	.39204
R Square	.15369
Adjusted R Square	.01264
Standard Error	12.94041

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	729.85953	182.46488	1.090	.3840
Residual	24	4018.89909	167.45413		

Table 4.73.--Regression of actual STRGRO on I,
SO, PT, and TS--Total Sample

All variables forced to enter the equation:

Variable	B	SE B	Beta	T	Sig T
I	.137737	.109621	.249278	1.256	.2210
SO	.059593	.038123	.298005	1.563	.1311
TS	.009547	.007721	.243951	1.237	.2282
PT	.072072	.075301	.191428	.957	.3481
(Constant)	-.396866	.229205		-1.731	.0962

Multiple R	.45326
R Square	.20544
Adjusted R Square	.07302
Standard Error	.26925

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	.44987	.11247	1.55	.2194
Residual	24	1.73990	.07250		

Table 4.74.--Regression of actual EMPGRO on
I, SO, PT, and TS--Total Sample

Stepwise entry of variables--Step 1:

Variable	B	SE B	Beta	T	Sig T
I	.584212	.201899	.486520	2.894	.0074
(Constant)	-.504962	.309165		-1.633	.1140

Multiple R	.48652
R Square	.23670
Adjusted R Square	.20843
Standard Error	.54071

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	1	.81512	.81512	5.12	.0319
Residual	24	4.29584	.15911		

Stepwise entry of variables--Step 2:

Variable	B	SE B	Beta	T	Sig T
I	.597879	.190918	.497902	3.132	.0043
SO	.142140	.069096	.327069	2.057	.0498
(Constant)	-.838443	.334133		-2.509	.0187

Multiple R	.58613
R Square	.34355
Adjusted R Square	.29305
Standard Error	.51100

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	1	3.55295	1.77648	6.80	.0042
Residual	26	6.78902	.26112		

All variables forced to enter the equation:

Variable	B	SE B	Beta	T	Sig T
I	.559352	.213280	.465818	2.623	.0149
SO	.157903	.074172	.363342	2.129	.0437
TS	.003462	.015022	.040711	.230	.8197
PT	.110703	.146507	.135300	.756	.4572

Multiple R	.60262
R Square	.36315
Adjusted R Square	.25701
Standard Error	.52386

Analysis of Variance:

	DF	Sum of Squares	Mean Square	F	Sig of F
Regression	4	3.75571	.93893	3.42	.0238
Residual	24	6.586277	.27443		

Research Question 1

This question was formulated to investigate the proposition that a rapidly growing, new industry would attract the opportunistic, growth-oriented entrepreneur. The MSCS scores (subscale and total) of the respondents from the dry cleaning industry (stable, slow-growth) and the MSCS scores of the respondents from the video rental industry (volatile, rapid-growth) were tested for significant differences as presented in Table 4.75. No statistically significant differences between industries were found. Although three of the subscales (SA, AR, and FR) and the total score (TS) were higher in the dry cleaning industry, the differences were not statistically significant.

Table 4.75.--Inter-industry comparison of MSCS scores

Variable	MSCS Mean Scores		T Value	Two-tailed Prob
	Dry Cleaners	Video Stores		
SA	2.3704	1.5556	1.69	.094
AR	1.3333	.8333	1.09	.277
FR	.4815	-.2500	1.34	.185
PI	1.2778	1.3056	-.05	.963
PF	.1111	.1667	-.10	.923
TS	5.5556	3.6389	1.28	.203
	(n=54)	(n=36)		

Research Question 2

To test the possibility that the MSCS scores would vary across planning types a MANOVA analysis was

performed with the MSCS subscale scores as the dependent variables and the planning type categories as the independent variable. The results for the total sample are presented in Table 4.76. No statistically significant differences in MSCS scores across planning types were found to exist. An ANOVA of the MSCS total score variable across planning types confirms the results of the MANOVA on individual MSCS subscales (Table 4.77). Separate analysis of industry samples yielded no notable differences in results.

Table 4.76.--Comparison of SA, AR, FR, PI, and PF for three planning types (SP, UP, NP)--
Total Sample

MANOVA results						

Test	Value	Approx. F	Hypoth DF	Error DF	Sig of F	
Pillais	.08490	.73591	10.00	166.00	.690	
Hotellings	.09149	.74107	10.00	162.00	.685	
Wilks	.91566	.73863	10.00	164.00	.687	

Univariate F-tests with 3,85 D.F.						
	Hypoth SS	Error SS	Hypoth MS	Error MS	F	Sig of F
SA	2.04	449.56	1.02	5.23	.19	.823
AR	1.30	391.17	.65	4.55	.14	.867
FR	.63	573.17	.31	6.66	.05	.954
PI	42.23	622.96	21.12	7.24	2.92	.060
PF	3.69	621.18	1.85	7.22	.26	.775

Table 4.77.--Comparison of MSCS total score for three planning types (SP, UP, NP)--Total Sample

ANOVA results					
Source	D.F.	Sum of Squares	Mean Square	F Ratio	F Prob
Between groups	2	50.7646	25.3823	.5119	.6012
Within groups	86	4264.3590	49.5856		
Total	88	4315.1236			

Group	Count	Mean
NP	25	3.6400
UP	39	5.1282
SOP	25	5.5200
Total	89	4.8202

Research Question 3

It has been assumed by other researchers that trade association members would tend to be the more opportunistic or entrepreneurial business owner/managers in a given industry (Bracker and Pearson 1986). If the MSCS can be assumed to be a measure of "entrepreneurial" tendencies, it would be interesting to examine the differences in MSCS scores between trade association members and non-members. The results (Table 4.78) of T-tests performed on the total sample to determine if significant differences do exist between these two groups indicate statistically significant differences on two of the five subscales (PI and PF) and on the total score (TS). This result provides some support for the notion that there are differences between trade association members and non-members in motivational patterns.

Table 4.78. Trade association members vs. non-members on MSCS scores--Total Sample

MSCS Mean Scores				

Variable	Members	Non-Members	T Value	Two-tailed Prob.

SA	2.2885	1.7105	1.20	.234
AR	1.4423	.7105	1.63	.107
FR	.5385	-.2895	1.53	.130
PI	1.9423	.3947	2.74	.008
PF	.7308	-.6842	2.57	.012
TS	6.9615	1.8158	3.70	.000
	(n=52)	(n=38)		

When the total sample was analyzed by industry with respect to this research question, an interesting result emerged. There were no significant differences between trade association members and non-members in the dry cleaning industry (Table 4.79). On the other hand, in the video industry the differences between these groups were quite strong (Table 4.80). Trade association members scored significantly higher on three of the subscales (FR, PI, and PF), and on the total score. The possible meaning of this finding will be discussed in the next chapter.

Table 4.79. Trade association members vs. non-members on MSCS scores--Dry Cleaners

MSCS Mean Scores				
Variable	Members	Non-Members	T Value	Two-tailed Prob.
SA	2.2571	2.5789	-.56	.578
AR	1.6000	.8421	1.26	.214
FR	.4857	.4737	.02	.987
PI	1.5714	.7368	1.06	.296
PF	.4000	-.4211	1.13	.263
TS	6.3429 (n=35)	4.1053 (n=19)	1.17	.247

Table 4.80. Trade association members vs. non-members on MSCS scores--Video Stores

MSCS Mean Scores				
Variable	Members	Non-Members	T Value	Two-tailed Prob.
SA	2.3529	.8421	1.83	.076
AR	1.1176	.5789	.76	.454
FR	.6471	-1.0526	2.04	.049
PI	2.7059	.0526	3.29	.002
PF	1.4118	-.9474	2.70	.011
TS	8.2353 (n=17)	-.4737 (n=19)	4.45	.000

A second, related question deals with the relationship between performance and trade association membership. Do trade association member firms tend to outperform those that are not so affiliated? The total sample analysis follows. Analysis by industry did not reveal notable differences on this question.

Perceived Performance Measures

As the data in Table 4.81 show, there is a significant difference in perceived performance between association members and non-members for the total sample. Only ROS is not significant at the 0.05 level and it comes very close.

Actual Performance Measures

Table 4.82 is presented to show the differences between members and non-members of trade associations for those respondents who reported actual performance data. It is interesting to note that no significant differences emerge on the four actual performance measures used. The implications of this interesting finding will be addressed in the next chapter.

Table 4.81.--Comparison of trade association members vs. non-members on perceived performance--
Total Sample

Variable	Mean Scores		T Value	Two-tailed Prob.
	Members	Non-Members		
SALGRO	3.6596	3.1402	3.55	.000
ROS	3.2446	2.9519	1.95	.053
EMPGRO	3.0643	2.4660	3.60	.000
OVERALL	3.7902	3.4528	2.39	.018
	(n=143)	(n=106)		

Table 4.82.--Comparison of trade association members
vs. non-members on actual performance
Total Sample

Variable	Mean Scores		T Value	Two-tailed Prob.
	Members	Non- Members		
SALGRO	.5793	.6321	-.14	.890
ROS-87	15.5904	21.1250	-1.65	.102
EMPGRO	.3955	.3639	.22	.826
STRGRO	.1379	.1985	-1.02	.307

CHAPTER 5
DISCUSSION AND CONCLUSIONS

An examination of the results presented in Chapter 4 reveals an overall lack of strong support for the hypotheses proposed for this study. Even so, limited support was obtained for several of the hypotheses and research questions. The purpose of this chapter will be to examine the nature of the business performance measures obtained; explore the findings relative to each dimension of the research model; explore the implications of supported hypotheses; suggest possible underlying reasons for lack of support for some of the hypothesized relationships; and propose directions for further research in this field.

Performance Measures

The difficulty in acquiring valid and accurate performance measures represents one of the greatest challenges in new venture and small business research. It is, nevertheless, vital to accurately assess performance if understanding of superior performance is to be gained.

There are various sources for the difficulties encountered in gaining the performance data desired.

In general, small business owners are not required to divulge profit/loss data except to the Internal Revenue Service for income tax purposes. Even then, for sole proprietorships, partnerships and Sub Chapter S corporations, the business profit/loss is included as part of personal income. Many small, "Mom and Pop" business owners are not only reluctant but may be unable to give accurate performance data. Many keep very poor records and those that are kept tend to overlap and merge with personal financial records in such a way that it is very difficult to separate business and personal finances.

There is no doubt that this sample is heavily weighted toward the very small business type. For those reporting actual performance data, the median number of stores was 1, the median number of employees was 4, and the median sales level was \$150,000. Given a median return on sales of 16%, the median profit level for the sample was \$24,000. The nature of the sample is further demonstrated by the fact that 63% of the sample firms are sole proprietorships or partnerships and none of the respondent firms are publicly-held corporations.

Different problems are often present in the more "entrepreneurial", rapid-growth firm. The very nature of rapid growth makes accurate record keeping and performance assessment at a given point in time

difficult to accomplish, although doing so is extremely important for purposes of management control. There are, therefore, strong influences working against the both the inclination and ability to report valid performance data for either the static small business or the rapid-growth venture.

The failure of the respondents to accurately provide all the requested actual performance data is a weakness of the present study. Even for the 35% who provided all the requested data, the quality and accuracy were often suspect. In some cases it seemed that reported figures were "pulled out of thin air" because they were given in round numbers and because identical figures were given for 1983 and 1987, in some cases. It should be emphasized that the "actual" performance figures used in this study are, in reality, self-report measures subject to all the potential inaccuracies and biases inherent in this type of measurement.

Recognizing the potential problems in obtaining accurate actual performance data, provision was made for an alternative type of performance information to be obtained under the assumption that if accurate actual performance data could not be obtained a reliable proxy would be available. The assumption that respondents would be more inclined to provide this information was borne out as some 82% fully completed

this portion of the questionnaire. However, as was described in Chapter 4, strong support for the use of the perceived, comparative performance data as a valid substitute for actual performance information was not obtained. Thus both types of performance measures were used as dependent variables in separate analyses to test the hypotheses.

Regarding the limitations of the performance measures, two additional points need to be made with respect to the perceived performance measures. It was assumed that virtually all of the respondents would have knowledge of comparable firms within the industry and region to which their own firms could be compared on performance. There was some evidence, based on comments written in the margins of the survey by several respondents, that this assumption was not necessarily valid. Some of the owner/managers of small operations located in small rural communities apparently had no reference point or knew little about the relative performance of their own firms. It may be assumed that most of the respondents in the above category simply did not complete that portion of the questionnaire. However, the possibility remains that some respondents completed the perceived performance information without any real knowledge of the comparative performance of similar firms.

A point related to that made above has to do with the apparent tendency for some respondents to give the perceived performance data using desired performance (i.e., actual performance relative to goals or objectives) as the point of comparison rather than the performance of other firms. In other words, it seemed that the owner/managers of some of the most rapidly growing (i.e., "entrepreneurial") firms in the sample tended to give average or below average perceived performance evaluations for themselves even though actual performance was clearly above average for the sample. It may be speculated that this occurred because they aspired to much more than had been achieved. This may be one of the reasons for the lack of a stronger positive relationship between reported actual performance data and reported perceived performance data.

The findings of this study suggest a need for more careful research into the relationship between perceived relative performance and actual performance in differing contexts, with particular emphasis on the precise identification of the point of reference for comparative performance evaluation. This need is substantiated by the disparate results of the actual to perceived performance measures correlation analysis by industry (Tables 4.8 and 4.9). The respondents from the video industry manifested a much stronger positive

correlation between the two sets of measures than did the dry cleaners. It may be that the firm owner/managers in an emerging, rapidly changing industry are more aware of the relative performance of competitors and other external factors than are the owner/managers in a more stable, mature industry. Thus environmental context may well have a significant moderating effect on the perceived--actual performance measure relationship.

Much more work remains to be done to improve researchers' ability to accurately assess performance in new and small firms. This problem tends to limit the generalizability of much of the previous research, a problem that is commonly encountered in research in organizations (e.g., Dalton, Todor, Spendolini, Fielding, and Porter 1980). An examination of the studies reviewed in Chapter 2 suggests that many researchers chose their samples based on convenience in obtaining objective performance data (e.g., firms listed in Dun & Bradstreet, listings of trade association members, or publicly-held corporations). This practice produces biased samples by excluding a large number of small or very new ventures that do not appear on such lists. The present study attempted to overcome this bias by including all firms in the survey, but was, as a result, left with the difficulty of accurately assessing performance.

Entrepreneurial Growth Propensity

Based on the underpinnings of McClelland's (1961) n Ach theory and Miner's (1982, 1986) theory of motivation to perform in task inducement systems, it was hypothesized that business performance and entrepreneurial growth propensity, as measured by the Miner Sentence Completion Scale-Form T (MSCS-Form T), would be positively related. This hypothesis received some support.

Hypothesis 1, which was based primarily on Smith and Miner's (1984, 1985) findings that owners of rapid growth high-technology firms scored higher on the MSCS, received limited support when perceived performance measures were correlated with MSCS subscales and total scores (see Table 4.10). Interestingly, the self achievement (SA) subscale showed the strongest and most consistent positive relationship with the perceived performance measures. This finding would seem to lend support to the notion that there is a positive relationship between a desire to achieve (or achievement motivation) on the part of the business owner/manager and perceived firm performance. This relationship may be indicative of a kind of optimism displayed by certain individuals who are high in achievement motivation.

In addition, the total score (TS) which is the overall measure of propensity to perform the roles

required in a task inducement system, showed statistically significant positive correlations ($P < 0.05$) with two of the perceived performance measures, SALGRO and ROS. There were relatively strong positive correlations ($P < 0.10$) with the other two performance measures, EMPGRO and OVERALL PERFORMANCE. Again it can be stated, albeit cautiously, that the results of this study lend support to the existence of a positive relationship between perceived firm performance and the owner/manager's propensity to perform the roles of a task inducement system (\bar{n} Ach) as measured by the MSCS-Form T.

An examination of the correlations between the MSCS scales and actual performance reveals mixed results (Table 4.11). There are two statistically significant positive correlations. Planning for the future (PF) is significantly correlated with EMPGRO and STRGRO at the 0.05 level. These correlations are consistent with those found with the perceived performance measures. However, there are numerous negative correlations, four of which are statistically significant. These relationships may be explained, in part, by the fact that three of the statistically significant negative correlations are with the return on sales (ROS) variable. The general lack of reliability of this measure has already been established. Even so, the general lack of strong

positive relationships calls for additional research into the link between the owner/manager's motivation to perform in a task inducement system as measured by the MSCS-Form T and actual small firm performance.

The three research questions posed in this study all dealt with the MSCS and its relationship with other variables in the study. It seemed probable that the more opportunistic or entrepreneurial business owners would be attracted to the industry where growth opportunities appear greater (i.e., the video industry). Thus, Research Question 1 was posed to explore this possibility. T-tests were performed to examine the differences in mean MSCS scores of the respondents from the dry cleaning industry versus the respondents from the video rental industry (see Table 4.75).

The results of this analysis were quite interesting. Although none of the differences were statistically significant ($P < 0.05$), the respondents from the dry cleaning industry had higher mean scores on four of the five subscales and on the total score of the MSCS. Only the personal innovation (PI) subscale was higher in the video industry. To attach an interpretation to these results is somewhat difficult, but it could be that the nature of this sample of respondents provides some possible explanations. As was noted earlier, this sample seems to fit the income-

substitution type of small business owner. It would seem reasonable that for these individuals the choice of industry was a foregone conclusion. That is, they went into the business that fit past experience or used criteria other than industry growth rate to make the decision as which industry to enter. This question bears further research and requires samples with a greater number of the opportunistic, growth-oriented entrepreneurs than was available in this study.

The second research question was posed to explore the relationship between the MSCS scores and planning type classification. Given the fact that the planning for the future (PF) subscale deals directly with the inclination to plan it seemed probable that a positive relationship might exist. However, no significant differences across planning types (see Table 4.76) were found. In fact, as was seen in Chapter 4, the planning type classification generally failed to discriminate on the performance variables as well. This point will be addressed in subsequent sections of this chapter.

The analysis of Research Question 3 provided stronger and more statistically significant results than any other hypothesis or research question in the study. The first part of this question tested for differences between trade association members and trade association non-members on mean MSCS scores (Table 4.78). Trade association members were significantly

higher on personal innovation (PI) and total score (TS) at the 0.01 level and on planning for the future (PF) at the 0.05 level of significance.

When the data were analyzed by industry an interesting result emerged. There were no significant differences between trade association members and non-members in the dry cleaning industry sample (Table 4.79). However, in the video industry, trade association members scored significantly higher on three of the five subscales, and on the total score of the MSCS (Table 4.80). This may be interpreted to mean that in the emerging, rapidly changing video rental industry the more opportunistic owner/managers tend to affiliate with external sources of information to aid them in monitoring and in responding to competitive and other demands.

The above findings add support to the validity of the assumption of Bracker and Pearson (1986) that trade association members would be the more opportunistic, entrepreneurial business owners, and that seems to be particularly true in the volatile, new industry as opposed to the stable, mature industry.

Given the findings described above regarding trade association membership and MSCS scores, it was interesting to examine performance differences between trade association members and non-members. The results of the T-tests (Table 4.81) show statistically

significant differences ($P < 0.01$) between members and non-members on perceived SALGRO and EMPGRO; a statistically significant difference ($P < 0.05$) on perceived OVERALL PERFORMANCE; and a difference very close to significance at the 0.05 level on perceived ROS. These results suggest that trade association members perceive themselves to be doing relatively better than comparable firms.

Given a perception of superior relative performance on the part of trade association members, it is interesting to note that on reported actual performance measures there is a notable lack of significant difference between members and non-members (Table 8.2). These findings suggest some interesting possibilities concerning the relationship between trade association membership and small firm performance. It would seem, given the results of the present study, that trade association membership is positively related to the way in which a business owner perceives the relative success of the firm, but not necessarily actual performance. Further study into the impact of trade association membership on firm performance is clearly needed.

Planning Process

The review of the literature in Chapter 2 revealed a lack of consistency in the findings of the research that has been done relating the planning process in

small firms to firm performance (see Table 2.4). It will be noted in retrospect that in two of the studies reviewed (Gable and Topol 1987, Robinson and Pearce 1983) no relationship was found to exist between levels of planning formality and performance. On the other hand, three of the studies (Bracker and Pearson 1985, 1986, Bracker, Keats, and Pearson 1987, Pearce Robbins, and Robinson 1987) showed strong positive relationships between planning formality and firm performance. This area remains one of controversy. Even if one accepts as given the fact that some sort of planning is worthwhile, the question of just how structured, formal, and sophisticated small business planning should be, remains unresolved.

The data analyzed in this study revealed little support for the hypothesized positive relationship between planning formality and firm performance in this study. In analyzing these results, several points stand out. First, according to the multiple cut-off classification scheme used in this study, there were relatively few firms that fell into the Structured Strategic Planners (SSP) category. Upon reflection this was not particularly surprising given the nature of the sample acquired. That is, most of the respondent firms were very small, relatively stagnant businesses. One would not expect a high degree of structure in the planning processes of this type of

marginally successful small business. This fact led to the consolidation of the two structured planning types (SSP and SOP) into one category called Structured Planners (SP).

A second point also relates to the nature of the sample for this study. The work of Bracker and Pearson (1985, 1986) and Bracker, Keats, and Pearson (1987) served as the foundation for the hypothesis developed for this portion of the present study. However, it should be noted that their samples were drawn exclusively from the membership lists of trade associations. As was noted above, the trade association member firms were significantly different from non-members on both the MSCS scores and perceived performance. The fact that this sample included both could have confounded the planning structure -- performance relationship. An additional point is that the earlier studies which focused on genuine small businesses (as opposed to rapid-growth mid-sized companies) generally found no significant difference in performance for planners and non-planners. It could well be that there is a "threshold" effect that moderates the planning formality--performance relationship. This threshold is most likely a function of the size of the firm. Below the threshold is category of firm that could be classified as the true "small business" in the sense that it run by an

individual or married couple in a relatively informal, "seat of the pants" manner. This firm is probably operated solely by the owners with no other employees. Even though these firms may well differ with respect to the amount of planning done, any planning is most likely to be done and kept in the head(s) of the owner(s). Thus, researchers who operationalize planning formality primarily as a function the existence of written plans (as was done in this study) fail to capture the subtle differences in planning that may exist but are not written down. It may well be counter-productive for the very small business owner to commit limited resources to formal, written planning. That could result in negative relationship between performance and planning formality.

For those firms above this hypothesized threshold, the size of the firm requires more formalized written planning because the scope and complexity of the operation begins to overwhelm the capacity of the owner to do it all in his/her head. This may explain the disparate research results concerning the planning formality--performance relationship. Studies which have examined firms below the threshold, such as this one, have rarely found a positive relationship between planning formality and performance. On the other hand, when researchers have studies samples of mid-sized, growing firms above the

threshold the results lean toward a positive relationship between planning formality and performance.

Although the lack of support for the hypothesized relationship was not totally unexpected given the mixed results of previous studies, it should be noted that there was a significant difference found among the three planning types (Structure, Unstructured, and Non-Planners) on perceived EMPGRO with Structured and Unstructured planners each significantly different from non-planners at the 0.05 level (see Table 4.12). For actual EMPGRO, a comparable result emerged with Structured Planners significantly higher than Non-Planners (Table 4.17). In addition, while the differences in mean performance levels for the other performance variables were not statistically significant, they were all in the expected direction for both perceived and actual measures, i.e, greater structure associated with higher performance.

The findings of this study indicate that the planning process (i.e., degree of structure) may not be related to performance in a consistent manner. It appears to moderated by a host of variables, including the "threshold" effect described earlier. However, the results are far from conclusive and much work remains to be done to answer the question as to how much

structure should be incorporated into a small business's planning process.

Strategy Content

The area of strategy content in new and small firms is one of the most interesting and potentially significant dimensions of new and small business research. The mixed results of the planning process research could be interpreted to imply that how plans are generated may not be as important as what is done to gain competitive advantage. In other words, there may be a variety of ways (processes) of achieving the same end--the development and implementation of a competitively advantageous strategies.

In an attempt to gain some understanding of the strategy content dimension, the respondents of the survey were asked to indicate the degree of emphasis placed on each of 21 items associated with competitive strategy (see Appendix 1, question 29). Factor analysis of the responses from the total sample allowed the 21 competitive methods to be reduced to five identifiable strategies or patterns of strategic behavior as follows (see Tables 4.23 and 4.24):

- 1) differentiation based on prestige, quality and customer service;
- 2) differentiation based on geographic focus, and marketing to higher priced market segments;
- 3) operational efficiency;
- 4) differentiation based on product/service innovation and customer service; and
- 5) low-cost leadership.

The strategies derived from the data in this study lend support to the validity of Porter's (1980) three generic strategy classification scheme. The strategies of differentiation, low-cost and focus each appear singly or in combination in the five patterns of strategic behavior found to be present in this study. The focus strategy was least prominent as an identifiable, separate strategy. It appears only as one aspect of the differentiation strategy identified in number 2 above. This finding is consistent with both the theoretical premise of Porter's generic strategies and other empirical research.

Conceptually, a firm chooses a relatively broad or narrow target market then seeks to gain competitive advantage either by differentiating its offerings from competitors or by achieving lower costs when price competition is severe. From an empirical standpoint, Dess and Davis (1980) found much stronger support for low-cost and differentiation than for focus as separate and identifiable strategies. The strategies that occurred most frequently in Stoner's (1987) study all seem to represent different ways of attaining competitive advantage through differentiation. Using an approach that was adapted for the present study, Robinson and Pearce (1988) found four identifiable "strategic behavior patterns." Not one of these

strategies explicitly emphasized focus as the primary means of attaining competitive advantage.

The five strategies identified for the total sample in this study fell into two broad categories: 1) differentiation and 2) low-cost. Strategies 1, 2, and 4 can all be classified as differentiation strategies, although differences exist in the means used to attain the desired result. This finding is perfectly consistent with what was expected. There are many ways of creating differences or uniqueness in products and services. It is to be expected that firms will attempt to differentiate along various dimensions. Strategy 5 is clearly low-cost leadership. It was the tightest and most easily interpreted factor to emerge. Strategy 3 is not as obviously low-cost, but is interpreted as fitting most closely with this basic strategic approach given the emphasis on internal operational efficiency.

As interesting and important as it is to derive identifiable patterns of strategic behavior in new and small firms, it is of far greater importance to attempt to evaluate the strategy--performance relationship. Do different strategic approaches lead to differences in performance? If so, which strategy(s) is most effective in a given competitive environment?

Following the approach used in previous studies (McDougall and Robinson 1987, Robinson and Pearce 1988), cluster analysis was used to group the firms in

the sample according to strategic orientation (see Table 4.26). Four clusters ultimately emerged and, a strategic orientation based on the factor scores for each cluster was identified. The four strategic orientations were: 1) low cost; 2) no identifiable strategy; 3) differentiation based on prestige, quality, customer service and marketing; and 4) differentiation based on product/service innovation, customer service, and operational efficiency. The means of the perceived performance measures were then compared across the different clusters to test for significant differences (see Table 4.29).

Although the overall model for the total sample did not yield significance, the univariate F-test indicated a significant difference ($P < 0.05$) across clusters on perceived return on investment (ROS). A multiple range test then showed that the mean perceived ROS for cluster 3 (differentiation) was significantly higher than that for cluster 1 (low cost). Even though this is not strong evidence, it does support the notion that new and small firms seldom have the capability to generate true cost advantage given the small scope of operation. The implication is that some type of differentiation strategy would be more likely to lead to superior performance in small firms as has been suggested before (Miller and Toulouse 1986).

Although limited support for the hypothesis was found when perceived performance measures were used, such was not the case for actual performance (Tables 4.34 through 4.37). No significant differences in actual performance were found across strategic orientations.

The analysis of the sample partitioned by industry revealed additional significant results relative to the strategic orientation--performance relationship. For the dry cleaning industry the MANOVA of the perceived performance measures across strategic orientations yielded statistically significant differences as did the individual ANOVA's for each perceived performance measure (Tables 4.44 through 4.48).

On the other hand, there were no significant differences across strategic orientations for the actual performance measures (Table 4.49). It is not surprising that stronger results were achieved by analyzing firms from within a specific industry. Competitive advantage should be largely a function of the industry in which a firm competes.

These results lend further support to the value of differentiation strategies for small firms. In every case in which a particular strategic orientation was found to be superior, it was a differentiation strategy. Low cost strategies did not emerge as

superior in any of the analyses. However, it must be noted that the differentiation strategies were superior only with respect to perceived performance, not actual performance, based on the analysis of the data for this study.

In the video industry the MANOVA did not yield statistical significance (Table 4.55), but the ANOVA's of two of the perceived performance measures, EMPGRO and OVERALL PERFORMANCE did show superiority for the differentiation strategy used by Cluster 1 (Tables 4.56 and 4.576). Again, however, no statistically significant results emerged when actual performance measures were used as the dependent variables (Table 4.58).

Overall Model

The development of a model of firm performance and growth was one of the major objectives of this study. It was deemed important to account for industry effects if the model was to be valid. It was, therefore, determined that samples would be taken from two small business-dominated industries with some important characteristics in common, but, at the same time, significant differences in maturity and growth opportunities. Thus the effects of entrepreneurial growth propensity, planning sophistication, strategic orientation and industry on performance could be studied.

Stepwise multiple regression analysis performed with perceived performance as the dependent variables, and MSCS scores, planning type, strategic orientation, and industry as the independent variables failed to yield any significant results (see Tables 4.42 through 4.70). There are several possible explanations for this result.

The first problem is that in previous analyses, neither the planning type nor strategic orientation variable were particularly useful identifying performance differences among the firms in the sample, except with perceived performance. However, the use of perceived performance measures in this regression analysis probably masked the effects of industry differences. Inasmuch as the respondents were asked to compare their firms to similar firms in the same industry, differences between industries were not captured. A final point deals with the variables not included in the model. It appears, in retrospect, that other variables, such as trade association membership, may have provided more explanatory power to the regression model than variables included in the originally hypothesized relationship.

In contrast to the regression analysis using perceived measures as the dependent variables, the stepwise multiple regression of actual performance measures on the independent variables did yield

significant results for two of the measures (Tables 4.71 through 4.74). The industry variable (I) provided significant explanatory power for actual SALGRO. In the analysis using actual EMPGRO as the dependent variable both Industry (I) and Strategic Orientation (SO) entered the stepwise multiple regression equation as significant variables. These results suggest that the nature of the industry did make a difference in actual firm performance. This was an anticipated result. The two industries used in this study were chosen to represent different contexts with respect to growth rate and stability. In fact, the respondents from the video industry were significantly higher on all four of the actual performance measures than were the dry cleaning firms, as was noted earlier.

Conclusions

The results of this study suggest several conclusions to be drawn. In general, the MSCS was supported as a potentially valid measure of "entrepreneurial propensity" or inclination to perform the role requirements of a task inducement system. The future for this measure in entrepreneurship research appears bright, although more research is needed to establish more firmly the relationship between actual performance and the MSCS. The significant results in this study generally were found with respect to perceived performance measures. The findings of this

study also suggest that trade association membership may be a significant variable in the performance equation of the new and small firm. There is need for further exploration into the relationship between performance and affiliation with external reference groups, such as trade associations for new and small businesses.

The relationship between planning process sophistication and business performance remains unclear, perhaps due, in part, to the threshold effect described earlier. This dimension may not yield to self-report types of research techniques such as the mail survey used in this study. It may be that only through intensive field observation can understanding of this elusive variable be gained, if it is to be understood at all.

The strategy content area appears to be a much more promising avenue of investigation than planning formality. The strategy content area is much more amenable to measurement and potentially more useful to the business owner/manager seeking competitive advantage. It seems imperative, however, to control very carefully for extraneous, confounding variables in research designs if causality between specific implemented strategies and firm performance is to be established. Even though broad industry categories were included as moderator variables in this study, it

seems likely that more attention to the external environment, in particular the relevant competitive context is needed. It may be that variables such as the location of the firm (e.g., rural vs. urban) has a greater impact on competitive advantage than does the industry category. A business firm's performance simply cannot be adequately understood or explained without explicitly considering the dynamics of the broader environmental context in which it exists. This may necessitate more in-depth study of smaller samples in smaller geographic regions to reduce the number of extraneous variables and control better for those that remain so that better understanding of the nature of the external competitive environment for a given sample of firms may be gained.

The findings of this study point to the need for better performance measures in this type of research. Even though previous research has indicated that the use of subjective or perceived performance measures may be a valid substitute for actual performance data, strong support for that premise was not found here. Aside from using in research only those firms for which there is publicly available performance information, this problem points to the need for research techniques more appropriate to the question. It may be that the self-report nature of the mail survey simply cannot adequately capture this important information. Perhaps

the virtues of large sample size afforded by the mail survey should give way, in this case, to more intensive participant observation methods in order for the researcher to obtain better and more valid data. In fact, it could be that financial performance, for example, is not the most important measure of performance for many small businesses, even where it is readily available. In addition, as was stated earlier, the lack of strong positive relationships between perceived and actual measures in this study may indicate that two different dimensions were being measured, each worthy of careful study in future research.

APPENDIX

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*   BUSINESS MANAGEMENT PRACTICES SURVEY   *  
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*           Department of Management           *  
*           University of Nebraska at Omaha     *  
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Please answer every question as accurately and completely as possible. Individual responses will be strictly confidential. Only aggregated data will be used for purposes of analysis.

** THANK YOU FOR YOUR PARTICIPATION **

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REFERENCES

- Afifi, A.A., and V. Clark. 1984. Computer-aided multivariate analysis. Belmont, CA: Lifetime Learning Publications.
- Aldrich, H., and C. Zimmer. 1986. Entrepreneurship through social networks. The Art and Science of Entrepreneurship, ed. D.L. Sexton and R.W. Smilor, 3-23. Cambridge, MA: Ballinger.
- Altman, E.I. 1983. Why businesses fail. Journal of Business Strategy. 3(4): 15-81.
- Atkinson, J.W., ed. 1958. Motives in fantasy, action, and society. Princeton, NJ: Van Nostrand.
- _____. 1964. An introduction to motivation. New York: Van Nostrand Reinhold.
- Atkinson, J.W., and N.T. Feather, eds. 1966. A theory of achievement motivation. New York: John Wiley & Sons.
- Barker, T., and M.L. Gimpl. 1982. Differentiating a service business: Why and how. Journal of Small Business Management 20(2): 1-7.
- Begley, T.M., and D.P. Boyd. 1987a. Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. Journal of Business Venturing 2(1): 79-93.
- _____. 1987b. A comparison of entrepreneurs and managers of small business firms. Journal of Management 13(1): 99-108.
- Berlew, D.E., and W.E. LeClere. 1974. Social intervention in Curaco: A case study. Journal of Applied Behavioral Sciences 10(1): 29-61.
- Birch, D. 1979. The job generation process. MIT Program on Neighborhood and Regional Change, Cambridge, MA.
- _____. 1987a. The atomization of America. Inc. (March): 21-22.

- _____. 1987b. The Q factor. Inc. (April): 53-54.
- _____. 1988. The truth about start-ups. Inc. (Jan): 14-15.
- Birley, S. 1984. Finding the new firm. Academy of Management Proceedings 64-68.
- _____. 1986. The role of new firms: Births, deaths, and job generation. Strategic Management Journal 7: 361-376.
- _____. 1987. New ventures and employment growth. Journal of Business Venturing 2(2): 155-165.
- Borland, C. 1974. Locus of control, need for achievement, and entrepreneurship. Doctoral dissertation, The University of Texas, Austin.
- Bracker, J.S., B.W. Keats, and J.N. Pearson. 1987. Planning and financial performance of small, growth firms. Paper presented at the National Academy of Management Meeting, New Orleans.
- Bracker, J.S., and J.N. Pearson. 1985. The impact of consultants on small firm strategic planning. Journal of Small Business Management. 23(3): 23-30.
- _____. 1986. Planning and financial performance of small, mature firms. Strategic Management Journal. 7: 503-22.
- Bresser, R.K., and R.C. Bishop. 1983. Dysfunctional effects of formal planning: Two theoretical explanations. Academy of Management Review 8(4): 588-99.
- Brief, A.P., R.J. Aldag, and T.I. Chacko. 1977. The Miner Sentence Completion Scale: An appraisal. Academy of Management Journal 20: 635-43.
- Brockhaus, R.H. 1975a. I-E locus of control scores as predictors of entrepreneurial activity. Academy of Management Proceedings 433-435.
- _____. 1975b. Recycling the unsuccessful technical entrepreneur. Proceedings of Project ISEED, Milwaukee, WI: The Center for Venture Management 79-84.

- _____. 1980a. The effect of job dissatisfaction on the decision to start a business. Journal of Small Business Management 18(1): 37-43.
- _____. 1980b. Risk taking propensity of entrepreneurs. Academy of Management Journal 23(3): 509-20.
- _____. 1980c. Psychological and environmental factors which distinguish the successful from the unsuccessful entrepreneur: A longitudinal study. Academy of Management Proceedings 368-372.
- _____. 1982. The psychology of the entrepreneur. In Encyclopedia of Entrepreneurship, ed C.A. Kent, D.L. Sexton and K.A. Vesper, 39-56. Englewood Cliffs, N.J.: Prentice-Hall.
- _____. 1987. Entrepreneurial research: Are we playing the correct game? American Journal of Small Business 11(3): 43-49
- Brockhaus, R.H., and P.S. Horwitz. 1986. The psychology of the entrepreneur. In The Art and Science of Entrepreneurship, eds. D.L. Sexton and R.W. Smilor, 25-48. Cambridge, MA: Ballinger.
- Brockhaus, R.H., and W.R. Nord. 1979. An exploration of factors affecting the entrepreneurial decision: Personal characteristics vs. environmental conditions. Academy of Management Proceedings 364-68.
- Budner, S. 1962. Intolerance of ambiguity as a personality variable. Journal of Personality 30: 29-50.
- Carland, J.W., F. Hoy, W.R. Boulton, and J.C. Carland. 1984. Differentiating entrepreneurs from small business owners: A conceptualization. Academy of Management Review 9: 354-59.
- Carland, J.W., F. Hoy, and J.C. Carland. 1988. "Who is the entrepreneur?" Is a question worth asking. American Journal of Small Business 12(4): 33-39.
- Carsrud, A.L., and K.W. Olm. 1986. The success of male and female entrepreneurs: A comparative analysis of the effects of multidimensional achievement motivation and personality traits. In Managing Take-off in Fast-growth Companies, ed. R.W. Smilor and R.L. Kuhn, 147-162. New York: Praeger.

- Carsrud, A.L., K.W. Olm, and G.G. Eddy. 1986. Entrepreneurship: Research in quest of a paradigm. In Art and Science of Entrepreneurship, ed. D.L. Sexton and R.W. Smilor, 367-78. Cambridge, MA: Ballinger.
- Castaldi, R.M. 1986. An analysis of the work roles of CEOs of small firms. American Journal of Small Business 11(1): 53-64.
- Cavanaugh, R.E., and D.K. Clifford. 1984. The high-growth potential of midsized companies. Management Review 73: 23-41.
- Churchill, N. 1983. Entrepreneurs and their enterprises: A stage model. In Frontiers of Entrepreneurship Research, ed. J.A. Hornaday, J.A. Timmons, and K.H. Vesper, 1-22. Wellesley, MA: Babson College.
- Churchill, N., and K.J. Hatten. 1987. Non-market-based transfers of wealth and power: A research framework for family businesses. American Journal of Small Business 11(3): 51-64.
- Churchill, N., and V.L. Lewis. 1986. Entrepreneurship research: Directions and methods. In The Art and Science of Entrepreneurship, ed. D.L. Sexton and R.W. Smilor, 333-65. Cambridge, MA: Ballinger.
- Collins, O.F., and D.G. Moore, D.G. 1964. The enterprising man. East Lansing, Mich.: Michigan State University.
- Collins, O.F., and D.G. Moore. 1970. The organization makers. New York: Appleton-Century-Crofts.
- Comegys, C. 1976. Cognitive dissonance and entrepreneurial behavior. Journal of Small Business Management 14(1): 1-6.
- Cooper, A.C. 1979. Strategic management: New ventures and small business. In Strategic Management, ed. D.W. Schendel and C.W. Hofer, 316-327. Boston: Little, Brown.
- _____. 1985. The role of incubator organizations in the founding of growth-oriented firms. Journal of Business Venturing 1(1): 75-86.
- _____. 1986. Entrepreneurship and high technology. In The Art and Science of Entrepreneurship, ed. D.L. Sexton and R.W. Smilor, 153-168. Cambridge, MA: Ballinger.

- Cooper, A.C., and A.V. Bruno. 1977. Success among high-technology firms. Business Horizons. 20(2): 16-22.
- Cooper, A.C., and W.C. Dunkleberg. 1986. Entrepreneurship and paths to business ownership. Strategic Management Journal 7: 53-68.
- Cooper, A.C., and W.C. Dunkleberg. 1987. Entrepreneurial research: Old questions, new answers, and methodological issues. American Journal of Small Business 11(3): 11-23.
- Cooper, A.C., G.E. Willard, and C.Y. Woo. 1986. Strategies of high-performing new and small firms: A reexamination of the niche concept. Journal of Business Venturing 1(3): 247-60.
- Costello, C.G. 1967. Two scales to measure achievement motivation. Journal of Psychology 66: 231-35.
- Coyne, K.P. 1986. Sustainable competitive advantage-- What it is, what it isn't. Business Horizons 29(1): 54-61.
- Dalton, D.R., W.D. Todor, M.J. Spendolini, G.J. Fielding, and L.W. Porter. 1980. Organization structure and performance: A critical review. Academy of Management Review 5(1): 49-64.
- Dandridge, T.C. 1979. Children are not 'little grown-ups': Small business needs its own organizational theory. Journal of Small Business Management 17(3): 53-7.
- Davig, W. 1986. Business strategies in smaller manufacturing firms. Journal of Small Business Management 24(1): 38-46.
- DeCarlo, J.F., and R.L. Lyons. 1979. A comparison of selected personal characteristics of minority and non-minority female entrepreneurs. Journal of Small Business Management 17(4): 22-29.
- DeCharms, R., H.W. Morrison, W. Reitman, and D.C. McClelland. 1955. Behavioral correlates of directly and indirectly measured achievement motivation. In Studies in Motivation, ed. D.C. McClelland, 414-423. New York: Appleton-Century-Crofts.
- Dess, G.G., and P.S. Davis. 1982. An empirical examination of Porter's (1980) generic strategies. Academy of Management Proceedings 7-11.

- Dess, G.G., and R.B. Robinson. Jr. 1984. Measuring organizational performance in the absence of objective measures: The case of the privately-held firm and conglomerate business unit. Strategic Management Journal 5: 265-73.
- Dollinger, M.J. 1985. Environmental contacts and financial performance of the small firm. Journal of Small Business Management 23(1): 24-30.
- Douglas, M.E. 1976. Relating education to entrepreneurial success. Business Horizons 19(Dec.): 40-44.
- Drucker, P.F. 1984. Our entrepreneurial economy. Harvard Business Review 62(1): 59-64.
- Drucker, P.F. 1985a. Entrepreneurial strategies. California Management Review 27(2): 9-25.
- _____. 1985b. The discipline of innovation. Harvard Business Review 63(3): 67-72.
- _____. 1985c. Innovation and entrepreneurship. New York: Harper & Row.
- Durand, D.E., and D. Shea. 1974. Entrepreneurial activity as a function of achievement motivation and reinforcement control. The Journal of Psychology 88: 57-63.
- Durand, D.E. 1975. Effects of achievement motivation and skill training on the entrepreneurial behavior of black businessmen. Organizational Behavior and Human Performance 14: 76-90.
- duToit, D.F. 1980. Confessions of a successful entrepreneur. Harvard Business Review 58(6): 44-48.
- Edwards, A.L. 1959. Manual for the Edwards Personal Preference Schedule. New York: The Psychological Corporation.
- _____. 1970. The measurement of personality traits by scales and inventories. New York: Holt, Rinehart, and Winston.
- Emery, F.E., and E.L. Trist. 1965. The causal texture of organizational environments. Human Relations 18: 21-35.

- Entwisle, D.R. 1972. To dispel fantasies about fantasy-based measures of achievement motivation. Psychological Bulletin 77: 377-391.
- Fairfield-Sonn, J.W. 1987. A strategic process model for small business training and development. Journal of Small Business Management 25(1): 11-18.
- Fineman, F. 1977. The achievement motive construct and its measurement: Where are we now? British Journal of Psychology 68: 1-22.
- Fredrickson, J.W. 1983. Strategic process research: Questions and recommendations. Academy of Management Review 8(4): 565-575.
- Frey, R.S. 1984. Need for achievement, entrepreneurship, and economic growth: A critique of the McClelland thesis. The Social Science Journal 21(2): .
- Fry, F.L., and C.R. Stoner. 1985. Business plans: Two major types. Journal of Small Business Management 23(1): 1-6.
- Gable, M., and M.T. Topol. 1987. Planning practices of small scale retailers. American Journal of Small Business 12(2): 19-32.
- Gartner, W.B. 1985. A conceptual framework for describing the phenomenon of new venture creation. Academy of Management Review 10(4): 696-706.
- _____. 1988. "Who is the entrepreneur?" Is the wrong question. American Journal of Small Business 12(4): 11-32.
- Gasse, Y. 1981. Entrepreneurial characteristics and practices: A cultural comparison. Academy of Management Proceedings 408-412.
- Gordon, L.V. 1976. Survey of Interpersonal Values: Revised Manual. Chicago: Science Research Associates.
- Hall, W.K. 1980. Survival strategies in a hostile environment. Harvard Business Review 58(5): 75-85.
- Hambrick, D.C. 1983. High profit strategies in mature capital goods industries: A contingency approach. Academy of Management Journal 26(4): 687-707.

- Hambrick, D.C., and L.M. Crozier 1985. Stumblers and stars in the management of rapid growth. Journal of Business Venturing 1(1): 31-45.
- Hand, H., W.P. Sineath, and W.E. Howle. 1987. Small business concepts and their relationship to performance: A field study of retail service stations. Journal of Small Business Management 25(2): 55-63.
- Harwood, E. 1982. The sociology of entrepreneurship. In Encyclopedia of Entrepreneurship, ed. C.A. Kent, D.L. Sexton, & K.H. Vesper, 91-98. Englewood Cliffs, NJ: Prentice-Hall.
- Heckhausen, H. 1967. The anatomy of achievement motivation. New York: Academic Press.
- Herbert, T.T., and H. Deresky. 1987. Generic strategies: An empirical investigation of typology validity and strategy content. Strategic Management Journal 8: 135-47.
- Hermans, J.M. 1970. A questionnaire measure of achievement motivation. Journal of Applied Psychology 54(4): 353-63.
- Hines, G.H. 1973. Achievement motivation, occupations, and labor turnover in New Zealand. Journal of Applied Psychology 58(3): 313-17.
- Hofer, C.W. 1975. Toward a contingency theory of business strategy. Academy of Management Journal 18(4): 784-810.
- Hofer, C.W., and W.R. Sandberg.. 1987. Improving new venture performance: Some guidelines for success. American Journal of Small Business. 12(1): 11-25.
- Hornaday, J.A. 1982. Research about living entrepreneurs. In Encyclopedia of Entrepreneurship, ed. C.A. Kent, D.L. Sexton, and K.H. Vesper, 7-19. Englewood Cliffs, NJ: Prentice-Hall.
- Hornaday, J.A., and J. Aboud. 1971. Characteristics of successful entrepreneurs. Personnel Psychology 24(2): 141-53.
- Hornaday, J.A., and C.S Bunker. 1970. The nature of the entrepreneur. Personnel Psychology 23: 47-54.

- Hornaday, J.A., and N.B. Tieken. 1983. Capturing twenty-one Heffalumps. In Frontiers of Entrepreneurship Research, ed. J.A. Hornaday, J.A. Timmons, and K.H. Vesper, 23-50. Wellesley, MA: Babson College.
- Hornaday, R.W. 1987. Small business managerial types and financial performance: Further Evaluation of the Filley and Alday Instrument. Paper presented at the National Academy of Management Meeting, New Orleans.
- Hoy, F., and J.W. Carland. J.W. 1983. Differentiating between entrepreneurs and small business owners in new venture formation. In Frontiers of Entrepreneurship Research, ed. J.A. Hornaday, J.A. Timmons, and K.H. Vesper, 157-166, Wellesley, MA: Babson College.
- Hoy, F., and D. Hellriegel. 1982. The Kilman and Hergen model of organizational effectiveness criteria for small business managers. Academy of Management Journal 25: 308-22.
- Hoy, F., and B.C. Vaught. 1980. The rural entrepreneur --a study in frustration. Journal of Small Business Management 18(1): 19-24.
- Hull, D.L., J.J. Bosley, and G.G. Udell. 1980. Renewing the hunt for Heffalump: Identifying potential entrepreneurs by personality characteristics. Journal of Small Business Management ??: 11-18.
- Ireland, R.D., and P.M. Van Auken. 1987. Entrepreneurship and small business research: An historical typology and directions for future research. American Journal of Small Business 11(4): 9-20.
- Jackson, D.N. 1974. Personality Research Form Manual. Goshen, New York: Research Psychologists Press.
- Jennings, D.F., and C.P. Zeithmal. 1983. Locus of control: A review and directions for entrepreneurial research. Academy of Management Proceedings 417-421.
- Jones, R.E. 1985. Internal politics and the strategic business plan. Journal of Small Business Management 23(1): 31-37.
- Jones, W.D. 1982. Characteristics of planning in small firms. Journal of Small Business Management 20(3): 15-18.

- Kahl, J.A. 1965. Some measures of achievement orientation. American Journal of Sociology 70: 669-681.
- Keats, B.W. and J.S. Bracker. 1988. Toward a theory of small firm performance: A conceptual model. American Journal of Small Business 12(4): 41-58.
- Kets de Vries, M.F.R. 1977. The entrepreneurial personality: A person at the crossroads. Journal of Management Studies 14: 34-57.
- _____. 1985. The dark side of entrepreneurship. Harvard Business Review 63(6): 160-167.
- Kirchoff, B.A. and B.D. Phillips. 1988. The effect of firm formation and growth on job creation in the United States. Journal of Business Venturing 3(4): 261-272.
- Kilby, P., ed. 1971. Entrepreneurship and economic development. New York: Free Press.
- Kim, J. and C.W. Mueller. 1978. Factor analysis: Statistical methods and practical issues. Beverly Hills, CA: Sage.
- Klinger, E. 1966. Fantasy need achievement as a motivational construct. Psychological Bulletin 66: 291-308.
- Kogan, N., and M.A. Wallach. 1964. Risk taking. New York: Holt, Rinehart, and Winston.
- Komives, J.L. 1972. A preliminary study of the personal values of high technology entrepreneurs. In Proceedings: Technical Entrepreneurship: A Symposium, ed. A.C. Cooper, and J.L. Komives, Milwaukee: Center for Venture Management.
- Kourilsky, M. 1980. Predictors fo entrepreneurship in a simulated economy. Journal of Creative Behaviour 14(3): 175-198.
- Lachman, R. 1980. Toward a measurement of entrepreneurial tendencies. Management International Review 20: 108-116.
- Lanyon, I.L., and L.D. Goodstein. 1982. Personality Assessment, 2nd Ed., New York: John Wiley & Sons.

- Lessner, M. 1974. Self-actualization and entrepreneurial orientation among small business owners: A validation study of the POI. Educational and Psychological Measurement 34: 455-460.
- Levenson, H. 1973. Multidimensional locus of control in psychiatric patients. Journal of Consulting and Clinical Psychology 41(3): 397-404.
- Liles, P.R. 1974. New business and the entrepreneur. Homewood, Ill.: Richard D. Irwin.
- Lindsay, W.M., and L.W. Rue. 1980. Impact of the organization environment on the long-range planning process: A contingency view. Academy of Management Journal 23(3): 385-404.
- Litzinger, W.D. 1965. The motel entrepreneur and the motel manager. Academy of Management Journal 8(4): 268-81.
- Litvak, I.A., and C.J. Maule. 1976. Comparative technical entrepreneurship: Some perspectives. Journal of International Business Studies 7(1): 6-15.
- Livesay, H.C. 1982. Entrepreneurial history. In Encyclopedia of Entrepreneurship, ed. C.A. Kent, D.L. Sexton, and K.H. Vesper, 7-15. Englewood Cliffs, NJ: Prentice-Hall.
- Longenecker, J.G., ?? McKinney, and C.W. Moore. 1988. Egoism and independence: Entrepreneurial ethics. Organizational Dynamics Winter, 64-72.
- Low, B.L. and I.C. MacMillan. 1988. Entrepreneurship: Past research and future challenges. Journal of Management 14(2): 139-161.
- Lynn, R. 1969a. An achievement motivation questionnaire. British Journal of Psychology 60(4): 529-534.
- _____. 1969b. Personality characteristics of a group of entrepreneurs. Occupational Psychology 43: 151-152.
- Madique, M.A. 1980. Entrepreneurs, champions, and technological innovation. Sloan Management Review 21(2): 59-76.

Madique, M.A. 1986. Key success factors in high-technology ventures. In The Art and Science of Entrepreneurship, ed. D.L. Sexton and R.W. Smilor, 169-180. Cambridge, MA: Ballinger.

Matters of fact. 1985 Inc. (April): 31-42.

Martin, A. 1982. Additional aspects of entrepreneurial history. In Encyclopedia of Entrepreneurship, ed. C.A. Kent, D.L. Sexton, and K.H. Vesper, 15-19. Englewood Cliffs, NJ: Prentice-Hall.

Martin, M.J.C. 1984. Managing technological innovation and entrepreneurship. Reston, VA: Reston.

McClelland, D.C. 1955. Measuring motivation in phantasy: The achievement motive. In Studies in Motivation, ed. D.C. McClelland, 401-413. New York: Appleton-Century-Crofts.

_____. 1961. The achieving society. Princeton: D. Van Nostrand.

_____. 1962. Business drive and national achievement. Harvard Business Review 40(4): 99-112.

_____. 1965a. Achievement and entrepreneurship: A longitudinal study. Journal of Personality and Social Psychology 1: 389-392.

_____. 1965b. Achievement motivation can be developed. Harvard Business Review 43(6): 6-24, 178.

_____. 1965c. Toward a theory of motive acquisition American Psychologist 20: 321-333.

_____. 1966. That urge to achieve. Think Magazine (Nov/Dec.): 19-23.

_____. 1971. The achievement motive in economic growth. In Entrepreneurship and economic development, ed. P. Kilby, 109-122. New York: Free Press.

_____. 1975. Power: The inner experience. New York: Irvington.

McClelland, D.C., J.W. Atkinson, R.A. Clark, and E.L. Lowell. 1953. The achievement motive. New York: Appleton-Century-Crofts.

- McClelland, D.C. and D.G. Winter. 1969. Motivating economic achievement. New York: Free Press.
- McDougall, P.P., and R.B. Robinson. 1987. New venture strategies: An empirical identification of eight distinct strategic orientations. Academy of Management Proceedings 73-77.
- McKenna, J.F., and P.L. Oritt. 1980. Small business growth: Making a conscious decision. S.A.M. Advanced Management Journal (Spring): 45-53.
- Mehrabian, A. 1968. Male and female scales of the tendency to achieve. Educational and Psychological Measurement 28: 493-502.
- _____. 1969. Measures of achieving tendency. Educational and Psychological Measures 29: 445-451.
- Mescon, T.S., and J.R. Montanari. 1981. The personalities of independent and franchise entrepreneurs. Academy of Management Proceedings, 413-417.
- Meyer, H.H., W.B. Walker, and G.H. Litwin. 1961. Motive patterns and risk preference associated with entrepreneurship. Journal of Abnormal and Social Psychology 63: 570-574.
- Miles, R.E., and C.C. Snow. 1978. Organizational strategy, structure, and process. New York: McGraw-Hill.
- Miller, D. 1983. The correlates of entrepreneurship in three types of firms. Management Science 29(7): 770-791.
- _____. 1986. Configurations of strategy and structure: Towards a synthesis. Strategic Management Journal 7: 233-49.
- Miller, D., M.F.R. Kets de Vries, and J. Toulouse. 1982. Top executive locus of control and its relationship to strategy making, structure, and environment. Academy of Management Journal 25(2): 237-53.
- Miller, D., and J. Toulouse. 1986. Strategy, structure, CEO personality and performance in small firms. American Journal of Small Business 10(3): 47-62.

- Miner, J.B. 1964. Scoring guide for the Miner Sentence Completion Scale, Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1965. Studies in management education. Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1977. Motivation to manage: A ten-year update on the "Studies in Management Education" research. Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1978a. The Miner Sentence Completion Scale: A reappraisal. Academy of Management Journal 21: 283-94.
- _____. 1978b. Twenty years of research on role-motivation theory of managerial effectiveness. Personnel Psychology 31: 739-60.
- _____. 1980a. The role of managerial and professional motivation in the career success of management professors. Academy of Management Journal 23(3): 487-508.
- _____. 1980b. Theories of organizational behavior. Hinsdale, IL: Dryden Press.
- _____. 1981. Scoring guide for the Miner Sentence Completion Scale Form-P. Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1982. The uncertain future of the leadership concept: Revisions and clarifications. The Journal of Applied Behavioral Science 18(3): 293-307.
- _____. 1984. The Miner Sentence Completion Scale Form-T. Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1985. Sentence completion measures in personnel research: The development and validation of the Miner Sentence Completion Scales. In Personality Assessment in Organizations, ed. H.J. Bernardin and D.A. Bownas, 145-176. New York: Praeger.
- _____. 1986. Scoring guide for the Miner Sentence Completion Scale Form-T. Atlanta, GA: Organizational Measurement Systems Press.

- Miron, D., and D.C. McClelland. 1979. The impact of achievement motivation training on small businesses. California Management Review 21(4): 13-28.
- Moore, C.F. 1986. Understanding entrepreneurial behavior: A definition and model. Academy of Management Proceedings 66-70.
- Moyer, R. 1982. Strategic planning for the small firm. Journal of Small Business Management 20(3): 8-14.
- Mukjerhee, B.N. 1968. Achievement values and scientific productivity. Journal of Applied Psychology 52(2): 145-47.
- Murray, H.A. 1943. Thematic Apperception Test Manual. Cambridge, MA: Harvard University Press.
- Nandy, A. 1973. Motives, modernity, and entrepreneurial competence. Journal of Social Psychology 9: 127-136.
- Neil, T. 1986. Distinctive competence: A marketing strategy for survival. Journal of Small Business Management 24(1): 16-21.
- Oliver, J.E. 1981. Scoring guide for the Oliver Organizational Description Questionnaire, Atlanta, GA: Organizational Measurement Systems Press.
- _____. 1982. An instrument for classifying organizations. Academy of Management Journal 25(4): 855-66.
- O'Neill, H.M., and J. Duker. 1986. Survival and failure in small business. Journal of Small Business Management 24(1): 30-37.
- Orpen, C. 1985. The effects of long-range planning on small business performance: A further examination. Journal of Small Business Management 23(1): 16-23,
- Palmer, M. 1977. The application of psychological testing to entrepreneurial potential. California Management Review 13(3): 32-39.
- Pandey, J., and N.B. Tewary. 1979. Locus of control and achievement values of entrepreneurs. Journal of Occupational Psychology 52: 107-11.

- Pearce, J.A., E.B. Freeman, and R.B. Robinson. 1987. The tenuous link between formal strategic planning and financial performance. Academy of Management Review 12(4): 658-675.
- Pearce, J.A., D.K. Robbins, and R.B. Robinson. 1987. The impact of grand strategy and planning formality on financial performance. Strategic Management Journal 8: 125-34.
- Peltham, A.M., and D.E. Clayson. 1988. Receptivity to strategic planning tools in small manufacturing firms. Journal of Small Business Management 26(1): 43-50.
- Pennings, J.M. 1982. The urban quality of life and entrepreneurship. Academy of Management Journal 25(1): 63-79.
- Peterson, R., and N.R. Smith. 1986. Entrepreneurship: A culturally appropriate combination of effort and opportunity. In Frontiers of Entrepreneurship Research, ed. R. Ronstadt, J.A. Hornaday, R. Peterson, and K.H. Vesper, 1-11. Wellesley, MA: Babson College.
- Petrof, J.V. 1980. Entrepreneurial profiles: A discriminant analysis. Journal of Small Business Management 18(4): 13-17.
- Porter, M.E. 1979. How competitive forces shape strategy. Harvard Business Review 57(2): 137-145.
- _____. 1980. Competitive strategy. New York: The Free Press.
- _____. 1981. The contributions of industrial organization to strategic management. Academy of Management Review 6(4): 609-620.
- Ramamurti, R. 1986. Public entrepreneurs. California Management Review 28(3): 142-158.
- Reynolds, P.D. 1987. New firms: Societal contributions versus potential. Journal of Business Venturing 2(2): 231-246.
- Rice, G.H. 1983. Strategic decision making in small business. Journal of General Management 9(1): 58-65.
- Roberts, E.B. 1968. A basic study of innovators: How to keep and capitalize on their talents. Research Management 11(4): 249-266.

- Robinson, R.B. 1979. Forecasting and small business: A study of the strategic planning process. Journal of Small Business Management 17(3): 19-27.
- _____. 1982. The importance of 'outsiders' in small firm strategic planning. Academy of Management Journal 25(1): 80-93.
- _____. 1983. Measures of effectiveness for strategic planning research. Journal of Small Business Management 21(2): 22-29.
- Robinson, R.B., and W.F. Littlejohn. 1981. Important contingencies in small firm planning. Journal of Small Business Management 19(3): 45-48.
- Robinson, R.B., and J.A. Pearce. 1983. The impact of formalized strategic planning on financial performance in small organizations. Strategic Management Journal 4: 197-207.
- _____. 1984. Research thrusts in small firm strategic planning. Academy of Management Review 9(1): 128-137.
- _____. 1986. Product life-cycle considerations and the nature of strategic activities in entrepreneurial firms. Journal of Business Venturing 1(2): 207-24.
- _____. 1988. Planned patterns of strategic behavior and their relationship to business-unit performance. Strategic Management Journal 9: 43-60.
- Robinson, R.B., J.A. Pearce, G.S. Vozikis, and T.S. Mescon. 1984. The relationship between stage of development and small firm planning and performance. Journal of Small Business Management 22(2): 45-52.
- Robinson, R.B., M.Y. Salem, J.E. Logan, and J.A. Pearce. 1986. Planning activities related to independent retail firm performance. American Journal of Small Business 11(1): 19-26.
- Romanelli, E. 1987. New venture strategies in the minicomputer industry. California Management Review, 30(1), ???
- Rotter, J.B. 1966. Generalized expectancies for internal vs. external control of reinforcement. Psychological Monographs 80 (1, Whole No. 609).

- Sandberg, W.R. 1986. New venture performance: The role of strategy and industry structure. Lexington, MA: Lexington Books.
- Sandberg, W.R., and C.W. Hofer. 1987. Improving new venture performance: The role of strategy, industry structure, and the entrepreneur. Journal of Business Venturing 2(1): 5-28.
- Schatz, S.P. 1971. n Achievement and economic growth: A critical appraisal. In Entrepreneurs and Economic Development, ed. P. Kilby, 183-190. New York: Free Press.
- Schendel, D.E., and C.W. Hofer, eds. 1979. Strategic management, Boston: Little, Brown.
- Schere, J.L. 1982. Tolerance of ambiguity as a discriminating variable between entrepreneurs and managers. Academy of Management Proceedings 404-08.
- Schrage, H. 1965. The R&D entrepreneur: Profile of success. Harvard Business Review 43(6): 56-69.
- Schwartz, E.B. 1976. Entrepreneurship: A new female frontier. Journal of Contemporary Business 5(1): 47-76.
- Sexton, D.L. 1986. A pleasant dilemma: To grow or not to grow. In Managing take-off in fast growth companies, ed. R.W. Smilor and R.L. Kuhn, 21-28. New York Praeger.
- Sexton, D.L. 1987. Advancing small business research: Utilizing research from other areas. American Journal of Small Business 11(3): 25-30.
- Sexton, D.L., and N. Bowman. 1983a. Determining entrepreneurial potential of students. Academy of Management Proceedings 408-412.
- _____. 1983b. Comparative entrepreneurship characteristics of students: Preliminary results. In Frontiers of Entrepreneurship Research, ed. J.A. Hornaday, J.A. Timmons, and K.H. Vesper, 213-232. Wellesley, MA: Babson College.
- _____. 1984a. Entrepreneurship education: Suggestions for increasing effectiveness. Journal of Small Business Management 22(2): 18-25.

- _____. 1984b. Personality inventory for potential entrepreneurs: Evaluation of a modified JPI/PRF-E test instrument. In Frontiers of Entrepreneurship Research, ed. K.H. Vesper, 513-528. Wellesley, MA: Babson College.
- _____. 1985. The entrepreneur: A capable executive and more. Journal of Business Venturing 1(1): 129-140.
- _____. 1986a. Validation of a personality index: Comparative psychological characteristics analysis of female entrepreneurs, managers, entrepreneurship students, and business students. In Frontiers of Entrepreneurship Research, ed. R. Ronstadt, J.A. Hornaday, R. Peterson, and K.H. Vesper, 40-51. Wellesley, MA: Babson College.
- _____. (1986b). A growth model of the firm based on market, owner, and strategic factors. Working paper, Center for Entrepreneurship, Hankamer School of Business, Baylor University.
- Sexton, D.L., and C. Kent. 1981. Female executives and entrepreneurs: A preliminary comparison. In Frontiers of Entrepreneurship Research, ed. K.H. Vesper, 40-53. Wellesley, MA: Babson College.
- Sexton, D.L., and P.M. Van Auken. 1982a. Prevalence of strategic planning in the small business. Journal of Small Business Management 20(3): 20-26.
- _____. 1982b. Characteristics of successful and unsuccessful entrepreneurs. Texas Business Review 56: 236-40.
- _____. 1985. A longitudinal study of small business strategic planning. Journal of Small Business Management 23(1): 7-15.
- Shapero, A. 1975. The displaced, uncomfortable entrepreneur. Psychology Today 9(6): 83-88.
- Shapero, A., and L. Sokol. 1982. The social dimension of entrepreneurship. In Encyclopedia of Entrepreneurship, ed. C.A. Kent, D.L. Sexton, and K.H. Vesper, 72-90. Englewood Cliffs, NJ: Prentice-Hall.
- Sherwood, J.J. 1966. Self-report and projective measures of achievement and affiliation. Journal of Consulting Psychology 30, 329-37.

- Shuman, J.C., and J.A. Seeger. 1986. The theory and practice of strategic management in smaller rapid growth firms. American Journal of Small Business 11(1): 7-18.
- Shuman, J.S., J.J. Shaw, and G. Sussman. 1985. Strategic planning in smaller rapid growth companies. Long Range Planning 18(6): 48-53.
- Sineath, P.R., H.H. Hand, and R.B. Robinson. 1982. Strategy modeling in low market share firms. AIDS Proceedings 141-145.
- Smith, N.R. 1967. The entrepreneur and his firm: The relationship between type of man and type of company. East Lansing, MI: Michigan State University.
- Smith, G.D., D.R. Arnold, and B.G. Bizzell. 1985. Strategy and business policy. Boston, MA: Houghton Mifflin.
- Smith, N.R., and J.B. Miner. 1983. Type of entrepreneur, type of firm, and managerial motivation: Implications for organizational life cycle theory. Strategic Management Journal 4: 325-40.
- _____. 1984. Motivational considerations in the success of technologically innovative entrepreneurs. In Frontiers of Entrepreneurship Research, ed. K.H. Vesper, 488-495. Wellesley, MA: Babson College.
- _____. 1985. Motivational considerations in the success of technologically innovative entrepreneurs: Extended sample findings. In Frontiers of Entrepreneurship Research, ed. J.A. Hornaday, E.B. Shils, J.A. Timmons, and K.H. Vesper, 482-88. Wellesley, MA: Babson College.
- Specht, P.H. 1987. Information sources used for strategic planning decisions in small firms. American Journal of Small Business 11(4): 21-34.
- Stanworth, M.J.K., and J. Curran. 1976. Growth and the small firm--An alternative view. Journal of Management Studies 13: 95-110.
- Steiner, G.A. 1967. Approaches to long-range planning for small business. California Management Review 10(1): 3-16.

- Steiner, M.P., and O. Solem. 1988. Factors for success in small manufacturing firms. Journal of Small Business Management 26(1): 51-56.
- Steinmetz, L.L. 1969. Critical stages of small business growth and how to survive them. Business Horizons 12(1): 29-36.
- Stevenson, H.H. 1985. A new paradigm for entrepreneurial management. In Entrepreneurship: What It is and How to Teach It, ed. J.J. Kao and H.H. Stevenson, 30-61. Boston: Harvard University Press.
- Stevenson, H.H., and D.E. Gumpert. 1985. The heart of the entrepreneur. Harvard Business Review 63(2): 85-94.
- Stoner, C.H. 1987. Distinctive competence and competitive advantage. Journal of Small Business Management 25(2): 33-39.
- Stoner, C.R., and F.L. Fry. 1982. The entrepreneurial decision: Dissatisfaction or opportunity. Journal of Small Business Management 20(2): 39-44.
- Spence, J.T., ed. 1983. Achievement and achievement motives: Psychological and sociological approaches. San Francisco: W.H. Freeman.
- Spence, J.T., and R.L. Helmrich. 1978. Masculinity and femininity: Their psychological dimensions, correlates, and antecedents. Austin, Texas: University of Texas Press.
- Susbauer, J. 1979. Commentary. In Strategic management, ed. D.E. Schendel and C.W. Hofer, 327-332. Boston: Little, Brown.
- Swayne, C.B., and W.R. Tucker. 1973. The effective entrepreneur. Morristown, NJ: General Learning Press.
- Thompson, A.A., and A.J. Strickland, . 1987. Strategic Management: Concepts and Cases, Plano, Texas: Business Publications, Inc.
- Thurston, P.H. 1983. Should smaller companies make formal plans? Harvard Business Review 83(5): 162-84.
- Timmons, J.A. 1971. Black is beautiful--is it always bountiful? Harvard Business Review 49(6): 81-94.

- Timmons, J.A. 1978. Characteristics and role demands of entrepreneurship. American Journal of Small Business 3(1): 5-17.
- _____. 1979. Careful self-analysis and team assessment can aid entrepreneurs. Harvard Business Review 57(6): 198-206.
- _____. 1980. A business plan is more than a financing device. Harvard Business Review 58(2): 28-34.
- Timmons, J.A., L.E. Smollen and L.M. Dinglee. 1985. New venture creation, 2nd Ed. Homewood, Ill.: Richard D. Irwin.
- Thompson, A.A. 1984. Strategies for staying cost competitive. Harvard Business Review 62(1) 110-17.
- Trist, E.L. 1977. Collaboratin in work settings: A personal perspective. Journal of Applied Behavioral Science 13: 268-278.
- Turner, J.H. 1970. Entrepreneurial environments and the emergence of achievement motivation in adolescent males. Sociometry 33: 147-165.
- Van Horn, T.P. 1979. Strategic planning in small and medium sized companies. Long Range Planning 12(2): 84-91.
- Van Kirk, J.E., and K. Noonan. 1982. Key factors in strategic planning. Journal of Small Business Management 20(3): 1-7.
- Vesper, K.H. 1979a. New venture ideas: Do not overlook the experiance factor. Harvard Business Review 57(4): 164-170.
- _____. 1979b. Commentary. In Strategic management, ed. D.E. Schendel and C.W. Hofer, 332-38. Boston: Little, Brown.
- _____. 1980. New venture strategies. Englewood Cliffs, NJ: Prentice-Hall.
- Vesper, K.H. 1986. New developments in entrepreneurial education. In The Art and Science of Entrepreneurship, ed. D.L. Sexton R.W. Smilor. 379-87. Cambridge, MA: Ballinger.
- Vozikis, G., and W.F. Glueck, W.F. 1980. Small business problems and stages of development. Academy of Management Proceedings 373-377.

- Wainer, H.A., and I.M. Rubin. 1969. Motivation of research and development entrepreneurs: Determinants of company success. Journal of Applied Psychology 53(3): 178-184.
- Watkin, D.G. 1986. Toward a competitive advantage: A focus strategy for small retailers. Journal of Small Business Management 24(1): 9-15.
- Webster, F.A. 1976. A model for new venture initiation: A discourse on rapacity and the independent entrepreneur. Academy of Management Review 1(1): 26-37.
- _____. 1977. Entrepreneurs and ventures: An attempt at classification and clarification. Academy of Management Review 2: 54-61.
- Weinrauch, I.D. 1984. Educating the entrepreneur: Understanding adult learning behavior. Journal of Small Business Management 23(2): 32-37.
- Weinstein, M. 1969. Achievement motivation and risk preference. Journal of Personality and Social Psychology 13(2): 153-172.
- Welsh, H.P., and E.C. Young. 1982. The information source selection decision: The role of entrepreneurial personality characteristics. Journal of Small Business Management 20(4): 49-57.
- Welsh, J.A., and J.F. White. 1981a. A small business is not a little big business. Harvard Business Review 59(4): 18-32.
- _____. 1981b. Converging on the characteristics of entrepreneurs. In Frontiers of Entrepreneurship Research, ed. K.H. Vesper, 504-15. Wellesley, MA: Babson College.
- Williams, J.M., and J.K. Stoudt, J.K. 1985. The effect of high and low assertiveness on locus of control and health problems. The Journal of Psychology 119: 169-173.
- Wood, D.R., and R.L. Laforge. 1981. Toward the development of a planning scale: An example from the banking industry. Strategic Management Journal 2: 209-216.

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