

RISK-TAKING PROPENSITY OF SUCCESSFUL AND  
UNSUCCESSFUL HISPANIC FEMALE ENTREPRENEURS

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BY  
MARGARET ANNA JOVER, B.S., M.S.

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DENTON, TEXAS

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To the Dean for Graduate Studies and Research:

I am submitting herewith a dissertation written by Margaret Anna Jover entitled "Risk-taking Propensity of Successful and Unsuccessful Hispanic Female Entrepreneurs." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Consumer Science.

June Impson  
June Impson, Major Professor

We have read this dissertation  
and recommend its acceptance:

Lucian Chensueth

Alan D. Jennings

Lucian Chensueth  
Chair, Family Sciences

Michael H. Hulse  
Dean, Education and Human Ecology

Accepted

Leslie M. Thompson  
Dean for Graduate Studies and  
Research



## DEDICATION

This dissertation is dedicated to my father, Roy B. Leslie, who was a positive role model. He gave me much encouragement and inspiration during my graduate studies and throughout my life.

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# ABSTRACT

## THE RISK-TAKING PROPENSITY OF SUCCESSFUL AND UNSUCCESSFUL HISPANIC FEMALE ENTREPRENEURS

Margaret A. Jover

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The purpose of the study was to compare how the risk-taking propensity of successful Hispanic female entrepreneurs differed from unsuccessful Hispanic female entrepreneurs. Also investigated were the dynamics of age, marital status, educational attainment, business training, amount and source of start-up financing, previous business experience, length of business ownership, and type of business owned on the risk-taking propensity of the two groups of Hispanic female entrepreneurs.

The number of women-owned small businesses has increased dramatically during the last decade, yet their businesses are more likely to fail than the national average within the first year of operation and almost half fail within the first four years of operation. Therefore, there is considerable risk in starting a new business--both financially and personally.

Risk-taking propensity has been linked to business success. The ability to identify risk-taking propensity and the characteristics affecting risk-taking propensity will

provide the female entrepreneur information important to her decision to become an entrepreneur. Through these means, the female entrepreneur can increase her probability for success.

Hispanic female entrepreneurs from a tri-county area in South Central Texas were interviewed and a modified version of Kogan and Wallach's (1964) Choice Dilemma Questionnaire administered to determine risk-taking propensity. Multivariate analysis and correlations were used to analyze the data. The instrument was factor analyzed.

There were no significant differences in the risk-taking propensity of the two groups. With the successful group of entrepreneurs, risk-taking propensity was found to be significantly related to age, source of start-up financing, and informal training with insurances. With the unsuccessful group of entrepreneurs, risk-taking propensity was found to be significantly related to informal business training in credit.

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## CHAPTER I

### INTRODUCTION

Female activity in the labor force has increased dramatically since World War II and has changed the face of the American labor force. According to the Bureau of Labor Statistics, 7 out of 10 women between the ages of 25 and 54 participated in the labor force in 1990, whereas by the end of World War II, 3 out of 10 women in this age group were employed outside of the home. In 1990, labor market participation was the norm for women of all age groups, regardless of marital status or race (U.S. Bureau of Census, 1990b).

Several factors have attributed to the rise of the labor force participation by women. First, there is an increasing social acceptance of working women. Second, with marriage rates declining and divorce rates rising, many women need economic independence. Finally, two incomes have become increasingly important in maintaining a middle class standard of living (Bloom, 1986).

One trend among working women is the growing number of women owning their own businesses--the female entrepreneur. According to Bureau of Census survey data, women are beginning to operate their own businesses at a greater rate

than men. Women owned businesses have grown from 1 in 10 in 1960; to 1 in 3 in 1987 (O'Hare & Larson, 1991). Since 1982, women-owned business have increased 57% (U.S. Bureau of Census, 1991b). In 1987, Texas had the second largest number of women-owned businesses (U.S. Bureau of Census, 1987).

Paralleling the increase of women-owned businesses is the increase in those businesses owned by Hispanics. There was a 20% increase in Hispanic-owned businesses between 1969 and 1972. Between 1972 and 1982, the number of Hispanic owned businesses jumped another 94% (U.S. Bureau of Census, 1972, 1990a). Hispanic-owned firms increased by 81% between 1982 and 1987 (U.S. Bureau of Census, 1991a). According to the 1987 Economic Census, in Texas the number of Hispanic owned businesses increased 49% between 1982 and 1987 (U.S. Bureau of Census, 1991b). Hispanics in Texas operated 20% of all businesses in 1987, and 23% of these businesses were women-owned (U.S. Bureau of Census, 1990b).

#### Problem Statement

Women-owned businesses are more likely than the national average to fail within the first year of operation and almost half fail within the first four years (O'Hare & Larson, 1991); therefore, there is considerable risk in starting a new business. In fact, accepted definitions of

the term "entrepreneur" include the criteria that an entrepreneur takes risks (Webster, 1990).

The success of an entrepreneurial venture has been linked to the risk-taking propensity of the entrepreneur (MacCrimmon & Wehrung, 1990). Little is known about the characteristics that are related to risk-taking propensity.

#### Rationale

The purpose of this study was to compare how the risk-taking propensity of successful Hispanic female entrepreneurs differed from Hispanic female entrepreneurs whose small businesses failed. Also investigated were the dynamics of age, marital status, educational attainment, business training, amount and source of start-up financing, previous business experience, length of business ownership, and type of business owned on the risk-taking propensity of the two groups of Hispanic female entrepreneurs.

The number of Hispanic women entrepreneurial ventures has increased 49% since 1982 (U.S. Bureau of Census, 1987). Awareness of the risks involved in an entrepreneurial venture, coupled with the ability to assess her risk-taking propensity might help the female Hispanic entrepreneur achieve success in her small business. Additionally, awareness of the business and personal characteristics affecting risk-taking propensity of successful Hispanic

female entrepreneurs may enable the potential entrepreneur to analyze and strength her success potential.

#### Research Questions

Research questions addressed in this study are:

1. Is there a difference in the risk-taking propensity of Hispanic female entrepreneurs whose entrepreneurial venture succeeded and those whose entrepreneurial venture failed?
2. What demographic characteristics are related to the risk-taking propensity of Hispanic female entrepreneurs?
3. What business characteristics are related to the risk-taking propensity of Hispanic female entrepreneurs?

#### Study Variables

The dependent variables of the study were success and risk-taking propensity. The independent variables were personal characteristics, business characteristics, and risk-taking propensity. Table 1 shows the study variables and their related dimensions.



Table 1

The Study Variables and Related Dimensions

Dependent Variables		Independent Variables	
Success Risk-taking Propensity	Personal Characteristics:	Business Characteristics:	Risk-taking Propensity
	Age	Length of ownership	
	Marital status	Start-up financing	
	Educational level	Business type	
	Business training	Number of employees	
	Business experience		

## Definition of Terms

The following terms are defined for the purpose of this study:

Age--The chronological age of the respondent at the time she completed the survey instrument.

Business Experience--Work experience in service, retail, manufacturing, construction, real estate, or finance business prior to owning a small business.



Business Training--Formal and informal courses, such as business planning, bookkeeping, personnel management, insurance, and credit.

Business Type--Type of business owned by the entrepreneur (e.g., service, wholesale, retail, manufacturing, construction, real estate, or finance).

Educational Level--The level of education the respondent has attained (e.g., no high school, some high school, some college, college graduate, some graduate work, or graduate degree).

Entrepreneur--"A major owner and manager of a business who is not employed elsewhere, has a sales tax number, a business address, has fewer than 25 employees, and who makes the decisions and takes the risks in the management of the business" (Brockhaus, 1980a).

Failed Business--A business that is no longer in existence at the time of this study or did not survive five or more years.

Hispanic--A person who comes from or whose parents or grandparents come from a Spanish speaking country.

Marital Status--Whether the respondent is single, married, divorced, or widowed.

Risk-taking Propensity--The perceived probability of receiving the awards associated with success of a proposed situation, which is required by an individual before he will

subject himself to the consequences associated with failure, the alternative situation providing less reward as well as less severe consequences than they proposed situation (Brockhaus, 1980a). Risk-taking propensity is measured by use of the CDQ.

Source of Start-up Financing--The source from which financing for beginning the small business was obtained (e.g., savings, financial institution, friend or relative).

Start-up Financing--Amount of money saved or borrowed for the purpose of beginning a small business.

Successful Business--A business which has been in operation for five or more years and is either making a profit or is thought to be a success by the respondent (O'Neill & Duker, 1986).

#### Theoretical Framework

This study is based on Atkinson's risk-taking model. The foundation for Atkinson's Risk-taking Model is the expected utility theory of risk. This section presents an overview of the expected utility theory of risk, challenges to the theory, and Atkinson's Model of Risk-taking.

#### Expected Utility Theory of Risk

The expected utility theory of risk is the most widely accepted theory of risk (MacCrimmon & Wehrung, 1986). The foundations of the theory were developed by Bernoulli, von Neumann, and Morgenstern. According to their theory,

the expected utility of any action is calculated by multiplying the probability of each uncertain event by the utility of the outcome arising from the event. Utility is the power of things to satisfy conscious wants, or the quality of being wanted. In the economic sense, utility is the power over one's conduct (Knight, 1964). People will be risk averse or try to avoid loss producing situations. When there is no possibility of gain, the individual will attempt to insure that no loss occurs (Arrow, 1971). For example, individuals purchase insurance to reduce the chance of loss even though there is no possibility of a gain.

#### Prospect Theory

Prospect theory was developed as a challenge to the utility theory of risk. Prospect studies have shown that people do take risk over losses and prospect theory attempts to explain this behavior (MacCrimmon & Wehrung, 1986). Tversky (cited in MacCrimmon & Wehrung, 1986) hypothesized that people are not uniformly risk averse. Risk aversion may depend upon the level of success or failure recently experienced.

#### Atkinson's Model of Risk Preferences

Atkinson's model of risk-taking was based on the expected utility of risk (Atkinson, 1957). His risk-taking model was composed of six variables: the subjective probabilities of success and failure, the incentive values

of success and avoiding failure, and the motives to achieve or avoid failure. Atkinson theorized that people with a high achievement motive would prefer moderate levels of risk and those with a high motive to avoid levels would prefer either high or low levels of risk. In a less risky situation, these individuals could succeed and in high risk situations these individuals would not have to accept blame for their failure.

#### Consumer Model of Risk Perception

The decision to become an entrepreneur involves consumer risk. Consumer studies suggest that consumers are influenced by their perception of the risk (Carroll, Siridhara, & Fincham, 1986). These studies have resulted in a six dimensional model of risk perception. The dimensions included in the model are:

1. Financial risk
2. Social risk
3. Psychological Risk
4. Performance risk
5. Safety risk
6. Convenience risk

How risk is perceived is related to the subjective perception of success and failure of Atkinson's Model of Risk Preferences. How a risk is perceived will affect the perception of success or failure.



### Measuring Risk-Taking Propensity

The instrument used to assess the risk-taking propensity in this study was developed by Kogan and Wallach (1964) and was derived, in part, from Atkinson's Risk-taking Model. The instrument includes 12 scenarios in which the subject is presented with a choice dilemma between a risky and a safe course of action. The scenarios involve subjective probabilities of success and failure and the incentive values of success and failure. The instrument has been used in previous studies to measure entrepreneurial risk-taking propensity (Brockhaus, 1980a; Masters & Meier, 1988).

### Summary

This study investigated the risk-taking propensity of Hispanic females owning a business and those no longer owning a business. Personal and business characteristics female entrepreneurs were examined to determine their relationship to risk-taking propensity.

## CHAPTER II

### A REVIEW OF RELATED LITERATURE

Current literature related to the population studied will be reviewed in this chapter. In addition, various theoretical frameworks of entrepreneurial concepts will be examined.

#### Definition of the Entrepreneur

Much has been written on what makes a person an "entrepreneur." This section discusses the definition of an "entrepreneur," as well as the characteristics, personality and motives of the entrepreneur.

There are many definitions of the term "entrepreneur." The dictionary defines an entrepreneur as "a person who organizes and manages a business undertaking and assumes the risk" (Webster, 1990). Unfortunately, there is no uniform definition of "entrepreneur" or "entrepreneurial activities" accepted by researchers.

Schumpeter (1934) credits Mills (as cited in Schumpeter, 1934) with bringing the term "entrepreneur" into general use. Mills focused on risk-bearing as the key difference between an entrepreneur and a manager. The business manager does not usually bear the financial risk if the business is not successful, whereas the entrepreneur



does bear the risk if the business fails. Hull, Bosley, and Udell (1980) concurred that the entrepreneur assumes risk, but they expanded their definition to include those who have purchased or have inherited a business with the intent of expanding the business.

Carland, Hoy, Boulton, and Carland (1984) voiced concern with the lack of precision in entrepreneurial literature. They questioned why the two terms--entrepreneur and small business owner--are used. According to their research findings, entrepreneurs differ from the small business owner by a venture strategy orientated toward growth and innovation. In later research, Carland, Hoy, and Carland (1988) expressed additional concern with the "concept" of the entrepreneur; not only in the definition of the term.

Some researchers have assumed that the entrepreneur was the original owner of the business. Hull et al. (1980) extended their definition to include those who purchase or inherit a business with the intent of expanding the business. Brockhaus (1980b) identified the entrepreneur as a manager or owner of a business who is not employed elsewhere. Cooper and Dundleberg (1987) agreed that the entrepreneur can either own or manage the business. Although McClelland (1961) accepted an entrepreneur as a business manager, his definition incorporated the

decision-making responsibility. According to McClelland, the entrepreneur makes the decision and takes the responsibility for that decision.

Other researchers (Kent, 1982; Lackman, 1980) have focused on the definition of the entrepreneur in terms of the activities taking place. To Lackman, an entrepreneur used new combinations of production to bring originality to the industry.

Dunkleberg and Cooper (1982) and Hornaday (1990) suggested that entrepreneurs be categorized rather than defined. Dunkleberg and Cooper (1982) surveyed over 1800 business owners and identified three categories of entrepreneurs--growth oriented, craft oriented, and independence oriented. The growth oriented entrepreneur desired high growth in five years and was not satisfied with making a comfortable living. The craft oriented entrepreneur aspired to be creative. The independent entrepreneur preferred small business ownership because it allowed independence. Hornaday (1990) suggested dropping the terms "entrepreneur" and "entrepreneurship" because they continue to confuse researchers. He proposed three categories to describe the entrepreneur--crafters, promoters, and professional managers. The crafters were motivated by the desire for creativity. The promoters sought wealth. The professional managers wanted to build

organizations. Hornaday admitted that some will find problems with his typology but that it does provide a method for explaining the various motivators of the small business owner.

Definitions of what constitutes entrepreneurship are still subject to debate. The term has been defined socially, economically and in terms of technical change. Some researchers make a distinction between the entrepreneur and the small business owner and other definitions include independent business owners as well as upper-level managers of large corporations. For this study, an entrepreneur was defined as "the major owner and manager of a business who is not employed elsewhere and who takes risks in the management of the business" (Brockhaus, 1980a). In addition, the entrepreneur studied had a business address, a sales tax number, fewer than 25 employees and was not employed elsewhere.

#### Female Entrepreneurs

This section examines the population of the female entrepreneur, the demographic characteristics, personality, motivations and problems of the entrepreneur.

##### Population Status

The number of women-owned businesses increased 57.5% between 1982 and 1987. In 1987, the majority (55.1%) of women-owned firms were in the service areas. The next

largest concentration of women-owned firms was in retail trade (19.4%) (U.S. Bureau of Census, 1991b).

Texas had the second largest number of women-owned businesses in the nation and accounted for 7.2% of all firms. In Texas there has been a 32.9% increase in women-owned firms. Of these firms 54.2% were in service industries and 19.2% were in retail trade (U.S. Bureau of Census, 1991b).

Hispanic-owned businesses increased 80.5% between 1982 and 1987. As with women-owned businesses, the majority of Hispanic-owned businesses has been concentrated in the service industry (43.7%) and retail trade (16.6%). Of the Hispanic-owned businesses, 24% were women-owned (U.S. Bureau of the Census, 1991b).

#### Demographic Characteristics

Studies indicated that the female entrepreneur was married, had children, and was between 35 and 65 years of age (Neider, 1987). The female entrepreneurs was often a first born or an only child and had a father that was self-employed (Hisrich & Brush, 1986). The female entrepreneur came from an upper or middle class background and is college educated. Most female entrepreneurs were in service or retail businesses and had previous work experience in their fields prior to becoming a business owner.

### Attributes of the Entrepreneur

A review of the literature pertaining to the characteristics of an entrepreneur showed there to be a large number of entrepreneurial attributes. According to the works of Kent, Sexton, and Vesper (1982), the key entrepreneurial characteristics included: self-confidence, perseverance, energy, resourcefulness, ability to take calculated risks, need to achieve, creativity, initiative, flexibility, positive response to challenges, independence, foresight, dynamism, leadership, ability to get along with others, responsiveness to criticism and suggestions, profit-orientation, perceptiveness, optimism, and versatility.

McClelland (1987) reported that there were forty-two different characteristics of entrepreneurs identified by researchers. The most frequently mentioned traits were: risk-taking, confidence, perseverance, energy, resourcefulness, creativity, foresight, initiative, versatility, intelligence, and perceptiveness.

Research indicated that male and female entrepreneurs were similar to the male entrepreneur. Hisrich and Brush (1986) reported that women entrepreneurs perceived themselves to have the same characteristics as their male counterparts. The female entrepreneurs perceived themselves to be energetic, independent, competitive, social,



idealistic, self-confident, perfectionists, anxious, flexible, goal-oriented, and generalists.

### Personality of the Entrepreneur

The personality characteristics of male and female entrepreneurs seem to be similar. Chaganti (1986) found no difference in male and female scores on personality tests in the areas of achievement, motivation, autonomy, persistence, aggression, independence, leadership, and locus of control.

Neider (1987) administered the Educational Personality Preference Schedule to female entrepreneurs. The women scored high on the following personality variables: need for achievement, deference, dominance, intraception, and autonomy. According to Neider, dominance was the need to influence others to do what one wants them to do and to direct the achievement of others. Endurance was the commitment to persist at a job until it is finished. Intraception was the need to analyze the motives of others and to predict behavior accordingly. Birley (1989) also found that male and female entrepreneurs had similar personalities.

Studies indicated no significant difference in the locus of control of male and female entrepreneurs (Cromie, 1987; Stevenson, 1990). However, Neider (1987) found that female entrepreneurs scored low on Rotter's Locus of Control



instrument. A low score indicated an internal locus of control or the belief that one can control one's life.

#### Motivation to be an Entrepreneur

There are similarities and differences in the reasons males and females have for becoming entrepreneurs. Liles (1974), in early entrepreneurial research found that the situation rather than the personality was a major determinant of entrepreneurship. According to Liles (1974), job dissatisfaction encouraged the start of an entrepreneurial venture. The individual then assessed readiness for the venture and overcame situational restraints before embarking on the entrepreneurial venture. If the individual was successful in their job, the individual was restrained from beginning an entrepreneurial venture. After overcoming the restraints, the individual then assesses the financial, career, family, and psychic risks involved with the decision.

Scott (1986) reported that males and females had similar motivations to become entrepreneurs. They were motivated by the challenge, the opportunity to be one's own boss and to make money. Birley (1989) found that both males and females became entrepreneurs to have a voice, to escape from supervision, and for money. Other motivators included low paying occupations and the constraints of subservient roles. Brockhaus (1980b) also found that job

dissatisfaction was a major push to begin an entrepreneurial venture. Entrepreneurs were less satisfied with promotion opportunities, less satisfied with co-workers, and less satisfied with their supervisors at their previous positions.

Neider (1987) found that a personal crisis often precipitated the entrepreneurial venture. Personal satisfaction and money were other motivators found by Neider. Hisrich (1986) reported that both male and female entrepreneurs were motivated by the need for independence and achievement.

Researchers found that males and females also had different reasons for becoming an entrepreneurs. Nelton and Berney (1987) reported two generations of female entrepreneurs with different reasons for beginning the entrepreneurial venture. The first generation of female entrepreneurs were motivated by personal crisis and often had little business training. The second generation of female entrepreneurs were similar to their male counterparts and had the same skills, training, and motivations of male entrepreneurs--the need for achievement, independence, and control. A later study by Nelton (1989) found that female entrepreneurs were often frustrated by the corporate life when they reached a "glass ceiling" and could not rise any

higher on the corporate ladder. This frustration, according to Nelton, was a motivator to begin her own business.

Cromie (1987) and Scott (1986) both found that family concerns were motivators for women to become entrepreneurs. Owning a business gave the woman more flex-time to be with their families. Through entrepreneurship the woman could combine both mother and career roles.

Scherer, Brodzinski, and Wiebe (1990) reported that males had a higher preference for entrepreneurship than females. They suggested social learning to be a strong influence on this preference. Differences in education and training of men and women enabled men to strive for their own business. Weirauch (1980) reported that men were physically more able to begin an entrepreneurial venture. Weirauch stated that male entrepreneurs were often able to save money by performing their own physical work whereas female entrepreneurs had to hire others to do much of their physical work.

Kent (1983) suggested that entrepreneurial training was needed to help motivate the female entrepreneur. He stated that sex stereotyping inhibited the female entrepreneur and suggested that by developing curriculum materials for use in elementary and high schools depicting women in the business world, females would be further encouraged to be entrepreneurs.



### Problems of Female Entrepreneurs

Female entrepreneurs experienced both family-related and business-related problems. Research findings indicated female entrepreneurs have difficulties in balancing the needs of the family and the business (Scott, 1986). Stoner, Hartman, and Arora (1990) found significant conflicts between the work and home roles of the female entrepreneur. A majority of the female entrepreneurs studied reported that they came home from work too tired to do the things they wanted to do. The female entrepreneurs also felt that the demands of their business took away from their personal interests and made it difficult to relax at home. Marital satisfaction was associated with both business and life satisfaction. The number of children and number of hours worked were not related to the work-home conflict. Role conflict was more prevalent among female entrepreneurs with a lower self-esteem or self-worth.

Longstreth, Stafford, and Mauldin (1987) reported that female entrepreneurs had difficulty in allocating time between their family and their business. Husbands of female entrepreneurs had high expectations regarding their wives' level of household production. These expectations produced conflicts in business and family time. The network systems formed with other entrepreneurs were reported to provide

valuable information about time management to female entrepreneurs.

Female entrepreneurs also experienced many business problems. Women business owners often had a lower networth than male entrepreneurs when beginning a business (O'Hare & Laron, 1991) and had difficulties in maintaining an adequate cash flow (Scott, 1986). Hisrich (1986) found that female entrepreneurs had difficulty obtaining financing and credit to begin their business and lacked business training to operate their business. Neider (1987) reported that female business owners had difficulty in delegating business tasks to others. Research also indicated that women business owners had inadequate record keeping and financial management skills (Hisrich, 1986; Pellegrino & Reese, 1982; Scott, 1986).

Women business owners often complained of being denied credit because of their sex (Nelton, 1989). Because they often had service related businesses, the women entrepreneurs seldom had inventory or equipment to serve as collateral. Nelton also suggested that the Women's Business Ownership Act of 1988 made it easier for women to obtain credit because the Act revised the Equal Credit Opportunity Act of 1974 and eliminated the exemption of commercial loans. Banks were no longer permitted to ask about the marital status of business loan applicants and they must



inform applicants that they had the right to obtain written explanations of the reason for denial of credit.

Nelton (1987) reported that lack of information was a major problem for female entrepreneurs. Furthermore, female entrepreneurs wanted information and were willing to pay for it. According to Nelton's study, women entrepreneurs indicated the need for information in the following areas: budget preparation, preparing and presenting a business plan, how to define and forecast the market, financial book- and record-keeping, legal aspects of business, sources of financing, how to make presentations to investors, insurance requirements, personnel management, licensing requirements, supervisory methods, production techniques. The most useful reported sources of information for female entrepreneurs were network or support systems, accountants, lawyers, business or professional organizations, public seminars, business periodicals, banker, and consultants.

#### Minority Entrepreneurs

Much of the entrepreneurial research used Anglo entrepreneurs as participants (Carsrud, Gaglio, & Olm, 1987; DeCarlo & Lyons, 1979; Hisrich, 1984; Hull et al., 1980; Masters & Meier, 1988; McClelland, 1987). The few studies using non-Anglo subjects segmented the groups into Anglos and minorities without differentiating between minority groups (Brush, 1986; Enz, Dollinger, & Daily, 1990; Hisrich,

1984). Entrepreneurs have also been segmented by gender but not both gender and race (Masters & Meier, 1988). This section reviews literature on both the minority entrepreneur and the Hispanic female entrepreneur.

According to Hisrich and Brush (1986), the minority entrepreneur tends to be a first-born child from a lower- or middle class family. The father often has a blue collar job and some college education. According to the profile developed by Hisrich and Brush (1986), the minority entrepreneur began the business venture between the ages of 35 and 45 and had previous experience in the area of the business venture.

Enz, Dollinger, and Daily (1990) studied the value orientations of minority business owners. The values studied were:

1. Collectivism--Respect for people
2. Duty--To value the integrity of reciprocal relationships, obligations, and loyalty
3. Rationality--To value fact-based decisions and actions
4. Novelty--To value change or the new
5. Materialism--To value possessions
6. Power--To value control over people and situations

They found that minority entrepreneurs were more value-similar to corporate America rather than non-minority

business owners. This finding contrasts other studies which showed little difference in the values of minority and non-minority entrepreneurs.

Van Fleet and Van Fleet (1985) studied black and white businesses in inner cities to determine if black businesses would be more successful than white businesses. Inner city areas studied were black and poor and were not considered appropriate environments for business success. They found that the number of years of business ownership was not useful in differentiating the degree of success and that successful owners, whether black or white, did not reside in the inner city. White business owners had difficulty in obtaining customers. The authors found that assets, rather than race, were the best variable to distinguish success in inner city areas.

Mescon (1987) suggested that minority entrepreneurs would be more successful with specialized training. The Entrepreneurial Institute, a multi-university-sponsored training and development organization was formed in 1983 to encourage the formation and success of minority small business in South Florida. In a survey of 147 participants, 90% said that special courses helped them improve their business operation. The program also assisted participants with business expansion.

Mann (1990) also studied the need for business education for minority entrepreneurs. He suggested that courses be offered at more suitable times such as at night. He also suggested that courses be offered in several locations rather than one site and that participants have time to network with other entrepreneurs.

Dadzie and Cho (1989) studied the factors associated with the formation, growth, and survival of minority businesses. Black, Hispanic, and Asian small business owners participated in the study. They found that many variables influenced the survival of the minority business including educational level, previous industrial experience, and role models. They suggested that the presence of minority role models were important to minority business success because the role models could assist the entrepreneur in locating outside funding sources.

Hisrich (1986) compared the characteristics of American and Puerto Rican female entrepreneurs. He found that Puerto Rican women entrepreneurs differed from U.S. women entrepreneurs in that their most recent occupation before becoming an entrepreneur was that of "homemaker." Both groups tended to have a close relationship with their mothers, but more resembled their fathers' personalities.

Puerto Rican women entrepreneurs differed from U.S. women entrepreneurs in many aspects of their business

venture. Their businesses were smaller, fewer were involved in their first business endeavor, and fewer Puerto Rican women had previous experience in the field of their present venture. Fewer Puerto Rican women entrepreneurs had trouble obtaining credit, perhaps because fewer tried to obtain credit. More U.S. entrepreneurs cited the family as a major source of current problems.

### Entrepreneurial Success

Entrepreneurial success has been investigated extensively by researchers. Research has resulted in many definitions of success and contributors of success. This section provides an overview of the research on entrepreneurial success.

#### Definition of Success

Entrepreneurial success has been defined in both business and personal contexts. Business definitions include business assets, business longevity, and business revenue. Personal definitions included personal goal attainment, balancing family and career, and personal satisfaction (Bates & Nucci, 1989; Fried, 1989; Gregg, 1985; O'Neil & Duker, 1986; Van Fleet & Van Fleet, 1985). Research also indicated that male and female entrepreneurs had differing viewpoints as to what makes a business successful.



Bates and Nucci (1989) found that business failure rates were inversely related to business size, whether size was measured by number of employees or sales revenue. Business with more employees or larger profit margins were more likely to succeed than small businesses and businesses with fewer employees. Firms in operation three years or less had a higher failure rate than firms in operation for more than three years.

Product quality also contributed to the success or failure of small businesses. O'Neill and Duker (1986) found that failed firms had a higher mean level of inferior products than successful firms. They also confirmed the relationship between capital intensity and business success. They defined a successful business as one that has survived. According to their definition, the fact that a business exists makes the business a success. Failure is, therefore, defined as non-survival. In addition, they found that failed businesses had a higher level of debt.

Van Fleet and Van Fleet (1985) also found that business success was best predicted by the assets and sales revenue. They did not find business longevity a useful variable in predicting success. On the other hand, Ibrahim and Goodwin (1986) reported that business success was defined in terms of longevity and of rate of return on sales. In their study, they found that successful small business owners tended to

have an efficient budget and a good relationship with a credit officer.

Male and female entrepreneurs differed in their definitions of success (Gregg, 1985). Male entrepreneurs measured success in dollars and cents. Female entrepreneurs measured success in more personal terms--goal attainment, balancing family and career, and providing an income rather than wealth.

In a national survey, Fried (1989) found that money was only one part of success. Women entrepreneurs defined success in terms of happiness, self-fulfillment, helping others, achievement and challenge. Other women entrepreneurs stated that success was maintaining a balance between the inner and outer self, doing something that makes a difference, self-satisfaction, having fun, enjoying life, and obtaining personal and financial goals.

#### Characteristics of Successful Entrepreneurs

McClelland (1987) reviewed current literature on success characteristics of entrepreneurs. He reported that the most commonly mentioned were confidence, perseverance, energy, resourcefulness, creativity, foresight, initiative, versatility, intelligence, and perceptiveness.

Personality traits such as risk-taking, autonomy, change, cognitive structure, innovation, and locus of control were effective dimensions in distinguishing

successful entrepreneurs from the general population (Ibrahim & Goodwin, 1986). Their findings were consistent with the findings of other researchers on entrepreneurial characteristics (Brockhaus, 1982). Chaganti and Chaganti (1983) found that innovation, creativity and managerial competence are key success characteristics.

Gardenswartz and Rowe (1987) interviewed 100 top professional and business women to determine success characteristics. They reported that successful women business owners had "four-wheel drive"--they had a driving ambition to succeed and were achievement motivated. They concluded that successful women business owners also have a "passion" for their work. They were willing to put in long hours to make their business a success. "Megavision" was another characteristic of the successful woman entrepreneur. They were able to see possibilities in epic proportions and they had a belief in themselves. They also had a "no excuse, just results" philosophy. They were not willing to make excuses--such as not being able to obtain credit--they found ways around problems. Those interviewed suggested the following strategies for success: take a partner, barter skills or services with others, network, and hire motivated people.

Buttner and Rosen (1988) reported that the characteristics attributed to successful entrepreneurs were

more commonly associated with male entrepreneurs than female entrepreneurs. Bank loan officers rated women entrepreneurs as significantly less successful than male entrepreneurs on the dimensions of leadership, autonomy, risk-taking, endurance, lack of emotionalism, and low need for support. They suggested that it might be necessary to train bank loan officers to avoid the use of sex stereotyping in evaluating proposals for new businesses. They further suggested that female entrepreneurs should to be alerted to the need to dispel traditional sex stereotypes in the context of loan application interviews.

A knowledge of lending officer's perception of factors for success might be beneficial as entrepreneurs prepare a loan application and interview. Montagno, Kurako, & Scarcella (1986) asked both lenders and entrepreneurs to rank items they felt were characteristic of the successful business owner. Both lenders and entrepreneurs ranked communication skills (both oral and listening skills), problem analysis, planning, self-motivation, and determination as important characteristics of success. Both groups ranked interpersonal insight, quantitative ability, independence, conceptualization and oral presentation skills as less important characteristics of success. Confidence, caring and insight were considered important characteristics by lenders but not by the entrepreneurs.

Entrepreneurs considered leadership, organizing, delegation and organizational sensitivity of lesser importance whereas lenders did not rank them as less important. Characteristics that some researchers have listed as very essential to business success were ranked low by both lenders and entrepreneurs. These included flexibility, delegating, risk-taking, and independence. It is important for entrepreneurs to realize which characteristics lending officers consider important to success when they apply for business loans.

Entrepreneurs perceived their prospects for success as substantially better than success rates for similar businesses (Cooper, Woo, & Dunkleberg, 1988). Entrepreneurs who had already made a commitment to be a business owner saw their odds for success higher than would seem justified by the statistical evidence of successful firms. Entrepreneurial perceptions of their success did not seem related to factors which previous research found to be associated with success.

#### Support Systems and Entrepreneurial Success

Support systems in the form of mentors, family, and friends contribute to the success of women-owned businesses. Carsrud et al. (1987) found strong ties between business networks and entrepreneurial success. Limited use of mentors inhibited the success of the female entrepreneur.



Conversely, they also found that strong network ties had a minimal impact of success.

Nelson (1989) reported that support systems do contribute to the success of women-owned businesses and found that the spouse was the primary source of both financial and personal support. Cooper and Dunkleberg (1987) found that the family provided both role models and support to the female entrepreneur. Hisrich (1986) reported that the strong support systems for female entrepreneurs include family, friends, and self-employed male mentors.

#### Risk-taking

Risk-taking propensity is seen as a distinguishing characteristic of successful entrepreneurs (Bowen & Hisrich, 1986; Brockhaus, 1980a; Master & Meier, 1988). This section examines models of risk-taking, perceptions of risk, and entrepreneurial risk-taking.

#### Theory of Risk

The theory of risk is part of the theory of rationality in choices. Expected utility theory is a widely accepted theory of risk (MacCrimmon & Wehrung, 1986). According to the expected utility theory of risk, people will be risk averters or try to avoid loss producing situations. When there is not possibility of gain, individuals will attempt to ensure that no loss occurs.

### Risk Preference

Expectancy theorists such as Atkinson (1957) have ignited much interest in risk preference. Atkinson's risk-taking model was derived from McClelland's study of need for achievement and the preference for moderate levels of success. His risk-taking model involved six variables: the subjective probability of success (expectancy), the subjective probability of failure, the incentive value of success, the incentive value of avoiding failure, the achievement motive, and the motive to avoid failure. Atkinson theorized that performance level should be the greatest when there is uncertainty about the outcome. He predicted this to be true regardless of whether the motive to succeed or the motive to avoid failure was stronger within an individual. Persons in whom the achievement motive was stronger should prefer moderate levels of risk and those whose motive to avoid failure should avoid intermediate risk. They should prefer either very easy and safe situations or extremely difficult or speculative situations because they would either succeed with the safe task or would not assume blame for failing at the extremely difficult task.

McClelland (1961) theorized that individuals need more control in moderately risky situations rather than the very risky or very easy situations. Individuals need no more

than average ability to perform successfully the very easy functions that are safe, but no amount of skill can help in situations of pure chance.

Research has identified three levels of risk preferences--low, moderate, or intermediate. Mancuso (1975) hypothesized that entrepreneurs tend to be moderate risk-takers. However, he had no empirical data to support this claim.

#### Perceptions of Risk

Liles (1974) suggested that the entrepreneur carefully think about the risk involved in beginning an entrepreneurial venture. According to Liles, becoming an entrepreneur involved financial, career, family, and psychic risks. The entrepreneurial venture could jeopardize the standard of living and failure could be visualized by the entrepreneur as a personal failure resulting in emotional consequences. The time spent in entrepreneurial activities also contributed to family related risks.

The decision to become an entrepreneur is a complex consumer decision. Consumer studies suggest that consumers are influenced by their perceptions of the risk (Carroll et al., 1986). These studies have resulted in a model of perceived risk. The model has six dimensions that can be applied to the consumer decision to become an entrepreneur:

1. Financial risk--The entrepreneur not only commits considerable funds into the business but also jeopardizes future income.

2. Social risk (loss of reputation or social status)--The entrepreneur faces a loss of reputation and social status of the entrepreneurial venture is not successful.

3. Psychological risks (loss due to worry or conflicting beliefs)--The entrepreneur often spends much time worrying about the success or failure of the business.

4. Performance risk (loss occurring as a result of the product not working)--The entrepreneur faces two aspects of performance risk. There is risk if the business fails and risk if the product or service fails to work properly.

5. Safety risk (physical harm coming from the use of the product)--Worry about the business could result in physical harm and if the product fails, physical harm could result.

6. Convenience Risk (loss of time or convenience)--The failure of the business could be seen as a tremendous loss of time to the entrepreneur.

As with any consumer decision, the decision to become an entrepreneur in a major consumer risk. Carroll et al. (1986) suggested that entrepreneurs evaluate the six dimensions of consumer risk when making consumer decisions.

### Risk-taking Propensity

A primary consideration for becoming an entrepreneur is the perceived degree of risk and the perceived possibility of failure associated with an unsuccessful business venture. Risk-taking is a distinguishing characteristic of entrepreneurs and successful entrepreneurs are thought to be moderate risk-takers (Mancuso, 1975).

Brockhaus (1980a) administered the Kogan-Wallach Choice Dilemmas Questionnaire to three groups of subjects. The entrepreneurial group, during the previous three months, had stopped working for an employer and begun an business venture. There were also two groups of managers. One group of managers was composed of managers who had changed positions within their organization during the previous three months and the other group of managers had changed organizations during the previous three months. Brockhaus (1980a) found no significant difference in the risk-taking propensity of the three groups. Brockhaus concluded that because no significant differences were found between the three groups is not an implication that entrepreneurs are not moderate risk-takers, but that both managers and entrepreneurs are moderate risk-takers.

Masters and Meier (1988) investigated differences in the risk-taking propensity between male and female entrepreneurs. They compared the scores from Kogan and



Wallach's Choice Dilemma Questionnaire using male and female entrepreneurs and male and female business managers. They found no significant differences in the risk-taking propensities of male and female entrepreneurs. They concluded that the woman's movement and women's entry into the business world had bridged the gap between the differences in male and female scores on the Choice Dilemma Questionnaire.

Hull et al. (1980) found that risk-taking differentiated between those most likely to start a business and those less likely. Risk-taking also was a distinguishing characteristic between future entrepreneurs and other undergraduate students (Kent, 1983).

MacCrimmon and Wehrung (1990) studied the risk-taking propensity of executives in Canada and the United States. They found that greater success was related to greater risk-taking. They stated that success and risk-taking were not causal determinations and they could not determine if greater risk-taking caused success or if the inverse were true. They also found that age, seniority, and number of dependents (which they termed "maturity") was inversely related to risk-taking. Education was also found to be related to risk-taking. Less educated business owners and executives were less willing to take risks. They concluded

that individuals unwilling to take risks in business were not likely to succeed.

#### Summary

A review of related literature found no accepted definition of the entrepreneur and provided an overview of entrepreneurial characteristics, motivations, and personality. In addition, entrepreneurial risk-taking and success were explored.

It was found that male and female entrepreneurs defined success differently. Male entrepreneurs defined success in monetary terms. Female entrepreneurs defined success in personal terms.

Risk was found to be related to entrepreneurial success. The perception of risk was found to influence entrepreneurial and consumer decisions. Entrepreneurs were found to be moderate risk-takers.

## CHAPTER III

### METHODOLOGY

This chapter describes the research design of the study. A description of the study framework, hypotheses, study groups, research instrument, data collection methods, and statistical analysis procedures are discussed.

#### Study Framework

This study was comparative in nature. The study compared the risk-taking propensities of female Hispanic entrepreneurs currently involved with a successful business venture and female Hispanic entrepreneurs no longer involved in a business venture.

The independent variables were: business characteristics, personal characteristics, and risk-taking propensity. The dependent variables were success and risk-taking propensity. Table 1 (page 5) shows the study variables and their related dimensions.

#### Hypotheses

The following null hypotheses were tested in this study:

1. There is no significant difference in the risk-taking propensities as measured by the CDQ of successful and unsuccessful female Hispanic entrepreneurs.

2. There is no significant relationship in the risk-taking propensity as measured by the CDQ and age of successful and unsuccessful female Hispanic entrepreneurs.

3. There is no significant relationship in the CDQ risk-taking propensity and the marital status of successful and unsuccessful female Hispanic entrepreneurs.

4. There is no significant relationship in the CDQ risk-taking propensity and the business training of successful and unsuccessful female Hispanic entrepreneurs.

5. There is no significant relationship in the CDQ risk-taking propensity and the business experience of successful and unsuccessful female Hispanic entrepreneurs.

6. There is no significant relationship in the CDQ risk-taking propensity and the educational level of successful and unsuccessful female Hispanic entrepreneurs.

7. There is no significant relationship in the CDQ risk-taking propensity and length of business ownership of successful and unsuccessful female Hispanic entrepreneurs.

8. There is no significant relationship in the CDQ risk-taking propensity and the amount of start-up financing of successful and unsuccessful female Hispanic entrepreneur.

9. There is no significant relationship in the CDQ risk-taking propensity and the source of start-up financing of successful and unsuccessful female Hispanic entrepreneurs.

10. There is no significance relationship in the CDQ risk-taking propensity and the type of business owned by the successful and unsuccessful Hispanic female entrepreneur.

#### Population

This comparative study used two groups of female Hispanic entrepreneurs--current small business owners and former small business owners. This section describes the study area and the sample.

#### Study Area

The study area was comprised of Comal, Hays, and Guadalupe Counties. The area lies approximately between Austin and San Antonio, Texas. According to the 1990 Census, 65,614 individuals live in Hays County; 51,832 live in Comal Counties; and 64,873 live in Guadalupe County. Hispanics comprise 28.8% of Hays County; 22.8% of Guadalupe County; and 29.7% of Comal County.

In 1987 there were 771 women-owned businesses in Comal County, 426 in Hays County, and 401 in Guadalupe County. Of the woman-owned business in Comal County, 22% were owned by Hispanic women; 19% of the women-owned businesses in Hays County were owned by Hispanics; and 20% of the women-owned businesses in Guadalupe County were owned by Hispanics. The sample consisted of approximately 9% of the Hispanic female entrepreneurs in the study area.



According to Chamber of Commerce data, one out of four businesses in operation in Guadalupe, Hays, and Comal counties in 1985 were no longer in operation in 1990. Of those businesses owned by women in 1985, one out of two was no longer in operation in 1990 (Guadalupe County Chamber of Commerce, 1990). The sample consisted of approximately 12% of the Hispanic female entrepreneurs whose businesses failed within the last five years.

#### Sample

The sample consisted of 60 female Hispanic entrepreneurs residing in Comal, Hays, and Guadalupe counties in South Central Texas. Thirty of the entrepreneurs were currently involved in a successful entrepreneurial venture and 30 were formerly involved in an entrepreneurial business. The names of successful Hispanic entrepreneurs were obtained from membership lists of Chambers of Commerce and Hispanic Chambers of Commerce, and from membership lists of women's business organizations, such as the Business and Professional Women's Association and the American Business Women's Association. Also, a computer record from the State Comptroller's office listing the names and addresses of all businesses having a sales tax number was obtained. The names of unsuccessful female entrepreneurs were identified from local financial institutions and Chambers of Commerce personnel. In

addition, the snow ball technique was used to locate names of women Hispanic entrepreneurs whose businesses failed. The same criteria used in the selection of successful entrepreneurs was used in selecting the unsuccessful entrepreneurs--while in business the entrepreneur had a sales tax number, a business address, fewer than 25 employees, and was not employed elsewhere.

#### Instrumentation

Two instruments were used to collect the data for the study. Risk-taking propensity scores were obtained from an adapted version of the Choice Dilemmas Questionnaire developed by Kogan & Wallach in 1964 and used by Brockhaus (1980) and Masters and Meier (1988) (see Appendix A). In addition, a survey instrument was developed to obtain personal and business characteristics (see Appendix A).

#### Choice Dilemma Questionnaire (CDQ)

The Choice Dilemma Questionnaire developed by Kogan and Wallach (1964) was used measure entrepreneurial risk-taking propensity. Permission to use the instrument was obtained from the publisher (see Appendix B). The instrument has been used to measure risk-taking propensity in previous entrepreneurial studies (Brockhaus, 1980a; Masters & Meier, 1988). The instrument was modified to eliminate gender specificity. Items pertaining to health problems and financial matters were updated to make the instrument more

timely. On this instrument, subjects were presented with 12 hypothetical situations. Each item required the respondent to choose between a safe alternative and a more attractive but risky one. In addition, the respondents were asked to indicate the probability of success sufficient for her to select the risky alternative. The instrument required approximately 30 minutes to administer.

Kogan and Wallach (1964), using the Spearman-Brown formula, determined an odd-even reliability coefficient for the CDQ, with reliabilities of .62 for women. They concluded that the internal consistency of the instrument was adequate.

#### Personal and Business Characteristics Survey

A questionnaire was developed to obtain personal and business related data. Personal characteristics included age, marital status, ethnic background, educational level, amount and source of startup financing, formal and informal business training and family members owning a small business. Business characteristics included length of business ownership, type of business owned, number of employees, prior business experience, sales tax number, business address, other employment, business profitability, feelings of success, and reasons for success or failure of the business. This information was used to compare the

demographic profile of each group. Table 2 shows the source for measuring the variables.

Table 2

Data Source for Measuring Variables

Variable	Source
Risk-taking propensity	CDQ
Age	Q1
Marital status	Q2
Business training	Q6, Q7
Business experience	Q10
Educational level	Q3
Length of business ownership	Q8
Startup financing	Q4, Q5
Business type	Q9
Number of employees	Q11
Success	Q13, Q14, Q15

Field Testing the Instrument

A field test of the instrument was conducted to determine content validity. The instrument was administered to 30 Hispanic members of a American Business Women's Association chapter located in a county in South Central

Texas not in the study area. Participants evaluated the instrument using the following criteria:

- Clarity of directions
- Ability to visualize themselves in the situations found in the Choice Dilemma Questionnaire
- Appropriateness of information requested in the Personal and Business Characteristic Survey Form.

Field study participants suggested that oral as well as written instructions be provided when administering the CDQ. Participants stated that when responding to the Choice Dilemma Questionnaire, they were unsure whether they should respond as they, personally, would act in the situation, or how they would advise others to act. It was decided to orally explain the instructions to the participants.

#### Data Collection

Personal interviews were used to collect the data. Those selected to participate were contacted by letter (see Appendix C). The letter gave the purpose of the study and invited them to participate in the study. A follow-up phone call was made to confirm their participation and to set up a date for the interview.

#### Interview Method of Collection

The CDQ and questionnaire were administered by the researcher. The interviews were conducted in the home or place of business of the participants. A script was used to



ensure that all participants were given the identical oral instructions. Participants were asked to sign a consent form (see Appendix D).

#### Treatment of Data

The hypotheses were tested for significant differences using multivariate analysis, Pearson Product Moment, and point bi-serial correlation. The CDQ was factor analyzed.

## CHAPTER IV

### RESULTS

The purpose of the study was to compare how the risk-taking propensities of successful female Hispanic entrepreneurs owning a small business differed from female Hispanic entrepreneurs whose small business failed. In addition, the study explored how personal and business characteristics were related to the risk-taking propensity of successful and unsuccessful female Hispanic entrepreneurs. Hypotheses were tested on personal characteristics (age, marital status, educational attainment, and business training), business characteristics (previous business experience, source and amount of business start-up funds, length of business ownership, and type of business owned), and risk-taking propensity.

#### Descriptive Results

This section provides descriptive results concerning the demographic and business characteristics of the entrepreneurs studied. Personal characteristics included age, marital status, educational level, business training, and entrepreneurial family members. Business characteristics included length of business ownership, type

of business, amount and source of start-up funds, and previous business experience.

### Sample

The sample population consisted of 60 Hispanic female entrepreneurs living in Comal, Guadalupe, and Hays counties in South Central Texas. The entrepreneurs were interviewed using a modified version of the Choice Dilemma Questionnaire (CDQ) developed by Kogan and Wallach (1964). Personal and business information was also obtained in the interview.

The group of successful female entrepreneurs was limited to those who had been in a business for five or more years, were not employed elsewhere, had a business address, fewer than 25 employees, and had a sales tax number. The group of failed entrepreneurs consisted of female former small business owners.

### Personal Characteristics

Age. There was little differences in the age of the successful and unsuccessful entrepreneurs. The mean age of the Successful Group of entrepreneurs was 49 and the range was from 29 to 64 years of age. The mean age of the Unsuccessful Group was 59 and the range was from 33 to 61.

Marital Status. The marital status of the two groups was similar. A majority of both groups (80% of the Successful Group and 90% of the Unsuccessful Group) was married. One of the Successful Group was single. Three of

the Successful Group and 2 of the Unsuccessful Group were divorced. Two of the Successful Group and one of the Unsuccessful Group were widowed.

Educational Level. The two groups were similar regarding educational level. The majority of both groups (63.3% of the Successful Group and 70.0% of the Unsuccessful Group) had either graduated from a high school or had obtained a GED. Eight of each group (26.7%) had attended college. There was a difference in those completing a college education. Two of the Successful Group (6.6%) had completed a college education, but none of the Unsuccessful Groups had completed a college education. None of either group had attended graduate school.

Business Training. The participants were asked if they had taken any formal or informal training in business-related topics. Differences were found in both the formal and informal business training of successful and unsuccessful entrepreneurs. The Successful Group had more formal business training in bookkeeping, personnel management, insurance, and credit than the Unsuccessful Group. Thirty percent of the Successful Group and 16.7% of the Unsuccessful Group had formal business training in bookkeeping or record-keeping. Three times as many of the Successful Group had formal business training in personnel management than the Unsuccessful Group. None of the

Unsuccessful Group had formal business training in either insurance or credit but 6.7% of the Successful Group had formal business training in insurance and 13.3% of the Successful Group had formal training in credit.

There were also differences in the two groups regarding informal business training in business-related topics. Four times as many of the Successful Group (13.3%) had informal business training in business planning than the Unsuccessful Group (0.0%). Twice as many of the Successful Group had informal business training in bookkeeping or record-keeping than the Unsuccessful Group. Forty percent of the Successful Group had informal business training in insurance, whereas 23.3% of the Unsuccessful Group had such informal business training.

Entrepreneurial Family Members. The participants were asked to indicate if any members of their family were small business owners. Two-thirds of the Successful Group (66.7%) and half (50.0%) of the Unsuccessful Group had fathers who were small business owners. In the Successful Group, three had mothers, ten had brothers, and 2 had sisters who were small business owners. In the Unsuccessful Group, 11 had brothers who were small business owners. Table 3 summarizes the personal characteristics of each group.



Table 3

Descriptive Statistics for Personal Characteristics of  
Successful and Unsuccessful Hispanic Female Entrepreneurs

Question	Frequency (%)	
	Successful	Unsuccessful
<b>Age</b>		
Less than 35 years	3 (10.0)	1 (03.3)
35 to 60 years	26 (86.7)	27 (90.0)
Over 60 years	1 (03.3)	2 (06.7)
<b>Marital Status</b>		
Single	1 (03.3)	0 (00.0)
Divorced	3 (10.0)	1 (03.3)
Married	24 (80.0)	27 (90.0)
Widowed	2 (06.7)	1 (03.3)
<b>Educational Level</b>		
Did not complete H.S.	1 (03.3)	1 (03.3)
H.S./GED	19 (63.3)	21 (70.0)
Some College/Business		
Training	8 (26.7)	8 (26.7)
College Degree	2 (06.6)	0 (00.9)
<b>Formal Training in Business-Related Topics</b>		
Business Planning	2 (06.7)	2 (06.7)
Bookkeeping	9 (30.0)	5 (16.7)

Table 3 (continued)

Question	Frequency (%)	
	Successful	Unsuccessful
Personnel Management	3 (10.0)	1 (03.3)
Insurance	2 (06.7)	0 (00.0)
Obtaining Credit	4 (13.3)	0 (00.0)
Informal Training in Business-Related Topics		
Business Planning	4 (13.3)	0 (00.0)
Bookkeeping	23 (76.7)	11 (36.7)
Personnel Management	3 (10.0)	1 (03.3)
Insurance	12 (40.0)	7 (23.3)
Obtaining Credit	6 (20.0)	4 (13.3)
Family Members Who Are/Were Small Business Owners		
Father	20 (66.7)	15 (50.0)
Mother	3 (10.0)	0 (00.0)
Brother	10 (33.3)	11 (36.7)
Sister	2 (06.7)	0 (00.0)

#### Business Characteristics

Business characteristics included length of business operation, business type, start-up financing, and previous business experience. The participants were also asked to

indicate what they felt made their business a success or failure.

Length of Business Operation. A majority of the Successful and Unsuccessful Groups had owned their businesses between 6 and 10 years at the time of the interview or when the business failed. Of the Successful Group, seven had owned the business between 11 and 20 years. Fourteen of the Unsuccessful Group had owned their business less than five years and one had owned her business over 10 years.

Business Type. A majority of the both groups had service related businesses (70% of the Successful Group and 80% of the Unsuccessful Group). Seven (23.3%) of the Successful Group and 5 (16.7%) of the Unsuccessful Group had retail businesses. Two of the Successful Group (6.7%) and one (3.3%) of the Unsuccessful Group had businesses in construction.

Start-up Financing. A majority of both groups (80% of the Successful Group and 63.3% of the Unsuccessful Group) had start-up funds of between \$1000 and \$5000. Two (6.7%) of the Successful Group and 6 (20.0) of the Unsuccessful Group had start-up funds of less than \$1000. Four of the Successful Group and 5 of the Unsuccessful Group had start-up funds of over \$5000. Half (50.0%) of each group borrowed their start-up funds from a financial institution. Thirteen

(30.0%) of the Successful Group and 9 (36.7%) of the Unsuccessful Group had saved the money to start the business. Two (6.7%) of the Successful Group and 6 (20.0%) of the Unsuccessful Group borrowed the business start-up funds from friends or relatives.

Previous Business Experience. Differences were found between the previous business experience of successful and unsuccessful entrepreneurs. Over half (53.3%) of the Successful Group had previous business experience whereas only 30% of the Unsuccessful Group had previous business experience. Table 4 summarizes the business characteristics of the successful and unsuccessful Hispanic female entrepreneur.

Success. The participants were asked to indicate whether or not they felt their business was successful. Of those owning a business, 73.3% indicated that they felt successful in their business endeavor. Among the reasons for success were support from spouse and other family members, ability to manage home and business, hard work, help from other business owners, education or attending programs offered by groups such as Chambers of Commerce.

Table 4

Descriptive Statistics for Business Characteristics of  
Successful and Unsuccessful Hispanic Female Entrepreneurs

	Frequency (%)	
	Successful	Unsuccessful
Length of Business Operation		
Less than 5 years	0 (00.0)	14 (46.7)
6 to 10 Years	23 (76.7)	15 (50.0)
11 to 20 Years	7 (23.3)	1 (03.3)
Over 20 Years	0 (00.0)	0 (00.0)
Business Type		
Service	21 (70.0)	24 (80.0)
Construction	2 (06.7)	1 (03.3)
Retail	7 (23.3)	5 (16.7)
Amount of Start-up Financing		
Less than \$1000	2 (06.7)	6 (20.0)
\$1000 to \$5000	24 (80.0)	19 (63.3)
Over \$5000	4 (13.3)	5 (16.7)
Source of Start-up Financing		
Personal Savings	13 (30.0)	9 (36.7)
Financial Institution	15 (50.0)	15 (50.0)
Friends/Family	2 (06.7)	6 (20.0)



Table 4 (continued)

	Frequency (%)	
	Successful	Unsuccessful
Previous Business Experience		
Yes	16 (53.3)	9 (30.0)
No	14 (46.7)	21 (70.0)

All of the Unsuccessful Group indicated that they felt that their business was not a success. Reasons for failure included economic conditions, inability to balance family and business, lack of credit opportunities, and being overwhelmed by the amount of paperwork.

#### Hypothesis Testing

Ten null hypotheses were tested to determine a significant difference in the risk-taking propensities of successful and unsuccessful entrepreneurs and significant relationships in personal and business characteristics and risk-taking propensity in this study. The two groups were compared to determine significant differences in risk-taking propensity. In addition, relationships between risk-taking propensity and personal and business characteristics were investigated. Personal characteristics included age, marital status, educational level, and formal and informal

business training. Business characteristics included length of business ownership, amount and source of start-up financing, previous business experience and type of business owned.

#### Differences in Risk-taking Propensity

The first null hypothesis was tested for differences in risk-taking propensities of successful and unsuccessful Hispanic female entrepreneurs. The dependent variable was risk-taking propensity and the independent variables were success and failure. There was a not a significant difference at the .05 level of significance in the risk-taking propensity, as measured by the CDQ scores, between successful Hispanic female entrepreneurs and unsuccessful Hispanic female entrepreneurs. The null hypothesis was accepted. Differences were tested using  $t$ -test. For risk-taking propensity, ( $t = 5.7341$ ,  $df = 58$ ,  $p = .06$ ), the probability value was not significant at the level of .05. Table 5 summarizes the results of these comparisons.

Table 5

Multivariate Analysis of Risk-taking Propensity of  
Successful and Unsuccessful Hispanic Female Entrepreneurs

Group	No.	Mean Age	<u>m</u>	<u>t</u>	<u>p</u>
Successful	30	49	75.887	5.7341	.06
Unsuccessful	30	59	59.000		

df = 58; alpha = .05

Relationship Between Risk-taking Propensity and Personal  
Characteristics

Four null hypotheses tested the relationship between risk-taking propensity and personal characteristics. The independent variables were age, marital status, educational level, and business training. Risk-taking propensity was the dependent variable. The hypotheses were testing using Pearson Product Moment R (for age) and Point Biserial (for marital status, educational level, and business training).

Age. Age was correlated with the risk-taking propensity of successful and unsuccessful entrepreneurs. A significant relationship at the .05 level of significance was found between age and the risk-taking propensity of successful female Hispanic entrepreneurs, therefore the null hypothesis was not accepted. A significant relationship at

the .05 level of significance was not found between age and the risk-taking propensity of the unsuccessful female Hispanic entrepreneur and the null hypothesis of was accepted. Table 6 summarizes the results of this comparison.

Table 6

Correlation Between Risk-taking Propensity and Age of Successful and Unsuccessful Hispanic Female Entrepreneurs

Group	No.	Mean Age	Multiple $R$	$p$
Success	30	49	0.5274	0.0027*
Unsuccessful	30	59	0.1151	0.4132

\*  $p < .05$

Marital Status. Marital status was correlated with risk-taking propensity for successful and unsuccessful Hispanic female entrepreneurs. A significant relationship at the .05 level of significance was not found between marital status and risk-taking propensity of the successful Hispanic female entrepreneur and the null hypothesis was accepted. A significant relationship at the .05 level of significance was not found between marital status and risk-

taking propensity of the unsuccessful Hispanic female entrepreneur and the null hypothesis was accepted.

Educational Level. Educational status was tested with risk-taking propensity for successful and unsuccessful Hispanic female entrepreneurs. A significant relationship at the .05 level of significance was not found between educational level and risk-taking propensity of the successful Hispanic female entrepreneur and the null hypothesis was accepted. A significant relationship at the .05 level of significance was not found between educational level and risk-taking propensity of the unsuccessful Hispanic female entrepreneur and the null hypothesis was accepted.

Formal Business Training. Each dimension of formal business training (business planning, bookkeeping, personnel management, insurance, and credit) was tested with risk-taking propensity for the successful and unsuccessful Hispanic female entrepreneur. A significant relationship at the .05 level of significance was not found between the formal business training dimensions of planning, bookkeeping, personnel management, insurance, and credit and risk-taking propensity of the successful Hispanic female entrepreneur and the null hypotheses were accepted. A significant relationship at the .05 level of significance was not found between the formal business training



dimensions of planning, bookkeeping, personnel management, insurance, and credit and risk-taking propensity of the unsuccessful Hispanic female entrepreneur and the null hypotheses were accepted.

Informal Business Training. Each dimension of informal business training (business planning, bookkeeping, personnel management, insurance, and credit) was tested with risk-taking propensity of successful and unsuccessful Hispanic female entrepreneurs. A significant relationship at the .05 level of significance was not found between business planning, bookkeeping, personnel management, and credit and the risk-taking propensity of successful Hispanic female entrepreneurs and, for these dimensions, the null hypotheses was accepted for the successful group. A significant relationship at the .05 level of significance was found between informal training in insurance and risk-taking propensity of the successful Hispanic female entrepreneurs, and for this dimension, the null hypothesis was not accepted.

A significant relationship at the .05 level of significance was not found between the informal business training dimensions of business planning, bookkeeping, personnel management and insurance and the risk-taking propensity of unsuccessful Hispanic female entrepreneurs, and for these dimensions, the null hypotheses was accepted.

A significant relationship at the .05 level of significance was found between informal training in credit and the risk-taking propensity of unsuccessful Hispanic female entrepreneurs, and for this dimension, the null hypothesis was not accepted. Table 7 summarizes the results of these comparisons.

Relationship Between Risk-taking Propensity and Business Characteristics

Five null hypotheses tested the relationship between risk-taking propensity and business characteristics of successful and unsuccessful Hispanic female entrepreneurs. The independent variables were start-up financing, length of time in business, business type and previous business experience. The hypotheses were tested using Point Biserial correlation.

Table 7

Correlations Between Risk-Taking Propensity and Personal  
Characteristics of Successful and Unsuccessful Hispanic  
Female Entrepreneurs

Multiple <u>R</u>		
Personal Characteristics	Successful Group	Unsuccessful Group
Marital Status	-0.2797	-0.2351
Educational Level	-0.2976	0.0720
Formal Business Training		
Business Planning	-0.01535	-0.0409
Bookkeeping	-0.1806	-0.0274
Personnel Mgt.	-0.1044	0.1846
Insurance	-0.1535	-0.0001
Credit	0.1484	0.0001
Informal Business Training		
Business Planning	-0.1375	0.0001
Bookkeeping	-0.3444	0.2962
Personnel Mgt.	0.1293	0.3350
Insurance	-0.4384*	0.1627
Credit	-0.0634	0.3449*

\* $p < .05$

Amount of Start-up Financing. Amount of start-up financing was correlated with risk-taking propensity of successful and unsuccessful Hispanic female entrepreneurs. No significant relationship at the .05 level of significance was found between the amount of start-up financing and risk-taking propensity of successful Hispanic female entrepreneurs and the null hypothesis was accepted. No significant relationship at the .05 level of significance was found between the amount of start-up financing and risk-taking propensity of unsuccessful Hispanic female entrepreneurs and the null hypothesis was accepted.

Source of Start-up Financing. The source of start-up financing was correlated with the risk-taking propensity of successful and unsuccessful entrepreneurs. A significant relationship at the .05 level of significance was found between the amount of the start-up financing and risk-taking propensity of the successful Hispanic female entrepreneur and the null hypothesis was not accepted. No significant relationship at the .05 level of significance was found between the amount of start-up financing and the risk-taking propensity of the unsuccessful Hispanic female entrepreneur and the null hypothesis was accepted.

Length of Time in Business. Length of time in business was correlated with risk-taking propensity of successful and unsuccessful entrepreneurs. No significant relationship at

the .05 level of significance was found between the length of time in the business and the risk-taking propensity of successful Hispanic female entrepreneurs and the null hypothesis was accepted. No significant relationship at the .05 level of significance was found between the length of time in business and the risk-taking propensity of unsuccessful Hispanic female entrepreneurs and the null hypothesis was accepted.

Type of Business. The type of business was correlated with the risk-taking propensity of successful and unsuccessful entrepreneurs. No significant relationship at the .05 level of significance was found between the type of business and the risk-taking propensity of the successful Hispanic female entrepreneur and the null hypothesis was accepted. No significant relationship at the .05 level of significance was found between the type of business and the risk-taking propensity of the unsuccessful hispanic female entrepreneur and the null hypothesis was accepted.

Previous Business Experience. Previous business experience was correlated with the risk-taking propensity of successful and unsuccessful entrepreneurs. No significant relationship at the .05 level of significance was found between the previous business experience and the risk-taking propensity of the successful Hispanic female entrepreneur and the null hypothesis was accepted. No significant



relationship at the .05 level of significance was found between the previous business experience and the risk-taking propensity of the unsuccessful Hispanic female entrepreneur and the null hypothesis was accepted. Table 8 summarizes the results of these comparisons.

Table 8

Correlations Between Risk-taking Propensity and Business Characteristics of Successful and Unsuccessful Hispanic Female Entrepreneurs

Multiple R		
Business Characteristics	Successful Group	Unsuccessful Group
Start-up Financing		
Amount	-0.1327	-0.1213
Source	-0.3667*	-0.1202
Time in Business	0.2727	-0.0851
Business Type	0.3224	0.2441
Previous Experience	-0.1315	0.2039

\* $p < .05$



### Summary of Hypotheses Testing

The results of null hypothesis testing of relationships between risk-taking propensity and personal and business characteristics of successful and unsuccessful Hispanic female entrepreneurs is summarized in Table 9.

Table 9

#### Results of Null Hypothesis Testing for Relationships Between Personal and Business Characteristics and Risk-Taking Propensity for Successful and Unsuccessful Hispanic Female Entrepreneurs

Variable/Dimension	Successful	Unsuccessful
Age	Not Accept	Accept
Marital Status	Accept	Accept
Educational Level	Accept	Accept
Formal Business Training		
Business Planning	Accept	Accept
Bookkeeping	Accept	Accept
Personnel Manage.	Accept	Accept
Insurance	Accept	Accept
Credit	Accept	Accept
Informal Business Training		
Business Planning	Accept	Accept
Bookkeeping	Accept	Accept

Table 9 (continued)

Variable/ Dimension	Successful	Unsuccessful
Personnel Management	Accept	Accept
Insurance	Not Accept	Accept
Credit	Accept	Not Accept
Start-up Financing		
Amount	Accept	Accept
Source	Not Accept	Accept
Time in Business	Accept	Accept
Business Type	Accept	Accept
Previous Experience	Accept	Accept

#### Factor Analysis of CDQ Data

Factor analysis is a statistical technique used to discover which variables in a data set form coherent subgroups that are relatively independent of one another (Tabachnick & Fidell, 1983). In this research, the goal of factor analysis was to summarize patterns of intercorrelations among Choice Dilemma Questionnaire test items. The steps in factor analysis include preparing the correlation matrix, determining the number of factors to be considered, extracting a set of factors from the matrix, rotating the factors to increase interpretability, and

interpreting the results (Tabachnick & Fidell, 1983). The data were analyzed using BMDP4M.

The Choice Dilemma Questionnaire was developed by Kogan and Wallach (1964) to measure risk-taking propensity. The instrument includes 12 scenarios in which the subject is presented with a dilemma and must choose between a safe and a risky course of action. The dilemmas involve subjective probability of success and failure. The instrument has been used in previous research to determine the risk-taking propensity of male and female entrepreneurs, older adults, and college students (Brockhaus, 1980a; Masters & Meier, 1988).

Principal components factor analysis (PCA) employing varimax rotation was performed on the choice dilemma items on the CDQ. Inspection of the correlation matrices among the 12 items for both successful and unsuccessful Hispanic female entrepreneurs revealed numerous correlations in excess of .30 and considerably higher. A correlational matrix that is factorable should include several sizeable correlations. Tabachnick and Fidell (1983) suggested the correlations should exceed .30. Table 10 summarizes the correlation matrix.

Table 10

Correlation Matrix of Choice Dilemma Questionnaire Items

Item No.	CDQ1	CDQ2	CDQ3	CDQ4	CDQ5
CDQ1	1.000				
CDQ2	0.345	1.000			
CDQ3	0.428	0.331	1.000		
CDQ4	0.292	0.410	0.357	1.000	
CDQ5	0.290	0.258	0.159	0.281	1.000
CDQ6	0.422	0.074	0.337	0.313	0.317
CDQ7	0.384	0.377	0.531	0.543	0.325
CDQ8	0.277	0.126	0.160	0.244	0.276
CDQ9	0.383	0.270	0.263	0.163	0.301
CDQ10	0.1940	-0.008	0.133	0.075	0.055
CDQ11	0.141	0.212	0.065	0.190	0.248
CDQ12	0.181	0.159	0.135	0.156	-0.128

CDQ6	1.000				
CDQ7	0.258	1.000			
CDQ8	0.193	0.200	1.000		
CDQ9	0.417	0.422	0.128	1.000	
CDQ10	0.243	0.112	0.301	0.308	1.000
CDQ11	0.210	0.163	0.220	0.307	0.209

Table 10 (continued)

Item No.	CDQ6	CDQ7	CDQ8	CDQ8	CDQ9
CDQ12	0.201	0.114	0.234	0.404	0.327

  

Item No.	CDQ11	CDQ12
CDQ11	1.000	
CDQ12	0.062	1.000

### Multicollinearity and Singularity

There are two different conditions of correlation matrices that can yield portions of the matrix unstable-- multicollinearity and singularity. Multicollinearity occurs when two variable are perfectly or almost perfectly correlated. Singularity occurs when one score is in a linear combination of others. An indicator of multicollinearity and singularity is a high Squared Multiple Correlation (SMC) between two variables. According to Tabachnick and Fidell (1983) a high SMC is near 1.0 (in excess of .99).

Inspection of the original, non-rotated RCA runs revealed that the smallest eigenvalues did not approach 1.



The largest Squared Multiple Correlation (SMC) was .7422. Multicollinearity and singularity were not indicated. Squared Multiple Correlations of CDQ items are given in Table 11.

#### Outliers Among Variables

SMCs among variables may also be used to evaluate outliers among variables. A variable with a low SMC (less than 0.3) indicates that the variables are unrelated to others in the set and are removed from the set. The lowest SMC was .3776. It was decided to retain all items in the analysis (see Table 11).

#### Outliers with Respect to the Solution

The goal of factor analysis in this study was to explore how variables grouped together. Some cases may be unusual with respect to their scores on the factors. Outliers with respect to the solution will have large Mahalanobis distances estimated as chi square values, from the location of the case in the space defined by factors to the centroid of all cases in the same space.



Table 11

Squared Multiple Correlations of Each Choice Dilemma  
Questionnaire (CDQ) Item with All Other Choice Dilemma  
Questionnaire Items to Assess Multicollinearity

CDQ Item	SMC
CDQ1	0.4710
CDQ2	0.4443
CDQ3	0.6005
CDQ4	0.5108
CDQ5	0.7422
CDQ6	0.4158
CDQ7	0.6484
CDQ8	0.3776
CDQ9	0.5217
CDQ10	0.5660
CDQ11	0.4481
CDQ12	0.6921

Mahalanobis Distance of each case from the centroid of the factor scores evolved as CHISQ/DF. Cases with values greater than 3.78 (the critical chi square value for three degrees of freedom divided by the number of factors) are considered outliers. Two cases were found to be outliers and were not used in the analysis. Table 12 shows the estimated factor scores and Mahalanobis Distances (Chi-squares) from each case to the centroid of all cases for the original data.

Table 12

Estimated Factor Scores and Mahalanobis Distances to Assess Outliers

Case	CHISQ/ DF	CHISQ/ DF	CHISQ/ DF	FACTOR 1	FACTOR 2	FACTOR 3
01	0.997	0.697	1.097	-0.118	1.107	0.923
02	2.204	0.425	20797	0.833	-0.657	0.387
03	1.104	0.840	1.192	-0.612	1.450	0.212
04	0.741	0.131	0.945	0.420	0.168	0.434
05	1.738	0.551	2.133	0.053	-0.883	0.933
06	0.999	0.684	1.104	0.467	-1.288	0.416
07	1.515	0.359	1.900	0.531	-0.890	-0.062
08	1.288	1.368	1.261	1.856	-0.611	-0.535
09	0.839	1.584	0.591	-1.298	-2.101	0.496
10	1.084	0.135	1.400	0.509	-0.363	-0.123

Table 12 (continued)

Case	CHISQ/ DF	CHISQ/ DF	CHISQ/ DF	FACTOR 1	FACTOR 2	FACTOR 3
11	1.217	0.961	1.303	1.568	0.469	0.450
12	0.746	0.545	0.812	0.214	-0.982	-0.793
13	0.310	0.053	0.396	-0.308	-0.167	0.192
14	1.197	2.502	0.761	1.849	-1.996	-0.323
15	0.705	1.307	0.504	1.961	0.162	0.221
16	0.922	1.140	0.850	1.800	0.410	0.114
17	0.709	0.743	0.697	1.233	0.785	-0.304
18	1.236	1.413	1.177	1.083	0.705	-1.603
19	0.422	0.124	0.521	0.242	0.335	-1.603
20	0.329	0.587	0.242	1.271	-0.067	0.376
21	0.437	0.678	0.356	0.569	1.117	-0.680
22	0.672	1.542	0.382	1.909	0.007	-0.990
23	0.734	0.396	0.847	0.501	0.967	0.037
24	0.639	0.631	0.642	1.044	0.016	0.896
25	0.514	1.160	0.299	0.474	1.804	-0.030
26	0.771	1.232	0.617	0.272	-0.476	1.842
27	0.672	0.758	0.643	0.540	0.769	1.179
28	0.456	0.119	0.569	-0.045	0.590	0.084
29	0.476	0.606	0.433	1.121	0.709	0.244
30	0.511	0.077	0.655	0.159	0.263	0.367
31	0.620	0.401	0.693	0.175	-1.083	-0.020

Table 12 (continued)

Case	CHISQ/ DF	CHISQ/ DF	CHISQ/ DF	FACTOR 1	FACTOR 2	FACTOR 3
32	0.792	0.473	0.898	-0.018	-0.018	-1.121
33	0.626	0.377	0.709	-0.618	0.265	-0.824
34	0.756	0.271	0.917	-0.894	0.099	0.063
35	1.030	0.438	1.227	-1.094	0.294	-0.171
36	0.635	0.686	0.619	-1.205	0.592	0.507
37	0.929	20246	0.490	-1.503	-2.056	-0.503
38	1.087	0.883	1.155	-0.854	-0.829	-1.111
39	1.013	0.060	1.331	0.229	0.042	0.354
40	1.683	2.429	1.434	-1.943	-0.398	1.831
41	1.438	0.742	1.671	-0.070	1.204	-0.878
42	1.275	0.240	1.620	-0.362	0.053	0.765
43	0.663	0.588	0.688	0.906	0.941	0.242
44	0.782	1.898	0.411	-0.822	0.139	2.236
45	1.822	0.949	2.114	-1.648	-0.157	0.326
46	0.906	0.530	1.031	-0.054	0.902	0.879
47	1.029	0.508	1.202	-1.169	0.092	-0.385
48	0.983	1.026	0.969	0.118	0.117	1.740
49	1.315	4.395	0.288	-1.149	3.102	-1.497
50	0.713	1.076	0.593	-0.479	1.059	1.370
51	1.721	3.376	1.169	-1.768	0.266	2.633
52	1.453	4.764	0.349	-1.627	1.398	-3.113

Table 12 (continued)

Case	CHISQ/ DF	CHISQ/ DF	CHISQ/ DF	FACTOR 1	FACTOR 2	FACTOR 3
53	0.917	2.332	0.446	0.259	-1.923	-1.798
54	0.398	0.096	0.499	-0.155	-0.350	-0.376
55	1.050	0.581	1.206	-0.563	-0.408	-1.122
56	1.075	0.725	1.192	-1.370	-0.136	0.528
57	1.042	0.153	1.339	-0.587	-0.326	-0.082
58	1.851	1.104	2.100	-1.135	-0.879	-1.119
59	1.898	1.253	2.133	-0.683	-1.727	-0.556
60	1.316	1.054	1.403	-0.704	-1.628	-0.123

Number of Factors

To determine the number of factors, an estimate was made from the sizes of eigenvalues reported as part of an initial run with PCA extraction. The number of factors with eigenvalues greater than 1 is an estimate of the maximum number of factors. Three factors had eigenvalues greater than 1, so it was estimated that three factors be extracted. Table 14 summarizes the factors and variances.

After the first run with principal factors extraction, inspection of variance extracted by the first several components revealed an expected decline (see Table 13). Percents of variance dropped off after the first three

factors. It was decided that the most reasonable number of factors was three.

Table 13

Eigenvalues (Variance Explained) for 12 Choice Dilemma Items on the Choice Dilemma Questionnaire

Factor	Variance Explained
Dilemma 1	3.7999
Dilemma 2	1.5046
Dilemma 3	1.1242
Dilemma 4	0.9905
Dilemma 5	0.9365
Dilemma 6	0.7243
Dilemma 7	0.6708
Dilemma 8	0.6366
Dilemma 9	0.5524
Dilemma 10	0.4602
Dilemma 11	0.3468
Dilemma 12	0.2534

Note: Variance Explained is the Eigenvalue



Simplicity of structure in factor loadings was assessed from the table of Rotated Factor Loadings (see Table 14). The factor matrix has been rearranged so that columns appear in decreasing order of variance explained by factors. The rows have been rearranged so that for each factor loadings greater than 0.5000 appear first. Loadings less than 0.5000 have been replaced by 0.

Table 14

Rotated Factor Loadings

CDQ Item	Factor 1	Factor 2	Factor 3
CDQ1	0.579	0.262	0.259
CDQ2	0.659	0.098	-0.021
CDQ3	0.751	-0.054	0.182
CDQ4	0.684	0.208	-0.005
CDQ5	0.310	0.758	-0.267
CDQ6	0.344	0.422	0.331
CDQ7	0.786	0.160	0.068
CDQ8	0.107	0.544	0.266
CDQ9	0.369	0.331	0.526
CDQ10	-0.059	0.306	0.685
CDQ11	0.034	0.642	0.186
CDQ12	0.130	-0.069	0.819

### Variance and Covariance

The importance of each factor was calculated as a percent of variance and covariance they represent (see Table 15). Sum of Square Loadings (SSL) was used in the calculations. For orthogonal rotation, it is important to use the SSL from rotated factors because distribution of variance among factors changes with rotation. Proportion of variance is SSL divided by the number of variables and converted to a percentage. The proportion of covariance is SSL divided by the sum of SSL (6.429). The first factor represents most of the covariance and the covariance is evenly distributed between the remaining two factors.

Table 15

### Percents of Variance and Covariance Explained by each Rotated Orthogonal Factor

	Factors		
	1	2	3
Sum of Square Loading	2.80	1.82	1.81
% Variance	23.36	15.15	15.05
% Covariance	43.36	28.28	28.11

Sorted Rotated Factor Loadings

Factors are interpreted through their factor loadings. Variables are grouped by factors (see Table 16) and reordered by size of loadings. A loading of .45 is required for inclusion of a variable in definition of a factor. CDQ item #6, relating to a doctorate degree, did not load on any factor.

Table 16

Sorted Rotated Factor Loadings

CDQ Item	Factor1	Factor2	Factor3
CDQ7	0.786	0.000	0.000
CDQ3	0.751	0.000	0.000
CDQ4	0.684	0.000	0.000
CDQ2	0.659	0.000	0.000
CDQ1	0.579	0.000	0.000
CDQ5	0.000	0.758	0.000
CDQ11	0.000	0.642	0.000
CDQ8	0.000	0.544	0.000
CDQ12	0.000	0.000	0.819
CDQ10	0.000	0.000	0.685
CDQ9	0.000	0.000	0.526
CDQ6	0.000	0.000	0.000

With that criterion, tables were generated to assist with interpretation. Variables are clustered by factors and put in ascending order by factor loadings with the largest loadings at the top. In interpretation, the near top is given greater weight. To interpret a factor, the underlying dimension that unifies the group is identified and labeled. Tables 17, 18, and 19 show the underlying dimensions of each factor.

Table 17

Factor 1: Psychological

CDQ ITEM	Underlying Dimensions	Factor Loading
#7	Loss of prestige Loss of reputation	0.786
#3	Loss of family standing Loss of inheritance	0.751
#4	Loss of prestige Loss of reputation	0.684
#2	Lifestyle change Loss of life	0.659
#1	Job change Financial loss	0.576

Table 18

Factor 2: Financial

CDQ Item	Underlying Dimension	Factor Loading
#5	Financial loss	0.758
#11	Financial loss Loss of prestige	0.642
#8	Financial loss	0.544

Table 19

Factor 3: Familial

CDQ Item	Underlying Dimension	Factor Loading
#12	Marital loss	0.819
#10	Balancing work/ family	0.685
#9	Family loss	0.526

Results of Factor Analysis

Factor analysis of the Choice Dilemma Questionnaire resulted in 11 of the questionnaire items loading onto three factors. The factors were given the following labels:



psychological, financial, and family. One item did not load on any factor.

#### Summary

The two groups were similar regarding their age, marital status, educational level, entrepreneurial family members, start-up financing, and business type, . The two groups differed in their business training, and previous business experience. The null hypotheses testing for relationships between risk-taking propensity and age, informal business training in insurance, and source of start-up financing were not accepted for the successful Hispanic female entrepreneur. The null hypotheses for relationships between risk-taking propensity and marital status; educational level; formal training in business planning, bookkeeping, personnel management, insurance, credit; informal business training in business planning, bookkeeping, personnel management, and credit; amount of start-up financing, time in business, business type, and previous business experience were accepted for the successful Hispanic female entrepreneur. The null hypothesis for relationships between risk-taking propensity and informal business training in credit was not accepted for the unsuccessful female entrepreneur. The null hypotheses testing for relationships between risk-taking propensity and age, marital status; educational level;

formal business training in business planning, bookkeeping, personnel management, insurance and credit; informal business training in business planning, bookkeeping, personnel management, and insurance; amount and source of start-up financing, time in business, business type and previous business experience.

The Choice Dilemma Questionnaire was factor analyzed to determine which items in the questionnaire for subgroups. Three factors were extracted and labeled: psychological, financial, and family.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

A modified version of the Choice Dilemma Questionnaire (CDQ) was used to measure risk-taking propensity of female Hispanic entrepreneurs owning a successful small business and female Hispanic entrepreneurs whose business venture failed. Data were analyzed for correlations between the personal and business characteristics of the two groups and their risk-taking propensity. In addition, the Choice Dilemma Questionnaire were factor summarized.

#### Summary

This study investigated the differences in the risk-taking propensities of successful and unsuccessful female Hispanic entrepreneurs in South Central Texas. Relationships between risk-taking propensity and personal and business characteristics were also examined.

The number of female entrepreneurs is increasing rapidly. In South Central Texas the number of female Hispanic entrepreneurs is a growing segment of the entrepreneur population. The decision to become an entrepreneur is [erceived as a risk. It could be helpful for the entrepreneur and those involved in training entrepreneurs be able to determine assess risk-taking

propensity and the factors related to risk-taking propensity. Risk-taking assessment could result in strengthening success potential.

The sample was taken from female Hispanic entrepreneurs living in Comal, Guadalupe, and Hays Counties. The "successful" entrepreneur was defined as remaining in business five years or more, having a business address, a sales tax number and having fewer than 25 employees. The "unsuccessful" entrepreneur was defined as being a former small business owners.

The two types of data were collected in an interview. The Choice Dilemma Questionnaire measured risk-taking propensity and a survey instrument designed by the research collected demographic and business information. Multivariate analysis and point biserial correlations were used to analyze data for hypotheses testing. The Choice Dilemma Questionnaire was factor analyzed.

The overall research questions pertained to differences in the risk-taking propensities of successful and unsuccessful Hispanic female entrepreneurs. Additional research questions concerned the demographic characteristics of the successful and unsuccessful Hispanic female entrepreneur and their relationship to the risk-taking propensity.

### Summary of Findings

Some differences were found between the two groups. Although both groups had similar educational levels, the successful group had more formal and informal business training than the unsuccessful group. The successful group also had more family members owning a small business than the unsuccessful group. Business training and family role models could be an indication of more preparation for owning a small business. The successful group had owned their businesses longer than the unsuccessful group. Almost half of the unsuccessful entrepreneurs experienced business failure during the first five years of business operation. The groups were similar regarding their business type and amount of start-up financing. This profile is consistent with other research (Carsrud et al., 1987; Enz, Dollinger, & Daily, 1990; Hisrich, 1984; Hisrich & Brush, 1986; Hull et al., 1990). The female Hispanic entrepreneur was married, well educated, had a retail or service-related business, and had prior experience in business.

Ten null hypotheses were tested in this study to determine if the risk-taking propensities of the two groups differed significantly. Hypotheses were also tested determining the relationship between risk-taking propensity and demographic and business characteristics. The risk-taking propensity of the successful Hispanic female

entrepreneur was significantly related to age, informal business training in insurance, and source of start-up financing. The risk-taking propensity of the unsuccessful Hispanic female entrepreneur was significantly related to informal business training in credit.

The instrument was factor analyzed using principal component analysis. Three factors were extracted. The factors were interpreted and labeled psychic, financial, and family. One item did not load onto any factor. This item pertained to a choice between universities when pursuing a doctorate degree. Because only two of the 30 participating in the study had a college education, pursuing a doctoral degree might not be a risk the subjects could envision themselves taking. The subjects may also have found the risk involved in doctoral study too great a risk to take.

### Conclusions

A significant relationship was found between the risk-taking propensity of successful entrepreneurs and age. As the entrepreneur ages, risk-taking propensity increases. Older entrepreneurs might have life experiences that better prepare them for small business ownership. The entrepreneurs might also have more financial stability prior to beginning a small business thereby increasing chances for success. Additionally, an older entrepreneur might not have the family/work conflicts of a younger entrepreneur and



could spend more time in business operation and therefore increasing business success.

A significant relationship was found between the source of start-up funds for the successful entrepreneur. Because the successful entrepreneur tended to be older, they may have attained greater collateral and other financial resources which enabled them to obtain credit from financial institutions. More of the successful group used personal savings to start their business. Because they were also older than the unsuccessful group, the successful group may have longer to save for their entrepreneurial venture.

The successful group also had more family members who were small business owners. Research has indicated that having a role model increases chances for success. Role models might assist the entrepreneur in preparing loan applications to start a business as well as give other advice in business operation and management which could increase the chance of success in business.

#### Recommendations

The following recommendations are derived from conducting this study and from the findings of this study:

#### Research Recommendations

A new instrument development effort using systematic procedures beginning with open-ended statements could result in a female-specific risk-taking propensity instrument. The

original risk-taking instrument was masculine-specific. The instrument was modified in this study to eliminate this masculine-specificity.

Different definitions of success of female entrepreneurial ventures could be derived from qualitative studies. Other definitions of entrepreneurial success could also be selected from existing literature.

Further research could be conducted on similar Hispanic female groups employing a self-administered questionnaire rather than interview techniques. The findings may show differences in the two groups and relationships between personal and business characteristics and risk-taking propensity. Comparisons could be made between Hispanic female entrepreneurs and white female entrepreneur to determine differences in risk-taking propensity and relationships between risk-taking and cultural differences. Comparisons could also be made between male and female Hispanic entrepreneurs.

Because risk-taking propensity was found to be related to formal and informal business training, further research could be conducted to determine sources of business-related training, information needs of the entrepreneur, and the role of mentors and role models in entrepreneurial success. The findings could be useful to those beginning an

entrepreneurial venture and those involved in conducting training programs for the small business owner.

Research is needed to determine the factors related to the success of women-owned businesses. Such information would be very valuable to those in a small business or contemplating the ownership of a small business.

Because availability and use of role models seem to be related to business success for women entrepreneurs, further research could involve identifying types of role models or mentors that are most helpful to the entrepreneur and responsibilities of these mentors and role models. The sex of the role model could also be of importance.

Research might also be conducted to determine the life satisfaction and job satisfaction of female entrepreneurs. The identification of the determinants of life and job satisfaction could be useful in minimizing work/family conflicts.

Research conducted on the barriers that female entrepreneurs encounter in beginning and operating a small business could be useful to future entrepreneurs in planning their businesses. Success in business ventures could also be increased by such information.

In summary, various methods of research could be used to determine the interactive effects of age, marital status, educational level, business longevity, business experience,

and business type on the success of the entrepreneurial venture. Research methods could include surveys, face to face interviews, and case studies.

#### Educational Recommendations

Educators could target formal and informal training opportunities to the female Hispanic entrepreneurs. Training in business-related areas could increase the probability that the business survive the first five years. By making a business plan, entrepreneurs would be able to determine if they have the necessary finances to begin a small business and increase their preparation in applying for business loans. Chambers of Commerce, A.B.W.A., A.A.R.P. groups, and R.S.V.P. groups could be an important source of informal business training and could help entrepreneurs improve their chances for success.

#### Limitations

This study had the following limitations:

1. Information collected was limited to entrepreneurs in Comal, Guadalupe, and Hays Counties and cannot be generalized to a larger population.
2. The sampling method used was limited to membership roles and snowball technique thus the findings cannot be generalized to a larger population.

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APPENDIX A

Instrument

### Choice Dilemma Questionnaire

Instructions. On the following pages, you will find a series of situations that are likely to occur in everyday life. The central person in each situation is faced with a choice between two alternative courses of action, which we might call **X** and **Y**. Alternative **X** is more desirable and attractive than alternative **Y**, but the probability of attaining or achieving **X** is less than that of attaining or achieving **Y**.

For each situation on the following pages, you will be asked to indicate the minimum odds of success you would demand before recommending that the more attractive or desirable alternative, **X**, be chosen.

Read each situation carefully before giving your judgement. Try to place yourself in the position of the central person in each of the situations. There twelve situations in all. Please do not omit any of them.

Appendix E from Risk Taking by Nathan Kogan and Michael A. Wallach, copyright 1964 by Holt, Rinehart and Winston, Inc., reprinted by permission of the publisher.

1. Ms. A, an electrical engineer, who is married and has one child, has been working for a large electronics corporation since graduating five years ago. She is assured of a lifetime job with a modest, though adequate salary, and liberal pension benefits upon retirement. On the other hand, it is very unlikely that her salary will increase much before she retires. While attending a convention, Mrs. A is offered a job with a small, newly founded company which has a highly uncertain share future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition of the larger firms.

Imagine that you are advising Ms. A. Listed below are several probabilities or odds of the new company's proving financially sound.

Please check the **lowest** probability that you would consider acceptable to make it worthwhile for Ms. A to take the new job.

- \_\_\_\_\_ The chances are 1 in 10 that the company will prove financially sound
- \_\_\_\_\_ The chances are 3 in 10 that the company will prove financially sound.
- \_\_\_\_\_ The chances are 5 in 10 that the company will prove financially sound.
- \_\_\_\_\_ The chances are 7 in 10 that the company will prove financially sound.
- \_\_\_\_\_ The chances are 9 in 10 that the company will prove financially sound.
- \_\_\_\_\_ Place a check here if you think Ms. A should **not** take the new job no matter what the probabilities.

2. Ms. B, a 45-year old accountant, has recently been informed by her physician that she has developed a severe heart ailment. The disease would be sufficiently serious to force Ms. B to change many of her strongest life habits--reducing her work load, drastically changing her diet, giving up favorite leisure-time pursuits. The physicians suggest that a heart transplant could be attempted which, if successful, would completely relieve the heart condition. But its success could not be assured, and in fact, the operation might be fatal.

Imagine that you are advising Ms. B. Listed below are several probabilities or odds that the transplant would prove successful.

Please check the **lowest** probability that you would consider acceptable for the transplant to be performed.

- \_\_\_\_\_ Place a check here if you think Ms. B should **not** have the transplant no matter what the probabilities.
- \_\_\_\_\_ The chances are 9 in 10 that the transplant will be a success
- \_\_\_\_\_ The chances are 7 in 10 that the transplant will be a success.
- \_\_\_\_\_ The chances are 5 in 10 that the transplant will be a success.
- \_\_\_\_\_ The chances are 3 in 10 that the transplant will be a success.
- \_\_\_\_\_ The chances are 1 in 10 that the transplant will be a success.

3. Ms. C, a married woman with two children, has a steady job that pays her about \$25000 per year. She can easily afford the necessities of life, but few of the luxuries. Ms. C's father, who died recently, carried a \$20000 life insurance policy. Ms. C would like to invest this money in stocks. She is well aware of the secure "blue-chip" stocks and bonds that would pay approximately 10% on her investment. On the other hand, Ms. C has heard that stocks of a relatively unknown company X might double their present value if a new product currently in production is favorably received by the buying public. However, if the product is unfavorably received, the stocks could decline in value.

Imagine that you are advising Ms. C. Listed below are several probabilities or odds that Company X stocks will double their value.

Please check the **lowest** probability that you would consider acceptable for Ms. C to invest in Company X Stocks.

- \_\_\_\_\_ The chances are 1 in 10 that the stocks will double their value.
- \_\_\_\_\_ The chances are 3 in 10 that the stocks will double their value.
- \_\_\_\_\_ The chances are 5 in 10 that the stocks will double their value.
- \_\_\_\_\_ The chances are 7 in 10 that the stocks will double their value.
- \_\_\_\_\_ The chances are 9 in 10 that the stocks will double their value.
- \_\_\_\_\_ Place a check here if you think Ms. C should **not** invest in Company X stocks, no matter what the probabilities.



4. Mr. D is the captain of College X's football team. College X is playing its traditional rival, College Y, in the final game of the season. The game is in its final seconds, and Mr D's team, College X, is behind in the score. College X has time to run one more play. Mr. D, the captain, must decide whether it would be best to settle for a tie score with a play which would be almost certain to work or, on the other hand, should he try a more complicated and risky play which could bring victory if it succeeded, but defeat if not.

Imagine that you are advising Mr. D. Listed below are several probabilities or odds that the risky play will work.

Please check the **lowest** probability you would consider acceptable for the risky play to be attempted.

\_\_\_\_\_ Place a check here if you think Mr. D should

5. Ms. E. is president of a light metals corporation in the United States. The corporation is quite prosperous, and has strongly considered the possibilities of business expansion by building an additional plant in a new location. The choice is between building another plant in the U.S., where there would be a moderate return on the initial investment, or building a plant in a foreign country. Lower labor costs and easy access to raw materials in that country would mean a much higher return on the initial investment. On the other hand, there is a history of political instability and revolution in the foreign country under consideration. In fact, the leader of a small minority party is committed to nationalizing, that is, taking over all foreign investment.

Imagine that you are advising Mr. E. Listed below are several probabilities or odds of continued political stability in the foreign country under consideration.

Please check the **lowest** probability that you would consider acceptable for Mr. E's corporation to build a plant in a foreign country.

- ☐ The chances are 1 in 10 that the foreign country will remain politically stable
- ☐ The chances are 3 in 10 that the foreign country will remain politically stable.
- ☐ The chances are 5 in 10 that the foreign country will remain politically stable.
- ☐ The chances are 7 in 10 that the foreign country will remain politically stable.
- ☐ The chances are 9 in 10 that the foreign country will remain politically stable.
- ☐ Please check here if you think Mr. E's corporation should **not** build a plant in the foreign country, no matter what the probabilities.

6. Ms. F is currently a college senior who is very eager to pursue graduate study in chemistry leading to a Doctor of Philosophy degree. She has been accepted by both University X and University Y. University X has a world-wide reputation for excellence in chemistry. While a degree from University X would signify outstanding training in this field, the standards are so very rigorous that only a fraction of the degree candidates actually receive the degree. University Y, on the other hand, has much less of a reputation in chemistry, but almost everyone admitted is awarded the Doctor of Philosophy, though the degree has much less prestige than the corresponding degree from University X.

Imagine that you are advising Ms. F. Listed below are several probabilities or odds that Ms. F would be awarded a degree at University X, the one with the greater prestige.

Please check the **lowest** probability that you would consider acceptable to make it worthwhile for Ms. F to enroll in University X rather than University Y.

- \_\_\_\_\_ Place a check here if you think Ms. F should **not** enroll in University X, no matter what the probabilities.
- \_\_\_\_\_ The chances are 9 in 10 that Ms. F would receive a degree from University X.
- \_\_\_\_\_ The chances are 7 in 10 that Ms. F would receive a degree from University X.
- \_\_\_\_\_ The chances are 5 in 10 that Ms. F would receive a degree from University X.
- \_\_\_\_\_ The chances are 3 in 10 that Ms. F would receive a degree from University X.
- \_\_\_\_\_ The chances are 1 in 10 that Ms. F would receive a degree from University X.

7. Ms. G, a competent chess player, is participating in a national chess tournament. In an early match she draws the top-favored player in the tournament as her opponent. Ms. G has been given a relatively low ranking in view of her performance in previous tournaments. During the course of her play with the top-favored man, Ms. G notes the possibility of a deceptive though risky maneuver which might bring her quick victory. At the same time, if the attempted maneuver should fail, Ms. G would be left in an exposed position and defeat would almost certainly follow.

Imagine that you are advising Ms. G. Listed below are several possibilities or odds that Ms. G's deceptive play would succeed.

Please check the **lowest** probability that you would consider acceptable for the risky play in question to be attempted.

- \_\_\_\_\_ The chances are 1 in 10 that the play would succeed.
- \_\_\_\_\_ The chances are 3 in 10 that the play would succeed.
- \_\_\_\_\_ The chances are 5 in 10 that the play would succeed.
- \_\_\_\_\_ The chances are 7 in 10 that the play would succeed.
- \_\_\_\_\_ The chances are 9 in 10 that the play would succeed.
- \_\_\_\_\_ Place a check here if you think Ms. G should **not** attempt the risky play, no matter what the probabilities.



8. Ms. H, a college senior, has studied the piano since childhood. She has won amateur prizes and given small recitals, suggesting that Ms. H has considerable musical talent. As graduation approaches, Ms. H has the choice of going to medical school to become a physician, a profession which could bring certain prestige and financial rewards, or entering a conservatory of music for advanced training with a well-known pianist. Ms. H realizes that even upon completion of her piano studies, which would take many more years and a lot of money, success as a concert pianist would not be assured.

Imagine that you are advising Ms. H. Listed below are several probabilities or odds that Ms. H would succeed as a concert pianist.

Please check the **lowest** probability that you would consider acceptable for Ms. H to continue with her musical training.

- \_\_\_\_\_ Place a check here if you think Ms. H should **not** pursue her musical training no matter what the probabilities.
- \_\_\_\_\_ The chances are 9 in 10 that Ms. H would succeed as a concert pianist.
- \_\_\_\_\_ The chances are 7 in 10 that Ms. H would succeed as a concert pianist.
- \_\_\_\_\_ The chances are 5 in 10 that Ms. H would succeed as a concert pianist.
- \_\_\_\_\_ The chances are 3 in 10 that Ms. H would succeed as a concert pianist.
- \_\_\_\_\_ The chances are 1 in 10 that Ms. H would succeed as a concert pianist.



9. Mr. J is an American captured by the enemy in the Vietnam War and placed in a prisoner-of-war camp. Conditions in the camp were quite bad, with long hours of hard physical labor and a barely sufficient diet. After spending several months in this camp, Mr. J notes the possibility of escape by concealing himself in a supply truck that shuttles in and out of the camp. Of course, there is no guarantee that the escape would prove successful. Recapture by the enemy could well mean execution.

Imagine that you are advising Mr. J. Listed below are several probabilities or odds of a successful escape from the prisoner-of-war.

Please check the **lowest** probability that you would consider acceptable for an escape to be attempted.

- ☐ The chances are 1 in 10 that the escape would succeed.
- ☐ The chances are 3 in 10 that the escape would succeed.
- ☐ The chances are 5 in 10 that the escape would succeed.
- ☐ The chances are 7 in 10 that the escape would succeed.
- ☐ The chances are 9 in 10 that the escape would succeed.
- ☐ Place a check here if you think Mr. J should **not** try to escape no matter what the probabilities.

10. Ms. K is a successful business woman who has participated in a number of civic activities of considerable value to the community. Ms. K has been approached by the leaders of her political party as a possible congressional candidate in the next election. Ms. K's party is a minority party in the district, though the party has won occasional elections in the past. Ms. K would like to hold political office, but to do so would involve a serious financial sacrifice, since the party has insufficient campaign funds. She would also have to endure the attacks of her political opponents in a hot campaign.

Imagine that you are advising Ms. K. Listed below are several probabilities or odds of Ms. K's winning the election in her district.

Please check the **lowest** probability that you would consider acceptable to make it worthwhile for Ms. K to run for political office.

- \_\_\_\_\_ Place a check here if you think Ms. K should **not** run for political office no matter what the probabilities.
- \_\_\_\_\_ The chances are 9 in 10 that Ms. K would win the election.
- \_\_\_\_\_ The chances are 7 in 10 that Ms. K would win the election.
- \_\_\_\_\_ The chances are 5 in 10 that Ms. K would win the election.
- \_\_\_\_\_ The chances are 3 in 10 that Ms. K would win the election.
- \_\_\_\_\_ The chances are 1 in 10 that Ms. K would win the election.

11. Ms. L, a married 30-year old research physicist, has been given a five year appointment by a major university laboratory. As she contemplates the next five years, she realizes that she might work on a difficult, long-term problem which, if a solution could be found, would resolve basic scientific issues in the field and bring high scientific honors. If no solution were found, however, Ms. L would have little to show for her fives in the laboratory, and this would make it hard for her to get a good job afterwards. On the other hand, she could, as most of her professional associates are doing, work on a series of short-term problems where solutions would be easier to find, but where the problems are of lesser scientific importance.

Imagine that you are advising Ms. L. Listed below are several probabilities or odds that a solution would be found to the difficult, long-term problem that Mr. L has in mind.

Please check the **lowest** probability that you would consider acceptable to make it worthwhile for Ms. L to work on the more difficult long-term problem.

- \_\_\_\_\_ The chances are 1 in 10 that Ms. L would solve the long-term problem.
- \_\_\_\_\_ The chances are 3 in 10 that Ms. L would solve the long-term problem.
- \_\_\_\_\_ The chances are 5 in 10 that Ms. L would solve the long-term problem.
- \_\_\_\_\_ The chances are 7 in 10 that Ms. L would solve the long-term problem.
- \_\_\_\_\_ The chances are 9 in 10 that Ms. L would solve the long-term problem.
- \_\_\_\_\_ Place a check here if you think Ms. L should **not** choose the long-term, difficult problem, no matter what the probabilities.



12. Mr. M is contemplating marriage to Miss T, a girl whom he has known for a little more than a year. Recently, however, a number of arguments have occurred between them, suggesting some sharp differences of opinion in the way each view certain matters. Indeed, they decide to see professional advice from a marriage counselor as to whether it would be wise for them to marry. On the basis of these meetings with a marriage counselor, they realize that a happy marriage, while possible, would not be assured.

Imagine that you are advising Mr. M and Miss T. Listed below are several probabilities or odds that their marriage would prove to be a happy and successful one.

Please check the **lowest** probability that you would consider acceptable for Mr. M and Miss T to get married.

- \_\_\_\_\_ Place a check here if you think Mr. M and Miss T should **not** marry, no matter what the probabilities.
- \_\_\_\_\_ The chances are 9 in 10 that the marriage would be happy and successful.
- \_\_\_\_\_ The chances are 7 in 10 that the marriage would be happy and successful.
- \_\_\_\_\_ The chances are 5 in 10 that the marriage would be happy and successful.
- \_\_\_\_\_ The chances are 3 in 10 that the marriage would be happy and successful.
- \_\_\_\_\_ The chances are 1 in 10 that the marriage would be happy and successful.

## Personal Characteristics

1. What is your age? \_\_\_\_\_
2. Please indicate your marital status.  
\_\_\_\_\_ Single, never married  
\_\_\_\_\_ Divorced  
\_\_\_\_\_ Married  
\_\_\_\_\_ Widowed
3. Please indicate your ethnic background:  
\_\_\_\_\_ Anglo  
\_\_\_\_\_ Black  
\_\_\_\_\_ Hispanic  
\_\_\_\_\_ Other
4. Please indicate the highest level of education attained:  
\_\_\_\_\_ Did not attend any high school  
\_\_\_\_\_ Completed some high school, but did not graduate  
\_\_\_\_\_ High school graduate or received GED  
\_\_\_\_\_ Some college or business school  
\_\_\_\_\_ College graduate or business school graduate  
\_\_\_\_\_ Some graduate work  
\_\_\_\_\_ Graduate degree
5. When beginning your business, how much money did you have as "start up" money? Please check the appropriate amount.  
\_\_\_\_\_ Less than \$1000  
\_\_\_\_\_ Between \$1000 and \$5000  
\_\_\_\_\_ Over \$5000



6. What was the source of your "startup money"?
- ☐ Savings
  - ☐ Borrowed from a financial institution
  - ☐ Borrowed from a friend or relative
  - ☐ Other (source: \_\_\_\_\_)
7. Please indicate if you have had any university classes in the following areas:
- ☐ How to prepare a business plan
  - ☐ Financial book and record keeping
  - ☐ Personnel management
  - ☐ Insurance
  - ☐ Obtaining credit
  - ☐ other (\_\_\_\_\_)
8. Please indicate if you have had any informal classes (workshops, seminars, continuing education) in the following areas:
- ☐ How to prepare a business plan
  - ☐ Financial book and record keeping
  - ☐ Personnel management
  - ☐ Insurance
  - ☐ Obtaining credit
  - ☐ other
9. Please indicate which of your relatives are (or were) small business owners.
- ☐ Father
  - ☐ Mother
  - ☐ Brother
  - ☐ Sister
  - ☐ None

## BUSINESS CHARACTERISTICS

10. How long have you been (or were you) in business:

- ☐ less than 5 years
- ☐ 6 to 10 years
- ☐ 11 to 20 years
- ☐ over 20 years

11. Please indicate the type of business you own or owned:

- ☐ Service
- ☐ Construction
- ☐ Retail
- ☐ Real estate/finance
- ☐ Wholesale
- ☐ Manufacturing

12. Prior to starting your business, were you employed in the same type of business that you now own or owned?

- ☐ Yes
- ☐ No

13. How many employees work (or worked) in your business?

- ☐ None
- ☐ 1-10
- ☐ 11-25
- ☐ over 25

14. Do you have a sales tax number?

- ☐ Yes
- ☐ No

15. Do you have a business address?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

16. Other than your business, you have other employment?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

17. Is your business making a profit?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

18. If you presently own a business, do you feel successful in your business?

\_\_\_\_\_ No

\_\_\_\_\_ Yes

19. If you consider your business successful, why do you feel that your business has succeeded?

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20. If you are not longer in business, why do you feel it did not succeed?

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APPENDIX B  
Permission Letter

## Permission Letter



HOLT, RINEHART AND WINSTON, INC.

ORLANDO, FLORIDA 32887 (407) 345-3983 Telex: 568373 Fax: (407) 352-8860  
PERMISSIONS DEPARTMENT

October 11, 1991

HRWC REF: TEXAS/Jover

Margaret A. Jover  
Co. Extension Agent/Home Economics  
Guadalupe Co.  
210 E. Live Oak  
Seguin, TX 78155

Dear Ms. Jover:

In response to your July 22 letter, we are willing to grant permission for the reprinting of Appendix E, pages 256-261 from RISK TAKING by Nathan Kogan and Michael A. Wallach (Seq. Num: 22487) in your forthcoming dissertation, provided copyright credit is given as a footnote on each page on which the excerpts are reprinted, as follows:

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Sincerely yours,

A handwritten signature in cursive script, appearing to read "Betty Schlossberg".

Betty Schlossberg

Permissions Assistant



APPENDIX C  
Letter to Participants

526 Arlington  
Seguin, Texas 78155  
October 15, 1991

Dear Business Woman:

I am a doctoral student attending Texas Woman's University. I am requesting your assistance in my doctoral research on the Risk-taking Propensity of the Hispanic Female Entrepreneur.

Your participation would take about one hour of your time and would involve taking a test that would measure your willingness to take risks. You would also be asked to provide personal and business information. All information will be kept completely confidential and you will not be indentified by name in the study.

If you agree to participate, I will collect the information in your home or office at a time that is convenient for you.

Within the next week, I will telephone you asking for your participation. At that time, we will set up a time for an interview. I hope you will consent to participate in this study. I think you will enjoy the interview and your participation will benefit this study.

Sincerely,

Margaret A. Jover

APPENDIX D  
Consent Form

## CONSENT FORM

I, \_\_\_\_\_, agree to participate in the research conducted by Margaret A. Jover. I also agree that:

a) I am being asked to complete the Choice Dilemma Questionnaire and the Personal and Business Information Form.

b) I may withdraw my participation at anytime

c) My participation will be confidential and my name will not appear on any instrument. Only my responses will appear in the study.

Date: \_\_\_\_\_