

©2018, Elsevier. Licensed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International <http://creativecommons.org/about/downloads>



What Affects Nascent Entrepreneurs' Proactiveness

Dumin Zhao

Associate Professor

Jiangsu University of Science and Technology

No.2 Mengxi Road, Zhenjiang City, Jiangsu Province, 212003, P.R. China

Tel. +86 15105290898

E-mail: zhaodumin@126.com

David Smallbone

Professor, Associate Director of the Small Business Research Centre

KHBS412, Kingston Business School, Kingston University, Kingston Hill, Kingston

Upon Thames, Surrey, KT2 7LB, UK.

Tel. +44(0)20 8417 9000 Ext: 65218

E-mail: D.Smallbone@kingston.ac.uk

What Affects Nascent Entrepreneurs' Proactiveness

ABSTRACT: Proactiveness is a pervasive phenomenon in entrepreneurial organisations, however, the existing literatures mainly focus on entrepreneurial orientation, proactiveness is only regarded as one dimension of EO, and most studies on EO are at the level of firm, not the individual. Based on effectuation theory, this study utilized data from CPSED and examined the antecedents of nascent entrepreneurs' proactiveness. We find that entrepreneurial experience has a positive effect on nascent entrepreneurs' proactiveness while management education and systematic search have negative effect. These findings add to the effectuation and entrepreneurial proactiveness literatures.

INTRODUCTION

This paper aims to contribute to the growing literature on the entrepreneurial process. More specifically, it focuses on the concept of entrepreneurial orientation which has attracted growing attention from researchers in recent years (Covin and Slevin, 1989; Lumpkin and Dess, 1996; Zahra et al., 1999). EO is contrasted to entrepreneurship. Entrepreneurship is new entry. Entrepreneurial orientation is the processes, practices, intentions, and decision-making activities leading to new entry (Lumpkin and Dess, 1996). Voss et al. (2005) define EO as “*a firm-level disposition to engage in behaviors that leads to change in the organization or marketplace*”. Entrepreneurial orientation is a multi-dimensional construct which is typically applied at the organisational level and characterises the firm’s entrepreneurial behaviour in relation to one or more of the three dimensions: firstly risk-taking, secondly innovativeness and thirdly proactiveness. The paper focuses on the third of these, namely proactiveness, which it is argued is an underestimated component of most entrepreneurial orientation models. The concept of entrepreneurial orientation is part of a process oriented view of entrepreneurship that places heavy emphasis on decisions made by entrepreneurs.

Proactiveness describes the propensity to act on the part of human beings. Proactiveness is included in most definitions of entrepreneurial orientation but only in a fairly marginal way, yet it can be argued that being proactive is one of the most important characteristics of entrepreneurship. It is in this context that the concept is selected as a

focus for this paper.

Organization theory shows that human behavior is subject to the constraints generated by both internal and external conditions, whilst humans are not completely passive recipients of external environmental pressures. The three components, namely human agents, the environment and behavior, interact with each other. Bateman and Crant (1993) defined the construct *proactive personality* “as a dispositional construct that identifies differences among people in the extent to which they take action to influence their environment”. In other words, people can consciously change their social and economic environment. Proactiveness refers to the propensity of human agents to take action in the face of external constraints. In so doing, they are likely to affect and may change the environment in which they operate. Proactive entrepreneurs are action-oriented entrepreneurs. Once they have discovered a business opportunity, they may gloss over the limitations of the resource base which they control.. Research evidence shows that proactiveness not only affects the formation of entrepreneurial intentions (Crant, 1996), but can also affect the performance of new enterprises (Becherer and Maurer, 1999). Furthermore, proactiveness shapes the strategic orientation of the new venture, encourages enterprises to develop new products and markets, promotes internal changes and organizational restructuring, so as to contribute to the growth of enterprise (Kickul and Gundry, 2002).

Proactive entrepreneurs are not passive recipients of external environmental pressures,

but are rather co-creators of the environment in which they operate. When facing a highly uncertain external environment, their emphasis is typically on how to control these environmental pressures, rather than attempting to predict future environmental change. In addition, proactive entrepreneurs tend to regard contingency as an opportunity; seeking to take advantage of it rather than to evade it. Their purpose is to transfer the contingency into the resources for achieving their goals (Sarasvathy and Kotha, 2001). Proactiveness is not only a characteristic of the individual but also a characteristic of a group and organization.

At the organizational level, proactiveness means to take the active scan of external environment to discover new market opportunities, to encourage innovation and change within the organization; to forecast institutional change and social trends, and to re-design or change business processes or products in order to resist adverse changes in the environment. Hence, proactiveness may also be regarded as an organizational dynamic capability (Aragon-Correa and Sharma, 2003). However, the entrepreneurship literature mainly focuses on the concept of entrepreneurial orientation, of which proactiveness is a small part. (Miller, 1983; Covin and Slevin, 1991; Knight, 1997). It is suggested that the existing EO concept is not applicable to nascent entrepreneurs, particularly since proactiveness is only a minor element and the formation of a new business requires proactiveness on the part of the entrepreneur.

THEORY AND HYPOTHESES

Causal and Effectual Logic

Sarasvathy has suggested that there are two different forms of logic used by entrepreneurs during new firm formation. Causal logic starts with a pre-determined goal and a given set of means, with the aim of identifying the optimum way to achieve this goal. Examples might include the decision between internal and external sources of production, the decision of market positioning, the decision of what is the highest potential return with the lowest-risk portfolio investment, the decision of financing, and the decision of how to select the most suitable staff for a specific post. In other words, most of the key strategic decisions that entrepreneurs face. Causal logic includes not just the choice of the best means for achieving the pre-determined objective, but also includes the creation of new means to reach the goal. Sarasvathy argues that novice entrepreneurs prefer causal logic while experienced entrepreneurs prefer effectual logic.

Effectual logic has three characteristics: (1) The avoidance of forecasting. Experienced entrepreneurs make key strategic decisions based on the accumulation of experience and the organic combination of knowledge rather than relying on the input of external information. On the other hand, novice entrepreneurs tend to rely on external information to predict future environment change. In addition, experienced entrepreneurs usually ignore predictive information because this information is merely a reflection of the current environment and doesn't consider the action to be taken by entrepreneurs. (2)

Focus on what can be done. Novice entrepreneurs like to set a target as a basis for taking action, while experienced entrepreneurs regard their experiences and knowledge as the guidance for their next actions, especially when they face the uncertain goals and highly dynamic environment; they determine the next action based on means such as who I am, what I know, whom I know, what I have. Just as Sarasvathy suggests, experienced entrepreneurs are means-oriented and novice entrepreneurs are goal-oriented. (3) Utilize contingencies. In causal logic there is a desire to want to avoid unpleasant surprises. Novice entrepreneurs regard such events as an obstacle for their set goal, while experienced entrepreneurs treat those contingencies as new opportunities because they have no set goals nor well developed thought-out plans. When novice entrepreneurs make their decisions at the beginning of the entrepreneurial process, some will follow causal logic and others will follow effectual logic. When they become more experienced they will prefer effectual logic. i.e. as experience is accumulated, they will eventually use effectual logic regardless of the initial logic.

Proactiveness is often discussed in the business domain, however, compared with causal logic, proactiveness exhibits more characteristics of effectual logic. Proactive entrepreneurs can take action without a meticulous plan (Bhide, 2000; Carter *et al.*, 1996), and can start a new firm without having accumulated sufficient resources (Baker and Nelson, 2005; Hmieleski and Corbett, 2006; Baker, 2007).

The effectuation perspective is a response to the fact that entrepreneurs are rarely faced with predictable environments; they have no means of obtaining complete information about the future. The contemporary focus on effectuation is usually associated with the work of Sarasvathy, who emphasizes that decision making by entrepreneurs is rarely optimal. It is typically taken on a make-do basis, where experience is a key factor. In this paper, effectuation draws on other theoretical concepts to help to interpret entrepreneurial behaviour. The approach is all about improvisation in which strategic perspectives emerge rather than are explicitly planned upfront (Sarasvathy, 2008). The approach emphasizes making do with what one has rather than making assumptions about what one *should* have. This particularly applies to resources at start-up and explains why the vast majority of businesses start off under-capitalised.

Sarasvathy uses the term “effectuation” to capture the logic behind the improvisation perspectives approach to organizing. In the planning perspective the entrepreneur’s challenge is to choose the optimal strategy. In the improvisation perspective, however, the entrepreneur’s challenge is to create the organization to explore possible combinations and modifications of the available means, which requires an open approach to organizing. In this effectuation approach the entrepreneur must behave flexibly, creatively and experimentally with the various inputs and interactions which others give rise to. In this context, Sarasvathy argues that entrepreneurs typically have three resources available at the organizing stage. These may be summarised by the answers to

the following questions: Who am I? What do I know? And, arguably most importantly, who do I know? These are the resources which the entrepreneur uses to create a new business enterprise.

In summary, in the planning perspective the goal is determined in advance and a key issue for the entrepreneur is what he or she can do to achieve the desired goal. It is assumed that the entrepreneur engages in rational decision making through analysis, control, generic recipes and planning, which can shape the organization towards the desired goal. By contrast, in an improvisation perspective, the entrepreneur must focus on the question of what they can achieve with the resources they have and/or can reasonably be expected to mobilize. In this paper the emphasis on proactiveness on the part of entrepreneurs is compatible with Sarasvathy's improvising perspective.

Based on the effectuation theory, the paper will investigate the antecedents of entrepreneurial proactiveness. The research hypotheses proposed are used to create the research model that is presented in Figure 1.

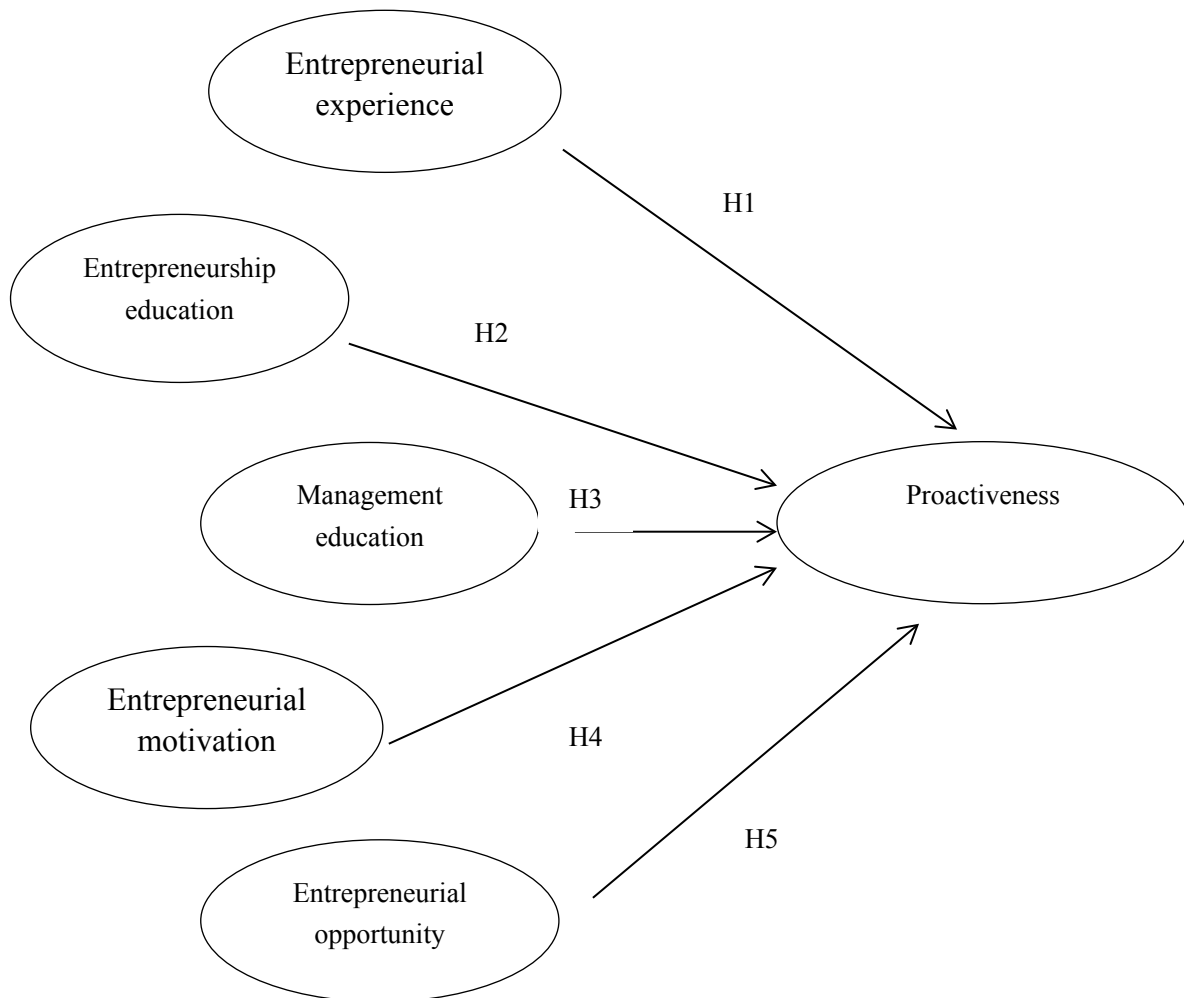


Figure 1. Research Model

Experience

Effectuation theory pays more attention to entrepreneurial experience. In fact, experience can be an important decision variable. Literature on expert decisions shows that experience can help people make better decisions through the accumulation of

experience and organic combination of knowledge required (Ericsson and Kintsch, 1995). People store the information of every action automatically, this information is used to match the perceived feasibility of new decisions (Reingold et. al., 2001). At the same time, learning theory distinguishes between open and closed loop learning with experience more central to the second type of decision, which may be almost routine in nature. This contrasts with open loop learning, where in an extreme case the decision maker may be facing not just the unknown (because it is outside his/her experience) but may in fact be unknowable. Using prior experiences, experts intuitively realize where failure could happen (Schenk, et al., 1998) and work to predict future environmental change in such a way that they build contingency into their strategy formation (Glaser, 1996).

Self-efficacy theory also regards personal experience as the most effective way to enhance personal level of self-efficacy. Mastery experiences strengthen one's confidence of what one can do with the skills one possesses. (Gist, 1987; Wood and Bandura, 1989). Researchers have suggested that perceived self-efficacy may determine the choice of opportunities and decisions (Markman, et al., 2002; Kickul, et al., 2009). In the business domain, Mitchell (1997) sought to understand the nature of entrepreneurial expertise in management. One empirical study shows a strong relationship between entrepreneurial expertise and firm performance (Reuber and Fischer, 1994). Literature on entrepreneurship also suggests that experience is an important factor in the

entrepreneurial process (Starr and Bygrave, 1991). Entrepreneurs who have created a new venture more than once have greater probability of becoming successful entrepreneurs than others (Ronstadt, 1982). Some survey evidence shows that almost one-third of entrepreneurs have prior entrepreneurial experience (Birley and Westhead, 1994). Westhead and Wright (1998), for example, study the impact of entrepreneurial experience on entrepreneurial activity, dividing entrepreneurs into three categories: novice founders, portfolio founders and serial founders. They found these three types of entrepreneurs exhibit lots of differences in their decisions and entrepreneurial activities.

Despite experience being regarded theoretically as an important influencing factor on the choice of entrepreneurial decision-making, empirical studies exploring the relationship between entrepreneurial experience and entrepreneurial decision-making are still inconclusive, as are studies of the relationship between entrepreneurial experience and entrepreneurial performance. For example, Newbert's (2005) study showed no significant effect on entrepreneurial performance, neither positively nor negatively.

In summary, research shows that entrepreneurial experience affects entrepreneurial decision-making. However, no research has directly examined whether entrepreneurial experience influences proactiveness, although from this research review it may be inferred that entrepreneurial experience is likely to influence proactive action. Therefore, the following hypothesis is proposed:

Hypothesis 1: entrepreneurial experience has a direct, positive effect on the level of

proactiveness.

Entrepreneurship Education

Entrepreneurship education has increasingly become a global phenomenon (Katz, 2003), although its role has changed over time as entrepreneurship has increasingly involved people from a widening social background. This has emerged from entrepreneurship research, which has shown that the personality of entrepreneurs is not significantly different from non-entrepreneurs (Brockhaus, 1980). One of the leading centers of entrepreneurship education is the Kauffman Foundation Entrepreneurship Center, which defines entrepreneurship education as teaching participants the knowledge and skills required to grasp opportunities ignored by others. Clearly, this is a proactive approach aiming to develop not just relevant knowledge and skills but also the insight and confidence to act when others are hesitant. The primary goal of entrepreneurship education is to increase the participants' awareness and understanding of new venture development process (Hills, 1988).

There is some empirical evidence which shows that attending entrepreneurship courses affect the decision-making of students about whether or not they would engage in entrepreneurial activity after graduation (Clouse, 1990). Peterman and Kennedy (2003) find that entrepreneurship courses significantly improved students' understanding of the feasibility of starting a business. Lena and Wong (2003) found that there was a positive correlation between people's attitude towards entrepreneurship education and the

propensity to engage in entrepreneurial activity. For example, at Harvard University, more than 50% of students who attended entrepreneurship courses started their own companies (Raichaudhuri, 2005). At the University of Arizona, the number of students who engaged in entrepreneurial activity after attending entrepreneurship courses is three times the number of students who did not attend entrepreneurship courses.

Whereas entrepreneurship education is based on effectual logic, management education is based on causal logic. (Sarasvathy, 2001). This is important because Sarasvathy's comparison of experienced entrepreneurs and MBA students found that their strategic decision making differed in many respects.

In summary, the positive influence of entrepreneurship education has been well documented and strong empirical support exists for its effect on entrepreneurial activity. Thus, the following hypothesis is proposed:

Hypothesis 2: entrepreneurship education has a direct, positive effect on the level of proactiveness.

Meanwhile, we suggest that management education has a different effect from entrepreneurship education based on effectuation theory, thus the following hypothesis is proposed:

Hypothesis 3: management education has a direct, negative effect on the level of proactiveness.

Entrepreneurial Motivation

The Global Entrepreneurship Monitor (GEM) divides entrepreneurs into two categories based on their stated motives for starting their business, which in some cases is necessity-driven and in others is opportunity-driven. (Reynolds et al., 2002). These two categories have significant differences in many respects such as access to resources, knowledge and skills. They have different expectations and tolerance of risk. Wagner's (2005) study shows that necessity-driven entrepreneurs expect lower risk and higher rates of return on their investments. In other words, they have more fear of failure than opportunity-driven entrepreneurs. Entrepreneurial motivation is a direct reflection of the economic conditions of the entrepreneurs. The GEM survey confirms that entrepreneurial motivation exhibits obvious differences in regional distribution, opportunity-driven entrepreneurs are more common in developed countries and regions such as the United States, Britain, France, while necessity-driven entrepreneurs occupy a higher proportion in low-income countries. It can be inferred that an opportunity-driven entrepreneur would be more positive on proactiveness than a necessity-driven entrepreneur. Thus, the following hypothesis is proposed:

Hypothesis 4: Entrepreneurial motivation has a direct effect on proactiveness, opportunity-driven entrepreneurs are more proactive than necessity-driven entrepreneurs.

At the same time, this distinction between necessity-driven and opportunity-driven entrepreneurs has been criticized because it tends to overlook the dynamic element which can be associated with a rapidly changing external environment and/or changes in

entrepreneurial behavior that are associated with entrepreneurial learning (Smallbone and Welter, 2004). There is another problem and that is that there is typically a failure to emphasize that the distinction between the two categories is based on a single question about the reasons for start-up. But in practice, the reference to start-up is often neglected and people talk about necessity and opportunity-driven entrepreneurship as though these categories describe ongoing conditions.

Entrepreneurial Opportunity

Entrepreneurial opportunity is a core element of the entrepreneurial process, since entrepreneurship is concerned with the discovery and exploitation of profitable opportunities (Shane and Venkataraman, 2000). Although they must be identified by individuals (or groups of individuals), entrepreneurial opportunities may result from major changes in society, regulations, and technology and reflect the conditions that market needs are not fully satisfied or resources are not completely utilized. Entrepreneurs' alertness to such changes enables them to identify opportunities represented by gaps in the market. Entrepreneurs' alertness are based on their possession of the prior information necessary to identify an opportunity and their cognitive properties necessary to value it (Kaish and Gilad, 1987; Venkataraman, 1997; Kaish and Gilad, 1991; Shaver and Scott, 1991; Shane and Venkataraman, 2000).

Literature suggests that opportunities can in some cases emerge by accident, whilst in other cases they result from systematic search. Entrepreneurs who have found

opportunities by accident have a higher level of alertness and tend to be more sensitive to change and innovation than entrepreneurs who found opportunities through systematic search. But alertness is not a natural ability; it is closely related to an individual's personal structure of knowledge and professional experience. Individuals who possess heterogeneous information can identify entrepreneurial opportunities more easily than others (Shane, 2000). According to Sarasvathy's theory, systematic search is a causal logic action. Entrepreneurs who prefer systematic search will made a deliberate decision rather than take a fast action after they identify an opportunity. Thus, the following hypothesis is proposed:

Hypothesis 5: the way to identify entrepreneurial opportunity has a direct effect on proactiveness. Entrepreneurs who found opportunities by accident are more proactive than entrepreneurs who found opportunities through systematic search.

RESEARCH METHOD

Research design and sample

In this study, data is taken from the Chinese Panel Study of Entrepreneurial Dynamics (CPSED). This program is a part of the Panel Study of Entrepreneurial Dynamics (PSED). The CPSED does not simply replicate the design of PSED because its objectives are not only to describe nascent entrepreneurship in China, but also to advance the international research frontier of this topic by providing context-specific knowledge (Zhang et al., 2011). At the same time, the CPSED adjusts its sampling method to take into account

China's huge population. Rather than nationwide sampling, the sampling is conducted in eight representative cities in China which includes *Beijing, Tianjin, Hangzhou, Guangzhou, Wuhan, Shenyang, Chengdu* and *Xi'an*. These cities were selected to represent different regions with varying levels of entrepreneurship. It is believed that sampling in these eight cities reflects the characteristics of nascent entrepreneurship in each region.

The CPSED is the first large-scale longitudinal study of new firm formation in China. Its data collection consists of three waves; in the first the CPSED project contacted 20,998 Chinese households by telephone through random dialing in the eight representative cities. Of those contacted, 974 were nascent entrepreneurs, 601 of whom went through a comprehensive telephone interview regarding the status and development of their startups. During the next two years, the CPSED has finished other two survey waves. New businesses are created by entrepreneurs through a series of actions. Nascent entrepreneurship is subsequent stage in the entrepreneurial process. Nascent entrepreneurs are individuals who take steps to create a venture, such as looking for equipment or a location, organizing a start-up team, preparing a business plan (Carter et al. 1996). Businesses existing for more than 3.5 years are referred to as established businesses and the entrepreneurs as established business(Bergmann and Stephan,2013).

Personality characteristics of the research sample are presented in Table 1. Of the 601 participant nascent entrepreneurs, 88.6% were in the age group of not more than 44,

67.9% were male, and 59.1% had undergraduate degrees (Table 1).

Table 1 Descriptive analysis of the sample(n=601)

characteristics	n	%
Gender		
Male	408	67.9
Female	193	32.1
Age groups		
≤44	532	88.6
>45	69	11.4
Educational level		
Not more than high school	219	36.4
Undergraduate	355	59.1
Postgraduate	27	4.5
Work experience		
Yes	482	80.2
No	119	19.8

Measures

Dependent variables

Proactiveness. In the literature on entrepreneurial orientation, proactiveness is one of the core dimensions which constitute the construct of EO. The 9-item scale developed by Covin and Slevin (1989) has become the standard for measuring EO. The three items to measure proactiveness include: (1) To initiate actions or to follow competitors' actions; (2) Often to introduce new products/services, administrative techniques, operating technologies or seldom to introduce new products; (3) To adopt competitive posture or to

avoid competitive clashes. With the academic community becoming increasingly interested in EO, a number of debates have emerged with respect to the nature of the construct and its measure (George and Marino, 2011). A recurrent question is whether EO represents a dispositional or a behavioral construct. Gartner (1988) argues that entrepreneurs should be recognized through their actions rather than their traits. Similarly, Covin and Slevin (1991) suggest that an individual's personal psychological profile does not make them an entrepreneur, who instead are identifiable by their actions. As a consequence, a behavioral model of entrepreneurship is proposed, in which behavior rather than attributes constitute the entrepreneurial process. Although a firm's disposition towards entrepreneurship should not be regarded as an essential element of the EO construct (Covin and Lumpkin, 2011), most measures of EO incorporate some items that reflect disposition and others that reflect behavior.

Considering respondents involved in the CPSED are nascent entrepreneurs and their new firms are in their infancy, the commonly used scale items referring to competitors were not considered appropriate in this case. Proactiveness is measured through questions focusing on the entrepreneur's behavior; for example by attempting to identify the time elapsed between recognizing opportunity and starting actions designed to exploit it.

Independent Variables

Entrepreneurial Experience. A number of researchers have previously suggested that entrepreneurial experience can yield important insights into the nature of entrepreneurial

characteristics and behavior (MacMillan, 1986; Starr and Bygrave, 1991; Westhead and Wright, 1998). MacMillan (1986) discusses the concept of habitual founders, Starr and Bygrave (1991) explore the consequences that individuals experience prior to start-up. Other researchers have developed taxonomies of habitual founders, dividing entrepreneurs into three categories. These are novice founders, who are those with no prior entrepreneurial experience, secondly portfolio founders, who retain their original business and inherit, establish and/or purchase another, and thirdly serial founders, who are those who sell their original business but, at a later date, inherit or establish a new business. (Westhead, Wright, 1998; Westhead, et al., 2003). The study in question here adopts the most commonly employed measure of entrepreneurial experience by asking respondents whether or not this was the first time for them to involve themselves in a new venture creation.

Entrepreneurship Education and Management Education. The second independent variable is entrepreneurship education in management, which are not the same because entrepreneurship education focuses specifically on “the promotion of entrepreneurship and in developing entrepreneurial skills and knowledge” (Verheul et al., 2001). Work undertaken by Dickson et al. (2008) has shown strong evidence supporting the relationship between levels of general education and entrepreneurial success. Whilst there are debates on the efficacy of entrepreneurship education for either economic or individual outcomes, there is a higher degree of agreement between researchers about the

longer-term returns from investment in entrepreneurship education (Galloway and Brown, 2002; Hegarty and Jones, 2008). As a consequence, in the study here respondents are asked whether or not they attended any programs of entrepreneurship education and/or programs of management education.

Entrepreneurial Motivation. The third independent variable is entrepreneurial motivation. It is suggested that the motivation of individual nascent entrepreneur is key to understanding why some nascent entrepreneurs quit the gestation process whilst others actually establish firms (Renko et al., 2012). Although the distinction used by GEM between necessity-driven entrepreneurs and opportunity-driven entrepreneurs has been much criticized, the dichotomy is incorporated into the present study. With the broadly based question asking respondents why they decided to involve in entrepreneurship activity; whether this was because they wanted to pursue a business opportunity or whether it was because they could not find paid-employment opportunities.

Entrepreneurial Opportunity Identification. The fourth independent variable is entrepreneurial opportunity identification. The literature on this topic distinguishes between a discovery viewpoint and an enactment viewpoint. Enactment means to create a new opportunity, which leads some writers, for example Alvarez and Barney (2007), to suggest that a discovery view of opportunity applies to those opportunities that arise from the exogenous environment, such as technological, regulatory, political, social, or demographic changes. while a creation view applies to those opportunities that emerge

from endogenous shocks., At the same time, some researchers suggest that these two viewpoints cannot be divided completely. Successful entrepreneurs are more adept at switching between discovery and creation modes of thought as the need arises (Baron, Ward, 2004). Some researchers have divided the discovery viewpoint into two: firstly that based on systematic searching and, second, discovery by accident (Kaish and Gilad, 1991; Ray and Cardozo, 1996; Bhide, 2000; Shane, 2000; Fiet and Patel, 2008; Tang and Khan, 2007; Fiet, 2007; Patel and Fiet, 2009). As far as the current study is concerned, the discovery viewpoint is applied using a measure which involves asking respondents how they identified the business opportunity; whether it was found through systematic search or whether it was found by accident.

Control variables

Gender and city were both controlled for because of evidence to suggest that both can have impact on entrepreneurial strategy, not least because of institutional differences (Fischer, et al., 1993; Kourilsky and Walstad, 1998; Eddleston and Powell, 2008).

ANALYSES AND RESULTS

Descriptive statistics and correlations for the relevant variables are shown in Table 2. The highest correlation is 0.363 (between entrepreneurship education and management education). Proactiveness significantly correlates with management education, as well as with opportunity identification and negative affectivity in the direction expected.

Hierarchical regression is used as the basic method of analysis. All the research results from the statistical analysis are shown in Table 3. Examining the control variables entered in the base model, it is found that the overall model fit is notably low ($F=1.520$); the dummy variable for city 02 has a negative association with proactiveness, suggesting that entrepreneurs in Xian city are less likely to take proactive action. In other words, it takes longer time for entrepreneurs in Xian city to make the decision to start their new firm after they identified an entrepreneurial opportunity than those in other cities. This can likely be explained with the institution fault or the shortage of entrepreneurial support system in this city, which naturally deters entrepreneurs from exploiting the opportunities they have identified.

The five independent variables (entrepreneurship education, management education, entrepreneurial motivation, entrepreneurial experience, opportunity identification) were then entered to test all of the five Hypothesis. The overall model fit is notably high ($F=2.325$, $p<0.01$), and the improvement in model fit is statistically significant ($\Delta R^2=.030^{***}$, $p<0.01$). Of the five main effect variables, three (management education, entrepreneurial experience, opportunity identification) have statistically significant influences on entrepreneurial proactiveness. Management education has a negative influence on entrepreneurial proactiveness (Beta=-.102, $p<0.05$). This supports hypothesis H3. The negative effect of opportunity identification (Beta=-.131, $p<0.01$) supports hypothesis H5. Entrepreneurial experience has a positive influence on

entrepreneurial proactiveness (Beta=.081, $p < 0.1$). This supports hypothesis H1. No support was found for hypothesis H2; that entrepreneurship education has a direct, positive effect on the level of proactiveness, and H4 that entrepreneurial motivation has a direct effect on proactiveness, opportunity-motivated entrepreneurs are more proactive than necessity-motivated entrepreneurs.

In order to analyse whether there are interactions between entrepreneurial experience and the other four independent variables, the four interactions variables were entered (entrepreneurial experience \times entrepreneurship education, entrepreneurial experience \times entrepreneurial motivation, entrepreneurial experience \times management education, entrepreneurial experience \times opportunity identification) to the contingent model. It is found that the overall model fit is notably high ($F=2.030^{***}$, $p < 0.01$), but the improvement in model fit is not statistically significant ($\Delta R^2 = .007$), none of the interactions have a statistically significant influence on entrepreneurial proactiveness.

Insert Table 1 Here

Insert Table 2 Here

DISCUSSION

Researchers have suggested that EO levels can vary considerably between SMEs and even between individuals. However, stretching the concept of EO to other levels or units of analysis may dilute its value by creating ambiguity (Covin and Lumpkin, 2011). An illustration might be when the EO of a nascent entrepreneur is measured. A nascent

entrepreneur who is making the decision about when to start a new firm to exploit a business opportunity can be very difficult to describe his or her market and, associated with that, the level of competition.

As a consequence, his EO cannot be measured by using existing scales. In this paper, a behavioral model is adopted to reflect entrepreneurial proactiveness; defined as the time between recognizing an opportunity and starting a new firm to exploit it. Proactiveness indicates the speed of entrepreneurial actions, which is an important part of the entrepreneurial process affecting the likely success of a new firm being able to fully exploit a newly identified business opportunity; a process known as first-mover advantage.

Firstly, by confirming the effects of entrepreneurial experience on entrepreneurial behavior, experienced entrepreneurs exhibit more proactiveness than novice entrepreneurs. Experience is a core element of effectuation theory and experienced entrepreneurs take actions based on their effectual logic, whilst novice entrepreneurs base their actions more on causal logic (Dew et al., 2009). This is not surprising because experienced entrepreneurs may know what they possess and know how to utilize the assets they have. Once an opportunity has been identified, they will make a decision to exploit it as quickly as possible. By contrast, novice entrepreneurs may tend to hesitate when they make decisions because they are not sure whether it is a true entrepreneurial opportunity or not. This is where their more limited experience acts as a constraint. The

findings reported in the paper show that experience may encourage entrepreneurs to adopt different actions regardless of whether their experience is superior or not.

The findings also give strong support to the argument of effectuation; that management education trains individuals to behave like managers rather than entrepreneurs. Consequently, management education has a negative effect on proactiveness because management education typically involves training in causal logic, which is systematic and more time consuming than the effectuation-based approach. Causal thinking emphasizes goal setting by prediction, making a detailed plan in advance (Sarasvathy, 2001). So when an individual uses causal logic, he or she will begin with a given goal, focus on expected returns, emphasize competitive analyses, exploit pre-existing knowledge, and try to predict an uncertain future (Dew et al., 2009). Not surprisingly this is likely to take longer than an approach based on effectuation.

A third result is that the identification of opportunities through systematic search has a negative effect on proactiveness. Systematic search is an action consistent with causal logic, so novice entrepreneurs may use this as a way of identifying opportunities more frequently than their more experienced colleagues. This finding partially accounts for the question posed by Fiet and Patel that novice entrepreneurs scan widely while trying to make a discovery, whereas experienced entrepreneurs narrow their search efforts to known domains, which would seem an entirely logical approach (Fiet and Patel, 2008).

The findings reported in the paper also have practical and policy implications. The first of the practical implications refers to the role of experience which as has been shown can be an important influence on an entrepreneur's decision making. Although the relationship between the experience and performance was not examined, the effect of experience on entrepreneurs' actions suggests that policy-makers should take the policy target into account when they make entrepreneurship policy. This finding is particularly applicable in the case of China and may help to explain why the government's policy on encouraging graduates to start their own businesses did not achieve the success that was anticipated. The emphasis on experience which is measured in the current study suggests that a policy helping graduates to gain work experience may be more productive in the longer term, in terms of its impact on entrepreneurship. The findings suggest that an early emphasis on gaining entrepreneurial experience may be more productive in the longer term.

The results of the study also point to important differences between entrepreneurship and management education, with each having different effects on entrepreneurs. One suggestion that emerges is that entrepreneurship education programmes may be very specialized. The negative relationship between a systematic search process and proactiveness is consistent with the view of effectuation theory, although, as some studies suggest, alertness and search should not be treated as contradictory concepts because the

dynamic interaction between them can increase the chances and improve the effectiveness of opportunity discovery (Tang, Khan, 2007).

In fact, alertness seems to be practiced by most entrepreneurs and has been dominant in the opportunity literature for many years. However, studies show that systematic search leads not only to more opportunities, but also to opportunities that generate more wealth than those generated through an alertness approach (Fiet, 1996, 2002, 2008; Fiet et al., 2004; Fiet and Patel, 2008; Patel and Fiet, 2009). As a consequence, it appears that both systematic search and finding opportunities by accident are powerful ways of identifying opportunity. As a result, it is suggested that entrepreneurs can combine the two ways effectively.

CONCLUSION

The aim of this study was to analyze the factors affecting the entrepreneurial proactiveness, in other words, why do some entrepreneurs make the decision to start a business quickly while others delay. The time delay refers to that between when an entrepreneur opportunity was identified and the decision to start a business or exploit the opportunity perhaps in an existing business.

The paper focuses on the proactiveness of nascent entrepreneurs, which can make a very important contribution to our understanding of entrepreneurial behavior at the infant stage of a new firm. Whereas the existing literature on proactiveness mainly focuses on entrepreneurial orientation, proactiveness is only regarded as one dimension of this. Moreover, most studies on entrepreneurial

orientation are at the level of firm, not the individual. Whereas this study, making use of CPSED data, uses the individual as the unit of investigation.

The analysis suggests that focusing on actions is helpful for understanding the entrepreneurial process when those constructs commonly used at firm or strategic business level cannot be used, or generally the findings support the view of effectuation theory.

As with most studies, this one has some limitations which, viewed positively, may provide opportunities for future research. First, there was no distinction between successful entrepreneurial experience and unsuccessful entrepreneurial experience. In this regard, Newbert (2005) investigated the relationship between entrepreneurial experience and successful new firm formation, finding no significant difference between successful and less successful entrepreneurial experience. At the same time, there are unanswered research questions concerning whether different experience should impact on entrepreneurial actions in different ways. The other main limitation is a measurement one and the limitations of the index used to measure the proactiveness of nascent entrepreneurs. In this paper, proactiveness is interpreted to refer to the time between the recognition of an opportunity and the commencement of a business, which is an important topic not least from a practical business support advice point of view. But at the same time, it is a very limited interpretation of the concept of proactiveness, and proactiveness essentially refers to a high propensity to take management stake actions. Further research is needed which takes this dimension to a higher level, not least because a higher level of activity is a characteristic associated with entrepreneurs. In order to take this topic further, some time would need to be invested in developing more sophisticated, multi-dimensional indices.

References

- Alvarez SA, Barney JB. (2007). Discovery and creation: alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 33-48.
- Aragón-Correa, J. A., and Sharma, S. (2003). A contingent resource-based view of proactive corporate environmental strategy. *Academy of Management Review*, 28 (1), 71-88.
- Baker, T. (2007). Resources in play: Bricolage in the Toy Store(y). *Journal of Business Venturing*, 22, 694-711.
- Baker, T. and Nelson, R. E. (2005). Creating something from nothing: Resource construction through entrepreneurial bricolage. *Administrative Science Quarterly*, 50, 329-366.
- Baron RA, Ward TB. (2004). Expanding the entrepreneurial cognition's toolbox: Potential contributions from the field of cognitive science. *Journal of Business Venturing*, 28, 553-573.
- Bateman, S., and Crant, M. (1993). The proactive component of organizational behavior, *Journal of Organizational Behavior*, 14(2), 103-118.
- Becherer R. C. and Maurer J. G (1999). The proactive personality disposition and entrepreneurial behavior among small company presidents. *Journal of Small Business Management*, 1, 28-36.
- Bergmann H, Stephan U. (2013). Moving on from nascent entrepreneurship: measuring cross-national differences in the transition to new business ownership. *Small Business Economics*, 41(4):945-959.
- Bhide A. 2000. *The Origin and Evolution of New Businesses*. Oxford University Press: New York.
- Birley, S. and Westhead, P. (1994) .A taxonomy of business start up reasons and their impact on firm growth and size. *Journal of Business Venturing*, 9(1), 7 -31.
- Brockhaus, R. H. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal*. 23(3), 509-520.

- Carter N, Gartner W, Reynolds P. (1996). Exploring startup event sequences. *Journal of Business Venturing*, 11, 151-166.
- Clouse, V. (1990). A controlled experiment relating entrepreneurial education to student's start-up decisions. *Journal of Small Business Management*, 28(2), 45-53.
- Covin, J. and D. Slevin. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-25.
- Covin, J. G., and Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10, 75-87.
- Covin, J.G. and Lumpkin, G.T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. *Entrepreneurship Theory and Practice*, 35, 855- 872.
- Crant, J. M. (1996). The proactive personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42-50.
- Dew, N., Read, S., Sarasvathy, S.D., Wiltbank, R. (2009). Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices. *Journal of Business Venturing*, 24 (4), 287-309.
- Dickson, P., Solomon, G. and Weaver, K., (2008). Entrepreneurial selection and success: Does education matter? *Journal of Small Business and Enterprise Development*, 15(2), 239-58.
- Eddleston, K. and Powell, G. (2008). The role of gender identity in explaining sex differences in business owners career satisfier preferences. *Journal of Business Venturing*, 23, 244-56.
- Ericsson, K. A., and Kintsch, W. (1995). Long-term working memory. *Psychological Review*, 102(2), 211-245.
- Fiet, J. (2002). *The Systematic Search for Entrepreneurial Discoveries*, Greenwood, Westport, CT.
- Fiet, J. O. (2007). A prescriptive analysis of search and discovery. *Journal of Management Studies*, 44, 592-611.

Fiet, J. O., and Patel, P. C. (2008). Forging business models for new ventures. *Entrepreneurship Theory and Practice*, 32, 749-761.

Fiet, J.O. (1996). The informational basis of entrepreneurial discovery. *Small Business Economics*, (8), 419-430.

Fiet, J.O., Van, C.G.H. and Norton, W.I. (2004). *Systematic Search by Repeat Entrepreneurs*, Connecticut: Information age publishing.

Fischer, E.M., Reuber, A.R., and Dyke, L.S. (1993). A theoretical overview and extension of research on sex, gender, and entrepreneurship. *Journal of Business Venturing*, 8(2), 151-168.

Galloway, L. and Brown, W. (2002). Entrepreneurship education at university: A driver in the creation of high growth firms? *Education Training*, 44(8/9), 398-405.

Gartner, W.B. (1988). "Who is an entrepreneur?" is the wrong question. *American Journal of Small Business*, Spring, 12 (4), 11-32.

George, B. and Marino, L.D. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling and operationalization. *Entrepreneurship Theory and Practice*, 35(5), 989-1024.

Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review*, 12, 472-485.

Glaser, R. (1996). Changing the agency for learning: Acquiring expert performance. In K. A. Ericsson (Ed.), *The road to excellence: The acquisition of expert performance in the arts and sciences, sports, and games* (pp. 303-311). Mahwah, NJ: Lawrence Erlbaum Associates.

Hegarty, C. and Jones, C. (2008). Graduate entrepreneurship: More than child's play. *Education Training*, 50 (7), 626-637.

Hills, G. (1988). Variations in university entrepreneurship education: An empirical study of an evolving field.

Journal of Business Venturing, 3, 109-122.

Hmieleski, K. M. and Corbett, A. C. (2006). Proclivity for improvisation as a predictor of entrepreneurial intentions.

Journal of Small Business Management. 44(1), 45-63.

Kaish, S. and Gilad, B. (1991). Characteristics of opportunities search of entrepreneurs versus executives: Sources, interests and general alertness. *Journal of Business Venturing*. (6), 45-61.

Katz, J.A. (2003). The chronology and intellectual trajectory of American entrepreneurship education. *Journal of Business Venturing*, 18(2), 283-300.

Kickul, J. and Gundry, L. (2002). Prospecting for competitive advantage: The proactive entrepreneurial personality and small firm innovation. *Journal of Small Business Management*, 40(2), 85-98.

Kickul, J., Gundry, L.K., Barbosa, S.D., and Whitcanack, L. (2009). Intuition versus analysis? Testing differential models of cognitive style on entrepreneurial self-efficacy and the new venture creation process. *Entrepreneurship Theory and Practice*, March, 4, 439-453.

Knight, G. A. (1997). Cross- cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*, 12, 213-225.

Kourilsky, M.L., and Walstad, W. B. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences, and educational practices. *Journal of Business Venturing*, 13(1), 77-88.

Lena, L. and Wong, P. (2003). Attitude towards entrepreneurship education and new venture creation. *Journal of Enterprising Culture*, 11(4), 339-357.

Lumpkin, G.T. and Dess, G.G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-72.

MacMillan I.C. (1986). To really learn about entrepreneurship, let's study habitual entrepreneurs. *Journal of*

Business Venturing, 1, 241-243.

Markman, G.D., Balkin, D.B., and Baron, R.A. (2002). Inventors and new venture formation: The effects of general self-efficacy and regretful thinking. *Entrepreneurship Theory and Practice*, 27, 149-165.

Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-792.

Mitchell, R. K. (1997). Oral history and expert scripts: Demystifying the entrepreneurial experience. *International Journal of Entrepreneurial Behaviour and Research*, 3(2), 122-139.

Newbert, S. L. (2005). New firm formation: A dynamic capability perspective. *Journal of Small Business Management*, 43(1), 55-77.

Patel, P. C., and Fiet, J. O. (2009). Systematic search and its relationship to firm founding. *Entrepreneurship: Theory and Practice*, 33(2), 501-526.

Peterman, N., and Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship, Theory and Practice*, 28, 129-144.

Raichaudhuri, A. (2005). Issues in entrepreneurship education. *Decision*, 32(2): 73-84.

Ray, S. and Cardozo, R. (1996). Sensitivity and creativity in entrepreneurial opportunity recognition: A framework for empirical investigation, *Presented at the Sixth Global Entrepreneurship Research Conference, Imperial College, London.*

Reingold, E. M., Charness, N., Pomplun, M., and Stampe, D. M. (2001). Visual span in expert chess players. *Psychological Science*, 12, 48-55.

Renko, M., Kroeck, G., Bullough, A. (2012). Expectancy theory and nascent entrepreneurship. *Small Business Economics*, 39, 667-684.

Reuber, A. R., and Fischer, E. M. (1994). Entrepreneurs' experience, expertise, and the performance of technology-

based firms. *IEEE Transactions on Engineering Management*, 41(4), 365-374.

Reynolds, P., Bygrave, W., Autio, E., Cox, L., and Hay, M. (2002). *Global Entrepreneurship Monitor 2002 Executive Report*. Wellesley, MA/London: Babson College/London Business School.

Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26, 243-263.

Sarasvathy, S. D., and Kotha, S. (2001). Dealing with Knightian uncertainty in the new economy: The Real Networks case. In J. Butler (Ed.), *Research on Management and Entrepreneurship*, Vol. 1: 31-62. Greenwich, CT: IAP Inc.

Schenk, K. D., et al. (1998). Differences between novice and expert systems analysts: What do we know and what do we do? *Journal of Management Information Systems*, 15(1), 9-50.

Shane, S. and Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *The Academy of Management Review*, 25(1), 217-226.

Shaver, K.G. and Scott, L.R. (1991). Person, process, choice: The psychology of new venture creation. *Entrepreneurship Theory and Practice*, 16, 23-45.

Smallbone, D. and Welter, F. (2004). Entrepreneurship in transition economies: Necessity opportunity driven? available at: <http://www.academia.edu/1024226/> Entrepreneurship in transition economies necessity or opportunity driven.

Starr, J., Bygrave, W. (1991). The assets and liabilities of prior start-up experience: An exploratory study of multiple venture entrepreneurs, in Churchill NC, Bygrave WD, Covin JG, Sexton DL, Slevin DP, Vesper KH, Wetzel WE Jr (Eds), *Frontiers of Entrepreneurship Research*, Babson College, Wellesley, MA, pp. 213-227.

Tang, J., Khan, S. (2007). Dynamic interactions between alertness and systematic search: A yin and yang perspective

on opportunity recognition and innovation. *The International Journal of Entrepreneurship and Innovation*, 8(3), 175-187.

Van Stel, A., Storey, D., Thurik, R., (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, 28, 171-186.

Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. in J. Katz and R. Brockhaus (eds.), *Advances in Entrepreneurship, Firm Emergence and Growth*, Vol. 3, (Greenwich, CT: JAI Press) pp. 119-138.

Verheul I, Wennekers S, Audretsch D, Thurik R. (2001). An eclectic theory of entrepreneurship: Policies, institutions and culture. *Research Report 0012*, EIM, Zoetermeer.

Voss, Z. G., Voss, G. B., and Moorman, C. (2005). An empirical examination of the complex relationships between entrepreneurial orientation and stakeholder support. *European journal of Marketing*, 39(9/10), 1132-1150.

Wagner, J. (2005). Nascent necessity and opportunity entrepreneurs in Germany: Evidence from the Regional Entrepreneurship Monitor (REM), *University of Lüneburg Working Paper Series in Economics* No. 10.

Westhead, P., and Wright, M. (1998). Novice, portfolio, and serial founders: Are they different? *Journal of Business Venturing*, 13(3), 173-204.

Westhead, P., Ucbasaran, D., and Wright, M. (2003). Differences between private firms owned by novice, serial and portfolio entrepreneurs: Implications for policy-makers and practitioners. *Regional Studies*, 37(2): 187-200.

Wood, R., and Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56, 407-415.

Zahra, S.A., Jennings, D.F. and Kuratko, D.F. (1999). The antecedents and consequences of firm-level entrepreneurship: the state of the field. *Entrepreneurship Theory and Practice*, 24(2), 45-65.

Zhang, Y., Yang, J., Au, K., and Reynolds, P. (2011). Anatomy of business creation in China: Initial assessment on

Table 2

Descriptive statistics and correlations.

	Mea	S.D.	1	2	3	4	5	6
	n							
Gender	0.68	0.467						
Entrepreneurship education	0.38	0.485	.08					
Management education	0.46	0.499	0.0	.36				
Entrepreneurial motivation	0.52	0.5	-	0.0	-			
Entrepreneurial experience	0.27	0.444	0.061	53	0.038			
Opportunity identification	0.76	0.425	0.0	37	0.06	57		
Proactiveness	1.73	0.803	0.055	73	3*	1	6*	8
				-	-	-0.10	0	0.0
				0.015	9**		28	5**

Note: n=601; *p<0.1, **p<0.05, ***p<0.01.

Table 3*Hierarchical regression analysis for proactiveness.*

Dependent variables	Base model		Independent model		Contingent model	
	β	Sig.	β	Sig.	B	Sig.
<i>Control variables</i>						
Dummy for city 01	-.047	.332	-.045	.356	-.046	.343
Dummy for city 02	-.096*	.053	-.095*	.054	-.095*	.052
Dummy for city 03	.004	.943	.010	.846	.010	.847
Dummy for city 04	-.040	.412	-.033	.494	-.039	.424
Dummy for city 05	.029	.562	.041	.419	.043	.396
Dummy for city 06	.065	.181	.075	.119	.080	.101
Dummy for city 07	-.023	.658	-.018	.724	-.022	.664
Gender	-.044	.289	-.037	.375	-.037	.371
<i>Main effect variables</i>						
Entrepreneurship education			.040	.380	.040	.453
Management education			-.102**	.023	-.081	.126
Entrepreneurial motivation			-.010	.821	-.033	.506
Entrepreneurial experience			.081*	.055	-.066	.551
Opportunity identification			-.131**	.002	-.168**	.001
			*		*	
<i>Interactions</i>						
Entrepreneurial experience×Entrepreneurship education					.018	.783
Entrepreneurial experience×Entrepreneurial motivation					.066	.337
Entrepreneurial experience×Management education					-.060	.409
Entrepreneurial experience×Opportunity identification					.152	.122
<i>Model</i>						
F	1.520		2.325**		2.030*	
			*		**	
R2	.021		.051		.059	
Adjusted R2	.007		.029		.030	

ΔR^2

.030***

.007

a Standardized coefficients are reported.

* $p < 0.1$. ** $p < 0.05$. *** $p < 0.01$.