

# The Interrelationship Between Environmental Hostility And Entrepreneurial Orientation

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## Abstract

*The main purpose of this paper is to present an empirical analysis of the interrelationship between the propensity of a firm to adopt an entrepreneurial orientation and its perceived degree of environmental hostility. The present study provides support for a minority view in the literature which argues that there is an inverse relationship between the degree of perceived environmental hostility and the likelihood that the firm will adopt an entrepreneurial orientation. This is a conclusion not supported by those who argue on logical grounds that adoption of an entrepreneurial orientation is a viable solution to the problem of U.S. firms' lack of global competitiveness.*

## Introduction

Business orientation is the underlying philosophy that determines the nature and scope of a business firm's activities and plans (Peterson, 1989). The orientation or strategic posture (Covin & Slevin, 1989: 75) of interest in the present study is the entrepreneurial orientation.

Entrepreneurial orientation is a key consideration for those who seek to explain on logical grounds America's lack of competitiveness in domestic and world markets because of the inappropriate manner in which it is perceived the business community has responded to an increasingly hostile environment (Hall, 1980; Hayes and Abernathy, 1980; Suzuki, 1979). Managers are criticized for acting as bankers, concerned primarily with short-run profits. Instead, it is argued, managers should act as entrepreneurs, providing innovative responses to radical (or discontinuous) innovations, those that create the need to "restructure the current business or create new businesses" (Maidique, 1980: 59). In summary, an entrepreneurial orientation is offered as one of the potential solutions to America's declining global competitive position.

## Objectives of the Study

This paper is concerned with the degree of entrepreneurial orientation, adopted by either an owner or manager, in relation to the level of perceived hostility in the environment. The significance of the study is that if empirical proof can be offered to support the hypothesis that environmental hostility fosters entrepreneurial behavior, then a homeostatic mechanism of sorts can be

posited which mediates the problems initially cited. This would lead one to question the argument that the conscious adoption of an entrepreneurial orientation is a viable solution to competitive problems if it could be shown that increased hostility in the business environment had already had the same effect. The study empirically seeks to examine the thesis that increased environmental hostility (the problem) leads to an increasingly entrepreneurial business orientation (an argued solution to the problem).

## The Nature of Entrepreneurship

Historically, interest in the entrepreneur dates to John Stuart Hill and nineteenth-century French economist, J.B. Say, who Schumpeter credits with recognizing that in a capitalistic society the entrepreneur is "the pivot on which everything turns" (Schumpeter, 1954: 554). Mill defined the entrepreneurial functions to include direction, control, supervision, and risk bearing. Widely held is his view that risk bearing is what distinguishes the term "entrepreneur" from the term, "manager" (Brockhaus, 1980, 1987). McClelland (1976) reflects later development of the concept, suggesting that an entrepreneur need not be an owner (the "intrapreneurship" concept), while Carland (1984) makes a clear distinction between small business owners and entrepreneurs.

While the debate continues over what precisely constitutes an entrepreneurial orientation (Brockhaus, 1987; Case, 1989), it appears that there is reasonable

consensus on the following: (1) willingness to accept risks as necessary antecedents of goal achievement; (2) adoption by the firm of a pro-active posture toward its environment; (3) innovativeness in problem solving, especially when it comes to market-oriented applications of technology (McClelland, 1976; Miller and Friesen, 1983; Ginsberg, 1985; Miles and Arnold, 1991; Miles, Thompson, and Arnold 1992). This summarizes the viewpoint taken by the present study's authors.

### **The Literature: Two Points of View**

Strategy theorists who have empirically examined the nature of the relationship between a firm's propensity to adopt an entrepreneurial orientation and the degree of environmental uncertainty or hostility it faces have arrived at two very different conclusions. While the total number of studies is relatively small, on the one hand there are the numerically predominant researchers who argue that there is a positive relationship between the perceived degree of environmental hostility and the propensity to adopt an entrepreneurial posture or orientation (Khandwalla, 1977; Murray, 1981; Foxall, 1984; Smart and Vertinsky, 1984; Hills, 1987; Morris and Paul, 1987; Covin and Slevin, 1989). Smart and Vertinsky (1984) argue that this not only a function of the entrepreneurial personality, but that the entrepreneurial orientation may be consciously adopted as a strategic response to environmental uncertainty. Covin and Slevin (1989) extend the analysis a step further by suggesting that there may be positive financial benefits to firms adopting the entrepreneurial orientation in hostile environments. Conservative (non-entrepreneurial) firms, they suggest, generally perform best in more benign environments.

In a distinct minority are researchers such as Miller and Friesen (1983), reporting empirical evidence to the contrary. In a performance-based study of 50 large Canadian firms and 88 large U.S. firms, they hypothesized that relative to samples of poor performers, successful firms tend to exhibit "negative correlations between increases in environmental hostility and increases in innovation" (1983: 223), with the ability to innovate being looked on as one of the key elements of the entrepreneurial personality. The results of their analysis for the Canadian sample tended to support such an hypothesis.

The literature also provides other examples of research challenging the characterization of entrepreneur as a risk taker and the profitability of applying such an approach to small business management. Brockhaus (1987) characterized entrepreneurial research as casting doubt "on the validity of general risk-taking as an entrepreneurial characteristic." Instead, he cited research which found no statistical difference in the "general risk preference patterns of a group of entrepre-

neurs and a group of managers," and which also suggested that the risk-taking characteristics of both groups were statistically similar to the more general population (1987: 3).

Further support for the above view is to be found in the research of Peacock (1986), who found that failed versus successful entrepreneurs did not differ significantly in terms of their risk taking propensity, and by Sexton and Bowman's (1983) study which found no significant differences in the risk-taking propensity of a group of entrepreneurship students and other students at the same university.

### **Research Design**

The primary purpose of the study at hand is to further empirically examine the interrelationship between the degree of perceived environmental hostility and the extent to which a firm adopts an entrepreneurial orientation. The research design is further suited to an examination of the basic concept of entrepreneurial orientation and whether it is an appropriate framework in characterizing the decision making process in some small firms. An important secondary objective is to generate further evidence to support either the majority or the minority view of the relationship between the degree of hostility in the environment and the manner in which entrepreneurial decisions are made. A focal point of the research is the Covin and Slevin study (1989), and the extent to which their results from a sample exclusively of small firms are generalizable to a larger sample which includes more variation in firm size.

The research design of the study at hand is based on that adopted by Covin and Slevin (1989), and utilized in a related study (Miles and Arnold, 1991 and Miles, Thompson, and Arnold 1992) analyzing the effect of strategic responses by small firms to both benign and hostile environments. This requires researchers to both conceptualize and measure two complex variables: entrepreneurial orientation and hostility in the environment.

#### *Measurement of Entrepreneurial Orientation*

Covin and Slevin developed a nine-item scale aimed at measuring firm's proclivities toward an entrepreneurial orientation or strategic posture. They used items adapted from both the Miller and Friesen (1982) and the Khandwalla (1977) studies, resulting in a set of items similar to those used by Ginsberg (1985).

#### *Measurement of Environmental Hostility*

To measure environmental hostility Covin and Slevin used Khandwalla's (1976) three-item measure of environmental hostility. Then, through cross-section analy-

sis, they examined the nature of the relationship between the nine-item and the three-item measures. Not only did they find that a hostile environment was associated with entrepreneurial orientation, but on the basis of performance they concluded that it was financially beneficial for the small businesses to adopt such a decision making posture. Before proceeding with a specific description of the manner in which the study at hand sought to measure the above two factors, let us first consider some general problems of definition and measurement.

### **Problems of Definition and Measurement**

In studying entrepreneurship and the environment, there are major problems in definition and measurement, and in the development of an operational model describing and relating the two variables. Initially, one must cope with the problem of defining and measuring entrepreneurial orientation. Next, one must consider how firms obtain information about the environment, and whether environmental opportunity scanning is a formal activity of the firm in question. Then, there is the problem of measuring the degree of hostility in the environment. And, finally, in terms of any response, it is necessary to consider the nature of the alternatives perceived by the firm.

Representative of the manner in which empirical research views the entrepreneur in relation to the environment is the Miller and Friesen study (1983) which assumes that entrepreneurial orientation describes a firm which relates to environmental uncertainty in an innovative, pro-active, and aggressive manner. In addition, the same study found that firms with a high degree of entrepreneurial orientation tended to engage in some type of pro-active environmental opportunity scanning.

In the above and similar studies, a hostile environment is one which is defined as negative, uncertain, and the source of unfavorable conditions beyond the immediate control of the firm. Hostile environments, it is argued, force the firm to make decisions based on a limited number of favorable economic opportunities, with a high potential for failure (Khandwalla, 1976; Miller and Friesen, 1983; Covin and Slevin, 1989). Critical in the above regard is the manner in which firms obtain and process information about the environment. The importance of taking account of environmental screening is highlighted by a study conducted by Smeltzer, Fann, and Nikolaisen (1988). A central premise of their study was that despite definitive research involving larger firms (Aguilar, 1967; Ansoff, 1980; Wilson, 1983; Fahay and Narayanan, 1986), little information has been collected about how small firms obtain and process information about the environment. Smeltzer, Fann, and Nikolaisen's (1988) study sought to fill this research

void, by querying the owner/managers of 88 small business firms in the Phoenix and Kansas City metropolitan areas as to their use of environmental scanning for decision making purposes. The particularly applicable findings from their study were those concerned with sources of information and the amount of weight placed on information from various sources. Among impersonal sources, most popular were magazines and trade journals. As far as personal sources were concerned, the authors concluded: (1) owner/managers believe that personal information is more valuable than impersonal information; and (2) informal personal information is deemed most valuable of all. Family and friends were judged more valuable sources of information than bankers, lawyers, and accountants (1988: 61). A subsequent analysis done by Smeltzer, Van Hook, and Hutt (1991) suggests that the quantity of information obtained from informal personal sources (from a strong social network) is greater than the quantity of information obtained from formal, more impersonal sources (with weaker social ties). However, Smeltzer, Van Hook, and Hutt found that the quality of information was not directly related to the source of information and the corresponding social network ties.

Miller and Friesen (1983) characterize the entrepreneurial oriented firm in terms of its ability to innovate and fully exploit environmental opportunities while containing environmental threats. An entrepreneurial oriented firm implicitly defines itself to be actively searching for environmental threats and opportunities and then creating innovative, potentially profitable solutions (Kirzner, 1983; Long, 1983).

### *The Scaling Problem*

In approaching the research at hand, the authors were faced with the choice of using or adapting existing scales designed to measure the above factors, or developing new scales better suited to the purpose. The former alternative provides results which are reasonably comparable with preceding studies, while the latter recognizes and seeks to correct limitations attached to existing research. Heavily weighted by comparability considerations, the decision was made in favor of a replication using an existing scale developed by Covin and Slevin (1989) and used in previous studies (Covin and Slevin, 1989; Miles and Arnold, 1991; Miles, Thompson, and Arnold 1992). However, in analysis of the results, the present authors purposely adopted an expanded theoretical framework, which included consideration being given to both the previously discussed majority and minority views of entrepreneurial decision making, and with adequate consideration of the roles played by environmental scanning and the gathering of information as these potentially affect the decision making process.

*Scale Reliability and Validity*

Covin and Slevin (1989) assessed the psychometric properties of the nine-item scale they used to measure the degree of entrepreneurial orientation for their sample of 344 small manufacturers. Miles and Arnold (1991) also reassessed and confirmed the psychometric properties of the scale in a study utilizing the same sampling frame as the present study. The scale exhibited a reliability coefficient of .87, an item range of 1.0 to 7.0, an item mean of 4.33, and a standard deviation of 1.23 (Covin and Slevin, 1989). Construct validity was established utilizing confirmatory factor analysis (Ginsberg, 1985; Miles and Arnold, 1991). The same measures applied to the entrepreneurial orientation scale used by the study at hand, with a mean of 4.15 and a standard deviation of 1.10, were very similar to those reported by the earlier study. Table 1 provides summary information on the set of nine items used to describe and measure the degree of entrepreneurial orientation.

Khandwalla's (1976) three-item scale was used to measure the level of environmental hostility. Covin and Slevin (1989) tested the psychometric properties of the scale. The reliability coefficient was .73, suggestive of a reliable indicator of environmental characteristics. When applied to Covin and Slevin's sample the scale had a mean of 4.13, a range of 1.0 to 7.0, and a standard deviation of 1.32. Analysis of the environmental hostility scale when used in the present study indicated a mean of 4.06 and a standard deviation of 1.11. This suggests that it is appropriate to make direct comparisons between the study at hand and the two earlier studies. Table 2 provides a summary of the three items utilized to describe and measure the perceived level of environmental hostility.

**Research Hypothesis**

On the basis of analysis of the literature and given the conceptual and methodological problems discussed to

TABLE ONE  
ITEM COMPOSITION OF THE COVIN AND SLEVIN  
ENTREPRENEURIAL ORIENTATION SCALE

- 
- 
1. A cultural emphasis on innovation and R&D
  2. A high rate of new product introduction
  3. A bold and innovative product development effort
  4. An initiative, pro-active posture
  5. A tendency to be the first to introduce new technologies and products
  6. A competitive posture toward competitors
  7. A strong proclivity for high risk, high return projects
  8. An environment that requires boldness from the firm to achieve its objectives
  9. When faced with risk, the firm adopts an aggressive, bold posture
- 
- 

Source: Covin and Slevin (1989); Miles and Arnold (1991)

TABLE TWO  
ITEM COMPOSITION OF THE KHANDWALLA  
ENVIRONMENTAL HOSTILITY SCALE

- 
- 
1. A very risky external environment
  2. A very stressful, extracting external environment
  3. A dominating, competitive external environment
- 
- 

Source: Khandwalla (1977) and Covin and Slevin (1989)

this point, the study was structured around two principal research hypotheses:

**H1:** A firm's level of entrepreneurial orientation will be positively correlated with its C.E.O.'s perception of the degree of environmental hostility faced by the firm.

**H2:** A C.E.O.'s perception of the degree of environmental hostility will be negatively correlated with the size of the firm.

### Methodology

The study utilized self-administered written response questionnaires to obtain the firm-specific data from a sample of firms in the furniture manufacturing industry as reported by Miles and Arnold (1991) and Miles, Thompson, and Arnold (1992). This methodology is based on the fruitful utilization of surveys by previous business orientation researchers (Barksdale and Darden, 1971; McNamara, 1972; Lawton and Parasuraman, 1980; Parasuraman, 1983; Bartlett, Schewe, and Allen, 1984; Ginsberg, 1985; Morris and Paul, 1987; Covin and Slevin, 1989; Peterson, 1989).

As far as environmental hostility is concerned, the assumption is made that this is a factor similarly measurable on the basis of the perceptions of the firm's C.E.O. This further assumes that C.E.O.'s engage in environmental scanning (Golde, 1964; Fahay, King, and Narayanan, 1981; Welsh and White, 1981; Dollinger, 1984; Johnson and Kuehn, 1987; Smeltzer, 1988), and that they evaluate whether the environment is hostile or benign on the basis of the number and quality of investment opportunities offered (Khandwalla, 1976; Covin and Slevin, 1989).

Asset size was utilized as the criteria for firm size classification due to a known propensity of some of the firm's in the sample to use the services of sub-contractors in the manufacturing process. Such a practice makes the number of employees an inappropriate size criterion. Analysis of furniture industry financial and data suggested that smaller firms are most commonly defined as those with control over less than \$1,000,000 in total assets. To better capture any differences based on size, the decision was made to use five mutually exclusive asset size categories, from less than \$500,000 to greater than \$5,000,000 in total assets.

### *Sampling Technique and Data Analysis*

The furniture industry was selected as the population of interest for this and other investigations by the authors (Miles and Arnold 1991; Miles, Thompson, and Arnold 1992) since it is an industry that typifies all of Maidique's (1980) stages of organizational development, including the "small," the "integrated," and the "diversi-

fied" company. Currently, there are two major concentrations of household furniture manufacturing of significance in the United States: (1) High Point, North Carolina, and (2) Tupelo, Mississippi. The traditional furniture domestic manufacturing center is located in the South Atlantic U.S. Bureau of Census region, accounting for approximately thirty-six percent of all domestic household furniture value added operations in 1982 (U.S. Department of Commerce, Bureau of the Census, 1986) and sixty-seven percent of the all domestic furniture manufacturing new ventures in 1986 (O'Connor, 1987).

A major trade organization for furniture manufacturers in the United States, the American Furniture Manufacturing Association, provided their membership list comprised of 375 major United States furniture manufacturers. An analysis of the American Furniture Manufacturers Association mailing list showed that it was primarily composed of firms operating within the South Atlantic manufacturing region. This suggested that firms in the rapidly developing Tupelo furniture manufacturing area, enumerated in the East South Central region by the U. S. Bureau of Census, were likely under-represented. Firms operating within the East South Central region accounted for approximately eleven percent of all domestic household furniture value added operations in 1982 (U. S. Department of Commerce, Bureau of the Census, 1986) and twenty-two percent of the all domestic furniture manufacturing new ventures in 1986 (O'Connor, 1987).

To correct for the omission of an important manufacturing center and to more fully represent the variance of characteristics within the industry, a census of the 526 furniture manufacturers from the Mississippi and Alabama directories was also included. Care was taken to assure that duplicate names were eliminated, and that firms contacted received no more than one questionnaire.

Data were analyzed utilizing the Pearson correlation coefficient to test for a significant degree of statistical association between perceived size, level of environmental hostility and a firm's degree of entrepreneurial orientation. The .01 level of significance was specified as the required level of significance in the test procedure (Ginsberg, 1985).

### Findings

The overall response rate to the survey was 18.8 percent, producing 169 usable replies. The overwhelming majority of the respondents were the firm's managing officer (84.6 percent), or an employee otherwise in a position reporting directly to the managing officer (10.6 percent). A majority of the respondents had five or more years of experience with the organization (78.1

percent). This combination of position and experience would appear to qualify the respondents to supply valid information on the firms' decision making process.

A random sample of fifteen non-respondents was later contacted to evaluate the possible impact of nonresponse error. A one-tailed t-test was used to test for a significant difference in the number of years respondents' firms had been in business compared to nonrespondents. A .05 level of significance was specified, see Table 3. There was not a significant difference in the number of years respondents had been in business compared to

nonrespondents.

The extrapolation method was also used to further check for nonresponse bias in the data set (Armstrong and Overton, 1977). This tests for the presence of nonresponse bias by comparing the responses of "early" as compared to "late" respondents. T-tests were used to determine if there were significant differences in the entrepreneurial orientation scores of first quartile and last quartile respondents. The results found non-significant differences, which it is assumed also would apply to nonrespondents, see Table 4.

TABLE THREE  
COMPARISON OF YEARS IN BUSINESS:  
RESPONDENTS VS. NON-RESPONDENTS

YEARS IN BUSINESS	NONRESPONDENTS	RESPONDENTS
10 years or less	37.5%	28.7%
11 - 20 years	25.0%	22.3%
21 - 50 years	12.5%	29.9%
Longer than 50 years	25.0%	19.1%
TOTAL	100.0%	100.0%

TABLE FOUR  
RESULTS OF THE T-TEST PROCEDURE: TESTING THE DIFFERENCES  
BETWEEN "EARLY" FIRST QUARTILE RESPONDENTS'  
MEAN ENTREPRENEURIAL ORIENTATION SCORE AND  
"LATE" LAST QUARTILE RESPONDENTS' MEAN ENTREPRENEURIAL SCORE

GROUP	NUMBER OF CASES	MEAN	T-VALUE	2-TAILED PROBABILITY
First quartile	39	4.17	-.10	.924
Last quartile	40	4.19		

**Results of The Hypothesis Tests**

Entrepreneurial orientation was found to be significantly negatively correlated with perceived environmental hostility. This was based on a negative correlation coefficient of -.25, significant at the .001 level. This fails to support Research Hypothesis One, which states that perceived environmental hostility and a firm’s level of entrepreneurial orientation are positively related.

Asset size was found to be significantly negatively correlated with perceived environmental hostility, based on a negative correlation coefficient of -.18, significant at the .01 level. This provides support for Research Hypothesis Two, suggesting that as firms increase in size management perceptions of the external environment become more favorable. Table 5 provides a summary of the statistical measures upon which the above conclusions are based.

**Expansion of The Behavioral Model**

In terms of the underlying behavioral model, it is necessary to expand its specifications to take account of the negative relationship uncovered between the degree of entrepreneurial orientation and the degree of perceived environmental hostility.

On the basis of both the literature and the study’s findings, this led to the introduction of an intervening variable, which in turn permitted the development of an expanded structural model (Figure 1).

In evaluating the validity of the amended model, it is necessary to incorporate another piece of objective

information obtained from the questionnaire--namely, size of firm as measured by corporate assets. The second relationship pictured is one introduced on the basis of the literature on how firms of varying sizes engage in environmental scanning. This relationship is needed to take account of how the manner in which information about the environment is obtained affects perceptions of the degree of hostility in the environment. One conclusion which can be drawn from the Smeltzer, Fann, and Nikolaisen (1988) study is the smaller the firm, the more likely personal sources, family and friends, will be relied upon as a source of information about the environment (1988: 61). However, the same study then asks an important question relative to the likely weight which might be given to such information for decision making purposes: "Are the managers seeking social and psychological support rather than objective information?" (1988: 61).

As far as the present authors are concerned, this is a key consideration. On this basis, an intervening relationship is defined in the amended model, one relative to the nature of small business firms’ environmental scanning. Simply stated, it is proposed:

**P1:** The larger the business firm, the more likely the environmental scan will be based on objective, rather than subjective considerations.

Given this assumption, the third structural component of the model now falls into place, i.e., the study’s finding that the perceived degree of environmental hostility and the size of the firm were negatively correlated. Given the proposition developed from the Smeltzer, Fann, and Nikolaisen (1988) study, the conclusion follows that as

TABLE FIVE  
PAIRWISE CORRELATION OF ENVIRONMENTAL HOSTILITY,  
ENTREPRENEURIAL ORIENTATION, AND FIRM SIZE

VARIABLE		V1	V2	V3
Environmental Hostility	(V1)	1.00		
Entrepreneurial Orientation	(V2)	-0.25a	1.00	
Organizational Size	(V3)	-0.18a	0.26a	1.00

"a" Indicates a significant at the .01 level.  
Source: Original data.

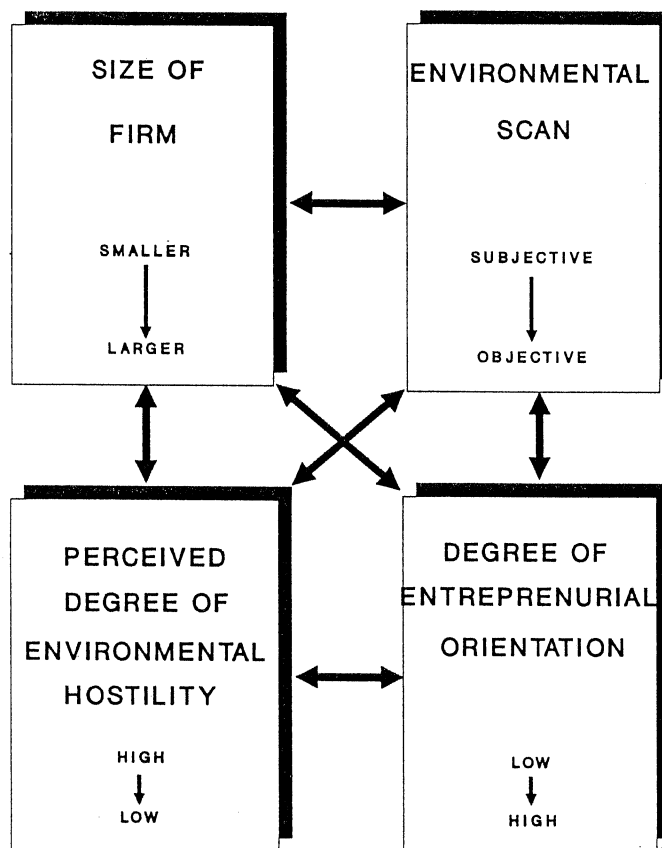


FIGURE 1. ELEMENTS IN ENTREPRENEURIAL DECISION MAKING

firms became more objective in their environmental scanning, the perceived degree of environmental hostility is reduced. The logical application of the amended model then makes use of the study’s other principal finding. This is the negative correlation between entrepreneurial orientation and the perception of the degree of hostility in the environment. On the surface, this is a finding not supported by a majority of the literature.

However, it can be argued that as smaller and smaller firms, on increasingly subjective grounds, perceive the environment as being increasingly more hostile this, in turn, makes their owners/managers less likely to adopt the aggressive, pro-active, risk taking postures which are attributed to the entrepreneurial orientation. Perhaps the point is better stated conversely: as firm size increases, so does reliance on more objective environmental information, which reduces the perceived threat of the environment, and which reduces the potentially high cost of failure to the point that owner/managers feel freer about adopting an entrepreneurial rather than

a managerial posture relative to decision making.

**Risk, Uncertainty, And Entrepreneurial Orientation**

It is the present authors’ contention that the above is not an unanticipated finding, and that any hypothesis to the contrary ignores or misinterprets a substantial body of relevant literature and research. Classic utility theory makes a clear distinction between risk and uncertainty (Knight, 1921; Von Neumann and Morgenstern, 1944; Luce and Raiffa, 1957; Raiffa and Schlaifer, 1968; Simon, 1958; Hill, Bass, and Rosen, 1970; Duncan, 1972; Downey, Hellriegel, and Slocumb, 1975). As a starting point, utility theory considers decisions made under conditions of certainty, when the outcomes attached to each alternative are known in advance. Under such circumstances, there is no deterrent to making decisions for fear of an unanticipated outcome.

This differs from the decision making environment which is characterized by risk. Under conditions of risk, outcomes are not known with certainty, but the proba-



bilities of various outcomes can be estimated (in the form of probability distributions with mean values and measures of dispersion). Collectively the possibility of all alternatives sums to one, i.e., it is certain one of them will be realized. The classic view of rationality in decision making assumes that under conditions of risk the alternative will be chosen which provides the highest expected utility based on the value of the outcome weighted by the likelihood of occurrence. The probabilities in this event are typically estimated on the basis of objective information.

The more contemporary approach argues that the same decision making framework can be applied in the event that probabilities of outcome are subjectively, rather than objectively determined. However, utility theory recognizes yet another case, when neither objective nor subjective information is available to estimate the likelihood of outcomes, and this situation is defined as uncertainty. Decisions made in the face of uncertainty can be likened to gambles made without any real knowledge as to the underlying odds.

Originally, it would appear, the term risk applied to the possibility that an adverse outcome might be experienced (Knight, 1921; Luce and Raiffa, 1957). However, to the extent that entrepreneurs engage in essentially rational behavior, it can be argued that entrepreneurial decision making behavior is best viewed as representing risk taking based on objectively defined probabilities (Brockhaus, 1980; Long, 1983; Schwer and Yucelt, 1984; Carland et al., 1984; Fahay and Narayanan, 1986; Brockhaus, 1987; Johnson and Kuehn, 1987). This validates the need for the additional structural component in the model to more completely define its specifications.

It can be argued from a behavioral perspective that utilization of information sources which fail to provide adequate and objective environmental data will be accompanied by a distinct reluctance to make decisions, regardless of one's inherent willingness to assume risk. In other words, those who would make decisions under conditions of risk may not choose to do so under conditions of uncertainty (i.e., without knowledge of the underlying probabilities). If hostile environments are more characterized by uncertainty and less characterized by risk, then a risk-taking entrepreneur will be less likely to make decisions. And, in smaller firms, more reliant on subjective rather than objective information sources, this similarly reduces the incentive to make decisions, regardless of whether or not one possesses the stereotyped entrepreneurial personality. Both conclusions support the significant negative correlation coefficients produced by the two principal investigations of the present study.

## Conclusions

The major conclusion from the present study is that the degree of perceived environmental hostility and the firm's level of entrepreneurial orientation appear to be negatively correlated. This finding fails to support much of the existing literature (Murray, 1981; Foxall, 1984; Smart and Vertinsky, 1984; Hills, 1987; Morris and Paul, 1987; Covin and Slevin, 1989). However, the findings are consistent with behavioral considerations developed from the strategy literature and also lend support to Jensen and Meckling's (1976) agency theory of management. Agency theory suggests that risk adverse managers seek to minimize their career risks by actively reducing risks faced by the firm, hence limiting the firm's potential returns (Brigham, 1985). Agency theory provides grounds the present study's principal finding: that management tends to become re-active and risk adverse as perceived environmental hostility increases; and pro-active, innovative, and risk accepting when the environment is perceived as being more benign.

The finding that firm size and degree of perceived environmental hostility are negatively related suggests that larger firms tend to view the environment as more influenceable and manageable than smaller firms, partly because they have more and better information on which to base their decisions. From this one can conclude that when management views the external environment as less hostile due to the firm's relative size or other criteria, management may be more willing to act in a pro-active, innovative, and risk accepting manner. However, in empirically testing this hypothesis, one cannot ignore research which shows that entrepreneurial behavior is also affected by numerous external considerations such as sex, cultural background, stage of business development, type of business, years of business experience, age and education and perception of self (Long, 1984; Schwer and Yucelt, 1984; Lafuente and Salas, 1989). This further suggests that too-heavy reliance has been placed in the past on uni-dimensional models of entrepreneurial behavior, which assume that possession of the narrowly defined entrepreneurial personality can be used as a valid predictor of the whether and what types of decisions will be made.

Overall, the study questions the largely unproven hypothesis that entrepreneurial orientation provides a viable solution to the problem of declining U.S. competitiveness in the face of increasing environmental hostility. As attractive as the argument might be on logical grounds, it loses much of its force if it fails to meet the test of empirical investigation. If the behavioral assumptions attached to the traditional view of entrepreneurial behavior do not meet the test of predicting behavior in a sample of small and medium sized firms, this leads one to question their overall applicability to the competitive problems of large scale organizations, or even an

entire beleaguered economy.

### Scope And Limitations

In evaluating the study's results, one must take account of the non-random nature of the specified sampling frame. The sample was drawn from the membership of the major trade organization of the domestic furniture industry. Firms were selected from both the Tupelo, Mississippi and the High Point, North Carolina furniture manufacturing regions. The intent was to obtain a representative sample of small to medium size business firms, not necessarily a representative sample of the furniture industry. This is consistent with the authors' primary focus on firm behavior, and not industry behavior. ❧

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