

# The Impact of Entrepreneurial Personality Traits on Perception of New Venture Opportunity

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**T***his empirical study examined links between entrepreneurial personality traits and perception of new venture opportunity in a sample of 207 respondents. Four entrepreneurial personality traits were included to predict respondents' perception of new venture opportunity. They are (1) achievement motivation, (2) locus of control, (3) risk propensity, and (4) proactivity. The results of multiple regression analysis show that three of the four entrepreneurial personality traits—locus of control, risk propensity, and proactivity—related significantly to perception of new venture opportunity in expected directions. Among the three personality traits, proactivity was found to have the strongest influence over entrepreneurial perception. No significant relationship was found between achievement motivation and perception of new venture opportunity. Among six control variables, only work experience was found to influence perception of new venture opportunity. This study explored links between entrepreneurial personalities and cognition and its results suggest that a combination of trait and cognition approaches contributes to a better understanding of entrepreneurial decision-making process. Both theoretical and practical implications were discussed.*

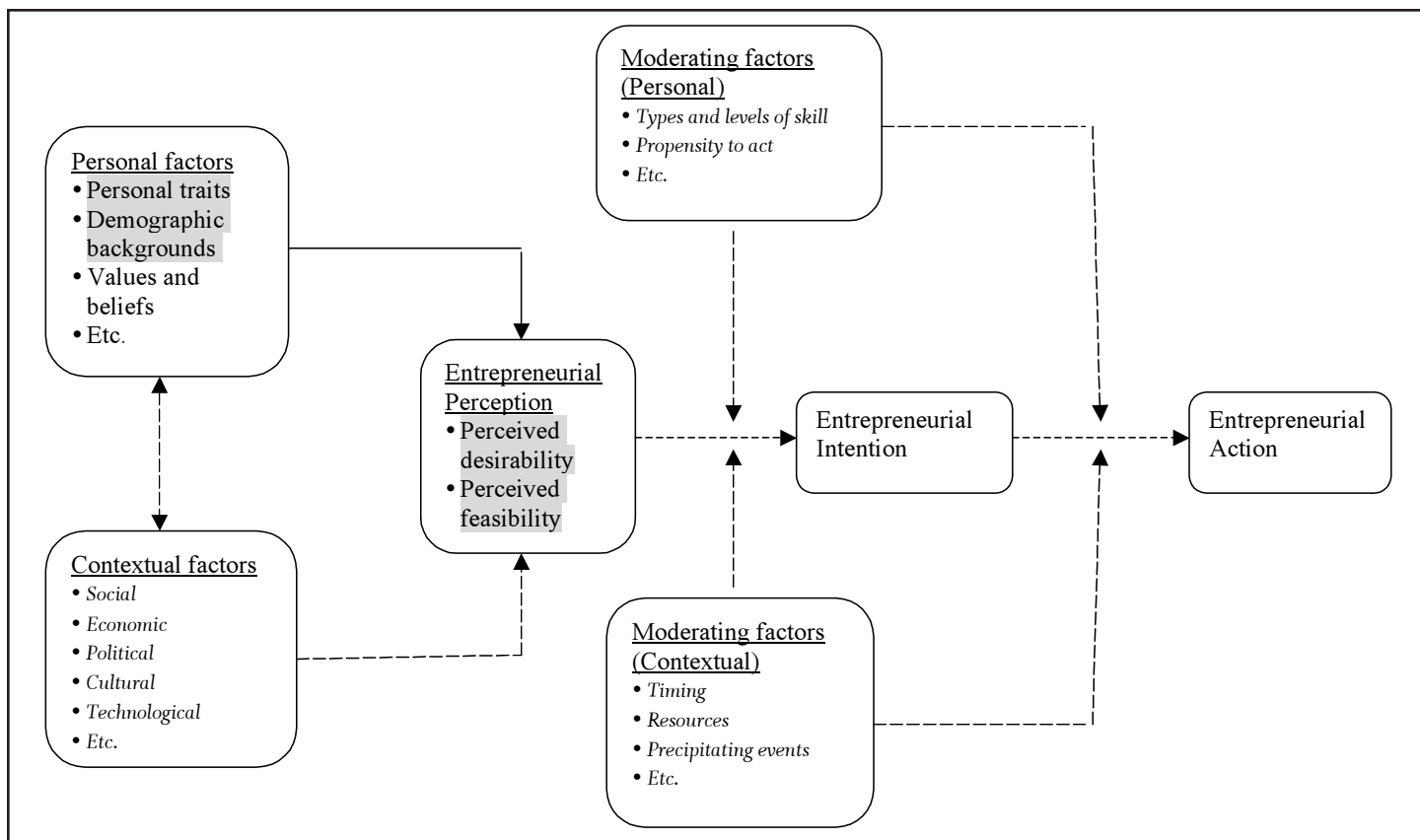
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Trait-based literature failed to identify a clear “psychological profile” (Gartner, 1989; Mitchell et al., 2002; Shaver and Scott, 1991) for entrepreneurs, and findings that could establish links between personality traits and entrepreneurial actions are at best inconclusive with very few exceptions (e.g., Johnson, 1990). Cognition-based entrepreneurship literature argues that entrepreneurs' decisions to engage in entrepreneurial actions such as new venture creation are based upon their intentions to proceed, which in turn are influenced by their perceptions that the actions are both feasible and desirable (Bird and Jelinek, 1988; Keh et al., 2002; Krueger, 1993, 2000; Shapero, 1975, 1982; Simon and Houghton, 2002). Findings in this line of research showed that differences in individuals' perceptions about a potential entrepreneurial action play a major role in their decisions whether to pro-

ceed or not (Palich and Bagby, 1995; Simon et al., 2000; Keh et al., 2002). Research indicated that the link between entrepreneurial personality traits and entrepreneurial action is indirect (Krueger, 1993). The influence of personality traits on entrepreneurial action is mediated by multiple layers of factors that include perception, attitude, and intention (e.g., Shepherd and Krueger, 2002). In the meantime, this mediated trait-to-action process is moderated by multiple contextual factors (Simon and Houghton, 2002). Thus, the process for entrepreneurial personality traits to influence an individual's entrepreneurial decision and action is rather complex, and ignoring the mediating and moderating factors contributed to the lack of conclusive findings between entrepreneurial personality traits and entrepreneurial action (Figure 1). To test all the mediators and moderators simultaneously is highly difficult, if not impossible (Krueger, 1993). This study intends to test one part of the process—the link between entrepreneurial personality traits and entrepreneurial perception.

Scholarly efforts to date have led to the identification of many factors that affect an individual's perception of potential entrepreneurial opportunities. For example, research showed that prior entrepreneurial experiences directly affected perceived feasibility and desirability of entrepreneurial actions (Krueger, 1993). Studies also found that cognitive biases, such as overconfidence, illusion of control and belief in the law of small numbers, directly influenced entrepreneurship-related risk perceptions (Keh et al., 2002; Simon et al., 2000), and indirectly affected perceived feasibility and desirability of potential new venture opportunities (Keh et al., 2002). Cross-cultural entrepreneurship research suggested that cultural values, such as high power distance, individualism, low uncertainty avoidance, and high masculinity, might increase perceived feasibility and desirability of potential entrepreneurial opportunities (Busenitz and Lau, 1996; McGrath and MacMillan, 1992; McGrath et al., 1992; Mitchell, et al., 2000).

In recent years researchers have started to look into the relationship between entrepreneurial personality traits and perception of entrepreneurial opportunities. For example, studies found that self-efficacy, defined as persons' belief in their ability to perform a given task (Chen et al., 1998;



**Figure 1. A General Model of Entrepreneurial Intention and Action**

Note: 1. Shaded items are variables tested in this study.  
2. Solid line is the relationship tested in this study.

Krueger and Dickson, 1994) might positively influence an individual's perception of new venture creation. Another disposition, propensity to act, was found to directly affect both entrepreneurial perceptions and intentions (Krueger, 1993). Keh et al., (2002) found in their study of small business owners in Singapore that risk propensity, as a controlling variable, directly affects respondents' perceived desirability and feasibility of a given fictitious new venture opportunity.

However, research to investigate direct links between entrepreneurial personality traits and entrepreneurial perception is still very limited. To contribute to the growing literature of perception-based entrepreneurship, this research is designed to empirically investigate the relationship between entrepreneurship-related personality traits and entrepreneurial perception. After an extensive literature review, four key personality traits are chosen that have long been considered to be associated with entrepreneurship—achievement motivation (McClelland, 1961), locus of control (Brockhaus, 1980; Hull et al., 1982), risk propensity (Brockhaus, 1980; Liles, 1974), and proactivity (Becherer and Maurer, 1999; Kickul and Gundry, 2002). The selection of these four personality traits is by no means exhaustive; how-

ever, they represent some of the most researched personality traits in entrepreneurship (e.g., Brockhaus, 1982; Korunka et al., 2003). The focal research question of this study is how these selected entrepreneurship-related personality traits influence an individual's perception of a potential entrepreneurial opportunity. Findings from this study will contribute to a better understanding of the role of entrepreneurial personality traits in the complex, multiple-staged process of entrepreneurial decision-making, which will add new insights to why some individuals proceed with entrepreneurial actions such as starting new ventures when others do not.

The next section includes literature review and hypotheses development, which is followed by research methodology and results of regression analysis. The last two sections include discussion of research implications and limitations.

### Literature Review and Hypotheses

Personality trait and cognition are two major approaches that attempt to distinguish entrepreneurs from nonentrepreneurs (Carland et al., 1984; Shaver and Scott, 1991). The former has failed to conclusively identify direct links between personality traits and entrepreneurial actions while the latter is making

progress in building a theory of entrepreneurial cognition that focuses on how people make assessments, judgments, and decisions that involve opportunity evaluation, venture creation, and growth (Mitchell et al., 2002). Some researchers suggest that personality traits may better predict part of the entrepreneurial cognitive process than the outcome of this process, that is, decision to engage in entrepreneurial actions (Krueger, 1993; Simon and Houghton, 2002). This study is different from previous research that focused on the direct links between personal traits and entrepreneurial action in that it proposes that entrepreneurial personality traits influence entrepreneurial perception and empirically examines the influence of some “hallmark” entrepreneurial personality traits (e.g., Brockhaus, 1982) on entrepreneurial perception, the initial stage of an entrepreneurial cognitive process. Four personality traits associated with entrepreneurship are chosen because of their importance in previous entrepreneurship-related personality trait research. These traits are (1) achievement motivation, (2) locus of control, (3) risk propensity, and (4) proactivity, or proactive personality. The following section introduces definitions and related studies of the four chosen personality traits and perception of new venture opportunity, and develops testable hypotheses.

### Perception of New Venture Opportunity

How a potential entrepreneurial opportunity is perceived directly affects an individual’s intention to proceed (Krueger, 1993). Studies suggest that entrepreneurs pursue opportunities that other people do not because they perceive such opportunities differently (Palich and Bagby, 1995; Forlani and Mullins, 2000). They tend to view some business situations and opportunities more positively than nonentrepreneurs do. The main thesis in this article is that individuals with certain entrepreneurial personality traits tend to perceive a potential entrepreneurial opportunity more positively than those without them.

Here a positive perception of a new venture opportunity is defined as perceiving the potential new venture opportunity to be both desirable and feasible (Shapiro, 1975; 1982; Krueger, 1993, 2000; Keh et al., 2002). In this study, perceived desirability and feasibility are combined in one construct (e.g., Keh et al., 2002) to measure the overall perception of a potential new venture opportunity (Fishbein and Ajzen 1975; Robinson et al., 1991). Thus, an individual who positively perceives a potential entrepreneurial opportunity perceives it to be both desirable and feasible.

### Achievement Motivation

Of all the personological measures presumed to be associated with the creation of new ventures (Shaver and Scott, 1991), need for achievement, or achievement motivation, is perhaps the most widely cited characteristic of entrepre-

neurs (Gasse, 1982). McClelland (1961, 1965) asserted that a society with a generally high level of achievement motivation will produce more energetic entrepreneurs who, in turn, produce more rapid economic development. Such an assertion that achievement motivation is the psychological moderator between Protestantism (Weber, 1948) and economic growth is thought to have ignited the search for the “personality characteristics of the successful entrepreneur” (Shaver and Scott, 1991). Empirical evidence shows that entrepreneurs are more achievement oriented than managers and the general population (Hornaday and Aboud, 1971; Begley and Boyd, 1987; Carland and Carland, 1991; Stewart et al., 1998).

McClelland’s work was not only a major contribution to the literature but was also a pioneering effort in the attempt to determine whether entrepreneurs or successful entrepreneurs tend to hold a certain psychological set. His research was based upon the concept of a “need for achievement” (*n Ach*). McClelland characterized individuals with high *n Ach* as those preferring to be personally responsible for solving problems, setting goals, and reaching these goals by their own efforts. Such persons also have a strong desire to know how well they are accomplishing their tasks. They are also more likely to behave in an entrepreneurial way, and tend to see and act on opportunities. On the basis of these demonstrated characteristics, McClelland suggested that entrepreneurs should have high *n Ach*. A high need for achievement predisposes a person to seek out an entrepreneurial position in order to attain more achievement satisfaction than could be derived from other types of more managerial positions.

In addition, McClelland’s study (1961) showed that people with high achievement motivation tend to perceive their probability of success as greater. Other researchers found that people with high achievement motivation tend to feel that their chances of winning are actually better than the stated odds (Atkinson, 1957). Thus, the following hypothesis is developed.

**Hypothesis 1: Achievement motivation is positively associated with an individual’s perception of new venture opportunities.**

### Locus of Control

The concept of locus of control (Rotter, 1966) refers to a generalized belief that a person can or cannot control his or her own destiny. Those who ascribe control of events to themselves are said to have an internal locus of control and are referred to as internals. People who attribute control to outside forces are said to have an external locus of control and are termed externals (Spector, 1982). Internals believe that the outcome of their behavior is the results of their own efforts. In contrast, externals believe that the events in their

lives are beyond their control and should be attributed to fate, luck, or destiny.

Empirical evidence showed positive correlations between Protestant ethic values and an internal locus of control, self discipline, hard work, honesty, and belief in a just world (Jones, 1997). People with an external locus of control tend to believe that the events in their lives are due to uncontrollable forces. They may place responsibility on some unknown forces out of their control (Trevino, 1992). In their view, achievement is, therefore, dependent on luck, chance, and powerful persons or institutions. The success of a new venture and its future fate are beyond an individual person's own efforts and capabilities. Conversely, people with an internal locus of control tend to believe that achieving success or avoiding failure depends on their own efforts and actions, and they generally take responsibility for their actions.

Locus of control has been of great interest in entrepreneurship research, and internality has long been identified as one of the most dominant entrepreneurial characteristics (Venkatapathy, 1984; Shapero, 1975; Brockhaus, 1974). Borland (1974) found that a belief in internal locus of control was a better predictor of entrepreneurial intentions than an Ach measurement (McClelland, 1961). However, some studies failed to demonstrate differences in locus of control between entrepreneurs and managers (e.g., Brockhaus and Nord, 1979).

Since running one's own business will give an entrepreneur full control of the business and individual responsibility for the business's outcome, internals should have a more positive attitude toward starting a new business than externals. Studies have pointed out that founders of new businesses have more internal locus of control than owners who were not involved in startup (Begley and Boyd, 1987). These previous findings lead to the following hypothesis regarding relationship between locus of control and perception of new venture opportunities.

**Hypothesis 2: Internal locus of control is positively associated with an individual's perception of new venture opportunities.**

### **Risk Propensity**

Here, Brockhaus's (1980, p. 513) definition of risk propensity is used. According to Brockhaus, risk propensity is the "perceived probability of receiving the rewards associated with success of a proposed situation, which is required by an individual before he or she will subject himself or herself to the consequences associated with failure, the alternative situation providing less rewards as well as less severe consequences than the proposed situation." Risk propensity represents an individual's orientation toward taking chances in a decision-making scenario (Sexton and Bowman, 1985).

Literature about risk propensity has two major themes, of

which one relates to prospect theory (Kahneman and Tversky, 1979), and the other holds the notion that risk taking is predispositional and trans-situational, thus risk propensity is more a characteristic of an individual than their situation. Most risk-propensity-related studies in the field of entrepreneurship took the second notion (e.g., Brockhaus, 1980; Gasse, 1982; McClelland, 1961; Stewart, et al., 1998). Efforts that tried to use risk propensity to differentiate entrepreneurs from general population led to inconclusive results (Brockhaus, 1980; Brockhaus and Nord, 1979). However, some studies did find significant difference between entrepreneurs and general population (Carland et al., 1995; Liles, 1974; Stewart, et al., 1998). Findings also showed that founders tended to be more risk taking than owners who were not involved in the startup (Begley, 1995; Begley and Boyd, 1987; Hull et al., 1980).

Lack of consistency in the findings from these studies might result from their research intentions that attempted to link risk propensity directly with outcome of the entrepreneurial decision-making process, for example, becoming an entrepreneur. Cognitive studies in entrepreneurial decision making suggests that risk propensity, a personality trait variable, is one of many antecedent variables in entrepreneurial decision-making process (Douglas and Shephard, 1999; Keh et al., 2002; Krueger, 1993; Simon et al., 2000). It might have a direct impact on attitude and perception, which in turn affect entrepreneurial intention and decision. Studies showed that low risk propensity tended to drive entrepreneurs to view business situations more positively (Palich and Bagby, 1995). Thus, the following hypothesis is introduced:

**Hypothesis 3: Risk propensity is positively associated with an individual's perception of new venture opportunities.**

### **Proactivity**

McClelland (1986) mentioned that proactivity, or proactive personality, was one of nine entrepreneurial competences that are more characteristic of successful entrepreneurs regardless of country and type of business. However, proactive personality and proactive behaviors have often been examined in career-related studies (e.g., Claes and Ruiz-Quintanilla, 1998; Seibert, Crant, and Kraimer, 1999). Only limited studies related proactive personality to entrepreneurial behaviors (Becherer and Maurer, 1999; Kickul and Gundry, 2002), and few related it to new venture startup decision making. In entrepreneurship literature, many studies focus on organizational-level proactivity, which treats proactivity as a strategic orientation variable (e.g., Covin and Slevin, 1991; Stevenson and Jarillo, 1990).

Prototypical proactive personality has been characterized as someone who scans for opportunities, shows initiatives,

takes actions, perseveres until he or she reaches closure by bringing about change, and is relatively unconstrained by situational forces (Bateman and Crant, 1993). Studies show that proactive personality is a stable disposition and is positively related to a number of important individual and organizational outcomes including job performance (Crant, 1995), tolerance for stress in demanding jobs (Parker and Sprigg, 1999), leadership effectiveness (Bateman and Crant, 1993; Crant and Bateman, 2000), participation in organizational initiatives (Parker, 1998), work team performance (Kirkman and Rosen, 1999), and entrepreneurship (Becherer and Maurer, 1999). In addition, proactive individuals were found to tend to engage in actions such as identifying opportunities, challenging status quo, innovation, career management, and tend to go beyond normal expectations or requirements (Bateman and Crant, 1993; Crant, 2000; Seibert, Kraimer, and Crant, 2001).

Several lines of research and theorizing suggest a relationship between proactive personality and innovative behavior. For example, Bateman and Crant (1993) regard propensity to identify opportunities as a defining characteristic of the proactive personality. Parker (1998) found that proactive personality was positively and significantly associated with an individual's participation in a company's organizational improvement initiatives. Literature on product innovation has frequently emphasized the proactive nature of individuals who act as change agents or product champions (Frohman, 1997; Howell and Higgins, 1990). Kickul and Gundry (2002) found that proactive personality influenced small business owners to tend to adopt proactive strategies that led to more innovations for the small businesses. It is therefore expected that proactive personality is associated with a positive perception of entrepreneurial opportunities.

**Hypothesis 4: Proactivity is positively associated with an individual's perception of new venture opportunities.**

## Method

### Sample

The sample in this study is composed of 207 undergraduate business students at a major university on the west coast of the United States. The sample is 49.8 percent female and 73.4 percent non-white. Of the total respondents, 17.6 percent are international students. Forty-one students (19.8%) have entrepreneurial experiences. The median age is 26, and the average work experience is 6.7 years. Subjects were asked to complete a survey as part of a voluntary class exercise. Participants signed a consent form, which described the study, assured confidentiality, informed them that the study is voluntary and that they can withdraw at anytime, and provided the contact information of the researcher for questions and clarifications. After participants completed consent

forms, they were asked to complete the two-part survey. Part one includes 44 items that measure the four chosen entrepreneurial personality traits. Part two includes a short case that measure outcome variable, which is respondent's perception of a new venture idea, and a section that solicited demographic information.

### Measures

*Perception of New Venture Opportunity.* This study used a short case developed by Keh et al., (2002) that described a potential new venture opportunity. Strengths of this case include that there was no indication of the industry so that respondents would not be influenced by the characteristics particular to that industry. In addition, a name was given to the character to make the situation more concrete, a practice recommended by other researchers (Finch, 1987). Cases were used often because they can capture the complexities of the perception of opportunities, and they have been used in several studies that evaluated business venture decisions (e.g., Sitkin and Weingart, 1995; Zacharakis and Shepherd, 2001). Another advantage of the case method is that it allows the context to be specified so that respondents are exposed to the same set of information (Finch, 1987; Hughes, 1998). The case used for this study has demonstrated good validity and reliability (Keh et al., 2002). Minor changes were made based on the published feedbacks to the article of Keh and his associates. For example, the statement "Please put yourself into Mr. Smith's shoes when you answer the following items" was added to increase respondents' involvement in the study. Three questions were asked at the end of the case to measure respondents' perceived feasibility and desirability of the new venture opportunity. An example is "This business is worth considering." Respondents indicated their levels of agreement with the statements on a 7-point scale (1 = strongly disagree to 7 = strongly agree). The reliability of this construct in our study is .83.

*Achievement Motivation.* Because of the multiethnic backgrounds of the respondents, the "Achievement Motive Questionnaire" constructed by Elizur (1979) and Tziner and Elizur (1985) was used to measure achievement motivation. This scale has 18 items, and has the advantage of subsuming many of the various conceptual facets of the construct implied in previous scales, and thus appears more comprehensive as a global measure. In addition, it was developed for cross-cultural comparative studies (Elizur, 1979) and therefore does not have items that are awkward from a cross-cultural perspective. Each achievement motivation item contains a question followed by five multiple-choice statements, from which one is chosen to represent the strength of a person's preference of belief. For example, to the question "Do you generally prefer difficult tasks or easy tasks?" Five alternatives are given: I generally prefer (1) difficult tasks much

more than easy tasks; (2) difficult tasks a little more than easy tasks; (3) difficult and easy tasks to the same extent; (4) easy tasks a little more than easy tasks; (5) easy tasks much more than difficult tasks. All the items are reversely scored. The Cronbach alpha of the total scale in this study is 0.89

**Locus of Control.** The 11 items employed in this study were extracted by James (1957) from a factor analysis of a larger set of items. This shortened scale has been proven to have good cross-cultural measurement equivalence (Ghorpade et al., 1999). Items include “I have usually found that what is going to happen will happen, regardless of my actions.” Respondents used a 7-point Likert-type scale ranging from 1 (strongly disagree) to 7 (strongly agree). All items are reverse-scored, which means the higher the score, the more external the locus of control is. The Cronbach’s alpha estimate is .83 in this study.

**Risk Propensity.** The Risk Style Scale developed by Forlani and Mullins (2000) was chosen to measure risk propensity. This measure dealt with personal propensities toward financial risk taking, as opposed to all kinds of risks, and has shown its efficacy in assessing the construct of interest for this study. Ray (1994) suggests that entrepreneurs do not have generalized risk-taking propensities, hence other research instruments that focused on risk taking in everyday life situation or other non-economic activities (sky diving) might not be effective when applied to risk situations actually encountered by entrepreneurs. This measurement has a Cronbach’s Alpha estimate of 0.62. Due to the exploratory

nature of this study, such an estimate is considered acceptable (Hair et al., 2005)

**Proactivity.** Proactive personality was assessed with a 10-item shortened version of Bateman and Crant’s (1993) 17-item Proactive Personality Scale. Bateman and Crant (1993) described the nomological net of this construct and presented evidence for the 17-item scale’s discriminate, convergent, and criterion validity. The shortened version of this scale is comprised of the 10 items with the highest average factor loadings based on results reported by Bateman and Crant (1993). Seibert et al., (1999; 2001) presented evidence for the validity and reliability of the shortened scale. On a 7-point scale (1 = strongly disagree to 7 = strongly agree), respondents indicated their levels of agreement that each of the statements is an “accurate description of yourself.” Items include “I am constantly on the lookout for new ways to improve my life.” The reliability is 0.91 in this study.

**Control Variables.** Previous studies suggest that demographic factors like gender (Hisrich and O’Brien, 1981; Sexton and Bowman-Upton, 1990; Chaganti and Parasuraman, 1996), age (Cooper, 1973; Howell, 1972; Shapero, 1971), ethnicity (Waldinger et al., 1990; Chaganti and Greene, 2002), nationality (Hofstede, 1980), previous work experience (Timmons and Spinelli, 2007) and entrepreneurial experience (Krueger, 1993; Brockhaus, 1982) may be important in understanding entrepreneurial intentions and actions. Thus, they were included in the regression model as control variables.

**Table 1. Descriptive Statistics and Correlations**

Variables	M	SD	1	2	3	4	5	6	7	8	9	10
1. Age	25.8	5.41										
2. Gender <sup>a</sup>	1.50	.50	-.15*									
3. Ethnicity <sup>b</sup>	3.33	2.09	-.13	.00								
4. Nationality <sup>c</sup>	1.17	.38	.06	-.06	.40***							
5. Entrepreneurial experience <sup>d</sup>	1.80	.40	-.23	.21**	.14*	.10						
6. Work experience	6.68	5.30	.75***	-.15*	-.27***	-.22**	-.26***					
7. Achievement motivation	2.47	.74	-.20**	.24**	.16*	.16*	.18*	-.28***				
8. Locus of control	3.30	.97	-.02	-.05	.10	.25***	-.03	-.11	.36***			
9. Risk propensity	6.43	1.42	.06	-.06	-.05	.05	-.03	.10	-.12	.01		
10. Proactivity	5.20	.94	.08	-.05	-.07	-.10	-.18*	.12	-.33***	-.13	.08	
11. PNVO <sup>e</sup>	4.71	1.16	.02	-.01	-.01	-.08	-.13	-.02	-.14*	-.18**	.18**	.30***

a: 1 = man, 2 = woman

b: 1 = White American, 2 = African American, 3 = Asian American, 4 = Hispanic/Latino American, 5 = American Indian/Alaska Native, 6 = Native Hawaiian and other Pacific Island, 7 = Multi-ethnic, 8 = other.

c: 1 = U.S. Citizen, 2 = Non U.S. Citizen.

d: 1 = with entrepreneurial experiences, 2 = without entrepreneurial experiences.

e: PNVO = Perception of New Venture Opportunity

Note: \* p < .05, \*\* p < .01, \*\*\* p < .001

**Results**

Table 1 reports the descriptive statistics including the means, standard deviations, and inter-correlations for all variables included in the study. None of the six control variables correlates significantly with perception of new venture opportunity. All the four trait variables correlated significantly with perception variable (locus of control,  $r = -.18, p < .01$ ; risk propensity,  $r = .18, p < .01$ ; proactivity,  $r = .30, p < .001$ ; achievement motivation,  $r = -.14, p < .05$ ).

Table 1 also shows that only achievement motivation correlates significantly with other two trait variables—locus of control ( $r = .362, p < .001$ ) and proactivity ( $r = -.325, p < .001$ ).

These findings are consistent with previous studies (e.g., McClelland, 1961).

Multicollinearity can distort the results substantially or make them quite unstable and thus not generalizable. Two steps suggested by Hair and associates (1998) were used to examine the multicollinearity impact of the independent variables. The first step was to examine the two collinearity index, VIF and Tolerance. No VIF value exceeds 10 and all Tolerance values surpass .95, which indicate very low levels of collinearity. The second step was to use the condition index. No conditioning index is above 30. Thus there was no support for the existence of multicollinearity.

Table 2 includes the hierarchical regression results when

Variables	PNVO	
	$\beta$	$\beta$
Step 1		
Gender	.01	.02
Age	.13	.13
Ethnicity	.03	-.01
Nationality	-.11	-.05
Entrepreneurial experience	-.14	-.11
Work experience	-.17	-.213*
Step 2		
Achievement motivation		.01
Locus of control		-.17*
Risk propensity		.17*
Proactivity		.26***
F	1.10	3.37***
$\Delta F$	1.10	7.54***
R <sup>2</sup>	.03	.16
Adj. R <sup>2</sup>	.01	.12

PNVO = Perception of New Venture Opportunity.

Note: \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

the dependent variable (perception of new venture opportunity) is regressed on control variables in Step 1, and the trait variables in Step 2. In Step 1 no control variable significantly predicted perception of new venture opportunity, while in Step 2, work experience was negatively associated with perceived desirability and feasibility of new venture opportunity ( $b = -.21, p < .05$ ). Hypothesis 1 predicted that achievement motivation would be positively associated with perception of new venture opportunity. As reflected in Table 2, this was not supported ( $b = .01, p = .83$ ). Hypothesis 2 (locus of control will be positively associated with an individual's perception of new venture opportunity) was supported ( $b = -.17, p < .05$ ). In Hypothesis 3, it was predicted that risk propensity would be positively associated with an individual's perception of new venture opportunity. The regression analysis demonstrates that the relationship is in the hypothesized direction ( $b = .17$ ) and significant ( $p < .05$ ). Hypothesis 4 (proactivity will be positively associated with an individual's perception of new venture opportunity) was supported by regression results ( $b = .26, p < .001$ ).

The R<sup>2</sup> at Step 1 (with the six demographic variables in the model) was .03 ( $p = .20$ ), which shows that the demographic variables did not explain significant variance in perception of new venture opportunity. The change in R<sup>2</sup> at Step 2 was .16 ( $p < .001$ ). Thus, the results suggest that the four trait variables explain significant variance in perception of new venture opportunity beyond the demographic variables.

**Discussion**

Analysis results show that some personality traits relate significantly to perception of new venture opportunity. It confirms propositions that traits may not contribute to decisions to engage in entrepreneurial actions directly, but they contribute to the whole decision-making process through their direct influence on an individual's perception and attitude regarding potential entrepreneurial events (Simon and Houghton, 2002; Krueger, 1993). It also supports the view that personality traits and other personal characteristic variables are indispensable in a good understanding of entrepreneurial process (Venkataraman, 1997; Shane and Venkataraman, 2000).

Results from this study also show that proactivity has the strongest impact on an individual's positive perception of potential venture opportunities. Proactive personality drives a person to take initiatives to improve current circumstances or create new ones, challenge status quo, and effect environmental changes (Crant, 2000). Proactive people tend to ignore constraining forces when they decide to initiate changes (Bateman and Crant, 1993). As was expected in this study, individuals high on this personality view new venture opportunity as more desirable and feasible than those with low proactivity do. This indicates that proactive people

would be more likely to initiate a new business under similar constraining situational conditions. Their attitudes and perceptions regarding entrepreneurial actions tend to be more positive (Robinson et al., 1991).

Locus of control was also strongly related to perception of new venture opportunity, and the relationship was in hypothesized direction. Locus of control refers to people's beliefs concerning the source of control over events affecting them (Rotter, 1966). People who strongly believe that the locus of control is internal (internals) tend to believe that they have control over changing events. As we expected, in our study, internals perceived more desirability and feasibility from the same venture opportunity than externals did. Internals' more positive attitude and perception regarding new venture opportunity could come from their preference of careers that will give them more personal control and personal responsibility. Thus, it is not clear whether such a positive relationship would still exist for entrepreneurial activities that may not provide so much personal control and responsibility as a new independent venture can give. Entrepreneurial activities that take place inside existing organization, such as corporate entrepreneurship, or that have strong collective orientation (Reitch, 1987; Stewart, 1989; Yan and Sorenson, 2003), may impose more restrictions on entrepreneurs. Future studies need to examine the relationship between locus of control and other types of entrepreneurial activities. Here we propose that internals will have a less positive perception of these entrepreneurial activities than that of a new venture creation, but more positive than other managerial jobs.

Like previous studies (Keh et al., 2002; Simon et al., 2000), risk propensity was found to be positively related with perception of new venture opportunity. Risk propensity refers to the tendency of a decision-maker to take or to avoid risk (Sitkin and Pable, 1992). People who tend to take risks perceive entrepreneurial actions and opportunities more desirable and feasible than those who tend to avoid risks. Entrepreneurship is a career that assumes risks. It is much less structured and accompanied with more uncertainties than managerial work (Bearse, 1982). Even though some studies found that successful entrepreneurs are often moderate, calculated risk-takers (Mancuso, 1975; Kogan and Wallach, 1964; Litzinger, 1963), our study shows that people with high risk propensity tend to perceive venture opportunities under similar conditions to be more positive.

The most unexpected result from this study is the failure to find significant relationship between achievement orientation and perception of new venture opportunity. It seems that the level of achievement motivation is unrelated to an individual's perception of a potential new venture opportunity. Achievement motivation is the personality trait that has been mostly associated with entrepreneurship since the

work of McClelland (1961). However, a more thorough literature review indicates that empirical findings did not always provide support to a positive link between high achievement motivation and entrepreneurship (Brockhaus, 1982; Brockhaus and Horwitz, 1986). For example, research showed that achievement motivation was not significantly associated with students' intention to become entrepreneurs (Borland, 1974) and their entrepreneurial interest (Sexton and Bowman, 1983). Our failure to find positive significant relationship between achievement motivation and perception of new venture opportunity adds to the debate regarding connections between the two variables.

One explanation is that achievement is not associated merely with starting or running one's own venture, or accomplishing other entrepreneurial tasks. In addition to business or economic activities, other areas of professional endeavor, such as arts, politics, religion, or education, also constitute proper channels for achievers (Gasse, 1982). It is quite possible that an individual high in achievement motivation has no or less interest in business or other business activities.

The choice of Tziner and Elizur's (1985) instrument to measure achievement motivation might add to the finding of insignificant result. Albeit its strength of conceptual consistency with the definition of achievement motivation and sound proven applications across diverse populations (Tziner and Elizur, 1985), this instrument intends to capture a more comprehensive picture of achievement motivation from multiple aspects—calculating risk, uncertainty, solving problems, satisfying needs, responsibility, and difficulty. Studies have shown that these six aspects did not correlate significantly with outcome variables always at the same time (Tziner and Elizur, 1985). Thus, the failure to find significant relationship in this study may be due to the multifaceted nature of the measurement, and future study needs to consider the separate impact of each of the six aspects of achievement motivation on entrepreneurial perceptions.

Among the six demographic variables, only work experience was significantly related to perception of new venture opportunity but in a negative direction. This suggests that more work experience tends to influence an individual to perceive a potential new venture opportunity less favorably. Unlike work experience, entrepreneurial experience was not found to affect perception of new venture opportunity. Empirical evidence suggested that not all entrepreneurship-related experiences will positively influence a person's perception of new venture opportunities (Krueger, 1993). Individuals with positive entrepreneurial experiences tend to perceive new venture opportunities more positively than those with negative entrepreneurial experiences do. Future study needs to consider the content of entrepreneurial experience as predictors to entrepreneurial perception.

Findings from this study suggest that ethnicity does not



affect a person's perceived desirability and feasibility of a new venture opportunity. No significant perception difference was found between American respondents and those from other countries either. Americans are often viewed as a people with stronger entrepreneurial values than other cultures (McClelland, 1961; Timmons and Spinelli, 2007). One explanation is that international students in the United States may be more similar to their American classmates than their countrymen back home.

Gender was also found unrelated to perception of new venture opportunity. This finding is consistent with previous studies suggesting that female entrepreneurs differ little from their male counterparts in such motivations as need for achievement, independence, job satisfaction, and economic necessity (Brush, 1992; Decarlo and Lyons, 1979; Hisrich and Brush, 1985). However, some empirical evidence suggests that female entrepreneurs need a greater stimulus than their male counterparts to take the ultimate initial step (Tuck, 1985). This study also failed to find significant differences between female and male respondents in locus of control, proactivity, and risk propensity. Female respondents differed significantly from their male counterparts in achievement motivation, but achievement motivation was not significantly related to perception of new venture opportunity. Finally, age also was found unrelated to an individual's perception of new venture opportunity. This suggests that young people do not necessarily perceive starting their own ventures more desirable and feasible than older people do. Timmons and Spinelli (2007) found that the majority of entrepreneurs start their ventures at an age between 30 and 50. Recent studies also show that entrepreneurship is becoming a choice for adult American across all ages.

In summary, findings from this study show that not all personality traits are predictors of perception of new venture opportunity, and some are stronger predictors than others. This study also indicates that personality trait variables are better predictors than demographic variables. An individual's perception of and attitude toward entrepreneurship may be more stable than we think (Robinson et al., 1991), and not easily changed by other non-innate factors. However, the final decision to take the plunge is subject to the influence of other factors both inside and outside the decision-making process.

## Conclusion and Limitations

Unlike previous studies in entrepreneurial personality traits that focused mainly on their direct influences on entrepreneurial intentions or actions (e.g., McClelland, 1961; Brockhaus, 1980; Borland, 1974; Hull et al., 1980), this study explored the impact of entrepreneurial personality traits on entrepreneurial perception, the missing link in most previous studies. The study results suggest that some entrepreneurial

personality traits, like strong proactive personality, internal locus of control, and high risk propensity, positively influence an individual's perception of a potential new venture opportunity. Among these personality traits, proactivity is the strongest predictor. The more proactive an individual is, the more likely he or she will perceive a new venture opportunity to be desirable and feasible. In the meantime, internals (individuals with internal locus of control) tend to view entrepreneurial opportunities more positively than externals (individuals with external locus of control). Even though previous studies suggest that successful entrepreneurs usually are calculated risk takers (Litzinger, 1963; McClelland, 1961), results of this study indicate that a high risk propensity will tend to influence a person to view a new venture opportunity more optimistically than a low risk propensity will do. However, such an overoptimistic perception and attitude regarding the future of a new venture resulted from a strong risk propensity may not always result in desirable consequences. It may influence an entrepreneur to ignore and take less seriously existing risks. This helps to explain why there is a lack of consistent finding between risk taking propensity and entrepreneurial or new venture success.

Contradicting the common wisdom that entrepreneurs often have high achievement motivation, this study suggests that a high achiever does not necessarily view a potential venture opportunity more positively than a non-high-achiever does. One explanation is that high achievers exist in other kinds of careers, not only in entrepreneurship or new venture creation (Gasse, 1982). It seems to suggest a different theory from McClelland's (1961) that economic growth of a society may rely less on the actual number of high achievers it generates than how many of these achievers view entrepreneurship as their main channel of achievement. Different cultures give achievement different meanings, not always attaching equal importance to success in business and entrepreneurial activities (Yang, 1986). Sometimes even entrepreneurship enjoys a status not fully derived from the power of wealth or capital manipulation but from traditional prestige values and traditional concepts of the "good life" and its relationship to a society's core working values (Hofstede, 1980). Future studies need to narrow the definition of achievement motivation to match research context and serve research purpose.

Above all, this study provides evidence that entrepreneurial personality traits play an important role in explaining entrepreneurial cognitions and actions. Any theory and framework that ignores the role of personal characteristics of entrepreneurs will be considered incomplete (Herron and Sapienza, 1992; Johnson, 1990). Researchers should continue to explore their role in new entrepreneurship theories (e.g., Mitchell et al., 2002; Shane and Venkataraman, 2000; Venkataraman, 1997) that attempt to take a holistic, systemic,

and process-based approach to explain entrepreneurship. This study took a step to empirically examine the first link of these theories, which is also the link that has been often ignored in previous research. A thorough examination of the link between personality traits and entrepreneurial cognition will help to clarify and explain many previously contradicting findings.

Findings from this study provide many important practical implications to both entrepreneurs and managers. One important implication is that entrepreneurs and managers should understand that personalities will influence their attitudes toward and perceptions of entrepreneurial opportunities. A good understanding of one's own personalities will help entrepreneurs and managers understand their proclivities in dealing with new venture and business opportunities, thus helping them to minimize possible negative impact of their personal proclivities on decisions about new venture or business opportunities. It might also help coworkers, teammates, and business managers understand their differences in evaluating new venture or business opportunities so they can make necessary mutual adjustment. From a human resource management perspective, findings from this study suggest that people with certain personalities may be more suitable for entrepreneurial types of work. For example, people with strong proactive personality should be assigned with tasks that need them to take initiatives such as new product development, new market exploration, etc. When working in an international and cross-cultural environment, managers should understand that achievement has different implications in different cultures, and people don't necessarily perceive entrepreneurship in the same way. Thus, when promoting entrepreneurial organizational cultures in overseas subsidiaries, home country managers should put into consideration local societal and working values. Finally, traditional American stereotype of entrepreneurs as young white

males should be revised as gender and age were not found to influence a person's perception of new venture opportunity at least in this empirical study. In addition, a higher percentage of immigrants or minority population engage in entrepreneurship may be the result of external reasons such as lack of other options to make a living rather than internal reasons such as stronger entrepreneurial personalities.

Like any study, this research is limited in many respects. One limitation might be that respondents in this study were undergraduate college students, not real-life entrepreneurs. However, Gartner (1989) argued that if a study is to explore whether certain personality traits can predict entrepreneurial intentions or behaviors, the study's sample should have been selected before they became involved in creating new enterprises. All of the respondents in this study were potential entrepreneurs. Secondly, a case was used to measure perception of new venture opportunity. Research participants may be less engaged in the study than they would have been had they faced a real situation in life. Such an effect may dilute the impact of some variables, such as achievement motivation, and increase the impact of other traits like risk propensity. Thirdly, controlling variables only include a limited amount of demographic information. Factors that might moderate and confound relationships found or not found in the study were not included. As previously discussed in this article, these factors might include cultural values, family backgrounds, types of work experiences, and entrepreneurial experiences. Lastly, the tendency of respondents to provide socially desirable answers could contaminate the data for this study, which may suppress and obscure relationships among variables, and produce artificial relationships among independent and dependent variables (King and Bruner, 2000). In future studies, statistical control techniques should be included in the questionnaire design to reduce the effects of social-desirability bias.

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