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Prior exposure to entrepreneurial experience and risk perception : a comparative study of potential entrepreneurs in Canada and China

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**PRIOR EXPOSURE TO ENTREPRENEURIAL EXPERIENCE AND RISK
PERCEPTION:
A COMPARATIVE STUDY OF POTENTIAL ENTREPRENEURS IN
CANADA AND CHINA**

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Abstract

This project investigated how potential entrepreneurs evaluate opportunities in the pre-startup phase of a new venture creation process. Based on Busenitz and Lau's (1997) cross-cultural cognitive model of new venture creation, I examined the relationship between risk perception and a potential entrepreneur's intention to start a venture, as well as the moderating effect of a potential entrepreneur's prior exposure to entrepreneurial experience on this relationship. In addition, I looked at the impact of uncertainty avoidance orientation on risk perception using samples collected from Canada and China. Results showed that risk perception was negatively related to entrepreneurial intention. However, it was found that one's prior exposure to entrepreneurial experience did not offset the negative impact of high risk perception on entrepreneurial intention. Interestingly, Canadian students from a society with lower levels of uncertainty avoidance were found to be less risk-taking and have higher risk perception than Chinese students.

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1. Introduction

New venture creation has a significant impact on a nation's economic growth, innovation, and job creation (Reynolds, Camp, Bygrave, Autio, & Hay, 2001; Reynolds, Hay, & Bygrave, 2000). Four phases are often mentioned in the study of new venture creation. In the first phase, potential entrepreneurs or would-be entrepreneurs develop an intention to start a business (Krueger, Reilly, & Carsrud, 2000). The second phase consists of developing a business concept after identifying an entrepreneurial opportunity. In the third phase, potential entrepreneurs begin to acquire resources and create an actual organization. In the fourth phase, the new organization starts to operate and compete in the market (Gelderen, Thurik, & Bosma, 2006). According to the sixth annual Global Entrepreneurship Monitor (Global Entrepreneurship Monitor, 2004), about 73 million people across the globe are either nascent entrepreneurs, or own or manage a young business. Different from potential entrepreneurs, nascent entrepreneurs (phase 2 and 3) actively engage in preparing and pursuing the creation of a new organization; entrepreneurs and business owners (phase 4) deal with actual entrepreneurial activities. These 73 million people have one thing in common and that is they have once been a potential entrepreneur. In other words, having an intention to start a new business is the seed of new venture creation. Therefore, it is critical for policy makers to understand what encourages one's willingness to create a new venture in the pre-startup phase.

New venture creation often involves high risk, but there are still a number of individuals willing to take this risky action even though the success rate is very low.

To explain why some individuals tend to bear the high risks associated with new venture creation but others do not, from a trait approach, researchers have tested whether one's risk propensity determines the initiation of entrepreneurial behaviors. Risk propensity measures the tendency to take risky actions (Sitkin & Pablo, 1992). However, studies have shown little or no difference in risk propensity between entrepreneurs and non entrepreneurs (Brockhaus, 1980; Palich & Bagby, 1995). Based on the fact that risk propensity is a weak predictor of entrepreneurial behaviors, researchers began to look at risk perception, suggesting that individuals have biases in the way they perceive risks given an event. That is, they may choose to take risks because they downplay the risk associated with the activity (e.g., Kahneman & Lovallo, 1993).

Individuals are motivated by a variety of factors to start a new enterprise, both situational and individual (Boyd & Vozikis, 1994). Most research in this area analyzes situational factors such as possible financial returns, family business, and social pressures. However, these factors ignore the impact of individual cognition on entrepreneurial initiation, which has drawn increasing attention in entrepreneurship literature regarding its influence on individuals' intentions to start a new business. Risk perception is a cognitive judgment as well as the driving force leading to behavior (Weber & Milliman, 1997). Following this stream of research, two pieces of empirical work have been conducted using a cognitive approach to investigate the indirect relationship between cognitive biases and entrepreneurial intention through risk perception (Keh, Foo, & Lim, 2002; Simon, Houghton, & Aquino, 2000).

Although no extensive studies have been done to test the relationship between risk reception and entrepreneurial activities, the aforementioned studies have both shown the positive association between them. Also, considering the risky nature of new venture creation, this study uses risk perception as a determinant of entrepreneurial behavior that involves risk evaluation.

Adapting the principles of Social Learning Theory (Bandura, 1977), scholars propose that role model is an important factor in facilitating a potential entrepreneur's desire to own a business (Auken, Fry, & Stephens, 2006; Dubini, 1989). Busenitz and Barney (1997) indicate that future research also needs to explore additional factors that may directly or indirectly predict the decision to start a venture such as prior exposure of role models who have started ventures (Dubini, 1989). Previous research using the role model approach has shown that exposure to a role model is an important element in making decisions towards entrepreneurial initiation (e.g., Carsrud, Olm, & Eddy, 1987; Krueger, 1993; Scherer, Adams, Carley, & Wiebe, 1989; Scott & Twomey, 1988). It can be expected that individuals do not react the same to a risky event such as founding a new venture as they value the outcome of their prior entrepreneurial experience differently. Positive experience may compensate for the negative effect of high risk perception on venture creation by making an individual feel more confident than others with little or negative experience. Thus, this paper is also going to examine if potential entrepreneurs' risk perception is moderated by their prior exposure to entrepreneurial experience.

Culture is important in any discussion of entrepreneurship because it determines the attitudes of individuals towards the initiation of entrepreneurship (Vernon-Wortzel & Wortzel, 1997). Recently, the influence of culture has been taken into account in research on risk. It is argued that risk perception is affected by culture (Kleinhesselink & Rosa, 1991), and differences in cultural context can dramatically influence how risks are perceived. One's perception of potential risks implies his or her attitudes towards an entrepreneurial idea, which later on could be considered an opportunity. Arenius and Minniti in their study on nascent entrepreneurs proposed that the "relationship between cross-country and country specific drivers of entrepreneurial behavior is a complex and important one and much more work is needed in this area" (2005, p. 243). Also, given that Hofstede (1980, 1997) proposes the likely correlation between national culture and one's willingness to make risky decisions, culture should be considered as an important variable in entrepreneurship research. In a cross-culture cognitive model of new venture creation developed by Busenitz and Lau (1996), it is indicated that the way one thinks is largely affected by the cultural backgrounds engrained in this individual. In other words, one's perception about the riskiness of exploiting a new opportunity can be fostered or diminished by the culture in which he or she is rooted. Therefore, another purpose of this paper is to find out whether potential entrepreneurs with different cultural backgrounds perceive risk associated with starting a new venture differently.

In summary, the examination of the relationship between risk perception and entrepreneurial intention, as well as the impact that exposure to entrepreneurial

experience has on this relationship, are important issues in understanding new venture decision making. By using samples of university students from two countries with different cultural backgrounds, this paper first replicates the positive relationship between risk perception and entrepreneurial intention reported by Simon et al. (2000) and Keh et al. (2002). Second, the potential moderating role of prior exposure to entrepreneurial experience is examined. Finally, this paper examines whether similar nomological relationships between risk perception and entrepreneurial intention would hold between different cultural settings. It is hoped that this helps entrepreneurship researchers better understand would-be entrepreneurs.

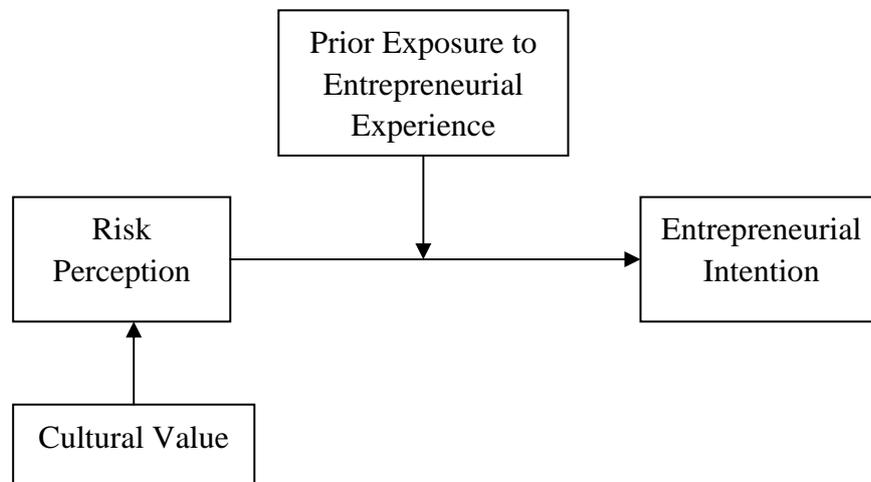


Figure 1. The model of this study

2. Literature Review & Hypotheses

2.1. Entrepreneurial Intention and Risk Perception

Entrepreneurial intention (EI) is defined (Katz & Gartner, 1988) as one's effort to acquire necessary information used to achieve the goal of initiating a new business. Krueger defines EI as the commitment to starting a business and the cognitive state that precedes the decision to act (Krueger, 1993, 2000). In this project, entrepreneurial intention is considered the key requirement for startups to make new venture creation decisions. Intentions have been shown to be the best predictor of planned behavior in the psychological literature (Ajzen, 1991), particularly when that behavior is rare and unpredictable. Ajzen and Fishbein (1969) also have concluded that the correlation between behavioral intentions and behavior can be as high as 0.95 and with an average of 0.75 across decisions. Furthermore, research by Krueger et al. (2000) suggests that intention is also the single best predictor of entrepreneurial behaviors since entrepreneurship is exactly the type of the planned behavior that is rare and unpredictable. Therefore, using entrepreneurial intention as a predictor of new venture creation is a reasonable approach for this study since it is the critical prerequisite for progression from a potential entrepreneur to a nascent entrepreneur.

In entrepreneurship literature, entrepreneurial orientation (EO) has been largely used to investigate entrepreneurial activities. Innovativeness, proactiveness, risk-taking, competitive aggressiveness, and autonomy, known as the five dimensions of EO, are necessary to understand the entrepreneurship process (Lumplin & Dess,

1996). Increasing level of EO overtime has a positive influence over firms' performance (Madsen, 2007). EO is also found to be significantly correlated to firms' strategic planning such as environment scanning, planning flexibility, and planning horizon length (Li, Tse, & Gu, 2006). In summary, entrepreneurial orientation is seen as a process reflected in recurring organizational behavior (Covin & Slevin, 1991) rather than the actions of individuals possessing certain attributes or characteristics. Therefore, there are two reasons I examine entrepreneurial intention instead of entrepreneurial intention in this project. First, entrepreneurial orientation is essentially strategic orientation of an organization as a source of competitive advantage. Studies on EO focus on firm-level entrepreneurship, or corporate entrepreneurship. In contrast, the interest of this research project is to investigate why individuals intend to take a risky action given an opportunity. In other words, including EO in this study is not considered appropriate for the unit of analysis—the individual level. Second, my study aims to investigate the pre-startup phase of a new venture creation process in which only the intention to create a new venture is examined without concerning outcomes of the intended entrepreneurial initiation. Whereas, EO has much been studied regarding its link to firms' ongoing performance.

Researchers in the field of entrepreneurship have looked at factors that influence new venture creation such as environments, demographics, and economics perspectives (e.g., Gartner, 1985; Gnyawali & Fogel, 1994; Reynolds & Miller, 1992). Environmental factors mainly focus on government regulations and procedures for new enterprises and societal attitudes towards new enterprises, etc; some

demographical factors are age, gender, and education as well as family composition and employment status; and economics factors could be resources such as time, financial support, and market conditions. However, these perspectives do not take into consideration the cognitive side of entrepreneurs. For example, why are some people and not others able to discover opportunities and become entrepreneurs? Therefore, some researchers have investigated whether personal traits (e.g. locus of control, innovativeness, and risk propensity) motivate entrepreneurial activities (Palich & Bagby, 1995; Thomas, 2004). Researchers who adopt the traits approach propose that risk propensity directly affects the tendency to become entrepreneurial, assuming that entrepreneurial individuals tend to have a “higher overall propensity or tolerance for risk” (Baron, 2004b, p. 224) than non-entrepreneurs. Surprisingly, risk propensity (Low & MacMillan, 1988) was not found as a significant factor to differentiate entrepreneurs from non-entrepreneurs. In response, this traits approach is questioned by other scholars based on the implied assumption that personalities acquired at birth or an early age are “immutable and unaffected” by experience or circumstance (Mueller & Thomas, 2001, p. 68). Given that entrepreneurship is a complex process that involves identifying, evaluating, seizing an opportunity, and bringing together the resources necessary for success (Gelderen et al., 2006), personal traits seem to be merely supportive of initiation of entrepreneurial behaviors.

The failure of using risk propensity to predict entrepreneurial behaviors leaves an interesting question for entrepreneurship researchers: If risk propensity is found not related to venture formation (Busenitz & Barney, 1997), what makes people take

risky entrepreneurial actions? To fill the vacuum within the entrepreneurship literature, an increasing body of research has attempted to explain entrepreneurial activities from a cognitive perspective (Baron, 1998, 2000; Herron & Sapienza, 1992; Keh, Foo, & Lim, 2002; Shaver & Scott, 1991; Simon et al., 2000) that “sheds new light on aspects of human behavior (e. g., decision making)” (Baron, 2004a, p. 169). The cognitive perspective argues that individuals’ perception largely affects intention to found a new business. The empirical piece conducted by Choo and Wong (2006) follows the cognitive approach, emphasizing the important influencing effect of would-be entrepreneurs’ perceptions on shaping attitudes and creating entrepreneurial intentions.

Cognitive biases such as illusion of control and belief in law of small numbers (Keh et al., 2002; Simon et al., 2000) influence the decision to become an entrepreneur through risk perception. In both studies, risk perception is accepted as a better predictor than risk propensity of entrepreneurial behavior, and entrepreneurs are found to be more likely to evaluate an idea more favorably when they perceive less risk in that idea. Risk perception, defined as the subjective judgment of the amount of risk inherent in the situation, is found as a significant factor that motivates risky entrepreneurial behavior (Das & Teng, 1997; Keh et al., 2002; Simon et al., 2000). In a recent study conducted by Acedo and Florin (2006), low perception of risks influenced largely why CEOs committed to international expansion. All of these studies are consistent with previous findings that emphasize the importance of risk

perception as a driver of entrepreneurial activities (Forlani & Mullins, 2000; Sitkin & Pablo, 1992; Sitkin & Weingart, 1995).

The risky nature of entrepreneurship implies that individuals perceive risks involved in starting a new venture. The basic fact that new ventures fail within a few years does not stop people from taking risky entrepreneurial actions, not necessarily because they like to take risks, but rather they perceive low or no risks involved in a given situation. These people are more confident about their own chance of success as a result of perceiving fewer risks. This suggestion is again confirmed by Palich and Bagby (1995) whose study indicates that entrepreneurs do not differ significantly from non-entrepreneurs in the extent of propensity to take risk, but they tend to perceive more strengths and opportunities than weaknesses and threats when doing SWOT analysis than managers perceive. This tells us that potential entrepreneurs may be particularly likely to perceive low levels of risk, even though they know that new venture creation is a risk-bearing process. This, in turn, will motivate entrepreneurial behaviors. “Entrepreneurs do not need a greater willingness to take risk if they do not perceive the riskiness of their acts” (Simon et al., 2000, p. 126). In other words, entrepreneurs may take risks unknowingly when deciding to start a new venture. Therefore, low risk perception may better explain an individual’s decision to start an enterprise, which leads to the following hypothesis:

H1: Low risk perception will be positively related to entrepreneurial intention.

2.2. Moderating effect of prior exposure to entrepreneurial experience

Bandura (1977) develops Social Learning Theory (SLT). It proposes that an individual can learn vicariously through observing behaviors of others, which are referred as role models for that individual. Observers will attempt to replicate their models' behaviors that result in positive outcomes. Derived from the principles of SLT, role model activities have been found to be an important element in understanding entrepreneurial behaviors (e.g., Scherer et al., 1989). As mentioned, the process of new venture creation starts with an entrepreneurial intention. Intentions and their underlying attitudes toward an entrepreneurial opportunity are perception-based, which should mean they are learned from experiences. Recent research by Witt (2004) examined how entrepreneurial aspirations can moderate the relationship between network and start up intention. The author argues that knowledge of new venture creation is built through repeatedly learned experiences from entrepreneurial role models, and those experiences enable individuals to align what they know with the nature of entrepreneurship. In other words, those experiences are expected to become the source of entrepreneurial aspirations that motivate one to start a new business by reducing the negative effects of other direct variables such as cost of network and dynamic of network. If so, by studying the impact of prior exposure to entrepreneurial experience on new venture creation decision making, we can obtain insight into whether the negative relationship of high risk perception and entrepreneurial intention can be possibly weakened.

The influence of learning processes and modeling may lead individuals to construct particular understandings of risk (Gooby & Zinn, 2006). Uncertainty, fear of failure, and risk are common obstacles of starting a new venture. As argued in the previous hypotheses, these obstacles are more prevalent in a society with a high uncertainty avoidance culture where individuals are more likely to perceive higher levels of risk in evaluating entrepreneurial opportunities, in turn, discourages entrepreneurial behaviors. However, I expect that individuals, who have had some prior exposure to entrepreneurial experience from their role models, are likely to bypass preconceived fears and perceived risks to entrepreneurship as they are experienced. However, quality of entrepreneurial experience could vary among individuals. That is, prior exposure to entrepreneurial experience would buffer the negative impacts of the above concerns in opportunity evaluation. More specifically, individuals who have been exposed to many entrepreneurial experiences are expected to have gained some sort of mental support that may offset the negative impact of high risk perception on entrepreneurial initiation.

Entrepreneurship research focusing on the role model approach has initially only looked at a family's background (whether parents were self-employed) as influencing the intention to start a new business. However, individuals' role models may not only be their parents, but also extended family members, friends, and other people of importance to them. Given a broader definition of role model, several other studies over the years also have shown that exposure to entrepreneurial role models and their related entrepreneurial experience is an important factor to understand entrepreneurial

behaviors. (Brenner, Pringle, & Greenhaus, 1991; Krueger, 1993). Results of these studies again confirm and support the call for combining Social Learning Theory principles, i.e. role modeling, with the study of entrepreneurship, by suggesting that individuals with former exposure of business ownership from their role models perceive seeking an entrepreneurial career more desirable than those who do not have that exposure.

In this study, I propose the moderating role of prior exposure to entrepreneurial experience, including the exposure from one's family business, a relative or a friend's business, someone else's small business, or one's own business on the relationship between risk perception and entrepreneurial intention. That is, an individual with generally high risk perception may have a strong intention to start a new business if this individual has a great amount of prior exposure to entrepreneurial experience. It can be argued that this individual may be confident in handling risks or get used to bearing risks involved in an event that he or she has been exposed to in many past similar experiences. Additionally, the positiveness of entrepreneurial experience is also very important to new venture creation decision making, and it is expected that positive experience should "carry more positive influence on attitudes than would bad experiences" (Krueger, 1993, p. 10). This suggestion is derived from the Social Learning Theory principles (Bandura, 1977) which suggest that observers replicate their models' behaviors that reinforce valued outcomes. However, given the fact that most entrepreneurship is unsuccessful, the quality of entrepreneurial experience varies among individuals. Bandura also suggests that: "In the course of learning, people not

only perform responses but also notice the effects they produce. By observing the different outcomes of their actions, they develop hypotheses about which responses are most appropriate in which settings” (1977, p. 17). That is, individuals learn from both positive and negative experience by selecting successful forms of behaviors and discarding ineffectual ones. An objectively negative experience (e.g., bankruptcy or economic loss) from which an individual learned might be rated as positive because that individual would discard ineffectual actions in the future in order to avoid repeated mistakes. Therefore, negative entrepreneurial experience would also weaken the negative relationship between risk perception and entrepreneurial intention.

In summary, potential entrepreneurs’ prior exposure to entrepreneurial experience in terms of its breadth and positiveness will moderate the negative impact of high risk perception on entrepreneurial intention in a given situation. Hypothesis two is proposed as follow:

H2: Prior exposure to entrepreneurial experience will moderate the negative relationship between high risk perception and entrepreneurial intention.

2.3. Cultural Value and Risk Perception

Risk is subjectively judged by individuals who may be influenced by “a wide array of psychological, social, institutional and culture factors...” (Slovic, 2000, p. 23). An individual is exposed to culture throughout his or her life starting with a family, continuing at school, and then at work. Therefore, how individuals think and

behave is inevitably affected by the dominant national culture of which they are a part.

Hofstede defines culture as “the collective programming of the mind which distinguishes the members of one group or category of people from another” (1997, p. 5). Individuals embedded in a culture have shared values, beliefs and norms which influence how they perceive surroundings and determine what is appropriate or inappropriate under their specific social context. Formation of cultural values and practices is a long process of social development. Members in a society gradually accept social attitudes and cultural values through socialization, and these attitudes and values are not easy to change.

Culture’s influence on entrepreneurship has recently drawn some attention from researchers, but empirical research in this area is still limited. Researchers who take the cultural values approach mostly address culture’s indirect effect on entrepreneurial behaviors through personal traits and cognition, derived from the cross-culture cognitive model of new venture creation. For example, Mueller and Thomas (2001) conducted an empirical study investigating culture’s impact on individuals’ entrepreneurial potential. Using data collected from nine countries with different cultural values, they found that cultural values such as individualism and uncertainty avoidance do affect one’s entrepreneurial orientation through its influence on the development of certain personality traits (e.g., locus of control and innovativeness). Mitchell, Smith et al. (2002) used cognition scripts to measure national culture’s influence over entrepreneurial cognition—the knowledge structures that people use to

make assessments, judgments, or decisions involving opportunity evaluation, venture creation, and growth (Mitchell, Busenitz et al., 2002). Their findings suggest that the pattern of entrepreneurial archetypes determined by entrepreneurial cognition does indeed differ among countries with different cultural values, explaining entrepreneurial phenomena in a cross-cultural setting. Jung, Ehrlich and Noble's (2001) cross-culture study found that self-assessed entrepreneurial self-efficacy, a key determinant of entrepreneurial action, was rated higher in the US (individualistic society) than in Korea (collectivistic society). Russell (2004) conducted a conceptual work to propose national cultural values' direct impact on entrepreneurship from a more general perspective, suggesting that entrepreneurial characteristics and successes are not portable from country to country due to differences in cultural values. These cross-culture studies in entrepreneurship have been well fitting with Busenitz and Lau's (1996) cross-cultural cognitive model of new venture creation which proposes that certain cultural values facilitate entrepreneurship preference through their influence on cognition. The pre-startup phase of new venture creation involves judging and evaluating the level of risk to entrepreneurial ideas and "people's risk judgments" are related to "cognitive processes" (Oltedal, Moen, Klempe, & Rundmo, 2004, p. 12), which implies that risk perception is a cognitive phenomenon. Therefore, this project also examines whether one's perception of risk is affected by certain cultural values that an individual is embedded with.

Culture's influence on risk perception has been looked at in the area of safety, where scholars suggest that, "cultural traits influence the amount of perceived risk"

(Park, 1993, p. 343). Kleinhesselink and Rosa (1991) used psychometric techniques to assess risk perception towards nuclear weapons under a cross-cultural setting and found that cultural values not only influence the amount of perceived risk but also the way how individuals perceived risk, which makes us realize that risk means different things to different people. Vredenburg and Cohen (1996) in their study regarding public safety found out that there are differences in risk perception among various culture groups. However, culture values' impact on risk perception has never been investigated in entrepreneurship research, but it could weigh heavily on the definition and understandings of risk as well as risky entrepreneurial behaviors.

If risk perception is influenced by culture in the context of social safety, this relationship should hold in the context of entrepreneurship, given the fact that entrepreneurial venture is risky. With Hofstede's (1980) study on cultural dimensions, the results of a 40-country study of 88,000 employees and managers of a single U.S. multinational (IBM), this project is able to dig further into which cultural values may affect one's risk perception regarding an entrepreneurial opportunity. Hofstede's research suggests that four dimensions (power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity) can distinguish one culture from another and significantly influence the way people behave. One of these cultural dimensions, uncertainty avoidance, is particularly useful for the purpose of this paper because of its possible impact on risk perception by the way it affects one's "mental program".

2.3.1. Uncertainty Avoidance and Risk Perception.

Hofstede defines Uncertainty Avoidance (UA) as “. . . the extent to which the members of a culture feel threatened by uncertain or unknown situations” (1997, p. 113). In countries with a high degree of UA, there is a higher level of anxiety and uncertainty about the future. People are less ambitious in career orientation, and tend to work in larger organizations to gain high job security and be loyal citizens who behave based on standardized rules and procedures of the formal organization. Therefore, the inherent uncertainty in life activities, such as quitting a good job to create a new venture, is felt threatened and stressed, which must be fought. Such people prefer to make group decisions, avoid conflict wherever possible, and resistant to change. In general, there is less willingness to take risks, a greater fear of failure, and lower tolerance for ambiguity (Hofstede, 1980, p. 176). In such culture contexts, individuals have a preconceived idea that new venture creation is a game for geniuses who account for a very small portion of the population. As a result, they tend to adhere to the crowd aiming to avoid uncertainty and perceiving a higher level of risk in a given situation.

In countries with a low degree of UA, there is a lower level of anxiety and uncertainty about the future. Young people are more ambitious in career seeking, and individual achievement is defined in terms of making a difference and being distinguished instead of security in life. As a consequence, these people are more prepared to accept challenges in exchange for bigger and more positive outcomes in the future, even when the possibility of failure is high. Instead of working for a large

organization, they prefer to work for smaller organizations as employers or to be self-employed, in which setting conflicts, changes, and risks are natural. In general, there is higher willingness to take risks, a greater hope of success, and higher tolerance of ambiguity (Hofstede, 1980, p. 176). In such culture contexts, individuals tend to believe in low risk and a high success rate when encountering an opportunity because of their eagerness to succeed and tendency to tolerate uncertainty.

Uncertainty avoidance is a measure indicating the level of anxiety regarding future events. Future events are inherently associated with uncertainties. Entrepreneurship certainly fits into this type of future event often associated with unexpected and uncontrollable outcomes. Whether or not to start a new business, which requires a great amount of personal commitment, always involves uncertainties and ambiguities that are considered the source of risk. Real world entrepreneurial practices illustrate that not everyone perceives entrepreneurial risk in the same way. Different societies deal with uncertainty in different ways, and strategies they use to cope with are developed through technology, law and religion (Hofstede, 1980, p.154). Therefore, the level of UA of a society could influence potential entrepreneurs' attitudes and ways of handling risks associated with turning ideas into entrepreneurial actions. When the outcome of a behavior such as entrepreneurship is highly uncertain, people with higher uncertainty avoidance tend to perceive higher risk as a result of their higher anxiety level towards unpredictable future events. By the same token, it is more likely for people in high UA societies to perceive higher levels of risk given a situation than those in low UA societies since they are less

optimistic and obsessed with a greater fear of failure, especially when encountering a highly ambiguous scenario like entrepreneurship. Therefore, hypothesis three is proposed as follow:

H3: Risk perception will be higher in a society with high uncertainty avoidance than in a society with lower uncertainty avoidance.

3. Methodology

3.1. Participants and Procedures

The sample for this study was drawn from university students in the business and management fields in both China and Canada on a convenient basis. The use of convenience sampling was to obtain a larger number of completed questionnaires quickly and economically. A questionnaire-based survey was delivered to participants in class. The instrument administered to the students surveyed their perception of risk involving a new venture creation decision scenario (see Appendix A) and their attitudes and desire about starting a new business after graduation. For data collection in China, instruments were administered in a classroom setting by local professors who agreed to participate in the project and administer the surveys. For each class, each participant was given a chance of winning 100 Yuan (about \$17 CAD) cash. For data collection in Canada, I gathered data from university students through in-class surveys, and each participant had a chance of winning \$20 cash.

Green (1991) suggests that required sample size for multiply regression analysis should be no less than $50 + 8m$ (where m is the number of independent variable). In my project, including two control variables, there are five independent variables (IVs) in total, thus a sample size of 200 meets the minimum requirement (100 for each country). To ensure a high response rate in China, I asked local professors to forward a pre-notification email to my potential respondents and give an introductory presentation in each class before conducting the survey. The reason for choosing a

target population of business students was that they represent the group that contains entrepreneurial potential and many entrepreneurship researchers had chosen business students in studies of investigating entrepreneurial intention (e.g., Jung et al., 2001; Simon et al., 2000).

Since this study was conducted in cross-national settings, items in the questionnaires were translated into Chinese by me and verified with other bilingual native Chinese speakers to ensure consistency and accuracy. In addition, I requested two Chinese graduate students (living in Canada over five years) and a professional translator who worked at Shanghai International Studies University (a well known university that provides professional translation service in Shanghai) to back-translate instruments in Chinese to English in order to minimize interpretation errors. Changes were made in the Chinese version until all translators agreed the questionnaires had equivalent meaning across both languages.

3.2. Measures

3.2.1. Risk perception.

This paper used a short case study followed by a 4-item scale (see Appendix A: Section B) developed by Keh et al. (2002) to measure a subject's risk perception. Respectively, these items measured probability of loss, level of uncertainty, size of possible loss and the overall risk of the venture. As mentioned, risk perception is the subjective judgment one makes when an environment or situation is encountered.

This case study was used to expose all subjects to the same specific information and to evaluate their attitudes and perceptions about the potential risks involved in the situation. Cases can capture the complexities of the evaluation of opportunities and have been used in several studies that evaluated business venture decisions (e.g., Sitkin & Weingart, 1995; Zacharakis & Shepherd, 2001). The length of this existing case was considered appropriate since it was only half a page long and didn't take subjects long to read. In order to avoid possible influences of industry characteristics on an individual respondent's judgment on the case, no information was indicated about which industry a subject's business was in. For example, some individuals may be more familiar with a certain industry, and as a result that individual might perceive less risk when being asked to start a new business in that particular industry.

Each respondent was asked to answer four questions after reading the case study. The four items measured the probability of loss, level of uncertainty in the situation, size of possible loss, and overall risk of the venture. The four questions were then summed to measure risk perception. The pretest and actual test of the same scale used in Keh et al. (2002)'s study indicates a reliability of $\alpha = 0.79, 0.89$, respectively.

3.2.2. Entrepreneurial Intention.

In the study, a participant's intention to start a new business was measured using a 4-item scale (see Appendix A: Section B) based on the existing scale originally developed by Krueger et al. (2000). It also has been adopted by Jung et al. (2001) and

modified by Keh et al. (2002) for their particular case study use. The participants were told that they should put themselves in exactly the same situation as Mr. Tan and determine what they would do before filling out the questionnaire. The pretest and actual test of the very similar scale to measure entrepreneurial intention used in Keh et al. (2002)'s study indicates a reliability of $\alpha = 0.75, 0.90$, respectively.

3.2.3. Prior exposure to entrepreneurial experience.

Prior exposure to entrepreneurial experience was measured using a 4-item scale used and developed in Kruger's (1993) study where breadth and positiveness of entrepreneurial experience are measured. Participants were asked whether they had been exposed to each of four possible types of entrepreneurial experience. Each respondent was assigned one point by default since some respondents had no exposure to any four possible types of entrepreneurial experience. Breadth of experience was the sum of these four yes-no questions (coded 1 for yes, 0 for no; See Appendix A: Section B).

Participants were then asked to rate the experience as positive or negative after they answer each of the four above items. For each item, positive responses were coded "1" while negative responses were coded "0". Positiveness of experience equaled the sum of these items. Prior experience then was the sum of items that measure breadth and positiveness of entrepreneurial experience plus the default one point.

3.2.4. *Cultural Value—Uncertainty Avoidance.*

In Hofstede's (1980) well-known study, Uncertainty Avoidance Index (UAI) for 40 countries was calculated based on three items: (1) rule orientation (Company's rules should not be broken—even when the employee thinks it is in the company's best interest"; (2) employment stability (employees statement that they intend to continue with the company (a) for two years at the most, (b) from two to five years; (c) more than 5 years, but leave before retirement, or (d) until I retire; and (3) stress (i.e., How often do you feel nervous or tense at work?). The actual formula used is: $UAI = 300 - 30 * (\text{mean score rule orientation}) - (\text{percentage of who intends to stay less than five years}) - 40 * (\text{mean stress score})$. However, this scale was designed by Hofstede particularly for employees instead of students. I only chose two out of the above three items (item 1 and 3) that can be related to my respondents. Item 3 was adjusted to "How often do you feel nervous or tense at school?" In addition, I included some other questionnaire items "ecologically related to UAI" (Hofstede, 1980, p. 194) (see Appendix A: Section C). Each student was asked questions to determine their current nationality as well as nationality at birth. A respondent whose currently nationality is the same as his or her nationality at birth was treated as a native of the country in which his or her university is located.

3.2.5. Control Variables.

Previous study has included demographic information such as gender, race, age and education as control variables. Regarding the characteristics of samples, I expected that variance in education and race would be low, especially in China, so this study only used two demographic variables: gender and age.

Gender is very likely to make a difference in risk perception, especially in this cross-culture setting. For example, Flynn, Slovic, and Mertz (1994) studied the differential risk perceptions of males vs. females as well as white vs. non-whites. They found that white males consistently exhibited lower perceptions of risk across a wide range of societal hazards. Mueller and Thomas's (2000) findings also suggest there are differences between men and women in the likelihood of an entrepreneurial orientation. Greve and Salaff (2003) in their cross-culture research on social networks found that there are some interesting differences between males and females in the way they relate to their family while establishing a firm. This finding may be explained by different cultural values affecting the expectations that parents have of their children (male and female). In China, women are supposed to be taken care of by their husband's family after getting married; therefore, their parents have less intention to encourage their daughters to own a business. On the other hand, men are carefully raised in China with the hope of becoming successful businessmen, since they are expected to take the responsibility of supporting two families (their own family and their wives' family) in the future. However, given that the rate of new business start-ups by women is increasing rapidly in many countries, the gender effect on

entrepreneurial behaviors could be very complex. Regarding the purpose of this paper, gender is considered a control variable in this study and it was dummy coded “1” for male and “0” for female.

Age is included because age is generally associated with maturity and social experience that may affect the decision to start a new venture. Consistent with this argument, year of study may also be influential particularly in this study. Third and fourth year university students are normally more concerned about their future career as they get closer to graduation. Therefore, it is expected that they may respond differently from first and second year students given a venture creation opportunity. Although general education level is not considered a control variable, prior education related specifically entrepreneurship could affect how individuals evaluate the risks involved in the case study.

Past research also has shown that factors such as flexibility and risk propensity are associated with individual’s acceptance of ambiguity and tolerance for risk (e.g., Keh et al., 2002; Simon, et al., 2000; Wally & Baum, 1994). This, in turn, may affect the decision to start a new venture. Physiologically flexible individuals display “informality, adaptability, optimism, and adventurousness” (Wally & Baum, 1994, p. 936). In other words, they may have a stronger tendency to take risky actions than less flexible individuals since they are able to respond to unexpected future events more quickly and flexibly. This study measured flexibility using the average score of ten items (Appendix A: Section A; $\alpha = 0.67$) (Wally & Baum, 1994), which was also used by Simon et al. (2000) in their study as one of the control variables. Although

research has shown that entrepreneurs do not have generalized risk-taking propensities (Palich & Bagby, 1995; Ray, 1994), risk-seeking individuals are expected to prefer entrepreneurial behaviors. In this study, risk propensity was measured by five items (Appendix A: Section A) developed by Forlani and Mullins (2000) and used by Keh et al. (2002). In each situation, a respondent was asked to either gamble for a higher financial return with low probability of winning or choose a promised low financial return. A respondent was assigned one point for each time he or she chose to gamble. Therefore, a respondent could have a risk propensity score ranging from zero to five.

4. Results

The data were collected from a sample of students from three universities (one in Canada, two in China). A total of 288 respondents participated in the study (187 respondents in China and 101 in Canada) and completed the questionnaires. Two participants that were missing a score on one or more variables were excluded from data analysis. In addition, one respondent in the sample was an extreme outlier with regard to age and was also dropped from the study. She is 45 years old: almost seven standard deviations away from the mean ($M = 22.14$ years old, $SD = 3.468$ years old). Therefore, 285 surveys out of 288 were usable.

4.1. Demographic Characteristics

Table 1 provides the descriptive statistics of respondents' demographic characteristics. As mentioned, 285 responses were used for data analysis in this study (187 Chinese students, 75 Canadian students and 23 students from countries and regions other than mainland China and Canada). Among the Chinese sample, 41.7% of respondents were male. The average age for Chinese respondents was 21.2 years old (ranging between 15 and 38). Of the Chinese respondents 34.8% had prior education related to entrepreneurship. Almost 95% of Chinese university students were from business and management field. More than half of them were first and second year students.

Among the Canadian sample, 61.3% of respondents were male. The average age for Canadian respondents was slightly higher than Chinese students ($M = 23.06$ years old; range = 20-39). Among Canadian students, 45.3% in this study had prior education related to entrepreneurship. Only 6.7% of students had a major that was not management, such as kinesiology, economics, or computer science. Almost 90% of the Canadian students were in their third and fourth year of study.

Within the part of the sample from countries and regions other than mainland China and Canada, respondents had an average age of 23.96 years old (range = 20-39), of which 56.5% were female. Of this group 43.5% had prior education related to entrepreneurship, and over 95% of them were management students. Of the total, 82.6% of the students were in third and fourth year study.

Due to the small variance in major among the three groups, major was not considered as a control variable.

Table 1. Demographic Characteristics of Respondents

Demographic Information		Chinese	Percentage	Canadian	Percentage	Other	Percentage
Survey Respondents		187	65.3%	75	26%	23	8.7%
Gender	Male	78	41.7%	46	61.3%	10	43.5%
	Female	109	58.3%	29	38.7%	13	56.5%
Age		Range: 15—38 year-old Mean: 21.2 year-old Standard Deviation: 2.288		Range: 20—39 year-old Mean: 23.69 year-old Standard Deviation: 3.966		Range:20—39 year-old Mean: 23.96 year-old Standard Deviation:4.995	
Prior Education in Entrepreneurship	Yes	65	34.8%	34	45.3%	10	43.5%
	No	122	65.2%	41	54.7%	13	56.5%
Major (Mgt)	Yes	177	94.7%	70	93.3%	22	95.7%
	No	10	5.3%	5	6.7%	1	4.3%
Year of study	1st	74	39.6%	2	2.7%	0	0%
	2nd	33	17.6%	6	8%	4	17.4%
	3rd	60	32.1%	25	33.3%	8	34.8%
	4th	20	10.7%	42	56.3%	11	47.8%
Country Birthplace	China	187	100%	0	0%	0	0%
	Canada	0	0%	75	100%	0	0%
	Others	0	0%	0	0%	23 (1 Italian, 3 Russians, 2 Koreans, 1 Japanese, 1 Lebanese, 1 Singaporese, 1 Malaysian, 4 Hongkongese, 1 Indian, 1 Indonesian, 1 Saudian, 1 American, 1 Vietnamese, 1 East European, 1 Aboriginal, 2 First Nation)	

4.2. Factor Analysis and Reliability Check

Items that measure flexibility, risk perception and entrepreneurial intention were summed into a scale, and Cronbach's alpha for the scales was calculated to assess whether the existing items formed a reliable scale respectively. In addition, factor analysis employing varimax rotation was used to check these items.

Table 2. Cronbach's Alphas of Measurements in Test

Cronbach's Alpha	English Version	Chinese Version
Flexibility	0.658	0.599
Risk Perception	0.716	0.550
Entrepreneurial Intention	0.851	0.789

As we can see in Table 2, Cronbach's alphas of measurements in English were generally higher than those in Chinese. The variance between alphas may be due to two factors. One is that all measures were originally designed in English, and there was no Chinese version of such measures. The other could be translation error. However, most reliability scores were over .60 which, as suggested by Nunnally (1978), means that the scales used in this study have good reliability. Alphas of flexibility and risk perception scales in Chinese version were a bit lower than .60, but overall alphas combining English and Chinese version for flexibility and risk perception were 0.607 and 0.621, which met the basic requirement for research.

4.2.1. Flexibility.

Principle axis factor analysis with varimax rotation was conducted to assess the underlying structure for the ten items of the Flexibility Questionnaire. Item 6 (“I do not always tell the truth”) was dropped due to the low alpha and low item-total correlation (.07). Alpha rose from .585 to .67 after the exclusion of item 6. This may possibly be attributed to participants who did not notice that item 6 was negatively scored.

Table 3 shows the results of the factor analysis of the nine flexibility items, which reveals three unique underlying factors with eigenvalues greater than one. Flexible individuals display “informality, adaptability, and adventurousness” (Wally & Baum, 1994, p, 936). Five items loaded on factor one. They were questions regarding “rightness about facts”, “decision making style”, “attitude towards laws”, “argue over matters of principle”, and “forget about words like probably, approximately, and perhaps”. Factor one was labeled as adaptability. Two items (“uncertain and unpredictable things” and “settlement”) loaded on factor two which was labeled as adventurousness. The remaining two items loaded on factor three. They were questions about “self standard” and “attitudes towards right and wrong things”. Factor three was then labeled as informality.

Table 3. Factor Analysis for Flexibility

	Factor		
	1	2	3
FX1	.540	.172	-.041
FX8	.509	.033	.010
FX9	.478	.095	.202
FX2	.382	.272	.029
FX10	.380	-.101	.167
FX3	.161	.544	.077
FX4	-.033	.541	.293
FX5	-.019	.177	.553
FX7	.237	.083	.406

Factor 1 was labeled as “adaptability”.

Factor 2 was labeled as “adventurousness”.

Factor 3 was labeled as “informality”.

4.2.2. Risk Perception and Entrepreneurial Intention.

Principle axis factor analysis with varimax rotation was also run on the 4-item risk perception scale and 4-item entrepreneurial intention scale. Results indicated that there was only one underlying factor with eigenvalues greater than one in each scale, which was “perceived risk involved in the given case study” and “intention to start this new business given the situation in case study”, respectively. This revealed that selected items that were summed up to create risk perception and entrepreneurial

intention scores clustered around one factor and were answered most similarly by the respondents.

4.3. Hypotheses Testing

Before conducting multiple regression analysis, I used a correlation matrix to test for multicollinearity, which can lead to misleading and/or inaccurate results. The means, standard deviations, and intercorrelations are presented in Table 4. From Table 4, multicollinearity was not a threat according to Berry (1993) as there was no correlation value over 0.8 between IVs. This indicated that the independent variables were indeed independent. Figure 2 showed the dots were scattered, which indicated the data met the assumptions of the errors being normally distributed and the variances of the residuals being constant. Also, it can be seen that one's intention to start a business was indeed negatively related to risk perception, and Chinese and Canadian students' response to intention to start the new venture described in the case study were different. Interestingly, responses to risk perception and risk propensity were also significantly different between two groups. These findings give some preliminary support to my hypotheses and are explained in discussion section.

Table 4. Mean, Standard Deviations, and Correlations Among All Variables (N=285)

	<i>Mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11
1.Entrepreneurial Intention	4.72	1.18	1										
2.Risk Perception	4.66	0.94	-0.51**	1									
3.Ent. Experience	4.07	2.29	0.23**	0.23**	1								
4.Flexibility	4.47	0.85	0.19**	0.11	-0.12*	1							
5. Risk Propensity	2.12	1.72	0.24**	-0.20**	-0.33**	0.04	1						
6.Age	22.08	3.31	-0.27**	0.27**	0.32**	-0.10	-0.21**	1					
7.Gender (a)	0.53	0.50	0.05	0.001	-0.15*	0.03	0.06	-0.08	1				
8.Year of study	2.57	1.14	-0.20**	0.24**	0.29**	-0.01	-0.20**	0.47**	0.04	1			
9. P.E.R.E (b)	0.38	0.49	0.07	-0.04	0.24**	-0.04	-0.10	0.12*	-0.16**	0.09	1		
10.Chinese (c)	0.66	0.48	0.36**	-0.30**	-0.59**	0.11	0.37**	-0.37**	0.16*	-0.53**	-0.10	1	
11.Canadian (d)	0.26	0.44	-0.36**	0.28**	0.52**	-0.13*	-0.31**	0.29**	-0.17**	0.45**	0.09	-0.83	1

(a) Male = 1; Female = 0; (b) Prior Entrepreneurship Related Education (P.E.R.E): Yes = 1; No = 0; (c) Chinese = 1; Not Chinese = 0; (d) Canadian = 1; Not Canadian = 0; *p < 0.05; ** p < 0.01 (Two-tailed Test)

Dependent Variable: Entrepreneurial Intention

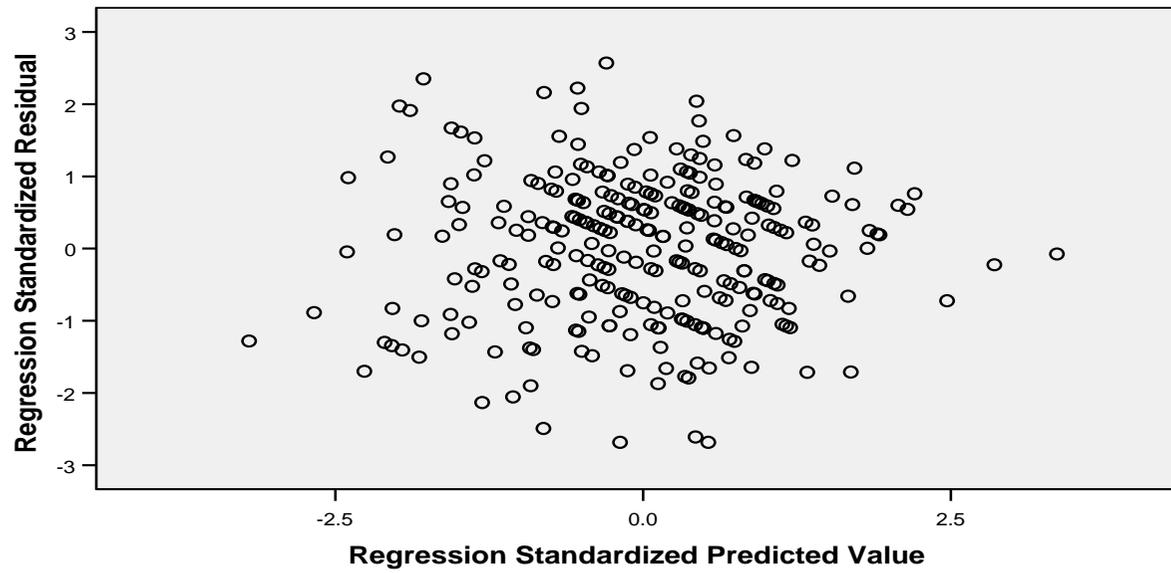


Figure 2. Scatterplot of DVs and IVs

Hypothesis one proposed that risk perception will be negative related to entrepreneurial intention. As shown in Table 4, hypothesis one was supported ($p < 0.01$) for the full sample. In order to determine whether the effects of control variables and predictor variables on entrepreneurial intention differed, a two-step approach using multiple regression was used to further test hypothesis one. More specially, in the first model, I entered only control variables. The second model included both control variables and predictor variables (see Table 5). Results of model 2 ($R^2 = 0.35$, R^2 change = 0.20, and $p < 0.001$) supported Hypothesis one. As expected, there is a significant negative relationship between risk perception and one's intention to start a new venture ($\beta = -0.51$, $p < 0.001$), even after controlling for nationality, risk propensity, flexibility, age, gender, education and year of study.

Since the emphasis in this study is comparing samples from Canada and China, I also examined whether the independent variables predict dependent variable differently across two countries. I therefore undertook separate analyses for the Chinese sample (Table 5: Model 3 and 4) and the Canadian sample (Table 5: Model 5 and 6). Overall, the results of these models from Table 5 continued to support hypothesis one. However, control variables regarding tolerance for risk such as risk propensity and flexibility were not significant in the Canadian sample, indicating that they maybe less likely to affect an individual's intention to start a new business in that country. In the Chinese sample, flexibility ($\beta = 0.26$, $p < 0.001$) and prior education in entrepreneurship ($\beta = 0.20$, $p < 0.05$) were found correlated to entrepreneurial

intention. Age, gender and year of study did not affect one's entrepreneurial intention in either group.

Table 5. Results of Regression

Predictors and Controls	Pooled Sample		Chinese Sample		Canadian Sample	
	Model 1 Entrepreneurial Intention	Model 2 Entrepreneurial Intention	Model 3 Entrepreneurial Intention	Model 4 Entrepreneurial Intention	Model 5 Entrepreneurial Intention	Model 6 Entrepreneurial Intention
Risk Propensity	0.18*	0.11*	0.10	0.10	0.09	-0.07
Flexibility	0.17*	0.22***	0.28***	0.36***	0.11	0.14
Age	-0.19*	-0.09	-0.05	0.16	-0.20	-0.13
Gender	0.04	0.04	0.04	0.04	0.03	0.02
Year of study	-0.09	-0.02	-0.09	-0.05	0.30	0.23
Prior Entrep. related education	0.11*	0.09	0.20*	0.14	0.12	0.10
Risk Perception		-0.50***		-0.44***		-0.61***
Ent. Experience		-0.03		0.03		0.20*
F statistic	8.27***	18.59***	4.30***	9.48***	1.99	7.44***
R square	0.15***	0.35***	0.13***	0.30***	0.15	0.47***
Adj. R square	0.13***	0.33***	0.10***	0.27***	0.08	0.41***
Change in R square		0.20***		0.174***		0.32***
Change in F		42.19***		22.03***		20.36***

*p < 0.05; ** p < 0.01; *** p < 0.001 (Two-tailed Test) All parameter coefficients are standardized estimates.

Hierarchical regression analysis was then used to test hypothesis two: whether one's prior exposure to entrepreneurial experience moderates the relationship between risk perception and entrepreneurial intention. A linear-by-linear interaction term was created by multiplying the proposed moderator (prior exposure to entrepreneurial experience) by the risk perception variable. After entering the main effects and control variables into the equation, the multiplicative term was added. The results are presented in Table 6. Prior exposure to entrepreneurial experience was not found to have a moderating effect on the risk perception and entrepreneurial intention relationship. (Pooled sample: change in $F(1, 275) = 0.137, p < 0.711$; Chinese sample: change in $F(1, 177) = 0.36, p < 0.549$; Canadian sample: change in $F(1, 65) = 1.64, p < 0.205$. As we can see, changes in F statistic were not significant after entering the interaction term. Thus, hypothesis two was not supported.

Table 6. Hierarchical Regression Analysis (Moderator)

Predictors and Controls	Pooled Sample		Chinese Sample		Canadian Sample	
	Model 1 Entrepreneurial Intention	Model 2 Entrepreneurial Intention	Model 3 Entrepreneurial Intention	Model 4 Entrepreneurial Intention	Model 5 Entrepreneurial Intention	Model 6 Entrepreneurial Intention
Risk Propensity	0.11*	0.11*	0.10	0.10	-0.07	-0.08
Flexibility	0.22***	0.22***	0.36***	0.36***	0.14	0.15
Age	-0.09	-0.09	-0.16	0.12	-0.13	-0.12
Gender	0.04	0.04	0.04	0.05	0.02	0.03
Year of study	-0.20	-0.20	-0.05	-0.05	0.23	0.24**
Prior Entrep. related education	0.09	0.09	0.14	0.15	0.10	0.08
Risk Perception	-0.50***	-0.44***	-0.44***	-0.50***	-0.61***	-0.06
Ent. Experience	-0.03	-0.06	0.03	-0.16	0.20*	1.07
Risk Perception × Ent. Experience		-0.10		-0.21		-1.121
F statistic	18.59***	16.48	9.48***	8.44	7.44***	6.86***
R square	0.35***	0.35	0.30***	0.30	0.47***	0.49
Adj. R square	0.33***	0.33	0.27***	0.27	0.41***	0.42
Change in R square		0		0.001		0.01
Change in F		0.137		0.36		1.64

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (Two-tailed Test) All parameter coefficients are standardized estimates.

Hypothesis three proposed that individuals from societies with different level of uncertainty avoidance may perceive risks differently. This study used Hofstede's (1980) measures of uncertainty avoidance to determine the level of uncertainty avoidance of a country. However, results of reliability check and factor analysis of selected (Appendix: Section C) did not meet the minimum requirement for conducting this research. (alpha: 0.264) Alternatively, I used UAI that was computed by Hofstede (1980) on the basis of the country mean scores for three different survey questions as already mentioned in a previous section of this paper. Hofstede's uncertainty avoidance index is well understood, and has been used in many previous studies. Hofstede (2001) claimed that national culture values are extremely stable over time. He argues that "... this stability can be explained from the reinforcement of culture patterns by the institutions that themselves are products of the dominant cultural value systems." In the long run, "cultures shift, but they shift in formation, so that the differences between them remain intact" (Hofstede, 2001, p. 255).

Due to the fact that Hofstede was not able to gather culture data from mainland of China, I used Mitchell, Smith et al.'s (2002) approximation method in which they used the results of McGrath, MacMillan, Yang, and Tsai's (1992) study, which included both Taiwan (which was included in the Hofstede's study) and China. In McGrath et al. (1992)'s study, China was found to have a similar score to Taiwan on the uncertainty avoidance dimension. The same method was also used by Mueller and Thomas (2002) in their study to get estimated culture dimension scores for the Peoples Republic of China. I dummy coded high UAI as "1" and low UAI as "0" to

separate Canadian and Chinese. Then, one way ANOVA was conducted to compare the mean scores of risk perception and its sub items (see Table 7). Unexpectedly, probability of loss, level of uncertainty in the situation and size of possible loss were perceived by Chinese respondents as significantly lower than by Canadian respondents. However, no significant difference was found regarding the perception of overall risk of the venture between two groups. They both considered the overall risk of this venture to be moderate high.

Table 7. Results of One-Way ANOVAs for Risk Perception and Sub items between Chinese and Canadian Samples

	M		MS	F
	Chinese Sample (N=187)	Canadian Sample (N=75)		
1. Probability of loss	4.93	5.27	6.05	3.811*
2. Level of uncertainty in the situation	3.89	4.72	36.61	21.29***
3. Size of possible loss	3.64	4.99	97.60	53.96***
4. overall risk of the venture	5.39	5.45	0.25	0.138
5. Risk Perception	4.46	5.11	22.30	27.90***

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$ (Two-tailed Test)

5. Discussion

Entrepreneurship is often difficult, as many new ventures fail. This project looked at the start-up stage of the new venture creation process, where potential entrepreneurs develop an intention to start a new business. In order to better understand the determinants of entrepreneurial behavior as a complex social process, the study adapted some principles of social learning theory (Bandura, 1977) and national culture (Hofstede, 1980). Consistent with previous studies (e.g., Forlani & Mullins, 2000; Keh et al., 2002; Simon et al., 1999; Sitkin & Pablo, 1992; Sitkin & Weingart, 1995), risk perception (H1) was found negatively related to entrepreneurial intention. As well, risk propensity did not predict one's intention to start a venture. These results supported the argument that risk perception is a better predictor of entrepreneurial activities than risk propensity (Brockhaus, 1980; Palich & Bagby, 1995). Consistent with this argument, personal traits such as flexibility was not significantly related to the intention to start a new business in Canadian sample. In other words, individuals do not have to be risk taking or be flexible in nature in order to express an entrepreneurial initiation. Whereas, they are more likely to decide to start a venture if they perceive low risks involved or positively evaluate the opportunity. For Canadian potential entrepreneurs, intention to start a new business is not predicted by age, gender, year of study, or prior entrepreneurship related education. In contrast, both flexibility and year of study were found to be correlated to entrepreneurial intention in the Chinese sample. Some factors may explain these differences between Canadian and Chinese respondents.

Flexibility measures are more descriptive than risk propensity measures. Therefore, it was likely that translation error could have had more influence on the understanding of questions regarding flexibility in Chinese-version. This suggestion was supported by the variance in reliability test on flexibility items between the two groups.

As far as year of study, most Chinese students go to university right after they finish senior high school. Thus, it is expected that same year university students are the same age, and thus more likely to have similar social and work experience that could affect entrepreneurial intention. Prior knowledge generated from work, education or other means is important to the process of entrepreneurial discovery (Shane, 2000). Besides the potential influence of prior knowledge, it can be argued that first and second year students are more concerned about studying and enjoying school life while third and fourth year students care more about professions and careers. They are therefore more capable of discovering and exploring entrepreneurial opportunities. However, in Canada, prior knowledge and age can not simply be determined by one's year of study since it is quite common that many students work for a while before they continue to study after graduating from senior high school. A first year university student could in many cases be older than a fourth year student. As a result, the influence of year of study on entrepreneurial intention could be washed out by large variances in age, social and work experience.

However, the proposed moderating effect of prior entrepreneurial experience on the negative relationship between risk perception and entrepreneurial intention

was not significant from the results, which indicated that prior exposure to entrepreneurial experience is not influential in making the decision whether or not to start a new venture in the given situation. This finding is different from Krueger's (1993) study which suggested that breadth and positiveness of prior entrepreneurial experience are positively related to entrepreneurial activities. This contradictory result may have occurred because the survey I used in this study measured one's entrepreneurial intention regarding a specific situation, namely one's evaluation of a given opportunity. Krueger's study, however, used more general measures to determine one's intention to start a venture in near future, where respondents tended to look back to their past entrepreneurial experience and relate it to the questions about that experience. Therefore, responses of these individuals would be expected to be more related to the prior entrepreneurial experience. In contrast, respondents of my study may have concentrated too much on the designed case study and felt restricted when answering the questions.

The last hypothesis looked at the potential of cultural influence (level of uncertainty avoidance) over one's perceived risks regarding an entrepreneurial opportunity. The study found that individuals from a higher level of uncertainty avoidance country had lower perception of a venture's riskiness. This result didn't support hypothesis three, but was opposite to what I expected. There are two possible reasons why uncertainty avoidance was negatively related to risk perception. First, Chinese society is more collective in nature than Canadian society (Hofstede, 1980). In China, people have risk-seeking tendencies because family and other

in-group members are expected to help a person bear the possible adverse consequences of risky choices. We can see such a tendency from the difference in risk propensity between Chinese and Canadian students. (see Table 8). Javenpaa and Tractinsky (1999) found that collectivists (Israel) exhibited lower risk perception toward online shopping than individualists (Australia) because of collectivists sharing negative consequences. It can be argued that Canadian from an individualistic society tend to take responsibility for their own deeds. Therefore, given the same situation, Canadian students were more likely to perceive higher risk since they considered themselves the only risk bearer of possible losses. Chinese students, however, had lower risk perception as “collectivism acts as a cushion against possible losses” (Weber & Hsee, 1998, p. 1208). Second, respondents in high uncertainty avoidance cultures often see uncertain, ambiguous, risky or undefined situations as threatening and tend to avoid them at all cost. It is therefore possible that Chinese respondents simply intended to make themselves believe involved risks were low, which helped them to block psychological effects such as fear of failure, uncertainty and unpredictable consequences. The conclusion reached by Folta and Ferrier (2000) is consistent with this explanation, in which they demonstrate that firms are more likely to buy out their partners when they are high in power distance and high in uncertainty avoidance.

Table 8. Risk Propensity Comparison Between Chinese and Canadian Sample

Risk Propensity	M	SD	F
Chinese (N=187)	2.58	1.69	37.176***
Canadian (N=75)	1.24	1.40	p < 0.001

6. Implications

This study raises some implications for researchers, and educators. First, this study increases understanding of one potential trigger of entrepreneurship, risk perception and its difference from risk propensity on an individual level. Risk perception should thus be seen as a better predictor of entrepreneurial intention and distinguished from the tendency to commit risky behaviors inherent in risk propensity. The willingness to take risk may not lead to new venture creation if an individual perceives high risk involved. If high risk perception is an obstacle of entrepreneurial activities, then factors that may reduce risk perception should be explored and examined by researchers in future.

Through the above finding, educators may be able to better understand potential entrepreneurs in the way that they evaluate opportunities and why they take risky actions. Specific courses or programs in entrepreneurship can be developed to test their impact on individuals' risk perception longitudinally. However, since the risky nature of a new venture is often inevitable, to encourage more start-up activities, entrepreneurship educators can try to switch the emphasis on reducing risk perception to motivating would-be entrepreneurs through other means. For example, educators can focus on triggering one's creative potentials, encouraging one to be more self-challenging and making one feel that entrepreneurship is interesting and exciting. This may also reduce one's fear of failure, uncertainty, and losses and minimize perceived risks involved in a variety of opportunities.

More importantly, this project indicated people from China and Canada with different levels of uncertainty avoidance differ in risk perception when evaluating the same situation. Risk is often associated with uncertainty. It seems logical that the relationship between uncertainty avoidance and risk perception would be positive. However, cultural values can be very complex according to Gelekanycz (1997). Previous research also found the above relationship was not always positive, but the type of risk matters (Randall & Eugene, 1991). In my case study, expected risk is financial orientated. Results showed that Canadian students were more conservative and tended to avoid gambling in the risk propensity test as most of them chose securer financial returns. They also perceived higher financial risks involved in the case than Chinese students. This interesting finding may imply that some Chinese cultural values are changing since “Culture is not a state but a flow...and is a creation through human perception and is shared among members of a population by social interaction and communication” (Carsten, 2006, p. 544). China is developing a stronger culture of economic growth as it gets well involved in the WTO system. This growing economic power provides more new venture creation opportunities especially for large urban cities like Shanghai and Xi’an (where data were collected). Compared to them, the city of Lethbridge is smaller and entrepreneurial activities are less prevalent. This suggests that researchers who conduct cross-cultural studies based on Hofstede’s national cultural values should count in the impact of potential cultural change and localism of different regions. For educators, location selection may be an important factor in designing appropriate entrepreneurship training.

7. Limitations and Future Research

It is important to consider some limits and constraints in this project. First, results of this study should be generalized with some caution, since my respondents were not randomly selected from each country. Purposeful sample may hold less external validity. Clearly, entrepreneurial intention is not only associated with people who have a business-education background. Students from other field of areas like computer science, math, engineering, etc. also have entrepreneurial potential. Therefore, future research needs to obtain a large size of sample randomly from university students with various education backgrounds.

Second, although translation and back-translation technique were employed in this cross-cultural study, it was apparent that reliability scores and the expected relationship between risk perception and entrepreneurial intention in the Chinese sample were overall weaker than in the Canadian sample, which may have been due to translation error and related misunderstandings of the questionnaires. In future, more indigenous methods with interviews and other forms of qualitative data should be followed to ensure equivalence and comparability of the constructs used in this study. In a related matter concerning measurement issues, the sample size for the Canadian group may have suffered because of the associated difficulties in collecting a large sample size in summer semesters. Future large-scale studies should lead more definitive conclusions.

Another important limitation of the current study is that the classroom atmosphere might have led students to problem solving rather than self-expression

when they were analyzing the case study. In addition, potential entrepreneurs in real situations may not behave as did my respondents in the hypothesized situation given in the study. As a result, the negative impact of risk perception on entrepreneurial initiation may have been reduced. Ongoing research can address this issue to achieve higher external validity by extending the boundaries of this study, such as types of venture, field settings, and one's general intention to start a business, or even to natural business settings.

This study only examined the effect of uncertainty avoidance on the level of risk perception. The contradictory finding added complexity of relationship between culture values and risk perception. If culture values did explain the difference in risk perception, it would be relevant to replicate and extend this study by incorporating other cultural dimensions. If not, then it is expected there will be little or no variance in level of risk perceived by individuals from countries that share similar culture values. Additionally, are cultural values indeed stable over time? Due to the mixed findings on relationship between culture values and risk perception, determining cultural values of an individual based on his or her nationality may no longer be persuasive. Therefore, instrument development in measuring culture values should be examined.

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Appendix A (Survey Items)

Section A

Please answer the following five items by circling the alternative ("a" or "b") you would feel most comfortable with.

1. a) An 80% chance of getting \$40,000 or b) Receiving \$32,000 for sure
2. a) Receiving \$30,000 for sure or b) A 20% chance of getting \$150,000
3. a) A 90% chance of winning \$200,000 or b) Receiving \$180,000 for sure
4. a) Receiving \$16,000 for sure or b) 10% chance of getting \$160,000
5. a) A 50% chance of getting \$50,000 or b) Receiving \$25,000 for sure

Please answer the following items by deciding how much you agree with the statements. (Circle the numbers that best reflect your opinions) (1): strongly disagree; (7): strongly agree.

1. For most questions there is just one right answer once a person is able to get all the facts.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

2. People would be a lot better off if they would just forget about words like probably, approximately, and perhaps.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

3. I don't like things to be uncertain and unpredictable.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

4. I like to have a place for everything and everything in its place.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

5. I set a high standard for myself, and I feel others should do the same.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

6. I do not always tell the truth.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

7. I think that I am more strict about right and wrong than most other people.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

8. Once I have my mind made up, I seldom change it.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

9. I am in favor of very strict enforcement of all laws.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

10. Most of the arguments I get into are over matters of principle.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

Section B

Please read the following case before answering questions 1-8.

Mr. Tan is a successful manager with four years of experience at a multi-national corporation (MNC). Before that he worked in a medium sized local company for five years. The idea of being his own boss, taking calculated risks, and making a fortune all appeal to him. Hence he is thinking of starting his own business.

He has an idea for a new business and decides to ask around to see if it is a good idea. He has some very positive feedback from some potential customers and some associates who know the industry well. Mr. Tan does not have the resources to do an in-depth market research to find out whether the business is going to work and published data are too general to be useful. However he feels that there is money to be made based on the positive feedback from potential customers and his associates. He is enthusiastic about starting the business even though he has no experience in this industry or starting his own business.

There are a few MNCs in the same industry but they have not targeted the market segment that Mr. Tan is aiming for. He feels that the MNCs are likely to move into the market as long as the new business is successful and he will not be able to fend off this major threat. He is unsure whether the market is still growing or matured. If the market has reached maturity, it is likely that a new business will be squeezed out of the market. If the market is still growing, the new business will be able to survive the entry of MNCs into this segment. Mr. Tan finds out that there are only a few small businesses that are still surviving in the industry.

Mr. Tan estimates he will need at least \$150,000 to finance the new business. As he has only \$40,000 in savings, he has to borrow from the bank or find partners to get the rest of the investment funds needed.

Please answer the following items by deciding how much you agree with the statements. (Circle the numbers that best reflect your opinions)

1. The overall risk of the business is high.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

2. The probability of failure is high.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

3. The founder stands to lose a lot financially.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

4. There is a lot of uncertainty when predicting how well the business will do.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

5. I would consider this business an opportunity.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

6. This business is worth considering.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

7. This business is feasible to you given the situation.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

8. This business is desirable to you given the situation.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

Please circle the best answer of the following items (9-16)

9. Have you parents ever started a business? -----Yes or No

(If no, please go to Q. 11)

10. Did you rate it as a positive or negative experience?-----Positive or Negative

11. Has anyone else you know ever started a business? -----Yes or No

(If no, please go to Q. 13)

12. Did you rate it as a positive or negative experience?-----Positive or Negative

13. Have you ever worked for a small or new company? ----- Yes or No

(If no, please go to Q. 15)

14. Did you rate it as a positive or negative experience?-----Positive or Negative

15. Have you ever started a business? ----- Yes or No

(If no, please skip Q.16 and go to Section C)

16. Did you rate it as a positive or negative experience?-----Positive or Negative

Section C

Please answer the following items by deciding how much you agree with the statements. (Circle the numbers that best reflect your opinions)

1. Decisions made by individuals are usually of higher quality than decisions made by groups.

1 2 3 4 5

Strongly Disagree

Strongly Agree

2. A large corporation is generally a more desirable place to work than a small company.

1 2 3 4 5

Strongly Disagree

Strongly Agree

3. Company rules should not be broken—even if the employee thinks it is in the company's best interest.

1 2 3 4 5

Strongly Disagree

Strongly Agree

4. In general, the better managers in a company are those who have been with the company the longest time.

1 2 3 4 5

Strongly Disagree

Strongly Agree

5. Competition between students usually does more harm than good.

Appendix B (Consent Letter)

Dear students:

This letter is an invitation to participate in a study I am conducting as part of my MSc (Mgt) degree in the Faculty of Management at the University of Lethbridge. I would like to provide you with more information about this project and what your involvement would entail if you decide to take part.

New venture creation has been long considered the engine of economic growth for a nation. Thus, what triggers new venture creation has become an important topic for researchers. This study will focus on investigating the factors that influence people's desire to start a new business, and help us understand potential entrepreneurs. Your expertise and experience as university students are very much appreciated and, are important to my understanding of this research.

Participation in this study is voluntary. Each of you will have a chance of winning \$20 cash for participating. You will be asked to complete a questionnaire, including a half page case study, which will take you about 10 to 15 minutes to complete. You may decide to withdraw from this study at any time without any negative consequences. Also, you have the right not to answer any particular questions that you are not comfortable with. Individual respondents will never be identified. The only identification information I need from you is your name for the purpose of drawing a cash winner. Please leave your name on the separate piece of paper I will give you if you wish to participate in the draw. These separate pieces of paper with names will be later shredded once the winner is announced. Data will be used for analysis purposes and only aggregated data resulting from this study will be presented in my final MSc project report. All information you provide will be kept completely confidential. Data collected during this study will be retained for four years in a secure location. Only researchers associated with this project will have access. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation, please contact me by phone or by email (403-328-0717, jun.zhai@uleth.ca). You can also contact my supervisor, Dr. Bradley Olson by phone or by email (403-329-2134, bradley.olson@uleth.ca). For questions of general nature regarding this research, please contact the Office of Research Services at the University of Lethbridge at 403-329-2747.

If you want to have an executive summary of this research before it is released in a public domain, please leave your email address on the other separate piece of paper I will give you.

I have read (or have been read) the above information regarding this research study on new venture creation and consent to participate in this study.

If you have filled out this questionnaire before, please check

Please check the following, to provide consent to participate in this study.

Yes, I want to participate in this study

No, I do not want to participate in this study:

Jun Zhai