

AN ABSTRACT OF THE THESIS OF

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The creation of a new business venture is a multidimensional event, but little research has addressed the interaction of entrepreneurial characteristics and their relationship to new venture creation. The purpose of this study was to propose a conceptual framework for systematically studying the entrepreneurial personality. The major components of the proposed framework were attitude toward the behavior, subjective norm, and perceived behavioral control, the three antecedents of behavior, and demographic indicators.

A stratified random sample of 20 subjects, 15 males and five females, was identified for this study from a population of 120 Oregon agriculture exporters. The study had an important limitation: the population

consisted only of agriculture export entrepreneurs. The data were gathered in two ways: an interview and a survey questionnaire.

Based on the findings, a conceptual framework was proposed. The framework consisted of three antecedents of behavior: attitude toward the behavior, perceived behavioral control, and the subjective norm. These antecedents were influenced by selected demographic variables. Prominent factors were need for achievement, long-term involvement, risk taking (moderate), internal locus of control, sex (gender), and family background. Additional variables deserving further study are: innovation, drive and energy, persistent problem solving, age, birth order, educational history, and previous experience.

The entrepreneurial behavior model developed from the conceptual framework was supported by the results of the study.

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CHARACTERISTICS OF OREGON AGRICULTURAL EXPORT ENTREPRENEURS

I. INTRODUCTION

Although the creation of a new business venture is a multidimensional event, little research has addressed the interaction of entrepreneurial characteristics and their relationship to new venture creation. The purpose of this study was to propose a conceptual framework as a way of systematically studying the entrepreneurial personality. The framework was used to describe Oregon agricultural export entrepreneurs.

Statement of the Problem

Entrepreneurship has surfaced as potentially a leading force to overcome the economic crisis in rural America (Maricle & Birkenholz, 1988). Focusing on agriculture, Knox (1988) asks, "Who gets the credit for developing new farm businesses?" Farmers themselves get most of the credit for venturing forth to conquer new market niches. One of these niches is international agriculture trade. Orville Freeman (1987), former Secretary of Agriculture, states that by building up export markets around the world, American agriculture can make full use of its productive capability.

Oregon is also becoming more active in the agriculture exporting arena. International export sales make up only 20 percent of Oregon's total agricultural income, and the United States is still the world's biggest market. Export sales alone cannot support the agricultural industry, but they will help Oregon agriculture compete successfully wherever there is opportunity. Although Oregon is working to meet the agriculture export challenge, little is known about the State's international agriculture exporters (Duncan, 1986/87; Oregon Food Policy Project, 1980; Oregon Trade Festival '87, 1988; The Agriculture Quarterly, 1988).

Moreover, there is extensive literature on entrepreneurs, but little information on agricultural entrepreneurs. One method of gaining information on Oregon's agricultural export entrepreneurs would be to examine their characteristics, compare them with the data reported for other groups of entrepreneurs, and report the similarities and differences. Brockhaus (personal communication, May 31, 1990) disagrees with this approach.

Brockhaus (personal communication, May 31, 1990) reports that the latest edition of the research compendium, Encyclopedia of Entrepreneurship, will drop the chapter on characteristics of entrepreneurs because further study would not be fruitful without better

methodology. Studies of entrepreneurial characteristics tend to focus on the effect of one or more characteristics of entrepreneurial behavior. For example, Hersch and Schiebe (1967), studied internal and external "locus of control" as a personality dimension of the entrepreneur; Borland (1975) researched locus of control, need for achievement and entrepreneurship; Frey (1984) examined need for achievement and economic growth; Peacock (1987), investigated the influence of risk taking as a "cognitive judgmental behavior"; Hay and Walker (1987) assessed the relationship between need for achievement and locus of control. The studies represent portions of an entrepreneurial profile; little attention has been focused on the interaction of a number of entrepreneurial characteristics, particularly how they lead to venture formation (Gartner, 1985).

Gartner (1985) maintains that the creation of a new business venture involves many factors. In order to study these new ventures, it is necessary to find a framework for systematically discovering and evaluating the similarities and differences among new ventures. According to Loucks (1981), the answers to who entrepreneurs are, how they behave, how they can be identified, selected, and developed, are far from clear. He concludes that for public policy makers, program managers, and educators, continuing research on this

topic remains an important priority. Kent, Sexton and Vesper (1982) support this position by stating that the theory of economic growth recognizes entrepreneurship as the key to investment in expanding productive capacity. Economic theory has yet to adequately explain either the process by which entrepreneurship emerges or the results of entrepreneurial activity in stimulating economic growth. This is a key topic for study in Oregon, since the State has the highest number of small businesses per capita in the United States (J. Pascone, personal communication, October 8, 1990). In addition, there is a scarcity of information on agricultural entrepreneurs.

Scherer, Adams, Carley and Wiebe (1989) caution that although the goal of studying entrepreneurship is to explain those factors that motivate an individual to select an entrepreneurial career, the task is beyond the scope of any one study. The career decision-making process is very complex. Based upon the review of literature, analysis of the conceptual framework, the interaction of its components, and the analysis of the characteristics and the demographic indicators that comprise the components, the process is understandable and quantifiable.

Review of Literature

The purpose of the review was to examine pertinent literature on agricultural entrepreneurship, provide a definition for entrepreneurship, and identify major characteristics and demographic indicators of an entrepreneur. Finally, a conceptual framework for describing entrepreneurial behavior was proposed.

Agricultural Entrepreneurs

Most Americans have been quite unaware of the importance of international trade and its direct bearing on jobs and the standard of living. Historically self-reliant, enjoying a resource rich and broad-based economy, Americans have simply not been accustomed to thinking of themselves as dependent upon foreign trade. Recently, American companies and consumers are increasingly experiencing and responding to the integration of global financial, production, management, and marketing systems (Division of Vocational Technical Education, 1989).

In rural America, international agricultural trade has been increasing in importance. Duncan (1986/1987) points out that just about everyone who lives in the areas of Oregon with economies driven mainly by

agriculture have been affected the last few years by sluggish domestic and foreign agricultural sales and generally low crop prices. Export sales, amounting to 20 percent of total agricultural sales, cannot support the industry alone, but will help Oregon agriculture compete successfully wherever there is opportunity. While Oregon is becoming more active in the international agricultural export arena, little is known about its agricultural exporters, particularly its entrepreneurs (Duncan 1986/1987).

Only one study has examined the characteristics of agricultural entrepreneurs. This study, by Cooper and Dunkelberg (1981), involved 1805 owner-managers of small firms. They reported substantial differences in the owner-managers' backgrounds. The factors they examined included family background, career paths, incubator organization characteristics, and attitudes and motivations associated with particular entrepreneurial types.

Two of the eight entrepreneurial groups included in the study by Cooper and Dunkelberg (1981) were agriculture and manufacturing/mining. Manufacturing entrepreneurs have been the subject of many prior studies and are often the reference point for inferences about entrepreneurship. They are contrasted with agricultural entrepreneurs in Table 1. The comparison is based upon

Table 1

Entrepreneurial Characteristics by Industry (Percent of the respondents for each industry)

	Agriculture	Manufacturing/ Mining
<u>Family Background</u>		
Parents owned business	73%	57%
<u>Educational History</u>		
High School or less	46%	34%
College Degree or more	38%	36%
<u>Previous Experience</u>		
Major reason for leaving organization - "Pushes"	15%	22%
Non-profit organization or not in labor force	38%	14%
<u>Need for Achievement</u>		
Make more money than would otherwise	26%	24%
A comfortable living is enough	46%	41%
<u>Internal locus of control</u>		
Do kind of work wanted to do	64%	35%
To avoid working for others	23%	28%
Operating controls and methods are in writing	34%	39%

(Cooper & Dunkelberg, 1981)

three of the demographic indicators and two of the seven major characteristics which will be included later in Table 4.

Overall, the manufacturing entrepreneurs examined by Cooper and Dunkelberg (1981) came from classic entrepreneurial families. They were relatively well-educated, the most managerially experienced, and most likely to have partners, all of which should have given these firms greater managerial resources and better prospects for success.

While the study by Cooper and Dunkelberg (1981), examined entrepreneurial characteristics across industrial groups, the focus of this review was agricultural export entrepreneurs. Before studying any group of entrepreneurs, one needs to set some general guidelines for examination. Among them are a definition of entrepreneurship and the identification of the major characteristics of an entrepreneur. The review will identify these guidelines and will conclude by proposing a conceptual framework for systematically describing entrepreneurial behavior.

Definition of the term, "Entrepreneur"

"There has been total confusion over the definitions of entrepreneur and entrepreneurship since the term was

first coined almost two hundred years ago" (Newman, 1988). Although no single definition has been uniformly accepted (Brockhaus, 1987; Greenwood, Bice, LaForge & Wimberly, 1984), Casson (1982) regards the definition as one of the most crucial and difficult aspects of the theory of entrepreneurship. To arrive at a definition, one must first examine the source and history of the term (Casson, 1982).

"Entrepreneur" is derived from the French verb "entreprendre" which means to undertake, to attempt, to try in hand, to contract for; or to adventure to try (Carland, Hoy, & Carland, 1988; Cousin, 1988). John Stuart Mill is credited with bringing the term into general use among economists; however, the word was used much earlier. Richard Cantillon, an international banker in the late 17th and early 18th centuries, described an entrepreneur as a rational decision maker who assumes risk and provides management for the firm (Binks & Vale, 1990; Brockhaus, 1987; Carland et al., 1988). Mill focused on risk bearing as the key differentiating factor between entrepreneurs and managers (Carland et al., 1988; Kent et al., 1982). In addition to risk, two other major themes are associated with the definition of an entrepreneur. These themes are complementary managerial competence and creative opportunities or innovation (Huntley, 1985; Kent et al., 1982; Robbins, 1986).

Definitional Themes

Table 2 places twenty-six definitions of entrepreneur or entrepreneurship into one, or more, of the three themes. Seven citations are sorted into the risk column, thirteen into the managerial competence column, and thirteen into the innovation column. The themes were defined as:

1. Uncertainty and risk. Burch (1986) identifies four critical areas of risk: financial, career, family and social, and psychic.
2. Managerial competence. The overall field of entrepreneurship is defined as the act of creating a new business (Kent et al., 1982).
3. Creative opportunity, innovation. Ronen (1983) states that the objective of the entrepreneur is to change the system. Reynolds (1986) adds that "true entrepreneurs" look at the world with what has been called "creative dissatisfaction." In regard to innovation, Brockhaus (1987) cautions that the image of the entrepreneur as a person with a new idea or product to exploit appears suspect. In his study, he found that as many as 60 percent of the entrepreneurs decided to start a business before they knew what type of

Table 2

Definition of Entrepreneur vs. Major Theme.

Author/Source of definition	Uncertainty and Risk	Managerial Competence	Innovation
<u>Journal Articles</u>			
Ashmore (1988)	X		
Belcher and Warmbrod (1987)	X		
Brockhaus (1980) (1987)		X	X
Brown (1984)			X
Burch (1986)	X		X
Carland et al. (1988)	X	X	X
Davis (1983)		X	
Gartner (1988)		X	
Kets De Vries (1977)		X	X
Lipper (1987)			X
Reynolds (1986)			X
Shelp (1985)			X
Solomon (1987)			X
Spewock (1987)		X	
Walla and Burger (1988)	X		
Zeithaml and Rice (1987)		X	
<u>Books</u>			
Casson (1982)			X
Drucker (1985)			X
Hutt (1988)	X	X	
Kent et al. (1982)		X	X
Newman (1988)	X	X	
Ronen (1983)			X
<u>Dissertations</u>			
Huntley (1985)		X	
Robbins (1986)		X	
Zelinko (1986)		X	

business they wanted to undertake. Thus many entrepreneurs are not necessarily developers of new products.

The three themes received more attention in the section of the review on characteristics.

While the three themes do influence the definition of entrepreneurship, there are other factors that also shape the definition. One of these is the identification of an entrepreneur.

Entrepreneur or Small Business Manager?

Davis (1983) argues that individuals who start small businesses must have two relatively distinct sets of instincts. The first set are those of the entrepreneur. The second set are those of the small business manager. He identifies four basic ways in which a person may become involved in a small business:

- 1) Buying an existing small business;
- 2) Inheriting a small business;
- 3) Becoming a franchisee; or
- 4) Starting a small business.

Davis (1983) concludes that the entrepreneurial function is one of building the initial business.

Joseph A. Schumpeter's theory (cited in Casson, 1982) contends that the purely entrepreneurial act occupies only a small proportion of the time that it takes to establish a business. What the entrepreneur does the

rest of the time is to manage the growth of the business by building up the organization and defending its interests. The definitional issue is an intermediary step in pursuing the reason for starting the business (Carland et al., 1988). Brockhaus (1987) states that a well-defined entrepreneurial population does not exist and research findings are often difficult to compare. Several authors (Burch, 1986; Kent et al., 1982) caution that entrepreneurs, whether proprietary or bureaucratic, are human beings, not blanks or interchangeable economic units; they cannot be standardized and reduced to mechanical models.

Entrepreneurship: A Definition

Although no single definition of entrepreneur has been universally accepted, for the purpose of this study an entrepreneur was:

An individual who establishes a business where none had previously existed (Robbins, 1986) and manages it for the principal purpose of profit and growth (Carland et al., 1988). The entrepreneur is characterized by innovative behavior and will employ strategic management practices in the business (Carland et al., 1988; Robbins, 1986; Solomon, 1987).

The definition presumes that risk is inherent in the establishment and management of a new business.

In addition to the definition, entrepreneurs are often described by numerous characteristics. These

characteristics are the subject of books, articles and research studies. The review identified seven major entrepreneurial characteristics. Six demographic indicators were also cited as assisting in describing an entrepreneur.

Characteristics

Literally thousands of organizations are created and die every year. A host of factors, from parental employment through job displacement, play a major role in initiating an enterprise (Carland et al, 1988). Generalization based upon narrow samples of entrepreneurs who became business owners in a particular way and in a particular industry should be considered with care (Cooper & Dunkelberg, 1981). Personal characteristics and prior careers of entrepreneurs differ by how they became owners (Burch, 1986).

Twenty-five characteristics discussed in the literature are listed in Table 3. Drive and energy, internal locus of control and risk taking were the primary foci of the literature. The work of Drucker (1985) and other authors support the addition of innovation as a frequently cited characteristic. Drucker (1985) adds that innovation includes dealing with failure as well as the tolerance of ambiguity and uncertainty.

Table 3

Characteristics of an Entrepreneur.

Competing against self-imposed standards
 Creativity, innovation
 Dealing with failure
 Desire to achieve
 Drive and Energy
 Dynamism, leadership
 Educational history
 Goal-setting
 Independence
 Internal locus of control
 Long-term involvement
 Moderate risk-taking
 Money as a measure
 Nurturing quality
 Organization
 Orientation to excellence
 Optimism
 Perceptiveness
 Persistent problem solving
 Self-confidence
 Taking initiative/personal responsibility
 Tolerance of ambiguity and uncertainty
 Use of feedback
 Use of resources
 Versatility of knowledge

Balogh, Ashmore, Ross, Bebris, Fischer, & Baker, 1985;
 Berns, 1989; Burch, 1986; Borland, 1975; Davis, 1983;
 Finger Lakes, 1987; Gasse, 1985; Greenwood et al., 1984;
 Kent et al., 1982; Maricle & Birkenholz, 1988; McClelland,
 1987; Robbins, 1986; Shapero, 1975; Timmons, 1978

McClelland and Winter (1969) add need for achievement. They contend that goal-setting, use of feedback, taking initiative and personal responsibility, competing against self-imposed standards, and money as a measure define need for achievement. Persistent problem-solving and long-term involvement are also frequently cited as characteristics of entrepreneurs.

Table 4

Major Characteristics of Entrepreneurs.

-
- * Drive and energy
 - * Innovation
 - * Internal locus of control
 - * Long term involvement
 - * Need for achievement
 - * Persistent problem solving
 - * Risk taking
-

Seven Major Characteristics of Entrepreneurs

1. Drive and energy. Entrepreneurs reported working significantly more hours per week than managers (Longenecker, 1983; Robbins, 1986). One coefficient of entrepreneurial success, is "energy" (Mancuso, 1973; Timmons, 1978).

2. Innovation. Innovation is the means by which entrepreneurs exploit change as an opportunity for a different business or product, service, or to alter the

system (Drucker, 1985; Gasse, 1985; Longenecker, 1983; Newman, 1988; Ronen, 1983). Gilad (1984) identifies the "entrepreneurial element" as the ability to discover opportunities that are overlooked by everyone else. According to Reynolds (1986), entrepreneurs look at the world with what has been called "creative dissatisfaction." This creative outlook is the intellectual basis for innovation.

Innovation (Drucker, 1985) always has to be close to the market, focused on the market, and market-driven. He declares that entrepreneurs will have to learn to practice systematic innovation. Systematic innovation is the purposeful and organized search for changes, and the systematic analysis of the opportunities such changes might offer for economic or social innovation. Systematic innovation (Drucker, 1985) means monitoring seven sources for innovative opportunity. The first four sources are primarily visible to the people within the enterprise. They are:

- * The unexpected--the unexpected success, the unexpected failure, the unexpected outside event;
- * The incongruity--between reality as it actually is and reality as it is assumed to be or as it "ought to be";
- * Innovation based on process need;

- * Changes in industry or market structure that "catch" people unaware.

The second set of sources for innovative opportunity involves changes outside the enterprise or industry:

- * Demographics (population changes);
- * Changes in perception, mood and meaning;
- * New knowledge, both scientific and nonscientific.

Successful innovators are conservative (Drucker, 1985). They are not "risk-focused"; they are "opportunity-focused." Furthermore, Brockhaus (1987) cautions that the concept of the entrepreneur as a person with a new idea or product to exploit appears suspect.

3. Internal locus of control. The most outstanding characteristic of entrepreneurs is that they know they will make it with or without outside help (Finger Lakes, 1987). Rotter's "locus-of-control" theory states that individuals perceive the outcome of an event as being either within or beyond their personal control and understanding (Fernald & Solomon, 1987; Kent et al., 1982). People with an internal locus of control, known as internals, believe that they are in control of their reinforcements (Borland, 1975). They feel that what happens to them depends on what they do and that they are in control of their own fate (Huntley, 1985; Kent et al., 1982). They tend to be more self-reliant and more in need of independence and autonomy (Kets De Vries, 1977).

Gasse (1985) cautions that extreme internals may be overly rigid. People with an external locus of control, externals, believe that they have no control over their reinforcements (Ronen, 1983). Hersch and Schiebe (1967) add that internals are likely to describe themselves as active, striving, achieving, powerful, independent and effective. Externals are more likely to describe themselves in somewhat opposite terms.

Entrepreneurs are more internal in their locus-of-control (Kent et al., 1982; Kets De Vries, 1977). This holds promise for distinguishing successful from unsuccessful entrepreneurs. Successful entrepreneurs believe that they can effectively influence the results of a business if they own it. Often it is only after deciding to start a business that they determine a product or service (Kent et al., 1982).

Locus of control moderates the influence of need for achievement. It is primarily among internals that those high in need for achievement behave in commonly predicted ways. Therefore, it may be that both high internal locus of control and high need for achievement are necessary characteristics of entrepreneurs (Borland, 1975).

Timmons (1978) states that this sense of personal causation as the determinant of success or failure is linked to the entrepreneur's motivation to achieve and preference for moderate risk taking.

4. Long-term involvement. One of the characteristics which distinguishes the entrepreneur, the creator and builder of a business, from the promoter or "fast-buck artist" is long-term involvement. An entrepreneur is driven to build a business, rather than simply get in and out in a hurry with someone else's money (Timmons, 1978). Although a large number of new enterprises fail, entrepreneurs tend to be optimistic about their own prospects for success (Brockhaus, 1987). A new business usually takes five to ten years to turn a profit if the enterprise lasts that long (Eisenberg, 1986).

5. Need for achievement. The need for achievement can be defined as the need and desire to meet challenges and to exercise power (Gasse, 1985). It refers specifically to the desire to do something better, faster, more efficiently, with less effort (McClelland, 1976). In describing need for achievement, Hutt (1988) mentioned self-confidence.

McClelland, (cited in Borland, 1975, & Brockhaus, 1987), has predicted that high need for achievement drives people to become entrepreneurs. He states that other researchers have found that entrepreneurs have higher motivation to achieve than average adults, university students, engineers and middle managers. McClelland followed up on 55 male college students who had been tested on need for achievement and reported that

14 years later 83 percent of the entrepreneurs had high need for achievement in college whereas 79 percent of the non-entrepreneurs had not. Considering these results with a similar study with a shorter follow-up period, he found that 67 percent of the entrepreneurs had high need for achievement in college, which was higher than expected. Though some studies indicate that entrepreneurs tend to have higher need for achievement scores than average, no really conclusive evidence exists that high need for achievement impels a person toward becoming an entrepreneur. (Borland, 1975; Brockhaus, 1987) Need for achievement has been thought of as a fairly stable personality characteristic.

Williamson (1985), in a study of female entrepreneurs, reported that need for achievement, the desire to excel, was cited more often than other motivation including status, money, power, competition, affiliation, security, and job satisfaction. However, the principal subject of Williamson's study did not list achievement as her primary motivation for starting her business. Money was her primary motivation, which is contrary to a person with a high need for achievement who sees money only as a means of keeping score. McClelland (1976) concurs that money provides entrepreneurs with concrete knowledge of the outcome of their efforts.

Higher up on the list is the desire to be independent, to find work satisfaction that is often lacking in the large corporation (Ashmore, 1989; Berns, 1989; Shelp, 1985). Entrepreneurs would tend not to become corporate managers even if paid from five to a hundred times their current earnings (Shelp, 1985). Burch (1986) counters that one of the key reasons to engage in entrepreneurial activity is to gain wealth. Subsistence-seeking has no entrepreneurial pull. Brockhaus (1987) cautions that even among those businesses which survive and achieve some degree of success, very few grow to a large size. Almost 60 percent of these surviving businesses have annual sales of less than \$25,000; entrepreneurial wealth is not the typical result.

Eight characteristics are associated with a person's possessing high need for achievement (Borland, 1975; McClelland, 1976, 1987; McClelland & Winter, 1969):

- a. Preference for tasks of moderate risk.

Entrepreneurs work harder and perform better than those with low need for achievement in moderate risk conditions if they feel that their performance on the task will influence their future success.

- b. Perform better than those low in need for achievement in competitive situations, whereas the converse is true in non-competitive

situations. Specifically, they do not work harder under all probabilities of winning, but only when there is some challenge in the situation, some chance of losing.

- c. Persevered longer at difficult tasks. Those with low need for achievement persevered longer at insolvable tasks and abandoned difficult but solvable problems sooner than high need for achievement persons.
- d. More future oriented. The entrepreneur considers more alternatives and their consequences. The Bible reminds us that "Without vision the people will perish" (Proverbs 29:18). McClelland (1987) paraphrases, "without motivation the people will perish".
- e. Lengthened time perspective. Entrepreneurs maximize their interests over a longer time span, so that they are less likely to slip into the trader mentality.
- f. Better able to postpone gratification if it means receiving a bigger reward in the end.
- g. Prefer to work with competent partners, rather than with less competent but more congenial people. Entrepreneurs choose experts over friends.

- h. Tend to do better at a wide range of tasks requiring some skill, including performance in school.

Of the eight characteristics, risk taking is often cited as among the most important entrepreneurial characteristics. McClelland (1976) states that need for achievement is peculiarly associated with moderate risk taking. Any task which allows one to choose the level of difficulty at which one works also permits one to determine how to be more efficient at it, how to secure the most benefit (utility) for the least cost. However, other writers such as Fernald and Solomon (1987) contend that risk taking is a primary characteristic.

Locus of control and need for achievement may be correlated and possibly causally related to entrepreneurship. They seem quite similar in their influence on behavior but have not been consistently found to be correlated with one another (Borland, 1975).

6. Persistent problem solving. Entrepreneurs have an intense level of determination and desire to overcome hurdles, solve a problem and complete the job. They are not intimidated by difficult situations (Timmons, 1978). Few if any entrepreneurs have escaped failure (Burch, 1986). A common characteristic of the most successful entrepreneurs is that the businesses which brought them the fame and fortune, for which they are now known, were

typically their second or third entrepreneurial business affiliation. Failing is a part of trying and winners are those who continually try (Bebris, 1987). Entrepreneurs have a healthy view of failure (Feinburg, 1984).

7. Risk taking. Brockhaus (1980) defines the propensity for risk-taking as the perceived probability of receiving the rewards 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 the proposed situation.

Kent et al. (1982) report that risk taking propensity does not distinguish new entrepreneurs either from managers or from the general population. They state that there is not an appropriate instrument for measuring the various aspects of entrepreneurial risk taking.

Brockhaus (1987) questions whether or not the entrepreneur is a high risk taker. The findings vary according to their sex, cultural background, stage of business development, type of business owned and the research method employed. Gasse (1985) concluded that the entrepreneur as a taker of moderate risk is no different from the full business population. Timmons (1978) disagrees; he holds that this characteristic is one of the most important since it has such significant

implications for the ways decisions are made and thus for the success or failure of the business.

Entrepreneurs are moderate risk takers. The chances of winning are neither too small nor too great (Bebris 1987; Hutt, 1988; Kent et al., 1982; Kets De Vries, 1977; Kiesner, 1984; Nelton, 1986; Timmons, 1978). Repeated, moderate risk taking has been noted as part of the basic trait pattern of the entrepreneur who has become a success, the enterpriser who is still in business (Peacock, 1987).

Rather than being moderate risk takers, entrepreneurs assume less risk since they operate in an area where competition is less intense (Newman, 1988). Mitton (1989) called them risk avoiders. They accept risk, but clearly understand that it is possible to initiate risk without actually taking risk. Entrepreneurs define their objectives, strategy and mix of resources to limit risk. They manage the risk that remains by adroitly shifting it to others whenever possible. Harrell (1987) questions the notion that the most distinguishing quality of entrepreneurs is their willingness to take risks. They are truly good at identifying opportunity niches and recognizing patterns of success to emulate.

Several authors (Brockhaus, 1980; Burch, 1986; Gasse, 1985) identify four critical areas of risk. They are: financial, career, family/ social, psychic.

- a. Financial Risk. The entrepreneur is exposed to personal bankruptcy. However, Ronen (1983) states that very few are willing to take much financial risk. Most were willing to expose themselves to the other forms of risk. Spewock (1987) counters that the most important source of financing for entrepreneurs is their own personal savings.
- b. Career Risk. Sometimes reentry into the job market is difficult once a business venture has failed (Brockhaus, 1980; Burch, 1986; Gasse, 1985).
- c. Family/social risk. Starting a new venture uses most of the energy and time of the entrepreneur. On the other hand it may afford the opportunity to bring the spouse and children into the business (Brockhaus, 1980; Burch, 1986; Gasse, 1985).
- d. Psychic risk. The greatest risk may be to the well being of the entrepreneur. If you fail, can you live with this failure (Brockhaus, 1980; Burch, 1986; Gasse, 1985)?

Sexton and Bowman (1983) found no difference in the risk-taking propensity of entrepreneurship students and other students at the same university. However, other studies have produced different findings. In these

studies, risk taking propensities varied significantly according to the respondent's motivations, including how they felt about themselves, the probability of improving themselves and the probability of accomplishing their goals. Burch (1986), equates entering into entrepreneurial activity to accepting risk. The difficulty in measuring risk has much to do with individual perceptions (Brockhaus, 1987). Entrepreneurs will be pictured as moderate risk takers.

Demographic Indicators of Entrepreneurs

Six demographic indicators that also assist in describing the entrepreneur were apparent in the literature. They were: age, birth order, sex, family background, educational history, and previous experience.

1. Age. Perceived "traumatic" events, such as watershed birthdays at 30, 40 or 50 that derail conventional aspirations may be motivators for entrepreneurial activity (Kent et al., 1982). The years between 25 and 40 are frequently mentioned as the age when the decision is most likely to be made; it is termed the free choice period. In a study of men who started technical companies, Shapero found that the average age of these entrepreneurs when they started their companies was 36 (cited in Borland, 1975). Four other authors

place the average age between 30 and 35 (Mancuso, 1973; Petrof, 1980; Ronen, 1983; Williamson, 1987). Spewock (1987) broadly stated that entrepreneurs range in age from 18 to 81 and 30 percent are under the age of 30.

2. Birth order. A frequently cited characteristic of the male entrepreneur is that of "independence." This comes in part from being either an only child or the oldest child in the family. Petrof (1980) concluded that successful entrepreneurs tend to be first born children. The woman entrepreneur is no different from the male with respect to family constellation (Diffley, 1983; Fernald & Solomon, 1987). Mancuso (1973) finds this remarkable; later-born children outnumber first born children in the general U.S. population. Petrof (1980) concluded that being the oldest child in the family is a much better predictor of entrepreneurial talent than is age.

3. Sex. The trend of the early Eighties suggests that it could well be the decade of the woman entrepreneur (Diffley, 1983). Most studies have examined male entrepreneurs and either overlooked or disregarded their female counterparts (Fernald and Solomon, 1987).

According to Hisrich and O'Brien (1982), studies of women entrepreneurs have investigated basically the same questions as studies of male entrepreneurs. It is not yet clear the extent, if any, to which men and women entrepreneurs are different. The sex of the entrepreneur

does not seem to relate to major differences in loci of control (Fernald & Solomon, 1987). Women are more often than not older than their male counterparts when starting a business (Finger Lakes, 1987). A majority of the women in a study by Diffley (1983) were between the ages of 35 and 54. As noted earlier, men are generally in their early to mid-thirties when starting a business.

4. Family background. Gasse (1985) states that studies on entrepreneurship show that the characteristics usually associated with the entrepreneur are developed early in life, and the environment, particularly the family in which the person grows up, has an important effect on the emergence of entrepreneurship. Entrepreneurs have a family history of self-employment (Williamson, 1985).

Entrepreneurs' fathers tended to be self-employed (Borland, 1975; Flexman, 1980; Robbins, 1986; Ronen, 1983). Mother's occupation may also play a positive role for women entering non-traditional business areas (Hisrich & O'Brien, 1982). Gasse (1985) reported that 72 percent [67 percent according to Jones and Elsaesser (1987)] of the entrepreneurs were from families where at least one parent was an entrepreneur. Spewock (1987) stated that this was true for only half of the entrepreneurs. Over 75 percent of all entrepreneurs, as reported by Greenwood and others (1984), had parents or

other role models who were self-employed. The success of the parents or role models' venture was not important (Kent et al., 1982).

Sexton and Kent (1981) found that 40 percent of the female entrepreneurs indicated that their fathers were entrepreneurs. However, only 11 percent indicated their fathers had served as a role model for their own entrepreneurial aspirations. They concluded that female entrepreneurs do not acknowledge their fathers as role models. Close relatives or friends can also serve as role models (Borland, 1975). Perhaps this is the situation for female entrepreneurs.

Shelp (1985) reported that the children of successful executives found that they "love" the things their father's money will buy and want to make even more than their father, but not work so hard for it. Shelp (1985) concludes that if these are the values of the "age of the entrepreneur," then the apprehensions of some about this new spirit are warranted.

5. Educational history. In a study by Robbins (1986), there were no significant differences among the three samples (entrepreneurs, intrapreneurs or individuals who start something new within an existing organization, and managers, who operate an existing business) in terms of highest level of education

attained. The mean total years of education for the entire sample was 17 years (college degree and some post graduate study).

Kent et al. (1982) state that the educational level of entrepreneurs exceed that of the "average person." However, there is a wide variation in the different types of entrepreneurs. Mancuso (1973), in studying entrepreneurs in small manufacturing operations, found that many, possibly a majority, have achieved a master's degree. Their level of respect for education ends abruptly when it comes to taking extra time to gain a doctorate.

Over three-fourths of the female respondents, in a study by Diffley (1983), had attended college, with over one-third earning a college degree. Flexman (1980), in her study, reported that 41 percent of the female respondents had some college and nearly 25 percent were college graduates. An additional 16 percent had education beyond the bachelor's degree. Gasse (1985) reported that 45 percent of the entrepreneurs studied had a university education. According to Spewock (1987), entrepreneurs do not need four year degrees, but most of them say it helps to have training in some basics like developing a plan for your business as well as other skills.

6. Previous experience. Gasse (1985) reported that professional and previous work experience tend to promote entrepreneurship. The decision to start a business can be influenced by work experience in adolescence or youth. Robbins (1986) found that entrepreneurs, intrapreneurs and managers had the same amount of work experience. In addition, entrepreneurs were somewhat more likely than managers to report sales experience as part of their work history and were also more likely than managers to report sales experience as their "best liked" employment. Spewock (1987) adds that job experience is the most important factor for men and women who start their own business.

Kent et al. (1982), discussed the effects of previous experience. A "push" seems to force potential entrepreneurs from their place of previous employment. Displaced persons according to Shapero (cited in Ronen, 1983), have a greater tendency to become entrepreneurs; the regular salary of a prestigious position is not being sacrificed. Dissatisfaction with previous work experience is closely related to the entrepreneurial decision (Kent et al., 1982). Eisenberg (1986) found that as many as 60 percent of the people who choose to open businesses do so out of frustration with their current jobs.

Mancuso (1973) puts all these traits together to create the whole entrepreneurial man.

- first born child;
- from a middle-class family;
- self-employed father;
- master's degree;
- married;
- 33 years old;
- "loads of energy", optimist, individualist and
bets on reasonable ventures.

Hisrich and Brush (1985) offer the following list of traits for the typical female entrepreneur.

- first born child;
- from a middle or upper class family;
- self-employed father;
- college degree;
- married with children;
- 40-45 years old when she started her
entrepreneurial career;
- previous experience in the venture;
- independence, achievement, and job satisfaction
are her strongest motivators.

Considerable attention has been focused on entrepreneurial characteristics in this section of the review. It would seem logical to initiate an examination of the characteristics, particularly as they pertain to the agricultural export entrepreneur. According to Gartner (1985), researchers need to think in terms of a combination of variables that make up each new venture creation. The next section of the review will conclude by proposing a conceptual framework for describing entrepreneurial behavior.

Conceptual Framework

Studies of entrepreneurial characteristics tend to focus on the effect of one or more of those traits on entrepreneurial behavior. As examples, Hersch and Schiebe (1967), studied internal and external control as a personality dimension; Borland (1975) studied locus of control, need for achievement and entrepreneurship; Frey (1984) examined need for achievement and economic growth; and Peacock (1987) investigated the influence of risk taking as a cognitive judgmental behavior. Hay and Walker (1987) assessed the relationship between need for achievement and locus of control. The exact nature of the relationships is far from clear and extremely complex.

According to Bird and Jelinek (1988) a theme emerging from entrepreneurship research is the need for a behavioral, process-oriented model of entrepreneurship. Studies by Fernald and Solomon (1987) along with Winslow and Solomon (1989) point out that a taxonomy must be developed and thoroughly analyzed in order for the body of knowledge on entrepreneurship to progress and develop a solid foundation.

The application of a conceptual framework is a way of measuring or systematically describing the entrepreneurial personality. The Theory of Reasoned

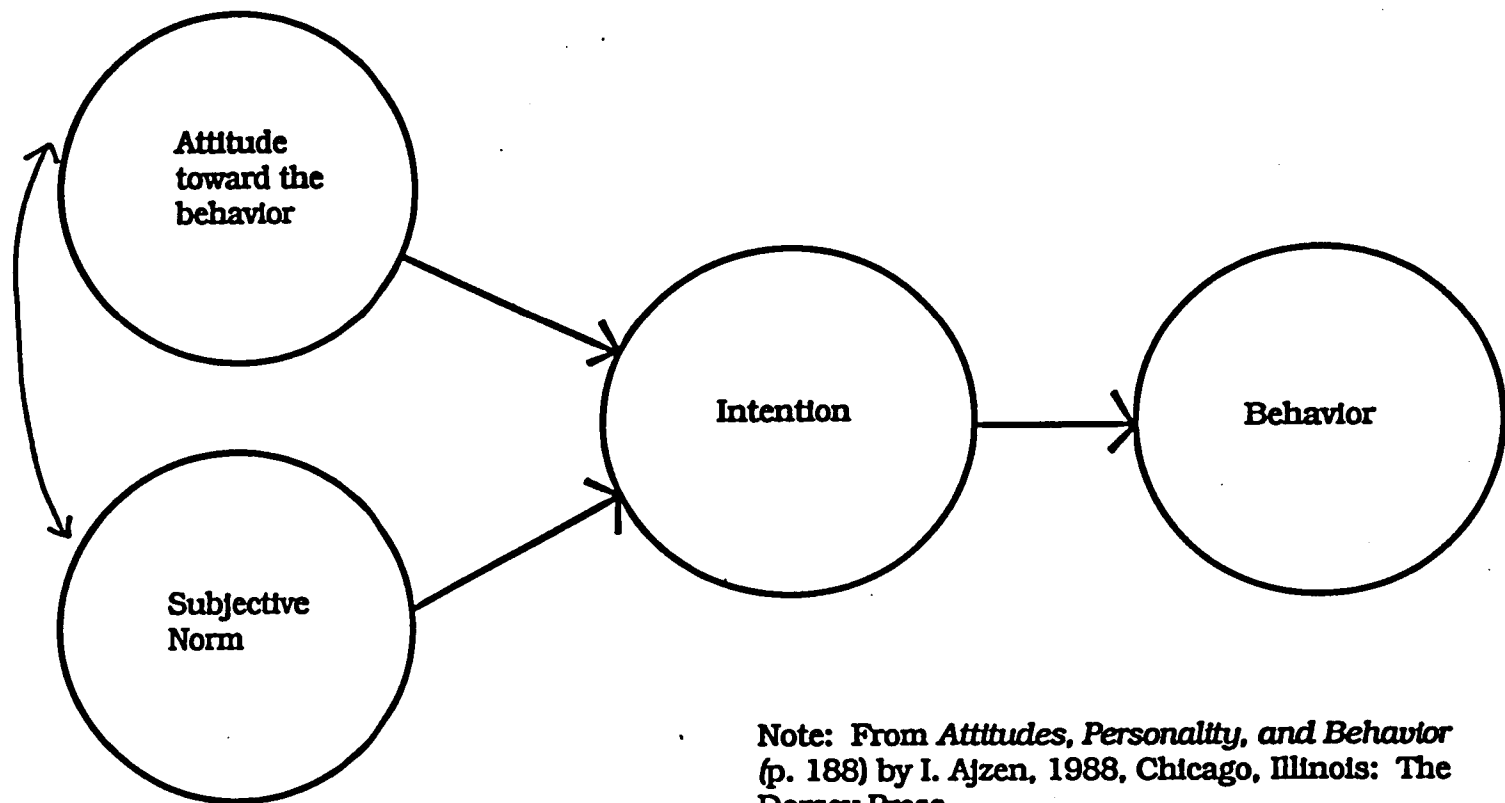
Action describes how people tend to proceed on a course of action in a deliberate manner (Ajzen, 1988; Ajzen & Fishbein, 1980).

Theory of Reasoned Action

As seen in Figure 1, two basic determinants, attitude toward the behavior and subjective norm, influence a person's intentions and ultimately behavior (Ajzen, 1988; Ajzen & Fishbein, 1980; Wicker, 1969). Attitude is a personal factor and is the individual's positive or negative evaluation of performing the particular behavior of interest (Ajzen, 1988; Ajzen & Fishbein, 1980). Virtually all verbal responses and sometimes even overt actions are considered to be indicants of a person's "attitude," and measures of these variables are often used interchangeably (Ajzen & Fishbein, 1980).

The second determinant of intention, subjective norm, is the person's perception of social pressure to perform the behavior under consideration. In general, people intend to perform a behavior when they evaluate it positively and when they believe that important others (such as parents, spouse, close friends, coworkers or perhaps experts such as accountants, etc.) think they should perform it (Ajzen, 1988; Ajzen & Fishbein, 1980; Woelfel & Haller, 1971). The theory assumes that the relative importance of attitude toward the behavior and

Figure 1. Theory of reasoned action



subjective norm depends in part on the intention under investigation (Ajzen, 1988).

Applications of the theory have included an examination of blood donation (Burnkrant & Page, 1988; Warshaw, Calatone, & Joyce, 1986); self-reporting as an indicator of actual behavior (Manfred & Shelby, 1988); and analysis of voting behavior (Fishbein & Coombs, 1974). Lin (1987) utilized the theory of reasoned action to identify factors that may influence the use of computers by industrial education instructors. In his study, he proposes a causal model to indicate the relationships among factors that may influence these instructors to use computers in one or more aspects of their jobs.

Songer-Nocks (1976) questioned the reasoned action model. She stated that the association between attitude and behavior appeared to be dependent on previous experience with the behavior, while the association between norms and behavior seemed to be dependent on consistency between personal motivation and perceived social expectations. Fishbein and Ajzen (1976) replied that, if the model is to be used to predict behavior, one must first insure a strong empirical relationship between intentions and behavior. In the absence of such a relation, the validity of the model rests on its ability

to predict intentions. Songer-Nocks (1976) countered that the prediction of behavior from attitudinal components has certain limitations which are potentially specifiable. Fishbein and Ajzen (1976) concluded that what does need to be further specified are those factors that limit the prediction of behavior from intentions.

Although the theory of reasoned action was developed explicitly to deal with purely volitional behaviors, many factors can disrupt the intention-behavior relation. Examples of internal factors are information, skills, abilities, emotions and compulsions. External factors may include opportunity and dependence on others. Although volitional control is more likely to present a problem for some behaviors than for others, personal deficiencies and external obstacles can interfere with the performance of any behavior. Collectively, these factors represent people's actual control or lack of control over behavior (Ajzen, 1988). A behavior is under volitional control if the person can decide at will to perform or not perform it. The more that behavior is contingent on the presence of appropriate opportunities or on possession of adequate resources, the less it is under control (Ajzen & Madden, 1986). Ajzen's Theory of Planned Behavior upgraded the theory of reasoned action to address this deficiency to a conceptual framework that

addresses the problem of incomplete volitional control (Ajzen, 1988; Ajzen & Madden, 1986; Schifter & Ajzen, 1985).

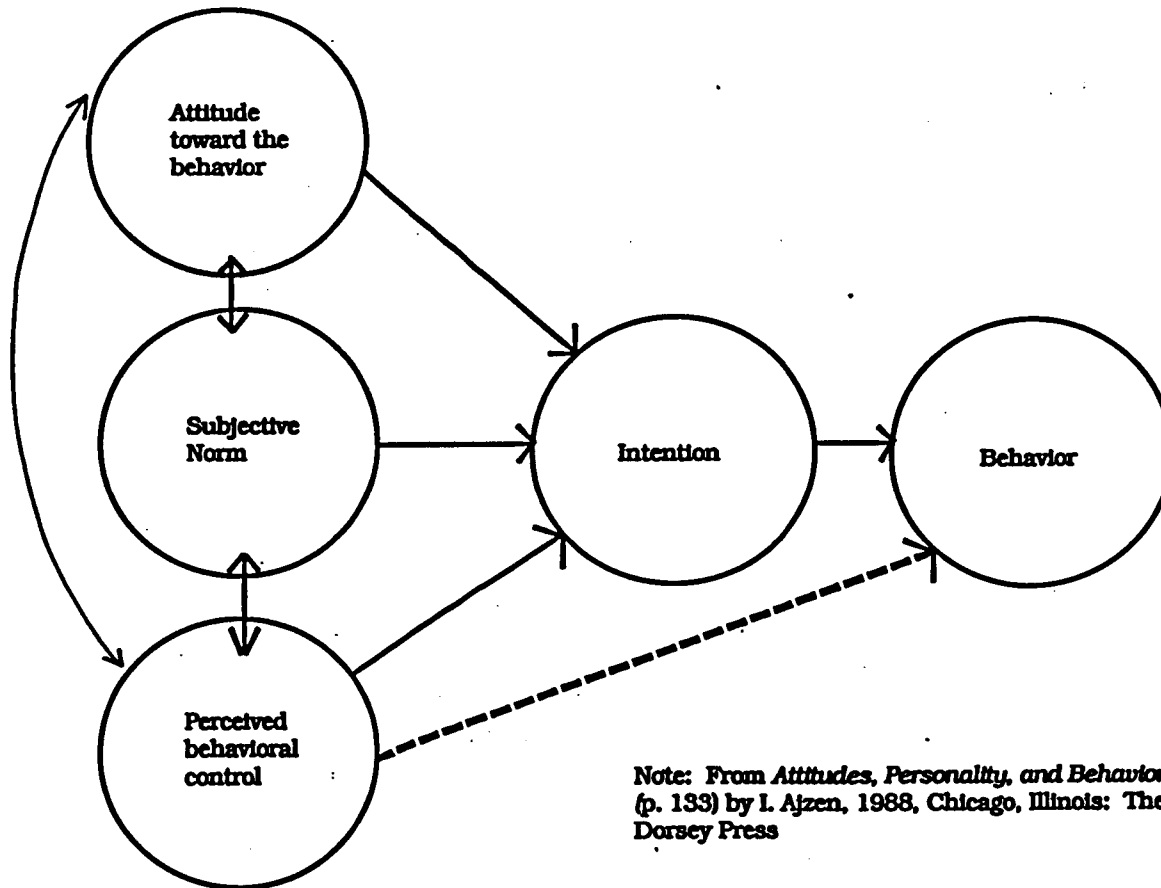
Theory of Planned Behavior

In this extension of the theory of reasoned action, a central factor is an individual's intention to perform the behavior of interest. In contrast to the theory of reasoned action, the theory of planned behavior postulates three, rather than two, conceptually independent determinants of intentions. The first two determinants, attitude toward the behavior and subjective norm, are the same as those in the theory of reasoned action. The third antecedent of intention is the degree of perceived behavioral control. This factor refers to the perceived ease or difficulty of performing the behavior, and it is assumed to reflect past experience as well as anticipated impediments and obstacles. The more favorable the attitude and subjective norm with respect to behavior and the greater the perceived behavioral control, the stronger should be the individual's intention to perform the behavior under consideration (Ajzen, 1988; Ajzen & Madden, 1986; Schifter & Ajzen, 1985).

The theory of planned behavior does not deal directly with the amount of control a person actually has in a given situation; instead, it considers the possible effects of perceived behavioral control on achievement of behavioral goals. Whereas intentions reflect primarily an individual's willingness to try enacting a given behavior, perceived control is likely to take into account some of the realistic constraints that may exist. To the extent that perceptions of behavioral control correspond reasonably well to actual control, they should provide useful information over and above expressed intentions (Ajzen, 1988).

Figure 2 illustrates two important features of the theory of planned behavior. First the theory assumes that perceived behavioral control has motivational implications for intentions. People who believe that they have neither the resources nor the opportunities to perform a certain behavior are unlikely to form strong behavioral intentions to engage in it even if they hold favorable attitudes toward the behavior and believe that important others would approve of their performing the behavior. We thus expect an association between perceived behavioral control and intention that is not mediated by attitude and subjective norm. This expectation is represented by the arrow linking perceived behavioral control to intention (Ajzen, 1988).

Figure 2. Theory of planned behavior



Note: From *Attitudes, Personality, and Behavior* (p. 133) by I. Ajzen, 1988, Chicago, Illinois: The Dorsey Press

The second feature of interest is the possibility of a direct link between perceived behavioral control and behavior. As noted earlier, in many instances the performance of a behavior depends not only on motivation to do so but also on adequate control over the behavior in question. It follows that perceived behavioral control can help predict goal attainment independent of behavioral intention to the extent that it reflects actual control with some degree of accuracy. In other words, perceived behavioral control can influence behavior indirectly, via intentions, and it can also be used to predict behavior directly (Ajzen, 1988).

The addition of perceived behavioral control to the variables contained in the original theory of reasoned action seems to improve greatly the prediction of behavioral intentions (Ajzen, 1988). This finding indicated that perception of behavioral control, like attitude toward the behavior and subjective norm, can have an important impact on a person's behavioral motivation. The more that attainment of a behavioral goal is viewed as being under volitional control, the stronger is the person's intention to try. In addition, perceived behavioral control can also improve the predication of actual behavior beyond the level obtained on the basis of intentions alone. This is the case, however, only under certain conditions. First, the

behavior must at least in part be determined by factors beyond a person's control. When the behavior is largely under volitional control, intentions alone are found to be sufficient to predict it. Secondly, perceived behavioral control must be fairly realistic, reflecting actual control to a reasonable degree. People intend to perform a behavior if their personal evaluations of it are favorable and if they think that important others would approve of it (Ajzen, 1988).

To some extent, strength in one factor can compensate for weakness in another (Ajzen, 1988). People who doubt their ability to carry out a certain behavioral plan may nevertheless intend to make a serious effort if they placed a high positive value on performing the behavior or if they experience strong social pressure to do so.

Intuitive observation would suggest that people are quite consistent in the patterns of behavior they exhibit (Ajzen, 1988). They act in ways that cannot be described as capricious, but it would be inaccurate to claim that their behavior is controlled by external forces.

Instead, human action is found to follow reasonably and consistently from relevant behavioral dispositions. While measures of behavioral dispositions cannot be used indiscriminately, when appropriately employed they yield highly valuable information.

The theory of planned behavior represents an attempt to account for the formation of intentions and the achievement of behavioral goals. Attitudes toward the behavior, subjective norms, and perceived behavioral control are the three primary determinants of intentions (Ajzen, 1988). Their formation is traced, respectively, to beliefs about the behavior's likely outcomes, beliefs about the expectations of important others, and beliefs about factors that may facilitate or hinder performance of the behavior. When people are aware of potential difficulties, they are assumed to plan their actions accordingly. The theory of planned behavior is thus designed to permit prediction and explanation of behavioral achievement by taking into account motivational antecedents which are reflected in intentions as well as other factors that are only partly under volitional control, factors that are reflected in perceived behavioral control.

Applying the theory of planned behavior, Schifter and Ajzen (1985) found that the intention to lose weight was a function of attitude toward weight reduction, subjective norm and perceived control over its attainment. The results of a study by Vinokur and Caplan (1987) of the job-seeking behavior of the unemployed were consistent with the theory. Behavior was not solely

determined by intention. Affirmative social support from the significant other was also an important contributor, particularly when combined with intention.

Planned Behavior and Entrepreneurial Development

Based upon the theory of planned behavior, entrepreneurial development is affected by those traits that individual entrepreneurs bring with them as their attributes (King, 1985). Several researchers have begun the process of model development to describe entrepreneurial behavior.

Gartner (1985) presents a framework for describing the creation of a new venture across four dimensions: individuals (characteristics and motivation), organizations (outcomes), environment (context) and new venture process (behaviors and relationships). Fernald and Solomon (1987) counter that it is difficult to describe the profile of an entrepreneur, regardless of gender, from the attitudinal and behavioral characteristics found in the literature. They contend that research strongly suggests that the key elements in understanding human behavior are values and value systems. Behavioral differences among individuals may be ascribed to the different priorities in which these values are held. However, the majority of the studies in

the review focus on the entrepreneur's behavioral characteristics.

Toward an Entrepreneurial Behavior Model

Previous studies represent portions of a behavioral model for entrepreneurship. The study's intent is to propose a comprehensive, conceptual framework for an entrepreneurial behavior model which incorporates the components of the model proposed by Ajzen (1988). The framework includes the antecedents of attitudes, subjective norms, and perceived control. The seven major entrepreneurial characteristics, presented earlier in the review, are components of the antecedents. The antecedents and their components are described as follows:

Attitude toward behavior. Both attitudes and traits refer to latent, hypothetical constructs that manifest themselves in a wide variety of observable responses. With attitudes, the responses are evaluative in nature, and they are directed at a given object or target. Personality traits are not necessarily evaluative. They describe response tendencies in a given domain, such as the tendency to behave in a conscientious manner, to be sociable, to be self-confident, etc. The responses that reflect an underlying trait do not focus on any

particular external target. Instead, they focus on the individual and can thus be used to differentiate between individuals and to classify them into different personality types. Although attitudes and traits are both assumed to be relatively stable, enduring dispositions, attitudes are typically viewed as more malleable than personality traits. The characteristics need for achievement, innovation, persistent problem solving, and long term involvement are evaluative in their response, and in the case of entrepreneurs are directed at an object. It is contended in literature that innovation (Drucker, 1985) and need for achievement (McClelland, 1965, 1976) are malleable characteristics.

Subjective Norm. In the subjective norm of the framework, family background has an important effect on the emergence of entrepreneurial behavior. In general, people intend to perform a behavior when they evaluate it positively and when they believe important others think they should perform it (Ajzen, 1988; Ajzen & Fishbein, 1980; Woelfel & Haller, 1971).

Perceived Behavioral Control. Bird (1989) argues that the entrepreneurial career is intentional, volitional control. Internal locus of control and risk taking are two characteristics that relate to control. Drive and energy are under the control of the

entrepreneur; as Mancuso (1973) and Timmons (1978) state it is one "coefficient of entrepreneurial success." Previous experience is added as a factor, but it may not be totally under control. Displaced persons have a greater tendency to become entrepreneurs (Ronen, 1983).

Departing from the Ajzen (1988) model, this study's conceptual framework for an entrepreneurial behavior model included a fourth component, the demographic indicators.

Demographic Indicators. In relationship to developing a framework, the demographic indicators age, sex, birth order and educational history cannot be manipulated. The literature suggests that they influence the other components: attitude toward behavior, subjective norm, and perceived behavior control.

The development of a conceptual framework for describing entrepreneurial behavior containing attitude toward the behavior, subjective norm, perceived behavioral control and the demographic indicators as components requires the answer to several questions. These questions are:

1. Is there a relationship among the individual components of each antecedent?
2. Is there a relationship between each antecedent?
3. Do the demographic indicators influence the three antecedents?

4. Are there major characteristics and demographic indicators which are prominent in their influence on entrepreneurial behavior?

The remainder of the study will answer these questions and examine the proposed conceptual framework for describing the personality of Oregon agricultural export entrepreneurs.

II. METHODOLOGY

Population and Sample

The study's population consisted of 120 agriculture exporters as identified in the Oregon Agricultural Suppliers Directory (Oregon Department of Agriculture, 1990). To be listed in the directory, exporters were either contacted directly by the Department of Agriculture or they heard about the directory and asked to be included. According to the Department, the directory is not meant to be an "all inclusive list" (personal communication, November 26, 1990).

A stratified random sample of 15 males and five females was selected for participation in the study. Two of the subjects were minorities. The 120 exporters were sorted into two groups based upon whether the person listed with the company had an apparently female or male name. Each list was alphabetized by company name, and the businesses in each list were assigned three-digit numbers in the order they were listed. Each list was then reordered using a random number table (Peterson, 1985).

Individuals on each list were contacted by telephone in their randomly assigned order. When an individual on the list was contacted by phone, the caller was identified, the purpose of the call and subject of the study were briefly described, and the source of the initial identification was revealed following the script in Appendix A.

The individual was asked if he or she was the owner of the business, if the business was exporting internationally and if he or she would be willing to participate in the study. If the initiator of the export activity could not be identified or did not wish to participate in the study, the next individual on the list was contacted. The procedure was continued until the 20 subjects were identified. One of the 15 male entrepreneurs listed in the study was actually a composite of his data and his wife's data. Based upon the discussion during the interview, it was judged that both were equally involved in the establishment and operation of the export business. The decision was made to include the data in the results.

Thirty-one men and all 14 women were called in order to identify the 20 subjects. Table 5 is a summary of the reasons why 25 individuals were not included in the study. One of the male former exporters had 36 years of experience in the field but had been "beaten up" by the

Table 5

Summary of the reasons for persons not included in the study by gender.

Reason:	Males	Females
Were not or no longer exporting agricultural goods.	8	2
Declined to participate.	5	0
Could not be contacted, apparently out of business.	2	4
Did not initiate export activity.	1	3
Number of non-respondents	16	9

market during the 1980's. Two other male former exporters stated that the experience had not been a good one or that it was "too much hassle."

Nine women were called who could not be included in the study, a summary of their responses are also included in Table 5. Two of the women were no longer with the firm listed in the directory. The other was a man who was mistakenly included with the women.

As seen in Table 6, most of the subjects were the owners of or partners in their own businesses. One of the women was a partner in the only female operated venture of its type in the world. A second female entrepreneur has an interest in the trust that was formed upon the death of her husband. The male manager of a cooperative was a member of its board and was one of its major growers. Another male was the president of a family corporation and handled export accounts; the stockholders of the corporation were mostly family members. The business was in its second generation of family ownership. Another male export entrepreneur's business was a subsidiary of a larger corporation. He acted as a broker for the larger corporation as well as buying and selling on his own.

The majority of the subjects started their own enterprises (Table 7). Two purchased their businesses from their parents; one represented the second generation

Table 6

Summary of the subjects primary position in their businesses by gender.

Primary position	Male	Female
Owner	9	1
Partner	3	3
Manager, cooperative	1	0
Other:		
Interest in trust	0	1
Family corporation	1	0
Part of larger company	1	0
Number of respondents	15	5

Table 7

Subjects' relationship to ownership of their businesses
by gender.

Type of ownership	Male	Female
<hr/>		
Original Owner	9	4
Purchased business from parents	2	0
Inheritor	2	0
Manager, Cooperative	1	0
Subsidiary of larger corporation	1	0
Interest in trust	0	1
Number of respondents	15	5

and the other is the third generation of family ownership of the business. Two male entrepreneurs were inheritors of their business with other family members involved in the operation of the business. One of these businesses was also in its third generation of family operation.

The general categories of agricultural products marketed by the export entrepreneurs included in the study are summarized in Table 8. A majority of the subjects' were international exporters of processed meats and produce.

The subjects marketed world-wide (Table 9). Seventy-five percent of the group reported contact with or sales to Japan or other Pacific Rim countries. Canada and Europe were identified as major markets. One of the female entrepreneurs reported that except for India and China her firm marketed all over the world.

In general, the entrepreneurs companies were small and varied in size from one to 180 full-time employees with seasonal employment in the largest company reported as 380 (Tables 10 and 11). They typically employed six to ten workers with gross sales between one and ten million dollars. The female respondents reported lower gross sales than their male counterparts, but only three of the five provide this information.

Table 8

Agriculture commodities exported by the subjects' businesses.

Commodity	Male	Female
Animal feed	0	1
Canned fish	2	0
Canned vegetables	1	0
Dry beans, peas, lentils, popcorn and birdseed	2	0
Equipment	0	1
Fruit and fruit products	3	0
Herbal products	0	2
Meat	1	0
Nursery stock	2	0
Nuts	1	0
Seafood, fish products	0	1
Seeds	1	0
Vegetables	1	0
Vegetarian food items	1	0
Number of respondents	15	5

Table 9

Export markets for the subjects' businesses (duplicated count).

Market	Males	Females
Canada	8	0
Europe	6	1
Japan and/or other Pacific Rim countries	11	4
World-wide, except India and China	0	1

Table 10

Size of companies by number of employees, reported for both male and female export entrepreneurs included in the study.

Number of employees	Male owned Companies	Female owned Companies
Five or fewer	7	2
Six to 10	2	1
11 to 25	3	2
26 to 50	1	0
50 to 100	1	0
101 to 200	1	0
Number of respondents	15	5

Table 11

Estimated gross sales for 1990.

Estimated gross sales	Males	Females
Under \$1 million	4	2
\$1 million to under \$10 million	7	1
\$10 million to under \$25 million	2	0

A majority of the subjects did not rely on export sales for a majority of their gross income (Table 12). They all planned to expand their export endeavors, but move conservatively into foreign markets. One female entrepreneur stated that she would like to "expand into California since it has the fifth largest economy in the world."

Procedure

After the phone contact, the data were gathered in two ways: an interview and a survey questionnaire. The purpose of the interview was to acquire comprehensive information on the venture into international agricultural trade. The interview focused on seven general areas of questioning. The major questions were:

1. Would you please describe your agricultural export business?
2. Would you please describe your international experience prior to starting your export business?
3. What prompted you to become an international agricultural export entrepreneur?
4. Was there a person who was a significant influence on your decision to enter international trade?

Table 12

Export sales as a percentage of estimated gross sales for 1990.

% of export sales	Males	Females
<hr/>		
Insignificant to five percent	4	3
10 to 40 percent	7	0
80 to 95 percent	1	1
100 percent	3	1
Number of respondents	15	5

5. Did you have prior education or training in this field or a related area?
6. Was either of your parents self-employed while you were growing up?
7. Would you please provide the following demographic information? Your birth order and age.

See Appendix B for the outline that guided the interview session.

The interviewer took precautions to assure that techniques for recording observations, note taking or tape recording, did not interfere with the interview process (Marshall & Rossman, 1989). The initial phone call and orientation prior to the interview established the appropriate techniques for recording observations. Participants were also advised that the information they provided would be treated as confidential. They were told that audiotaped interviews would be transcribed to a journal. Information from the subject who asked to not be taped was recorded directly in a journal by hand. Names of the individuals and firms were coded in the journal. It was impossible to audiotape the majority of the interviews due to the level of background noise. These interviews were also recorded directly into journals. Individual interviews ranged in length from 30

minutes to over two hours; the majority lasted approximately 45 minutes.

In addition to the interviews, the respondents were asked to complete a questionnaire (Appendix C) which was given to them at the conclusion of the interview. The questionnaire was accompanied by a cover letter and a stamped self-addressed return envelope. Each subject was presented with an "Oregon State University" pencil to complete the questionnaire and a gift-wrapped ceramic "Oregon State University" coffee mug as a thank you for participating in the study.

The cover letter, questionnaire and follow-up procedures were constructed using guidelines provided by Dillman (1978). One week after the interview, a follow-up letter was mailed to each of the interviewees. The letter was written as a thank you for those individuals who had returned their questionnaire and a reminder for those who had not (Appendix D). Three weeks after the interview, a second follow-up was sent to the one nonrespondent. This mailing consisted of a cover letter (Appendix E), replacement questionnaire and a stamped self addressed envelope. The subject promptly returned the questionnaire.

The tapes, journals and survey instruments were placed in a file and in a location different than the one in which the names and addresses of the subjects were

kept. Because the recordings included the subjects' names and the name of their firms, the tapes will be erased upon the completion of this study.

The questionnaire elicited information on the respondents' entrepreneurial qualities. Portions of the Jackson Personality Inventory and the Personality Research Form-E, which were developed by Douglas Jackson (1976, 1989), were used to gather information from the subjects. The instrument for this study included portions of a second modification of the two Jackson instruments, which was developed by Sexton and Bowman (Sexton, personal communication, July 8, 1990).

The first modification consisted of utilizing only the nine trait scales from the two Jackson instruments that discriminated between entrepreneurship majors and other business school majors at Baylor University. The second modification was based on a cluster analysis of the scores to reduce the number of questions on the first modified test from 196 to 80 (D.L. Sexton, personal communication, July 8, 1990).

The Jackson Personality Inventory was developed primarily for use on populations with average or above average ability. The instrument is designed to provide measures of a variety of personality traits. These traits have relevance to the prediction of behavior in a wide variety of contexts (Jackson, 1976).

The Jackson Personality Inventory, JPI consists of 16 scores, (Table 13) (Buros, 1978; Jackson, 1976). Goldberg (1978) states that the Jackson Personality Inventory has been proposed for "research in personality, as an aid to vocational, educational and personal-adjustment counseling, classroom demonstration purposes, and similar applications" (p. 871). He concluded that the instrument is highly recommended for personality research, but he questioned its use in all of the listed settings. Lykken (1978) adds that the main problem with the Jackson Personality Inventory is its essentially arbitrary selection and definition of the original dimensions and its misleading implication that the scales actually measure organized traits of personality. Sexton and Bowman (1984, 1986) found the instrument to be valuable in their studies of entrepreneurs.

The Personality Research Form-PRF yields "a set of scores for personality traits broadly relevant to the functioning of individuals in a wide variety of situations" (Conoley & Kramer, 1989; Jackson, 1989). It is primarily focused on areas of normal functioning rather than upon psychopathology (Jackson, 1989). Form-E has 22 scales associated with it (Table 14) (Conoley & Kramer, 1989; Jackson, 1989). Hogan (1989) states that the Personality Research Form is technically excellent

Table 13

Sixteen scores in the Jackson Personality Inventory, JPI.

Anxiety	Breadth of Interest
Complexity	Conformity
Energy level	Innovation
Interpersonal affect	Organization
Responsibility	Risk taking
Self esteem	Social adroitness
Social participation	Tolerance
Value orthodoxy	Infrequency

(Buros, 1978; Jackson, 1976)

Table 14

Twenty-two scales of the Personality Research Form-E,
(PRF-E).

Achievement	Affiliation
Aggression	Autonomy
Dominance	Endurance
Exhibition	Harm avoidance
Impulsivity	Nurturance
Order	Play
Social recognition	Understanding
Infrequency	Abasement
Change	Cognitive structure
Defendence	Sentience
Succorance	Desirability

(Conoley & Kramer, 1989; Jackson, 1989)

and is well suited for what Jackson sees as the primary use of the test: "A tool for general research in personality." He cautions that despite the technical excellence of the instrument, users interested in psychological meanings may find other tests more useful. Wiggins (1989) stated that the Personality Research Form has been viewed as an exceptionally promising and welcome addition to the realm of normal personality testing. The most frequently expressed disappointment with it is the lack of validity studies and norm data on other than college students that would permit its application in an applied setting. Wiggins (1989) points out that the new norm data for Form E are presented for male and female adult samples, for a stratified random sample of college students, and for a group of juvenile offenders. Form E was used in the development of the modified versions.

In a study by Sexton and Bowman (1984), 218 university undergraduates were sorted into three groups consisting of 45 entrepreneurship majors, 75 business students and 98 non-business majors. The students were administered six instruments consisting of the Jackson Personality Inventory, Personality Research Form-E, Kogan-Wallach CDQ, Budners Tolerance-Intolerance of Ambiguity Scale, Steer's Manifest Needs Questionnaire, and Levinson's Locus of Control. A comparison of all six tests revealed nine different characteristics that

distinguish budding entrepreneurs from all others. The characteristics of "Conformity," "Energy Level," "Interpersonal Effect," Risk Taking," and "Social Adroitness" are in the Jackson Personality Inventory (Jackson, 1976; Sexton & Bowman, 1984)). "Autonomy," "Change," "Harm Avoidance," and "Succorance" are found in the Personality Research Form-E (Jackson, 1989; Sexton & Bowman, 1984). In recognizing the importance of time to entrepreneurs, Sexton and Bowman (1984) limited the variables in the modified instrument to those nine. The reliability coefficients ranged from .66 to .72 which was very close to the original coefficients reported by Jackson. An additional validation of the combined instrument was completed by Sexton and Bowman (1986). They reported that the validity and reliability of the Jackson Personality Inventory and Personality Research Form-E have not been altered by the modification and combination of the two instruments.

Table 15 compares the first modified version and the second modification, which will be used in this study. While the second modification of the combined Jackson Personality Inventory and the Personality Research Form-E is designed to measure only those nine traits that distinguish entrepreneurs, the modification did pose a dilemma for this study. There was not a direct match between the nine trait scales as defined by Jackson

Table 15

Reliability of the Original vs. the Shortened (Second)
Modified Version of the Jackson Personality Inventory and
the Personality Research Form-E.

VS. TRAIT	<u>RELIABILITY</u>		
	ORIGINAL MODIFIED	SECOND MODIFIED	CORRELATION ORIGINAL
	VERSION	VERSION	SECOND

Conformity	.788	.734	.870
Energy Level	.728	.703	.888
Interpersonal			
Affect	.798	.764	.899
Risk taking	.823	.781	.905
Social Adroitness	.671	.658	.865
Autonomy	.679	.588	.898
Change	.634	.614	.871
Harm Avoidance	.809	.740	.910
Succorance	.738	.740	.899

(Personal communication from M. McLure to D. Sexton,
September 17, 1988)

(1976, 1989) and the seven major characteristics of entrepreneurs as identified through the review of literature.

The questionnaire included the trait scales of "Conformity," "Energy Level", and "Risk", which were found in the second modification and were taken from the Jackson Personality Inventory (Jackson, 1976; Sexton & Bowman, 1984). "Autonomy," which was from the Personality Research Form-E (Jackson, 1989), was also taken from the second modification (Sexton & Bowman, 1984). The study incorporated two additional trait scales from each of the major instruments: "Innovation" and "Complexity" from the Jackson Personality Inventory (Jackson, 1976) and "Achievement" and "Endurance" from the Personality Research Form-E (Jackson, 1989). The study proposed to measure the seven entrepreneurial characteristics, as identified in the review, by using the trait scales from the two Jackson instruments and the second modification (Sexton & Bowman, 1984). The relationships were established as follows: "Need for Achievement" was measured by "Achievement"; "Innovation" by "Innovation"; "Persistent Problem Solving" by "Complexity"; "Long Term Involvement" by "Endurance"; "Risk Taking" by "Risk Taking"; "Drive and Energy" by "Energy Level"; and "Internal Locus of Control" was measured by contrasting "Conformity" and "Autonomy".

A comparison of the definitions for the seven entrepreneurial characteristics and the trait scales is included in Appendix F. A listing of the survey items that address each trait is also included with the comparison of definitions.

The interpretation of the scores from items in the Jackson Personality Inventory (Jackson, 1976) followed the traditional model of test theory. All individuals are thought of as possessing the trait or characteristic to some degree. The higher the score, the greater the probability that the individual will show behavior relevant to the characteristic measured by the scale.

The Personality Research Form-E (Jackson, 1989) scales were developed using carefully defined images of what each scale should measure. The definitions provided for the items emphasize one pole of a bipolar dimension, in this case the description of a high scorer. Low scores, like high scores, signify the presence of important characteristics which differentiate the subject from others.

SPSS/PC+ Version 4.0 was used to provide descriptive statistics and Pearson Product-moment correlation coefficients. The critical interval was .10.

III. FINDINGS AND DISCUSSION

This study is concerned with proposing a conceptual framework for entrepreneurial behavior as a way of systematically describing the entrepreneurial personality. The related literature focused on four components of a framework. These components were demographic indicators and three antecedents of behavior: attitude toward the behavior, subjective norm, and perceived behavior control. The antecedents contained the identified seven major entrepreneurial characteristics. Questions focused on the relationships among the antecedents and the demographic indicators and also among the characteristics which composed the antecedents and the individual demographic indicators. Summaries of the data from interviews and the questionnaires are presented in Appendix G. Each characteristic and demographic indicator contributed to the make up of the agricultural export entrepreneur. Each of the components had its function and interacted with the other components of the conceptual framework.

The literature stated that while the characteristics and demographic indicators proposed by the framework are present in all people, they are "uniquely" present in

entrepreneurs. To examine this assertion, Table G24 reports the percentiles of the mean ratings of four measures of major entrepreneurial characteristics: innovation, complexity, achievement and endurance. Of the four, achievement which was the indicator of the characteristic "need for achievement" was the most pronounced. Need for achievement and its prominence in the study will be discussed later. The ratings of these four characteristics suggested that their presence or absence was not the important issue, rather it was their interaction. This implied support for the framework which was developed on the premise that there was interaction between the four components of the framework and the individual factors which composed them. Further, through the course of the personal interviews, other factors arose which, although coincidental to the study, contribute to an understanding of the agricultural export entrepreneur.

Before venturing into the findings, the study had an important limitation. The population consisted only of agriculture export entrepreneurs. Individuals who were not exporting were not included in the sample.

Findings Related to the Conceptual Framework

The major components were: attitude toward behavior, subjective norm, perceived behavioral control and demographic indicators. The strongest relationship between components of the framework existed between the antecedents of attitude toward behavior and perceived behavioral control.

Attitude toward the behavior versus Perceived behavioral control

"Attitude toward the behavior" was a personal factor and was the individual's positive or negative evaluation of performing the particular behavior of interest (Ajzen, 1988; Ajzen & Fishbein, 1980). Behavioral control is the perceived ease or difficulty of performing the behavior as well as anticipated impediments and obstacles (Ajzen, 1988; Ajzen & Madden, 1986; Schifter & Ajzen, 1985). Within these two antecedents, the relationship and interaction of three characteristics were noteworthy. Two of these characteristics were "need for achievement" and "long-term involvement," both were found in the antecedent attitude toward the behavior. They in turn were also related to internal locus of control, an indicator of perceived behavioral control.

McClelland (1976) stated that need for achievement referred specifically to the desire to do something better, faster, more efficiently with less effort. He stated that it "drives" people to become entrepreneurs. One of the female entrepreneurs stated that she was restless to get out of the house and make a "contribution." Nevertheless, she asserted that raising four children was a contribution. Under the definition of need for achievement, the entrepreneur is described as being more future oriented (Borland, 1975; McClelland, 1976, 1987; McClelland & Winter, 1969). This presupposed a relationship between need for achievement and long-term involvement ($r=.34$, $ndf= 19$, $p=.07$), which was evident during the interviews.

One of the characteristics which distinguishes the entrepreneur is a willingness to have long-term involvement in an endeavor. An entrepreneur is "driven" to build a business, rather than to simply "get in and out" (Timmons, 1978). The comments of two of the subjects best summarized this point:

In selling "ag" products to "foreigners" a great deal of sensitivity is required and patience or the cultural differences will sour some deals. This is particularly true of American exporters. Most of the energetic sales approaches of American "salesmen" don't work in the Orient where the "indirect approach" is preferred. The true creativity is to determine how to approach an overseas sales prospect. Many times patience, a sense of what the client may think of you, and

a following of unusual cultural rules will pay off more than the aggressive and imaginative thinking approach.

Long-term commitment; it takes three to five years to begin to show a profit. It may take three years of working with a customer to make a sale. It is easy to go out of business, it is hard to stay in business.

This commitment to stay in business is related to the third prominent characteristic of entrepreneurs, "internal locus of control."

The study provided support for the literature. Successful entrepreneurs believed they could effectively influence the results of a business if they owned it (Kent et al., 1982). As an example, one subject entered a business because she determined that she could save it. Timmons (1978) stated that this sense of "personal causation" as the determinant of success or failure is linked to the entrepreneur's motivation to achieve. The relationship between the three characteristics, need for achievement, long-term involvement, and internal locus of control (Tables G2, G5, G12, and G13), was evident among the subjects. Although internal locus of control was most closely related to these two characteristics, it was also related to the other characteristics in these two antecedents (Tables G12, G13, and G25).

Need for achievement, long-term involvement and internal locus of control were also related to the notion that people entered the export business because they had

an idea or product that would sell and were looking to establish a marketing niche for themselves (Table G10), or "niche marketing" (Knox, 1988). Establishing a niche was a typical theme among the subjects. An illustrative comment was: "You start with nothing....try to find a niche that works. Once you find a niche, then you are established." Another subject stated that the key was to find something one really liked to do and "...get good at it. It may work into a business."

The subjects were moderate risk takers a phenomena which is aligned with the literature (Bebris, 1987; Hutt, 1988; Kent et al., 1982; Kets De Vries, 1977; Kiesner, 1984; Nelton, 1986; Timmons, 1976). The risk taking characteristic seemed to interact with the other characteristics. In addition to internal locus of control, risk taking appeared to be related to energy, need for achievement, problem solving, and innovation (Table G11).

Harrell (1987) stated that entrepreneurs are able to identify opportunity niches and to recognize patterns of success to emulate. In the study, subjects with previous exporting experience tended to be greater risk takers than those without prior international marketing experience (Table G15). Greater risk taking was also evident among subjects who reported that an idea prompted them to enter the export arena (Table G10). This is

illustrated in the study by an entrepreneur who found that the Japanese needed onions and what followed was a "natural evolution." As another subject explained, three things are required: "preparation, opportunity, and luck....when you have the opportunity, be prepared to do something with it." A further illustration of this point was provided by another subject who, although still exporting, had suffered serious financial, personal and emotional setbacks. He was working at another job, unrelated to agriculture exporting, to help recover from the losses. Yet, he enumerated the export possibilities associated with the current job during the discussion of agriculture export activity. A thread through the data was the relationship between need for achievement, long-term involvement, and internal locus of control, particularly their influence on the other characteristics.

Prior studies (Borland, 1975; Frey, 1984; Hay & Walker, 1987; Hersch & Schiebe, 1967; Peacock, 1987) tended to focus on the effect of one or more of the characteristics of entrepreneurial behavior. This study's comparison of attitude toward the behavior and perceived behavioral control provided a glimpse of the interaction of the seven major entrepreneurial characteristics. Based upon the collected data, each characteristic contributed to the make up of the

agricultural export entrepreneur. Each had its function and its level of functioning. The strongest relationship between components of the antecedents in this comparison were observed between need for achievement and long-term involvement (attitude toward the behavior) and locus of control (perceived behavioral control). In further testing of the conceptual framework, the study contrasted the antecedents attitude toward the behavior and subjective norm.

Attitude toward the behavior versus Subjective norm

Attitude, the entrepreneur's positive or negative evaluation of performing a particular behavior (Ajzen, 1988; Ajzen & Fishbein, 1980), was contrasted with the influence of family or significant others on entrepreneurial behavior. As proposed by Ajzen (1988), Ajzen and Fishbein (1980), and Woelfel and Haller (1971), the influence of a significant other is important to the performance of the behavior in question. If a significant other was not influential, need for achievement and innovation seemed to enable the subjects to compensate for this deficiency (Tables G8 and G9).

Nevertheless, need for achievement was also associated with the influence of a significant other. If the subjects' fathers or parents were self-employed, need

for achievement was higher than if they were not (Tables G6 and G7). One entrepreneur reported that his father, "a man of integrity," influenced him to enter the export arena. He now has a mission emphasizing integrity and is trying to keep instilling that in his staff. Another subject was influenced by his spouse. He was always upset with the "company." She told him to find something he could do himself.

The influence of a significant other, other than a parent or spouse, was important. Often this significant other was a friend or business associate knowledgeable in the export arena (Tables G8 and G9). A reoccurring comment during the interviews focused on the assistance given or sought out from knowledgeable others. The literature review revealed that entrepreneurs preferred to work with competent partners rather than with less competent but more congenial people. Borland (1975), McClelland (1976, 1987), and McClelland and Winter (1969) stated that entrepreneurs choose experts over friends. This was one of the features associated with need for achievement.

As in the review, the entrepreneurs in the study relied on knowledgeable others for assistance in their business. One had a marketing director, another had begun a search for one. Another subject commented that entrepreneurs should surround themselves with the "right

people." Another stated that it is important to know your strengths and weaknesses; hire people to take care of your weaknesses. "Locate the right partners." There were also expressed needs for assistance. Summaries of anecdotal comments were:

Export entrepreneurs need more assistance in marketing their product, establishing the market and doing the paperwork.

Need a way of marketing agriculture, most entrepreneurs are people that are involved.....too busy to do it. There are only so many hours.

Perhaps there is some means of getting together to swap stories. A help group.

There is a community in Oregon that wants to help each other. It is important that small businesses work together so that they can compete.

As a final note, one entrepreneur stated that he was not influenced to enter the export arena though, he added, he had influenced many other people.

In this study, the subjects who were not influenced by a significant other were able to compensate through the characteristics need for achievement and innovation (Tables G8 and G9). Nevertheless, need for achievement was also associated with the influence of significant others. The remaining characteristics contained in the antecedent, attitude toward behavior, were important in this comparison with the subjective norm, but the characteristic, need for achievement, was the most

pronounced. Sexton (personal communication, July 8, 1990) warned that need for achievement was a "W.A.S.P." characteristic and even McClelland was changing his viewpoint on the characteristic. Two of the 20 participants in the study were non-white and both were among those having the lowest need for achievement.

Subjective norm versus Perceived behavioral control

In identifying the characteristics of the "Oregon agricultural export entrepreneur," the influence of a significant other was also related to the antecedent perceived behavioral control. This influence resulted in moderate risk taking and was related to drive and energy (Tables G8 and G9). Perhaps the assistance or advice of significant others lessened risk and allowed the entrepreneurs to devote more energy to the development of their businesses ($r = -.62$, $ndf = 19$, $p = .002$).

It appeared that internal locus of control compensated for the lack of influence of parents or significant others (Table G9). Internal locus of control was measured by contrasting conformity and autonomy. Statistically conformity and autonomy were negatively correlated as expected ($r = -.43$, $ndf = 19$, $p = .03$). Only autonomy was correlated to influence of significant others ($r = .37$, $ndf = 19$, $p = .056$). Rotter's "locus of

control" theory states that individuals perceive the outcomes of events as being either within or beyond their personal control and understanding (Fernald & Solomon, 1987; Kent et al., 1982). From earlier discussion, internal locus of control is related to the other characteristics. This relationship is carried into the subjective norm where it seemed to have the most pronounced relationship to the decision to enter international agriculture trade. An example is the entrepreneur who left his corporate position because he was concerned with product quality and believed that he could help make a difference.

Demographic indicators versus Attitude toward the behavior

In the proposed conceptual framework, attitude toward the behavior referred to latent, hypothetical constructs that manifest themselves in a wide variety of observable responses (Ajzen, 1988; Ajzen & Fishbein, 1980). These responses were evaluative in nature and directed at a given object or target. In this study, the object or target was the development of an agricultural exporting business.

In starting an export business, education potentially overcame some of the barriers to entering the business.

The level of education seemed to provide some of the initial impetus to start the export business and to provide assistance over the long term (Table G23). Long-term involvement, innovation and problem solving seemed to provide female entrepreneurs with the impetus to overcome their lower educational attainment and later start in business in comparison to their male counterparts (Tables G1, G17, G18, G21, and G22).

Coinciding with the literature, female entrepreneurs were older as a group when starting their business than their male counterparts (Table G17) (Diffley, 1983; Finger Lakes, 1987). Although Petrof (1980) concluded that successful entrepreneurs tend to be first born children, there was no pattern to the birth order of the female entrepreneurs (Table G22). This varied from conclusions in the literature that female entrepreneurs were no different from the males with respect to family constellation (Diffley, 1983; Fernald & Solomon, 1987). The most pronounced difference between the male and female entrepreneurs was in their need for achievement. The male entrepreneurs had a more pronounced need for achievement than the female export entrepreneurs in the study, regardless of age (Tables G1 and G18) ($r=.55$, $ndf=18$, $p=.007$). Nonetheless, there was greater variation in the male population than between male and female subjects. Birth order seemed to be the factor

which provided the point of comparison for the other demographic indicators and the characteristics. First born male agricultural export entrepreneurs were younger when starting their business and had less education than the other birth order groupings (Tables G19 and G21). They had the greatest need for achievement, long-term involvement, innovation and problem solving of the three groups (Table 20). The last born subjects were older when starting their businesses (Table 19) and had higher educational attainments than the other subjects. These findings tend to support Petrof's (1980) conclusion that being the oldest child in the family is a much better predictor of entrepreneurial talent than is age.

Mancuso (1973), Petrof (1980), Ronen (1983), and Williamson (1987) placed the average age for starting a business between 30 and 35 years. A majority of the male subjects in the study were in this age range or younger (Table G17).

First born subjects, particularly their need for achievement, seemed to provide the impetus for development of a successful entrepreneurial venture, specifically among the males. In later born male entrepreneurs, a higher level of education potentially overcame some of the barriers to entering the business (Table 23). While the female subjects had achieved a lower level of education than their male counterparts,

they seemed to overcome this through their innovation and problem solving.

Demographic indicators versus Subjective norm

In the subjective norm of the conceptual framework, family background was reported in the literature to have an important effect on the emergence of entrepreneurial behavior. The subjects could not recall significant others who clearly influenced them to specifically enter the export business (Table G8). Yet, a reoccurring comment during the interviews centered on the assistance given or sought out from knowledgeable others. Even though significant others who influenced them to enter the export trade were not named, the subjects did rely on assistance from knowledgeable others. Some anecdotal comments were:

Travel is important, (you) pick up bits of information [from knowledgeable others] that will help; (the subject) knows all of his customers.

The conference is somewhere in the world every two years, (the subject) makes it a point to attend.

Entrepreneurs need more encouragement, places to go to learn, they need to take advantage of leads from the Department of Agriculture. Community colleges are another good source of assistance; they are more accessible than four-year schools. By providing assistance to entrepreneurs, the better each one looks, the better they all look.

In agreement with the literature, a majority of the entrepreneurs had fathers or parents who had been self-employed (Table G6).

Demographic indicators versus
Perceived behavioral control

Bird (1989) contended that the entrepreneurial career is a manifestation of intentional, volitional control. Three characteristics and one demographic indicator composed this component of the framework: internal locus of control, risk taking, drive and energy, and previous experience.

Internal locus of control and risk taking were two characteristics that related to control. Although present in all of the subjects, these characteristics were more evident in male and first born subjects (Tables G1 and G20). According to Jackson (1976), the higher the score on the scale for a characteristic measured by his instrument, the greater the probability that the individual will show the behavior relevant to that characteristic. Perhaps it should be noted that the female subjects did have smaller businesses, when comparing gross sales as groups, than the males (Table 11, Chapter II). In regards to birth order, it appeared that education could compensate for internal locus of

control and risk taking in the later born subjects. The characteristic drive and energy was viewed as being under the control of the entrepreneur. From the review of literature (Mancuso, 1973; Timmons, 1978), drive and energy were one "coefficient of entrepreneurial success." The subjects may have compensated for differences in internal locus of control and education by energy for the task (Tables G14, G18, G23). Based on information gathered incidentally to the interview, the survey instrument may not have composed a full picture of the observed energy level of the entrepreneurs. One subject will be used to illustrate this point. The subject worked the "third" shift in an industrial setting when starting the agricultural export business, so that he could "be home during the day to work on the business."

Previous experience, while not a major characteristic, is part of the antecedent, perceived behavioral control, and may not be totally under the subjects' control. In the study it received brief mention as related to the literature. Eisenberg (1986) found that as many as 60 percent of the people who chose to open a business did so out of frustration with their current jobs. Of more importance, 90 percent of the subjects had prior education or training or practical experience in the field or a related area prior to entering the agricultural export business (Table 16G).

Some comments related to this notion of education, training and practical experience were:

Work for another nursery for three to five years so that you know what is going on in the industry.

[You] need a track record.

Have a full knowledge of what you are dealing with; your customers will ask specific questions.

Know your product.

Learn the industry.

[You] need to know your product, alot try to fake it. You get the chance to lie once.

Internships; start people out on the end of the broom, work them through the total function of the organization.

Even the entrepreneurs who took over or became part of the family business had experience or training outside of that business.

Although the creation of a new business venture was described as a multidimensional event, little research, as reported in the review, addressed the interaction of entrepreneurial characteristics and their relationship to new venture creation. This study proposed a conceptual framework for entrepreneurial behavior composed of seven major characteristics and six demographic indicators. The framework described the Oregon agricultural export entrepreneurs who participated in the study. In addition, factors incidental to the study contribute to

the description of the entrepreneur. Based upon the discussion of the findings, the next chapter will present the summary and implications of this study.

IV. SUMMARY AND IMPLICATIONS

Summary

This study proposed a conceptual framework as a way of systematically describing the entrepreneurial personality. The major components of the proposed framework were attitude toward the behavior, subjective norm, and perceived behavioral control, the three antecedents of behavior, and demographic indicators. The antecedents contained the seven major entrepreneurial characteristics which were proposed and confirmed by the study. The antecedents and demographic indicators as well as their interactions were the focus of the research study.

This study's population consisted of 120 agriculture exporters as identified in the Oregon Agricultural Suppliers Directory (Oregon Department of Agriculture, 1990). A stratified random sample of twenty subjects, 15 males and five females, was identified for the study. This study had an important limitation. The population consisted only of agriculture export entrepreneurs. Entrepreneurs who were not exporting were not considered as part of the sample.

The data were gathered in two ways: an interview and a survey questionnaire. The purpose of the interview was to acquire comprehensive information on the venture into international agriculture trade. A summary of each interview was coded into a journal by hand. Individual interviews ranged in length from 30 minutes to over two hours; the majority lasted approximately 45 minutes.

In addition to the interviews, the respondents were asked to complete a questionnaire which was given to them at the conclusion of the interview. The questionnaire sought information on the respondents' entrepreneurial qualities, the seven proposed major entrepreneurial characteristics. The characteristics were estimated by using trait scales from three instruments. Portions of the Jackson Personality Inventory and the Personality Research Form-E (Jackson 1976, 1989) and a second modification of the two Jackson instruments (Sexton, personal communication, July 8, 1990) were used to gather information from the subjects.

The related literature indicated that successful agricultural entrepreneurs may be characterized by four factors (attitude toward the behavior, subjective norm, perceived behavioral control and demographic indicators). The literature also indicated that the factors should be related. This conceptual framework served as the basis for the initial research questions for the survey.

Information provided by the subjects when taken in the context of the related literature provoked additional questions. The framework, particularly the interrelationship among the posited factors and indicators, was examined in light of the information provided by each subject. For each subject, the qualitative information was first applied; the quantitative data were then used to verify the qualitative observations.

Implications

Agricultural export entrepreneurs are characterized by seven major entrepreneurial qualities and six demographic indicators. The seven qualities are clustered in two factors: attitude toward the behavior and perceived behavioral control. The demographic variables cluster in two factors, subjective norm and demographic indicators, and contributed to the antecedent perceived behavioral control.

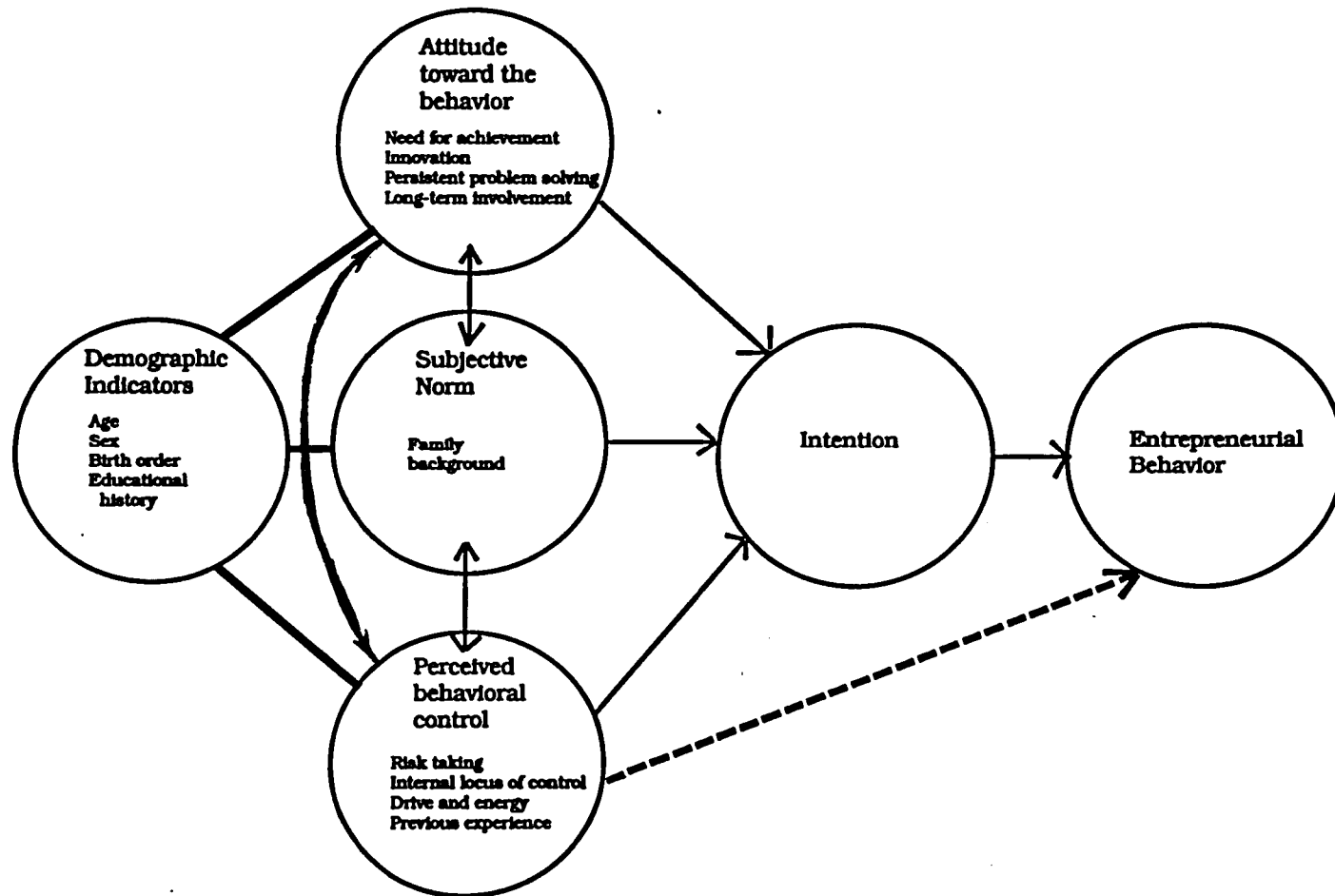
Attitude toward the behavior consists of the qualities need for achievement, innovation, persistent problem solving, and long-term involvement. The subjective norm consists of family background, a demographic indicator. Perceived behavioral control consists of risk taking, internal locus of control, drive

and energy, and previous experience. Finally, demographic indicators are defined by age, gender, birth order, and educational history. All factors are related; but, attitude toward behavior, subjective norm, and perceived behavioral control are "antecedents" to the intention to become an entrepreneur. Likewise, demographic indicators influence these three factors. The major implication of the study is that this framework can be organized into an entrepreneurial behavior model (Figure 3).

The proposed model should now be tested with a larger group of subjects. Testing of the whole model should focus on the interaction of the four components of the model as well as the interaction of the individual factors, seven major characteristics and six demographic indicators. A personal interview of each subject is a necessary data gathering strategy to acquire reliable information.

Individually, the relationships among the antecedents, the demographic indicators and their components have implications for further study. The strongest relationship among components of the model exists between the antecedents of attitude toward behavior and perceived behavior control, which contain the seven major entrepreneurial characteristics. The

Figure 3. Entrepreneurial Behavior Model



seven major characteristics are appropriately placed within these two antecedents. The connection between these two antecedents needs further testing, particularly the interactions of the characteristics that compose them.

Attitude toward the behavior

While the other two characteristics comprising attitude toward the behavior are important, need for achievement and long-term involvement are the most prominent. Of the two, need for achievement is the most pronounced.

Need for achievement is pervasive in comparisons with all components of the model. It is linked to the influence of significant others in the subjective norm, to internal locus of control in perceived behavioral control, and to the demographic indicators. A high level of need for achievement can compensate for a lower level of some of the other factors.

Of note is the fact that two of the participants are non-white, both are among the subjects with the lowest level of need for achievement. The level of need for achievement in non-whites may not be an issue. The focus of further study should be on the relationship of need

for achievement to the other factors. Yet, additional studies should include a larger sample size so that comparisons may be made by gender and by race to see if there are significant relationships.

Need for achievement is paired with long-term involvement. They in turn are related to internal locus of control, a component of perceived behavioral control. Comments by the subjects of the study confirmed the relationship of these characteristics. This relationship among the three characteristics demonstrates the interaction of two of the components of the model, attitude toward the behavior and perceived behavior control. It is the strongest relationship between components of the antecedents in the model.

Subjective norm

The subjective norm is a paradox. A majority of the agriculture entrepreneurs have a parent or parents who are or were self-employed. Yet, the significant other, person who influenced the subject to enter the agriculture export business, is not predominately a parent or close relative. There is a need for further examination of who influences the entrepreneurial decision; the study did not directly address this issue.

The subjective norm is influenced by need for achievement, attitude toward the behavior, internal locus of control, and risk taking. Risk taking like internal locus of control is a component of perceived behavioral control.

In this antecedent, family background or the influence of a significant other, alone, are not predictors of entrepreneurial behavior. Rather, the interaction of the other components of the model are important in the decision. Further study should examine this issue, particularly the relationship with need for achievement. If need for achievement is a malleable characteristic, can education influence need for achievement? At the same time, can an instructor or instructors serve as the significant other and also influence the entrepreneurial decision?

Perceived behavioral control

Risk taking, internal locus of control, drive and energy, and previous experience, a demographic indicator, are factors in this antecedent and each have implications for further study.

Of these components, internal locus of control is the most prominent. The relationship between need for achievement, long-term involvement, and internal locus of

control, particularly their influence on the other characteristics is a thread through the study. Further investigation should be completed on the effect of internal locus of control on the entrepreneurial decision and the other components of the model. If conformity and autonomy are used to measure internal locus of control, the sample size should be large enough to produce sufficient statistical data to confirm or deny their usefulness.

Agriculture export entrepreneurs are moderate risk takers. Further study should contrast the level of risk taking between successful agriculture export entrepreneurs and those who were not successful in their venture or those who chose not to export.

Drive and energy as a characteristic provides an interesting contrast in this study and needs further examination. The responses to the survey questionnaire are different than the responses from the personal interviews. The instrument, for this measure, may not be germane to the entrepreneur. Further study using a larger sample size should be completed on this topic.

The subject of prior experience also needs more study. The notion that people choose to open a business out of frustration with their current jobs is not a significant issue in this investigation. Of more importance for further work is the examination of the

relationship among prior education or experience, the idea that need for achievement is a malleable characteristic, education as the significant other and their collective influence on the entrepreneurial decision. The model needs further testing at this point.

The dashed line linking perceived behavioral control and entrepreneurial behavior indicates the possibility of a direct link between the antecedent and the outcome; a partial substitute for a measure of actual control. This was not tested, but using a larger sample size should be a feature in another study, particularly the effect of prior experience.

Demographic indicators

The demographic indicators while being relatively fixed do influence the three antecedents and their components. Gender and birth order are the most notable indicators.

Gender has an important relationship to the entrepreneurial decision. Despite the small study sample, the interaction of gender with the other components of the model is statistically significant. It is recommended that any further testing of the model involve a larger sample size, both females and males.

Birth order is a prominent feature of the model, but the data does not support the position that entrepreneurs are primarily first born children. Of more importance are the interactions of each birth order grouping (first, last, other) with the other components of the model. Birth order and its role in shaping the entrepreneurial decision with the other components of the model needs further study.

In the model, there was no attempt to draw a relationship between intention and behavior. The subjects of this study were successful entrepreneurs, they were already exhibiting the behavior that the model is intended to describe. This aspect of the model needs to be tested using a larger population made up of successful subjects and those who were not successful in their agricultural export venture.

The creation of a new business venture is a multidimensional event. Little research addresses the interaction of entrepreneurial characteristics and their relationship to new venture creation. The entrepreneurial behavior model developed by this study is supported by the results. There is interaction among the components of the model and they relate to the entrepreneurial act, the creation of a new agricultural

export business venture. The model is an approach to explaining the creation of a new business venture and merits further study.

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APPENDICES

APPENDIX A

Telephone Script

Telephone Script

Call person from list

Identify self

- * Name
- * Doctoral candidate at Oregon State University

Source of their name and business

- * Oregon Agriculture Suppliers Directory

Purpose of study

- * Writing on agriculture export entrepreneurs
- * People who start their own agriculture export business

Did you start the export business in your firm?

- * If not, may I speak to the person who started the export business?

If the person cannot be identified, thank them for their time and go to the next person on the list.

If the person can be identified or it is the person speaking on the phone, ask:

- * Would you be willing to participate in my study?

If not, thank them for their time and go to the next person on the list.

If yes, explain that the study is in two parts:

- * Personal interview at the place of business.
- * Completion of a survey instrument. The instrument will be given to the person at the end of the interview for completion at a later time.

Ask for an appointment, explaining that the interview will last approximately 45 minutes.

Close the call by stating that they will receive a letter confirming the appointment.

APPENDIX B

Interview Script

CHARACTERISTICS OF OREGON AGRICULTURAL EXPORT

ENTREPRENEURS INTERVIEW SCRIPT

1. Which of the following best describes your current
(primary) position?

Owner

Partner

Manager, but not owner

Employee

Other (please specify)

2. In reference to your business, were you:

The original owner?

A buyer into an existing business?

A franchiser?

An inheritor?

3. Please describe your business.

Products marketed?

What countries?

Number of employees?

Unique features?

Projected gross sales for 1990?

Less than \$5,000
\$5,000 to \$9,999
\$10,000 to \$14,999
\$15,000 to \$19,999
\$20,000 to \$29,999
\$30,000 to \$39,999
\$40,000 to \$49,999
\$50,000 to \$74,999
\$75,000 to \$99,999
Over \$100,000

Exports make up approximately what % of your gross sales?

Number of years you have been exporting?

Future goals for the business?

How many businesses have you owned before starting
this one?

4. Please describe your international experience prior to starting your export business.

Did you have prior international marketing experience?

Did you/are you learn(ing) a language? If so, which one?

If not, is knowledge of a foreign language important in the international marketplace?

5. What prompted you to become an international agricultural export entrepreneur?

Economic factors?

Inheritance?

Influence of significant other?

Purchased business?

Developed idea, product that would sell?

6. Was there a person who was a significant influence on your decision to enter international trade?

None

Spouse

Father

Mother

Close relative (please specify)

Significant other (please specify)

In addition, did any particular agency such as the Department of Agriculture, Oregon State University or Small Business Assistance Center provide significant advice in establishing or maintaining your business?

7. Did you have prior education or training in this field or a related area? Please describe your prior training.

What was the highest level of education that you completed?

Completed grade school

Some high school

Completed high school

Some college

Completed college (specify major)

Some graduate work

A graduate degree (specify degree and major)

Do you think all students should learn a foreign language to prepare for international trade?

What three to five things should be taught to help future entrepreneurs?

What are your top five, personal, training needs?

8. Were either of your parents self-employed while you were growing up? (Respondents who answer yes will be asked to identify the parent or parents and describe the business. They will be asked if their parents were also involved in international trade.)

9. To complete this part of the study, the following demographic information is needed:

When were you born in relation to your brothers and sisters? (Only child? First born? Other than first or last born? Youngest?)

Your age when you entered the export business?

Under 20 years old

20-25

26-30

31-35

36-40

41-45

46-50

51-55

56-60

Over 60 years old

APPENDIX C

Letter, Survey Instrument

Date

Dear ,

Thank you for agreeing to participate in my study of Oregon agricultural export entrepreneurs. I enjoyed our visit on the phone and am looking forward to our appointment (date) at (time) .

As I described, the study is divided into two parts. The interview on the (date) will focus specifically on your business. The second part of the study is the survey instrument which focuses on entrepreneurial qualities. These positive qualities are present in each person, but are more distinct in people who start or run their own business. The survey may be completed after our visit and returned in a stamped self-addressed envelope, which I will supply.

I do look forward to our visit. For your convenience I have included my home and work phone numbers.

Sincerely,

Wayne E. Johnson
P.O. Box 103
Crabtree, OR 97335

home phone 928-0041
work phone 967-8822

ENTREPRENEURSHIP, THE OREGON PHENOMENA

A doctoral study of the "Characteristics of Oregon Agricultural Export Entrepreneurs"

While there have been many studies completed in the Eastern United States on business venture creation, entrepreneurship, there have been few in-depth studies completed in Oregon. This doctoral study will focus on the agriculture export entrepreneur as identified in the Oregon Agriculture Suppliers Directory. Please answer all of the questions. If you wish to comment on any questions or qualify your answers, please feel free to use the space in the margins or on the back cover of this document.

Your responses will be kept confidential.

Please return the completed document in the stamped self-addressed envelope.

Thank you for your assistance.

For further information about the study, contact either:

Wayne Johnson	home phone	928-0041
	work phone	967-8822

or

Dr. Warren Suzuki, Acting Chair
Department of Vocational and Technical Education
Snell Hall 301
Oregon State University
Corvallis, Oregon 97330

737-2961

Entrepreneurial qualities: The following 104 questions form the heart of this study and have been reproduced, by permission. Although the qualities measured by the instrument are present in all people, they are uniquely present in entrepreneurs. It is crucial that you answer each item. Your cooperation is appreciated.

Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

- | | | | |
|---|---|-----|---|
| T | F | 1. | I am very sensitive to what other people think of me. |
| T | F | 2. | |
| T | F | 3. | |
| T | F | 4. | I delight in feeling unattached. |
| T | F | 5. | |
| T | F | 6. | |
| T | F | 7. | People should be more involved with their work. |
| T | F | 8. | |
| T | F | 9. | |
| T | F | 10. | |
| T | F | 11. | Note: The full survey instrument cannot be included in the study. |
| T | F | 12. | |
| T | F | 13. | Extremely simple problems bore me. |
| T | F | 14. | |
| T | F | 15. | |

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Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

T F 16.

T F 17.

T F 18. **Note: The full survey instrument cannot be included in the study.**

T F 19.

T F 20.

T F 21. I like people who are stable and easy to understand.

T F 22.

T F 23.

T F 24. If I run into great difficulties on a project, I usually stop work rather than try to solve them.

T F 25. My actions are governed by the way people expect me to behave.

T F 26.

T F 27.

T F 28. I could live alone and enjoy it.

T F 29. I enjoy involved discussions, even those that last for hours.

T F 30.

T F 31.

T F 32.

T F 33.

Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

T F 34.

T F 35. Note: The full survey instrument cannot be included in the study.

T F 36.

T F 37.

T F 38.

T F 39. I will not be satisfied until I am the best in my field of work.

T F 40.

T F 41.

T F 42. I sometimes feel as if I could sleep for a week.

T F 43. Taking risks does not bother me if the gains involved are high.

T F 44.

T F 45. Modern music is so varied that there is something for each different mood I have.

T F 46.

T F 47.

T F 48. I have spent hours looking for something I needed to complete a project.

T F 49.

T F 50.

Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

- T F 51. I would participate only in business undertakings that are relatively certain.
- T F 52. I usually try to share my problems with someone who can help me.
- T F 53.
- T F 54.
- T F 55. Note: The full survey instrument cannot be included in the study.
- T F 56.
- T F 57.
- T F 58. I don't need a lot of sleep to keep up on my energy.
- T F 59. In games I usually "go for broke" rather than playing it safe.
- T F 60.
- T F 61. I prefer drawings that require some study in order to be understood.
- T F 62.
- T F 63.
- T F 64.
- T F 65.
- T F 66. People often ask me for help in creative activities.

Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

- T F 67. My goal is to do at least a little bit more than anyone else has done before.
- T F 68. If I become tired I set my work aside until I am more rested.
- T F 69.
- T F 70. I don't really think of myself as a creative person.
- T F 71.
- T F 72. Note: The full survey instrument cannot be included in the study.
- T F 73.
- T F 74.
- T F 75.
- T F 76. I don't have the energy to do some of the things I would like.
- T F 77. The reasons that people do things are usually complex.
- T F 78.
- T F 79.
- T F 80.
- T F 81.
- T F 82. I often try to invent new uses for everyday objects.
- T F 83. As a child I worked a long time for some of the things I earned.

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Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

- T F 84. When I get to a hard place in my work I usually stop and go back to it later.
- T F 85. I always feel that I must look into all sides of a problem.
- T F 86.
- T F 87.
- T F 88. Note: The full survey instrument cannot be included in the study.
- T F 89.
- T F 90.
- T F 91. I don't mind working while other people are having fun.
- T F 92.
- T F 93.
- T F 94.
- T F 95.
- T F 96.
- T F 97. The most useful political principles are those that are easy to understand.
- T F 98. I like to experiment with various ways of doing the same thing.
- T F 99.

Answer each statement by circling either T for TRUE or F for FALSE, even if you are not completely sure of your answer.

T F 100.

T F 101. I think of myself as a straightforward,
uncomplicated person.

T F 102. I hope to develop a new technique in my field
of work.

T F 103.

T F 104. Note: The full survey instrument cannot be
included in the study.

THANK YOU AGAIN FOR RESPONDING TO THIS STUDY. PLEASE
RETURN THE COMPLETED FORM IN THE ENCLOSED SELF-ADDRESSED,
STAMPED ENVELOPE. YOUR COMMENTS ARE WELCOME.

If you would like to receive a summary of the results of
this study, please complete the following information.

NAME _____
ADDRESS _____

APPENDIX D

Thank-you Letter

Date

Dear ,

Thank you for taking the time to assist in my study. Each visit has been unique, providing its own glimpse of an Oregon agricultural export entrepreneur. Results of the study should be available in mid to late May, I will send you a copy at that time. OSU must first accept the study before the results can be shared.

(Personal note)

Once again, thank you for your assistance, particularly the time spent in completing the questionnaire.

Sincerely,

Wayne E. Johnson

APPENDIX E

Reminder Letter

Date

Dear ,

Your response is important to the study. Even though the survey is voluntary, I would like to hear from you. (personal note) , so perhaps it is already in the mail. If not, for your convenience I have enclosed another copy of the instrument and a stamped addressed envelope.

Thank you for your assistance with this part of the study. Results of the study should be available in mid to late May, I will send you a copy at that time.

Sincerely,

Wayne E. Johnson

APPENDIX F

Characteristics vs. Measurement by source

Proposed correlation, conceptual framework vs. Second modification(Mod), Jackson Personality Inventory(JPI) and Personality Research Form-E(PRF-E).

Components of Framework	Measure by Source
-------------------------	-------------------

Attitude toward behavior

NEED FOR ACHIEVEMENT:

Associated with a high need for achievement are a preference for tasks of moderate risk; perform better in competitive situations; persevere longer at difficult tasks; more future oriented; lengthened time perspective; better able to postpone gratification; prefer to work with competent partners; tend to do better at a wide range of tasks.

ACHIEVEMENT (PRF-E):

Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence.

INNOVATION: The specific tool of entrepreneurs; means by which they exploit change as an opportunity for a different business, service or to change the system; ability to discover opportunities overlooked by everyone else.

INNOVATION (JPI): A creative and inventive individual, capable of originality of thought; motivated to develop novel solutions to problems; values new ideas; likes to improvise.

PERSISTENT PROBLEM SOLVING: Entrepreneurs are not intimidated by difficult situations.

COMPLEXITY (JPI): Seeks intricate solutions to problems; is impatient with oversimplification; is interested in pursuing topics in depth regardless of their difficulty; enjoys abstract thought; enjoys intricacy.

Proposed correlation, conceptual framework vs. Second modification(Mod), Jackson Personality Inventory(JPI) and Personality Research Form-E(PRF-E).

Components of Framework

Measure by Source

Attitude toward behavior

LONG-TERM INVOLVEMENT:
Driven to build a business,
rather than simply get in
and out in hurry with
someone else's money.

ENDURANCE (PRF-E): Willing
to work long hours; doesn't
give up quickly on a
problem; persevering, even
in the face of great
difficulty; patient and
unrelenting in work habits.

Perceived Behavior Control

RISK TAKING: Moderate risk
taking has been noted as
part of the basic trait
p a t t e r n o f t h e
entrepreneur.

RISK TAKING (JPI):

A high scorer enjoys
gambling and taking a
chance; willingly exposes
self to situations with
uncertain outcomes; enjoys
adventures having an
element of peril; takes
chances; unconcerned with
danger.

A low scorer is cautious
about unpredictable
situations; unlikely to
bet; avoids situations of
personal risk, even those
with great rewards; doesn't
take chances regardless of
whether the risks are
physical, social, monetary
or ethical.

Proposed correlation, conceptual framework vs. Second modification(Mod), Jackson Personality Inventory(JPI) and Personality Research Form-E(PRF-E).

Components of Framework

Measure by Source

Perceived Behavior Control

INTERNAL LOCUS OF CONTROL:
An individual that knows they will make it with or without outside help. Perception that the outcome of an event is either within or beyond personal control and understanding; entrepreneurs are more internal in their beliefs than the general population.

CONFORMITY (JPI): A low scorer refuses to go along with the crowd: unaffected and unswayed by other's opinion; independent in thought and action.

AUTONOMY (PRF-E): A high scorer tries to break away from restraints, confinement, or restrictions of any kind; enjoys being unattached, free, not tied to people, places or obligations; may be rebellious when faced with restraints.

DRIVE AND ENERGY:
A coefficient of entrepreneurial success, is "energy".

ENERGY LEVEL (JPI): A high scorer is active and spirited, possesses reserves of strength; does not tire easily, capable of intense work or recreational activity for long periods of time.

Appendix G

Data Tables

Table G1

Summary of mean scores for measures of seven entrepreneurial characteristics.

<u>Measure</u>	<u>Female</u>	<u>Male</u>	<u>Group</u>
<u>Achievement</u>			
No.of items	16	16	16
Mean score	10.80	13.53	13.21*
Range	10-12	10-16	10-16
<u>Innovation</u>			
No.of items	20	20	20
Mean score	16.40	14.23	14.48*
Range	12-20	7.5-20	7.5-20
<u>Complexity</u>			
No.of items	20	20	20
Mean score	9.20	8.83	8.87*
Range	6-12	3-18	3-18
<u>Endurance</u>			
No.of items	16	16	16
Mean score	11.60	11.07	11.13*
Range	10-14	7-15	7-15
<u>no. of respondents</u>	5	15	20

* = weighted mean

$$\frac{14 \times \text{female mean} + 106 \times \text{male mean}}{120}$$

Table G1 (cont.)

Summary of mean scores for measures of seven entrepreneurial characteristics.

<u>Measure</u>	<u>Female</u>	<u>Male</u>	<u>Group</u>
<u>no. of respondents</u>	5	15	20
<u>Risk</u>			
No. of items	8	8	8
Mean score	4.40	5.53	5.40*
Range	0-7	3-8	0-8
<u>Conformity</u>			
No. of items	8	8	8
Mean score	2.60	3.63	3.45*
Range	1-4	0-7	0-7
<u>Autonomy</u>			
No. of items	8	8	8
Mean score	2.00	4.23	3.97*
Range	0-5	1-8	0-8
<u>Energy level</u>			
No. of items	8	8	8
Mean score	5.80	5.93	5.91*
Range	3-7	3-8	3-8

* = weighted mean

$$\frac{14 \times \text{female mean} + 106 \times \text{male mean}}{120}$$

Table G2

Achievement, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Achievement</u>	vs.	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u> 11.09 <u>Range</u> 10-12 N = 11		14.73 9-20	9.00 3-15	10.55 7-14	4.64 0-7	3.82 1-7	2.55 0-6	5.09 3-7
<u>Mean</u> 15.00 <u>Range</u> 14-16 N = 9		14.83 7.5-20	8.83 4.5-18	12.00 9-15	6.00 4-8	2.83 0-6.5	5.06 2-8	6.89 5-8
<u>Group weighted</u> <u>Mean</u> 13.21		14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G3

Innovation, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Innovation</u>	vs.	<u>Achievement</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u>	10.08	12.33	5.92	11.33	4.67	5.25	1.92	6.00
<u>Range</u>	7.5-13	10-15	3-12	9-15	3-7	3-7	1-3	4-7
<u>N</u>	= 6							
<u>Mean</u>	15.25	13.75	9.88	12.13	5.25	2.38	3.75	6.00
<u>Range</u>	14-17	10-16	7-18	9-14	0-8	0-5	0-6	3-8
<u>N</u>	= 8							
<u>Mean</u>	18.83	12.17	10.67	9.83	5.83	2.83	5.33	5.67
<u>Range</u>	18-20	10-16	9-15	7-11	3-8	0-5	2-8	3-7
<u>N</u>	= 6							
<u>Group weighted</u>								
<u>Mean</u>	14.48	13.21	8.87	11.13	5.40	3.45	3.97	5.91

Table G4

Complexity, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Complexity</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u>	5.50	13.14	11.64	11.71	4.71	4.79	3.07	6.57
<u>Range</u>	3-8	10-16	7.5-17	9-15	3-7	1-7	4-8	4-8
<u>N</u>	= 7							
<u>Mean</u>	9.00	12.71	16.29	11.43	5.14	3.14	4.14	5.71
<u>Range</u>	9	10-15	14-19	9-14	0-8	1-5	2-7	3-8
<u>N</u>	= 7							
<u>Mean</u>	12.83	12.67	16.67	10.33	6.00	2.00	3.83	5.33
<u>Range</u>	10-18	10-16	10-20	7-13	4-8	0-5	0-8	3-7
<u>N</u>	= 6							
<u>Group weighted</u>								
<u>Mean</u>	8.87	13.21	14.48	11.13	5.40	3.45	3.97	5.91

Table G5

Endurance, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Endurance</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u> 9.70 Range 7-11 N = 10		11.80 10-16	16.00 9-20	9.60 5-15	5.70 3-8	3.60 0-7	3.90 3-7	5.70 4-8
<u>Mean</u> 12.70 Range 12-15 N = 10		13.90 10-16	13.55 7.5-17	8.25 3-18	4.80 0-8	3.15 0-6.5	3.45 3-8	6.10 3-8
<u>Group weighted</u> <u>Mean</u> 11.13		13.21	14.48	8.87	5.40	3.45	3.97	5.91

Table G6

Parental self-employment for Oregon agricultural export entrepreneurs.

<u>Parent Self-employment</u>	<u>Females</u>	<u>Males</u>	<u>Group</u>
<hr/>			
Both parents	0	2	2
Father only	2	10	12
Neither parent	3	3	6

Table G7

Parental self-employment vs. Mean scores for measures of seven major entrepreneurial characteristics.

<u>Parent(s) self- employed</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Yes</u>								
mean score	13.29	13.82	8.04	11.07	5.50	3.61	3.75	6.14
range	10-16	7.5-20	4.5-15	7-15	3-7	0-7	0-8	3-8
n= 14								
<u>No</u>								
mean score	11.83	17.00	11.00	11.50	4.67	2.83	3.50	5.33
range	10-16	14-20	9-18	9-14	0-7	0-5	2-6	3-6
n= 6								
<u>Group weighted mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G8

Person(s) who influenced the entrepreneurs decision to enter the agricultural export business.

<u>Influence</u>	<u>Females</u>	<u>Males</u>	<u>Group</u>
Spouse	2	1	3
Father	0	2	2
Other*	3	6	9
None	0	6	6

*Other = friend, business associate(s), word of mouth

Table G9

Influence on decision to enter international marketing vs. Mean scores for measures of seven major entrepreneurial characteristics.

<u>Influence</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Spouse, Father</u>								
mean score	12.60	13.20	8.00	11.80	3.20	3.40	2.80	6.00
range	11-16	9-19	3-12	10-14	0-5	1-5	1-5	4-8
n= 5								
<u>Other</u>								
mean score	12.44	14.28	9.28	11.22	5.56	3.72	3.28	5.89
range	10-16	7.5-20	4.5-18	7-15	4-7	0-7	0-7	3-8
n= 9								
<u>None</u>								
mean score	13.67	16.83	9.17	10.67	6.50	2.83	5.00	5.83
range	10-16	14-20	9-10	9-13	3-8	0-5	2-8	3-8
n= 6								
<u>Group weighted</u>								
mean	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G10

Factor prompting the decision to enter agriculture export market vs. Mean scores for measures of seven major entrepreneurial characteristics.

<u>Factor</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Idea/Economics</u>								
<u>Inheritance</u>								
mean score	13.18	15.14	8.14	11.18	5.18	3.14	4.41	6.45
range	10-16	7.5-20	4.5-10	9-14	0-8	0-6.5	1-8	3-8
n= 11								
<u>Other</u>								
mean score	12.44	14.00	9.89	11.22	5.33	3.67	2.78	5.22
range	10-16	9-20	3-18	7-15	3-7	0-5	0-6	3-7
n= 9								
<u>Group weighted</u>								
<u>mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G11

Risk, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Risk</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u>	3.70	12.50	14.40	8.30	11.40	3.70	3.40	5.70
<u>Range</u>	0-5	10-16	9-19	3-15	7-15	1-6	1-7	3-8
<u>N</u>	10							
<u>Mean</u>	6.80	13.20	15.15	9.55	11.00	3.05	3.95	6.10
<u>Range</u>	6-8	10-16	7.5-20	4.5-18	9-13	0-7	0-8	3-8
<u>N</u>	10							
<u>Group weighted</u>								
<u>Mean</u>	5.40	13.21	14.48	8.87	11.13	3.45	3.97	5.91

Table G12

Conformity, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Conformity</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Mean</u> 0.67 Range 0-1 N = 6		13.67 10-16	17.00 14-20	10.67 8-18	11.67 9-13	6.33 5-8	5.33 0-8	6.33 3-8
<u>Mean</u> 3.63 Range 3-4 N = 8		12.50 10-16	15.13 10-20	9.17 6-12	11.25 10-14	4.38 0-7	3.00 1-7	6.38 4-8
<u>Mean</u> 5.75 Range 5-7 N = 6		12.50 10-15	12.08 7.5-18	6.92 3-15	10.67 7-15	5.33 3-7	2.92 2-6	4.83 3-7
<u>Group weighted</u> <u>Mean</u> 3.45		13.21	14.48	8.87	11.13	5.40	3.97	5.91

Table G13

Autonomy, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Autonomy</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Energy level</u>
<u>Mean</u> 1.86		12.09	12.95	7.68	11.45	4.91	4.32	5.55
<u>Range</u> 0-3		10-15	7.5-20	3-12	9-15	0-7	1-7	3-7
<u>N</u> = 11								
<u>Mean</u> 5.89		13.78	17.00	10.44	10.89	5.67	2.22	6.33
<u>Range</u> 4-8		10-16	14-20	7-18	7-13	3-8	0-5	3-8
<u>N</u> = 9								
<u>Group weighted</u>								
<u>Mean</u> 3.97		13.21	14.48	8.87	11.13	5.40	3.45	5.91

Table G14

Energy level, selected mean scores, vs. the remaining measures of the major entrepreneurial characteristics.

<u>Energy level</u>	vs.	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>
<u>Mean</u> 3.67 Range 3-5 N = 6		11.83 10-15	15.17 9-18	8.50 3-15	11.00 7-15	4.67 3-7	4.33 1-6	2.67 0-6
<u>Mean</u> 6.00 Range 6 N = 5		13.20 11-16	14.60 10-19	11.40 9-18	12.00 10-14	4.20 0-6	2.20 0-4	3.40 1-6
<u>Mean</u> 7.00 Range 7 N = 6		12.50 10-16	14.42 7.5-20	7.75 4.5-12	10.17 9-12	6.50 4-8	4.08 0-7	3.92 1-8
<u>Mean</u> 8.00 Range 8 N = 3		15.00 14-16	15.00 14-17	8.00 7-9	12.33 12-13	5.67 4-8	2.00 1-4	5.67 4-7
<u>Group weighted</u> <u>Mean</u> 5.91		13.21	14.48	8.87	11.13	5.40	3.45	3.97

Table G15

Prior international marketing experience vs. the remaining measures of the major entrepreneurial characteristics.

<u>Prior experience</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>Yes</u>								
mean score	12.57	15.57	11.00	10.86	6.00	3.29	4.29	5.86
range	10-16	9-20	5-18	7-13	3-8	0-7	2-6	3-8
n= 7								
<u>No</u>								
mean score	13.00	14.35	7.81	11.38	4.85	3.42	3.35	5.92
range	10-16	7.5-20	3-12	9-15	0-8	0-6.5	0-8	3-8
n= 13								
<u>Group weighted mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G16

Entrepreneurs experience prior to entering the agricultural export business.

<u>Experience</u>	<u>Female</u>	<u>Male</u>	<u>Group</u>
Education or training	2	14	16
Practical experience	1	1	2
None	2	0	2

Table G17

Age of subjects when starting an agricultural export business.

<u>Age</u>	<u>Females</u>	<u>Males</u>	<u>Group</u>
<hr/>			
20-25 years old	1	3	4
26-30 years old	0	6	6
31-35 years old	0	1	1
36-40 years old	0	2	2
41-45 years old	2	0	2
46-50 years old	0	2	2
51-55 years old	1	1	2
56-60 years old	1	0	1
No. of respondents	5	15	20

Table G18

A comparison of the demographic indicator Age vs. the seven major entrepreneurial characteristics as measured by the items on the survey instrument.

<u>Age</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>20-35 years</u>								
mean score	12.64	13.32	8.86	11.27	4.55	4.23	3.41	5.36
range	10-16	7.50-18	3-18	7-15	0-7	0-7	1-7	3-8
n= 11								
<u>36-60 years</u>								
mean score	13.11	16.56	9.00	11.11	6.11	2.33	4.00	6.56
range	11-16	12-20	6-12	9-13	4-8	0-4	0-8	3-8
n= 9								
<u>Group weighted</u>								
<u>mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Age when starting an agricultural export business vs.
Birth order.

<u>Age</u>	<u>First born</u>	<u>Last born</u>	<u>Other than first or last born</u>
<u>20-25 years</u>			
Females	0	0	1
Males	2	0	1
<u>26-30 years</u>			
Females	0	0	0
Males	2	2	2
<u>31-35 years</u>			
Females	0	0	0
Males	0	1	0
<u>36-40 years</u>			
Females	0	0	0
Males	2	0	0
<u>41-45 years</u>			
Females	0	0	2
Males	0	0	0
<u>46-50 years</u>			
Females	0	0	0
Males	1	1	0
<u>51-55 years</u>			
Females	1	0	0
Males	0	0	1
<u>56-60 years</u>			
Females	0	1	0
Males	0	0	0

Table G20

A comparison of the demographic indicator Birth order vs. the seven major entrepreneurial characteristics as measured by the items on the survey instrument.

<u>Birth order</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>First born</u>								
mean score	13.75	16.50	9.75	11.88	5.88	2.13	5.00	6.00
range	10-16	13-20	5-18	9-15	3-8	0-6	0-8	3-8
n= 8								
<u>Last born</u>								
mean score	12.60	13.10	6.90	10.60	5.80	4.70	3.30	6.20
range	10-16	7.5-19	4.50-9	9-12	4-7	1-7	2-5	3-8
n= 5								
<u>Other</u>								
mean score	12.00	14.00	9.43	10.86	4.14	3.86	2.43	5.57
range	10-15	9-20	6-15	9-13	0-7	3-5	1-6	3-7
n= 7								
<u>Group weighted</u> <u>mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G21

Educational history of agricultural export entrepreneurs included in the study.

<u>Educational history</u>	<u>Females</u>	<u>Males</u>	<u>Group</u>
High school grad. to some college	3	3	6
College degree	0	6	6
Some graduate school to graduate degree	2	6	8
No. of respondents	5	15	20

Table G22

Educational history of agricultural export entrepreneurs included in the study vs. Birth order.

<u>Educational history</u>	<u>First born</u>	<u>Last born</u>	<u>Other than first or last born</u>
<hr/>			
<u>High school grad. to some college</u>			
Females	1	0	2
Males	2	0	1
<u>College graduate</u>			
Females	0	0	0
Males	4	1	1
<u>Some graduate school to graduate degree</u>			
Females	0	1	1
Males	1	3	2

Table G23

A comparison of the demographic indicator Educational history vs. the seven major entrepreneurial characteristics as measured by the items on the survey instrument.

<u>Educational history</u>	<u>Achievement</u>	<u>Innovation</u>	<u>Complexity</u>	<u>Endurance</u>	<u>Risk</u>	<u>Conformity</u>	<u>Autonomy</u>	<u>Energy level</u>
<u>High School</u>								
<u>some college</u>								
mean score	12.17	14.50	7.50	11.67	4.17	3.17	3.17	5.83
range	10-14	9-18	3-10	10-14	0-7	1-5	0-7	3-8
n= 6								
<u>College grad.</u>								
mean score	15.17	14.08	9.25	12.33	6.33	2.75	4.58	6.50
range	14-16	7.5-20	4.5-18	9-15	4-8	0-6.5	2-8	6-8
n= 6								
<u>Graduate School</u>								
mean score	11.63	15.50	9.75	10.00	5.25	4.00	3.38	5.50
range	10-12	9-20	5-15	7-11	3-7	1-7	1-6	3-7
n= 8								
<u>Group weighted</u>								
<u>mean</u>	13.21	14.48	8.87	11.13	5.40	3.45	3.97	5.91

Table G24

Percentile rating of four measures of major entrepreneurial characteristics as an indication of their "uniqueness" in the subjects of the study.

<u>Rating</u>	<u>*Innovation</u>	<u>*Complexity</u>	<u>**Achievement</u>	<u>**Endurance</u>
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Female

Mean	16.40	9.20	10.80	11.60
Range	12-20	6-12	10-12	10-14
Percentile of mean	74	26	62	71
Percentile of range	40-94	6-60	50-72	48-87

Male

Mean	14.23	8.83	13.53	11.07
Range	7.5-20	3-18	10-16	7-15
Percentile of mean	58	18	83	51
Percentile of range	9-94	1-98	38-95	10-91

* Jackson Personality Inventory (Jackson, 1976)

** Personality Research Form-E (Jackson, 1989)

Table G25

Correlation of measures of entrepreneurial characteristics and demographic indicators (SPSS/PC+ Version 4.0).

Correlations:	Yrs. exp.	No. prior bus.	Prior exp.	Influ. S.O.	Education	Who employed	Birth order	Age	Conformity	Energy	Risk	Autonomy	Complexity	Innovation	Achievement	Endurance	Gender
Years of experience																	
r=																	
ndf=																	
p=																	
No. prior businesses																	
r=	-.3604																
ndf=	19																
p=	.059																
Prior experience																	
r=	-.1744	.1143															
ndf=	19	19															
p=	.231	.316															
Influence of sign. other																	
r=	.5135	-.7823	-.3754														
ndf=	19	19	19														
p=	.010	.000	.051														
Education																	
r=	-.0868	-.0269	.2912	.0095													
ndf=	19	19	19	19													
p=	.358	.455	.106	.484													
Who employed																	
r=	.0264	.1211	-.1048	-.1351	-.2668												
ndf=	19	19	19	19	19												
p=	.456	.305	.330	.285	.120												
Birth order																	
r=	.2594	-.3572	-.1257	.4137	.5023	-.1683											
ndf=	19	19	19	19	19	19											
p=	.135	.061	.299	.035	.012	.239											

Table G25 (cont.)

Correlation of measures of entrepreneurial characteristics and demographic indicators (SPSS/PC+ Version 4.0).

Correlations:		Yrs. exp.	Mo. prior bus.	Prior exp.	Influ. S.O.	Education	Who employed	Birth order	Age	Conformity	Energy	Risk	Autonomy	Complexity	Innovation	Achievement	Endurance	Gender
Age	r=	-.2426	.2924	.0086	-.1041	.0748	.0067	.1304										
	ndf=	19	19	19	19	19	19	19										
	p=	.151	.105	.486	.331	.377	.489	.292										
Conformity	r=	.1509	-.2104	-.0317	.1103	.1794	.2218	.5077	-.4172									
	ndf=	19	19	19	19	19	19	19	19									
	p=	.263	.187	.447	.332	.225	.174	.011	.034									
Energy	r=	.0422	.1171	-.0192	.0371	-.1349	.0813	.0269	.1765	-.2028								
	ndf=	19	19	19	19	19	19	19	19	19								
	p=	.430	.311	.468	.438	.285	.367	.455	.228	.196								
Risk	r=	-.2077	.6421	.2866	-.6246	.2023	.2170	-.0740	.3989	-.2567	.2143							
	ndf=	19	19	19	19	19	19	19	19	19	19							
	p=	.190	.001	.110	.002	.196	.179	.378	.041	.137	.182							
Autonomy	r=	-.0935	.2864	.1973	-.3668	.0410	.2459	-.3467	-.0261	-.4348	.3604	.3798						
	ndf=	19	19	19	19	19	19	19	19	19	19	19						
	p=	.347	.110	.202	.056	.432	.148	.067	.457	.028	.059	.049						
Complexity	r=	-.3527	-.0409	.4403	-.1187	.2209	-.1518	-.3053	.0555	-.5470	-.1644	.1873	.3264					
	ndf=	19	19	19	19	19	19	19	19	19	19	19	19					
	p=	.064	.432	.026	.309	.175	.261	.095	.408	.006	.244	.215	.080					
Innovation	r=	-.5462	.3224	.1590	-.3718	.1367	-.1564	-.3808	.3532	-.5697	-.1157	.2523	.4839	.5327				
	ndf=	19	19	19	19	19	19	19	19	19	19	19	19	19				
	p=	.006	.083	.252	.053	.283	.255	.049	.063	.004	.314	.142	.015	.008				
Achievement	r=	-.1748	.1842	-.0961	-.1953	-.0343	.2507	-.2507	.0402	-.2658	.4255	.2172	.5332	.0902		-.0203		
	ndf=	19	19	19	19	19	19	19	19	19	19	19	19	19		19		
	p=	.231	.218	.344	.205	.443	.143	.143	.433	.129	.031	.179	.008	.353		.466		
Endurance	r=	.0607	-.1786	-.1353	.2252	-.3190	-.3226	-.2850	-.0010	-.1301	.2032	-.3639	-.2036	-.2192		-.2165	.3360	
	ndf=	19	19	19	19	19	19	19	19	19	19	19	19	19		19	19	
	p=	.400	.226	.285	.170	.085	.083	.112	.498	.292	.195	.057	.195	.177		.180	.074	
Gender	r=	.1254	.1820	.2087	-.3564	.3062	.3792	-.1642	-.4085	.1834	.0151	.2469	.4487	-.0074		-.2209	.5489	-.1391
	ndf=	19	19	19	19	19	19	19	19	19	19	19	19	19		19	19	19
	p=	.304	.228	.196	.067	.101	.055	.251	.041	.226	.475	.154	.027	.488		.182	.007	.285