



An Extended Model of Entrepreneurial Intention:

A Comparative Study between Nascent Entrepreneurs in Taiwan and China

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ABSTRACT

Promoting entrepreneurial activities is one of the most promising solutions for boosting and sustaining economic development of a nation. Entrepreneurial activities are believed to accelerate economic growth and create job opportunities; the popularity of entrepreneurial activities could also reflect the efficiency of both public and private sectors in a specific area. After decades of exploration, the essence, the critical factors, and the causes and effects of entrepreneurship have been extensively investigated; however, as a concept covering various aspects and a process involving dynamic interactions, it would be fruitful to jointly consider individual level, cognitive level, and environmental level variables to construct a holistic understanding of the concept. By collecting questionnaires from nascent entrepreneurs in Taiwan and China, the current study concluded that both entrepreneurial self-efficacy and social network of nascent entrepreneurs have positive effects on entrepreneurial intention; the influence of entrepreneurial environment on entrepreneurial intention is inconclusive for the sample collected in Taiwan and in China. The effect of entrepreneurial education on entrepreneurial self-efficacy and entrepreneurial intention were not supported based on the collected data either. Discussion, implication, and direction for further inquires are provided.

Key Words: Entrepreneurial Intention, Entrepreneurial Self-Efficacy, Social Network, Entrepreneurial Education, Entrepreneurial Environment

Introduction

The financial tsunami seriously injured the economic base of many countries; with all kinds of public policies, regulations, and incentive programs being announced, financial turbulences still annoyingly hit the headline from time to time. As a tiny island, the economic situation of Taiwan is tightly attached with the international market; business performance from various industries was also endangered in the past few years. Based on the economic forecast, a bumping journey is expected in the upcoming years; surprisingly, facing the toughest condition, small and medium sized enterprises (SMEs) have still performed well in the past few years. SMEs occupied more than 95% of all companies in Taiwan; the continuous appearance of new business ventures expressed a strong entrepreneurial intention of the people living on this tiny island. Crossing the strait, various kinds of incubators, accelerators, and entrepreneurial parks were established at a fast speed to support potential entrepreneurs starting new business ventures. Venture capitals and other kinds of resources are also attracted from around the world to sizzle the atmosphere of entrepreneurship. Based on the 2016 GEDI (Global Entrepreneurship and Development Index) report , Taiwan ranked number 6 while China ranked number 6 among 130 participant countries in the world . Although the results seem to be optimistic, it should be reminded that the performances of entrepreneurial activity for both parties might not be as good as the overall ranking. Cultivating the ambiance of entrepreneurship for sustaining competitive in the global marketplace is a critical issue of top priority.

For the long-term economic development of a country, entrepreneurship is considered a great indicator (Acs and Szerb 2007; Audretsch 2007; Shook et al. 2003); for individuals, establishing a business venture is a pathway toward self-actualization and to obtain monetary return (Greenberg and Sexton 1988). Noticing the importance of entrepreneurship, both private and public sectors have devoted resources for ensuring the long-term sustainability of the economy. Incentive programs, related regulations, tax privileges, as well as various acts for encouraging investment have been conducted to support and foster the establishment of start-ups.

As a process encompassing internal as well as external influences, previous studies considered entrepreneurial intention a suitable predictor of engaging in entrepreneurial activities. However, no agreement concerning the right way to increase/enhance entrepreneurial intention has been achieved. The current study argues that, in order to draw a clearer picture of entrepreneurial intention, factors from different levels should be considered simultaneously. Moreover, in response to Shook et al. (2003), the current study collected data from “real” nascent entrepreneurs, combined different models, included the external factor, and integrated factors from different levels for figuring out more about the essence of entrepreneurial intention.

Literature Review

Entrepreneurship and Entrepreneurial Intention

Schumpeter (1934) argued that entrepreneurship should not be treated like a fad; since then, the importance and effects of entrepreneurial activities have been intensively studied in the field of economics (Cooper 2003; Shook et al. 2003). Narrowly speaking, entrepreneurship is to start a new business venture from scratch (Low and MacMillan 1988; Thiel and Masters 2014). More accurately, entrepreneurship is a process of generating new values through a new combination of resources; “creative destruction” is the term used by Schumpeter (1934) to describe the entrepreneurship process. Reynolds et al. (1999) defined entrepreneurship as: “Any attempt at new business or new venture creation, such as self-employment, a new business organization, or the expansion of an existing business, by an individual, a team of individuals, or an established business.” Incorporated concepts of risk and uncertainty, Dollingers (1988) thought of entrepreneurship as a process of creating a new business venture in the environment of high risk and uncertainty. Creativity and innovation, resources combination and the establishment of new business ventures, as well as risk and uncertainty were considered three critical factors during the entrepreneurship process. Entrepreneur, undoubtedly, is the key in the process of establishing a new business venture (Bygrave 1997; Shook et al. 2003). In addition to create new business ventures, in order to generate positive effects and contribute to the development of national economy, entrepreneurs have to manage various kinds of information, take risk, handle uncertainty, unite and relocate external resources, and be optimistic as well as confident.

Actually, the identification of business opportunity is the starting point for the deployment of establishing startups; entrepreneurial intention plays a crucial role for triggering potential entrepreneurs to spot business opportunities in the marketplace. Previous studies considered entrepreneurial intention a good predictor of entrepreneurial behavior for two reasons: first of all, establishing a new business venture is clearly a planned behavior; secondly a new business venture takes a period of time to be established (Bird 1988; Katz and Gartner 1988; Krueger et al. 2000). Chen et al. (1998) proposed that entrepreneurial intention is the personal decision made by the entrepreneur to create and manage his/her own business in the future; others described entrepreneurial intention as the inclination of a specific individual (the potential entrepreneur) to start a new business venture (De Noble et al. 1999). By including the concept of time gap, Krueger (2000) also corroborated that entrepreneurial intention is the belief of starting a new business venture in the future.

Three streams of studies could be identified concerning entrepreneurial intention from the literature:

(1) the IEI (Implementing Entrepreneurial Ideas) model proposed by (Bird 1988); (2) the SEE (Shapero’s Entrepreneurial Event) model proposed by (Shapero 1982); and (3) the TPB (Theory

of Planned Behavior) model. In essence, the basic idea of these three models is quite similar, empirical studies also confirmed the explaining power of TPB and SEE (Krueger et al. 2000). However, as these models only focus on the entrepreneurs, influences from other levels were neglected; as establishing a new business venture is apparently a complex process with the impacts from different levels of variables surrounding potential entrepreneurs, the current study included variables from cognitive and cultural level for further understanding the essence of entrepreneurial intention.

Entrepreneurial Self-Efficacy

The concept of self-efficacy could be traced back to social cognitive theory that considered human behavior as the results of the interaction among person, environment, and behavior (Bandura 1977). From the academic work of Bandura (1994), “perceived self-efficacy is defined as people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives”. The process of establishing a new business venture is tightly coupled with the social environment; as complexity and risk are inevitable components on this journey, self-efficacy is considered a crucial part for potential entrepreneurs to cultivate entrepreneurial intention.

Four major sources of self-efficacy were identified from previous studies (Bandura 1977; Bandura 1982; Bandura 1997; Bandura 2003), including (1) performance accomplishments, (2) vicarious experiences, (3) verbal persuasion, and (4) emotional arousal. Previous accomplishments could unarguably increase the evaluation of self-efficacy; with higher self-efficacy, individuals could be more confidently face challenges and hopefully accomplish an even tougher task or achieve a greater goal. Vicarious experience has the same effect on self-efficacy. By observing others with similar levels of capabilities to achieve a specific objective, individual would have a better idea of whether he/she could attain same level of achievement. Verbal persuasion from significant others used to be an important source of inspiration and encouragement; however, verbal persuasion is not as effective as previous accomplishments and vicarious experience (Bandura 1982). Finally, emotion and self-efficacy are tightly connected; a good health condition and the accompany of a high mood would help individuals have higher perception of self-efficacy; on the contrary, self-efficacy would be lower.

Several researchers have utilized the concept of self-efficacy in the field of entrepreneurship. A previous study proposed that self-efficacy, social support, and learning are closely related to entrepreneurial intention (Boyd and Vozikis 1994). These authors argued that entrepreneurial behavior would only be performed when the potential entrepreneur identified a specific business opportunity with a certain level of self-efficacy to take advantage of that opportunity. Other researchers also corroborated that incorporating self-efficacy would broaden the field of entrepreneurship (Chen et al. 1998). However, as argued by Forbes (2005), traditional measures for self-efficacy might not be suitable in the

context of entrepreneurship. With necessary modification, the current study included the concept of self-efficacy to depict a richer picture of the entrepreneurial process.

Entrepreneurial Education

New business ventures are the backbone of economy and the engine for being prosperous (Carland and Carland 2010). Universities in developed countries have devoted lots of efforts on entrepreneurial

education for several decades (Fiet 2001; Katz 2003; Vesper and Gartner 1997), while Asian countries have not noticed the trend until recently (Katz 2003).

One of the main purposes of entrepreneurial education is to equip individuals with the capability of identifying business opportunities; by a proper design of the curriculum and the learning experiences, individuals could be cultivated with necessary knowledge, techniques, skills, and the confidence to start his/her own business venture (Garavan and O'Conneide 1994). Briefly speaking, entrepreneurial education is a process of active learning; potential entrepreneurs are supposed to obtain, keep, and utilize those capabilities acquired from entrepreneurial education and make the best use of those capabilities on the way of establishing their own business ventures. Moreover, entrepreneurial education could also be considered as a process of socialization (Curran and Stanworth 1989). As the process of establishing new business ventures is characterized by uncertainty and risk, entrepreneurial education could not only prepare potential entrepreneurs with necessary capabilities but also provide mental support to alleviate anxiety and anxious on the journey of establishing new business ventures (Wan 1998). In conclusion, entrepreneurial education could increase both the potential entrepreneur's inclination and his/her perceived feasibility of setting up a business venture (Fayolle and Klandt 2006; Peterman and Kennedy 2003; Saulo et al. 2008).

Ideally, a harmonious combination of entrepreneurial education, entrepreneurial training programs, and public policies as well as regulations would be preferred to encourage potential entrepreneurs to put into action. Entrepreneurial education could alter the perception of potential entrepreneur to start a new business venture, to trigger the formulation of entrepreneurial intention, and ultimately to promote the establishment of new business ventures (George et al. 2010; McMullan et al. 2002).

From both sides of the strait, entrepreneurial education in formal educational institutions is still at the infant stage; however, entrepreneurial education and all kinds of training programs provided by non- educational institutions are quite popular. Institutions supporting potential entrepreneurs, co-working space, and official as well as unofficial regular gatherings could easily be found in major cities. The phenomena not only demonstrate the energy of entrepreneurship but also supplement the inadequacy of formal educational systems. The current study takes a broader view of entrepreneurial education; in other words, for the participants of the current study, both formal and informal entrepreneurial education were considered as entrepreneurial

education. Respondents with the experience of taking entrepreneurial education, from formal or informal educational institutions, are qualified for the current study.

Entrepreneurial Environment

Entrepreneurial activities and the external environment are tightly coupled; the surrounding atmosphere and the availability of resources would definitely affect the willingness of potential entrepreneurs and the performance of new business ventures as well. Silicon Valley in the United States, Helsinki in Finland, and East London in the United Kingdom could be considered as perfect examples for demonstrating the importance of entrepreneurial environment. In addition to the strength of

entrepreneurial intention, the external environment with sufficient resources, a supportive industrial structure, and a positive attitude toward entrepreneurship from the public are all considered as critical components to promote entrepreneurial behavior (Audretsch and Thurik 2000). A previous study also indicated that, in an environment with favorable conditions, entrepreneurial intention would be increased with the behavior of starting new business ventures being praised (Gnyawali and Fogel 1994). Other scholars argued that the effects of external environment on entrepreneurial intention might be bi-directional (Zahra and Bogner 2000; Zahra and Neubaum 1998). Specifically speaking, a favorable environment could encourage the establishment of new business ventures, while an unfavorable environment might also urge potential entrepreneurs to alter the status quo by establishing business ventures to pursue growth and profitability (Covin and Slevin 1989; Dean et al. 1998; Dean and Meyer 1996). However, it would be agreed that all kinds of external causes are needed to construct a favorable environment while an unfavorable environment is considered the accumulated results of the external environment and the personal background of the potential entrepreneur. In other words, a generally agreed conclusion might not be achievable from the investigation of the unfavorable environment. In the current study, both tangible and intangible factors in the environment were included to figure out the effects of a favorable entrepreneurial environment on entrepreneurial intention.

Social Network

On the journey of creating new business ventures, social capital plays a vital role for collecting information and decreasing risk (Thiel and Masters 2014). Establishing and maintaining all kinds of relationships in various social networks are crucial conducts for potential entrepreneurs trying to survive and thrive in the marketplace. Social networks operated in Silicon Valley is considered one of the most important causes that make the tiny and crowded place the

wonderland for potential entrepreneurs (Thiel and Masters 2014). The influence of social network on the establishment of new business venture starts from the initial stage and extends to the operating and even harvesting stage (Hoang and Antoncict 2003; Johannisson et al. 1994).

Networks are constructed by nodes and lines; a node represents a specific person, a team, or an organization, the line is the official or unofficial relationship connecting different nodes (Kristiansen 2004). Entrepreneurs usually do not have sufficient resources and information at the early stage of creating business ventures; additionally, potential entrepreneurs might even not have a clear idea of the difficulties and obstacles facing them on the journey either. Social network could not only help potential entrepreneurs, directly or indirectly, to obtain necessary resources and information, but also to decrease negative effects of possible hazards and to increase the chances of survival for new business ventures (Ardichvili and Cardozo 2000; Ardichvili et al. 2003). Moreover, trust among different nodes in the social network could ensure and strengthen the quality of retrieved resources and information; lots of time and efforts could then be saved on verifying the correctness and the suitability of the retrieved resources and information.

From above discussion, it is quite clear that social network could pose great influences on establishing new business ventures; however, previous studies have not achieved an agreement about the effect of social network on entrepreneurial intention. In the current study, the effect of social network of nascent entrepreneurs on entrepreneurial intention as well as on his/her entrepreneurial self-efficacy will be further examined.

Research Methods

Research Framework and Hypotheses Development

Based on the literature reviewed in the previous section, the research framework of the current study is depicted in Fig. 1; six hypotheses were formulated for further understanding the concept of entrepreneurial intention by including variables from different levels.

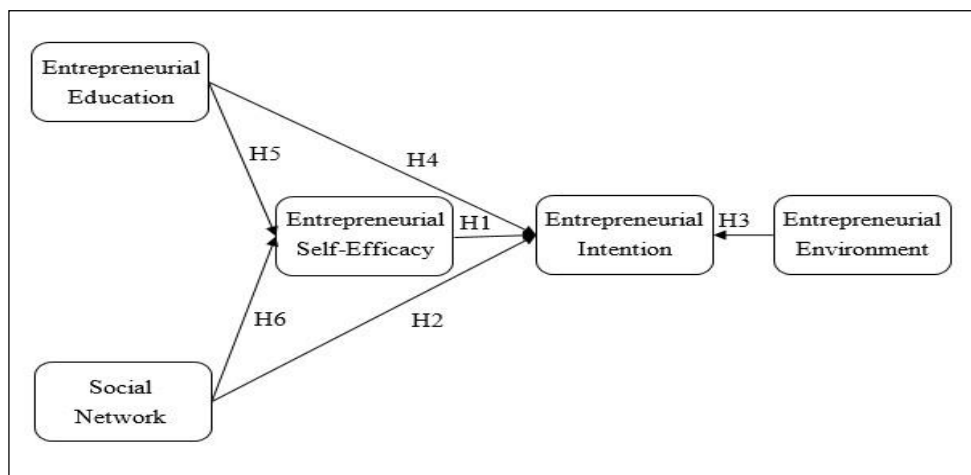


Fig. 1 Research Framework

Entrepreneurial self-efficacy is defined as the subjective evaluation of the potential entrepreneur (in the current study, the respondent is the nascent entrepreneur) about his/her capability of establishing a new business venture (Ajzen 1987). Individuals with higher entrepreneurial self-efficacy would have a higher intention to establish new business ventures (Barbosa et al. 2007; Zhao et al. 2005). H1 is then formulated in the current study as follows:

H1: Entrepreneurial self-efficacy has a positive and significant effect on entrepreneurial intention.

At the initial stage of establishing new business ventures, external resources and information are crucial for the mere existence of the business venture (Chung et al. 2000; Cooper 2002; Dubini and Aldrich 1991; Starr and MacMillan 1990). Social network plays a critical role for retrieving suitable and adequate resources (Davidsson and Honig 2003); building up relationships with others in various social networks would be of great help for potential entrepreneurs. Moreover, participating in social networks would also help potential entrepreneurs acquire valuable information, accelerate the process of assembling necessary resources, and ultimately foster the establishment of new business ventures (Blau 1977; Burt 1983; Granovetter 1973). The second hypothesis is proposed as follows:

H2: Social network has a positive and significant effect on entrepreneurial intention.

Entrepreneurial activities are tightly coupled with the external environment; resources and information required for establishing new business ventures could only be retrieved from the surrounding environment. During the process of establishing new business ventures, lots of interaction between the entrepreneur and the environment would be necessary; a sound and supportive external environment would have a positive effect on entrepreneurial intention of the potential entrepreneur. Therefore, the third hypothesis is stated as follows:

H3: Entrepreneurial environment has a positive and significant effect on entrepreneurial intention.

As discussed from the literature, entrepreneurial education could improve the capability of identifying business opportunities for potential entrepreneurs. By taking advantage of those opportunities, potential entrepreneurs could set up business ventures and pursue greater achievements. During the process of taking entrepreneurial education, potential entrepreneurs might also build up relationships with other potential entrepreneurs, participate in various kinds of social networks, and increase his/her confidence of setting up a new business venture. Therefore, the fourth hypothesis is described as follows:

H4: Entrepreneurial education has a positive and significant effect on entrepreneurial intention.

One of the major purposes for entrepreneurial education is to equip potential entrepreneurs with necessary knowledge, skills, and techniques; during the process of entrepreneurial education, potential entrepreneurs would also get the chance of participating in different social networks,

meet up with future partners, and in turn increase entrepreneurial self-efficacy. The fifth hypothesis is stated as below:

H5: Entrepreneurial education has a positive and significant effect on entrepreneurial self-efficacy. Actually, participating in various kinds of social networks could not only help potential entrepreneurs obtain valuable information and scarce resources, emotional support from other members in the same social network would be of great value for surviving through the harsh process of establishing new

business ventures. Hypothesis 6 of the current study is proposed as follows:

H6: Potential entrepreneur's social network has a positive and significant effect on entrepreneurial self-efficacy.

Research Sample, Questionnaire Design, and Pretest

As implied from the title of the current study, the samples for investigating relations hypothesized in the current study were collected from two different areas: Taiwan and China. In Taiwan, members of App Works Venture and NTU Garage were invited to participate the current study. In China, members of Vstartup in Beijing Zhongguancun Science and Technology Park and Venture Workshop in Dalian were contacted and agreed to fill out questionnaires.

The current study takes a quantitative perspective to further dissect the concept of entrepreneurial intention; questionnaire is utilized as the major instrument for collecting data. The questionnaire is divided into two major parts: the first part includes items for variables presented above while the second part consists of demographic items (including: gender, age, educational background, number of previous attempts to establish a new business venture, and income). It should be mentioned that a screening item is included at the beginning of the questionnaire to make sure that the respondent is a nascent entrepreneur (less than 3.5 years, based on the definition of Global Entrepreneurship Monitor).

Based on the definition of entrepreneurial intention from Shook et al. (2003), six items were used for measuring entrepreneurial intention; the items were adapted from Leong (2008) and Linan and Chen (2009). The concept of entrepreneurial self-efficacy is derived from Bandura (1983) and Bandura and Benight (2004); the current study adapted 5 items from Wood and Bandura (1983) with necessary modifications to fit the context of entrepreneurship. For measuring entrepreneurial education, 4 items were formulated to understand respondents' perception after taking various kinds of entrepreneurial education. Both formal and informal entrepreneurial education were included in the current study. Four items were used to measure entrepreneurial environment; respondents were asked to express their opinions about the friendliness and support of entrepreneurial activities from the external environment. Finally, 8 items were included for measuring social network. As stated above, previous studies have not quantitatively investigated the concept of social network; the current study, based on the effects of social network on entrepreneurial intention described from the literature, adopted 8 items and utilized experts' opinions to ensure the face validity of the items.

As the respondents of the questionnaire are from two different areas, Taiwan and China, a proper wording is needed for securing a full understanding of the items. In addition to experts' opinions, experienced entrepreneurs were consulted for making necessary modifications. After a proper revision, pretests were conducted both in Taipei and in Dalian through the help of local administrative office. In total, 50 pretest questionnaires are collected. The Cronbach's α for the entire questionnaire is 0.93, indicating the properness of the questionnaire to be used in the formal data collection stage.

Data Collection Process

The questionnaires were distributed in two waves. The first wave started from 05/26/2014 to 06/08/2014 through email; 89 completed questionnaires were collected from Taiwan and 57 from China. The second wave started from 06/09/2014 to 06/15/2014. In China, questionnaires were distributed through email; 26 completed questionnaires are collected. In Taiwan, questionnaires were distributed in a public entrepreneurial event; 62 completed questionnaires are received. After a careful inspection, 232 completed and valid questionnaires were collected; 149 of them were from Taiwan, and the rest were from China. Multiple regression analysis was then conducted to verify the proposed hypotheses.

Results, Discussion, Limitation & Future Directions

Results of Hypotheses Testing

Before testing the hypotheses, descriptive analysis was conducted. Male nascent entrepreneurs consist 75.2% of the collected sample in Taiwan and 73.5% in China; most of the respondents are under 40 (76.2% in Taiwan and 85.5% in China). About 50% of the respondents in Taiwan have a master degree from various majors; only 24.1% of the respondents in China have a master degree. For participants from both areas, about one third of them do not have any experience of establishing new business ventures. From the results of Pearson Correlation, values of correlation between different variables are all less than for Taiwan and China, indicating a medium-level correlation and the suitability of conducting further analysis. In the following sections, results of hypotheses testing will be provided.

Regression analysis results for H1: "Entrepreneurial self-efficacy has a positive and significant effect on entrepreneurial intention" are listed in Table 1.

Table 1 Results of Testing H1

Dependent	Entrepreneurial Intention			
Independent	Beta	R ²	F	P
Entrepreneurial Self-Efficacy(C) ^a	0.653	.426	60.178	.000
Entrepreneurial Self-Efficacy(T) ^b	0.545	.297	61.989	.000

a: China; b: Taiwan

From the p-value listed above, H1 cannot be rejected based on the samples collected from Taiwan and China. The value of R2 indicates that entrepreneurial self-efficacy has a stronger impact on entrepreneurial intention in China than in Taiwan. However, more statistical analysis is need to conclude that the impact of entrepreneurial self-efficacy on entrepreneurial intention is different between two areas. Results of regression analysis for H2 “Social network has a positive and significant effect on entrepreneurial intention” are presented in Table 2. Based on the p-value, H2 cannot be rejected either. The value of R2 for China and Taiwan indicates that the effect of social network on entrepreneurial intention is almost the same; more analysis would be needed to achieve a concrete conclusion.

Table 2 Results of Testing H2

Dependent	Entrepreneurial Intention			
Independent	Beta	R ²	F	P
Social Network(C) ^a	0.481	.232	24.405	.000
Social Network(T) ^b	0.441	.194	35.402	.000

^a: China; ^b: Taiwan

Hypothesis 3 investigates the effect of entrepreneurial environment on entrepreneurial intention; results of regression analysis are listed in Table 3. From the p-value listed in the following table, the effect of entrepreneurial environment on entrepreneurial intention is confirmed in China while rejected in Taiwan. More specifically, based on the results of regression analysis, entrepreneurial environment does have an impact on entrepreneurial intention of respondents in China. However, the influence of entrepreneurial environment on entrepreneurial intention is not significant in Taiwan. Discussion about the variation will be provided in the next section.

Table 3 Results of Testing H3

Dependent	Entrepreneurial Intention			
	Beta	R ²	F	P
Entrepreneurial Environment(C) ^a	0.308	.095	8.490	.005
Entrepreneurial Environment(T) ^b	0.200	.040	6.103	0.15

^a: China; ^b: Taiwan

Hypothesis 4 is formulated for verifying the effect of entrepreneurial education on entrepreneurial intention. From the results listed in Table 4, it is concluded that, for both areas, the effect of entrepreneurial education on entrepreneurial intention is rejected. The results indicate that the value of entrepreneurial education is not fully appreciated; more discussion will be provided in the last section.

Table 4 Results of Testing H4

Dependent	Entrepreneurial Intention			
Independent	Beta	R ²	F	P
Entrepreneurial Education(C) ^a	0.216	0.47	3.954	.050
Entrepreneurial Education(T) ^b	0.197	.039	5.955	.016

a: China; b: Taiwan

Hypothesis 5 is articulated to test the effect of entrepreneurial education on entrepreneurial self- efficacy. From Table 5, the p-values indicate that the effect of entrepreneurial education on entrepreneurial self-efficacy is not significant. Based on the samples collected for the current study, as described in the previous section, the benefits of entrepreneurial education are not fully demonstrated. Effects from other causes might pose higher impact on entrepreneurial intention and entrepreneurial self- efficacy for nascent entrepreneurs.

Table 5 Results of Testing H5

Dependent	Entrepreneurial Self-Efficacy			
Independent	Beta	R ²	F	P
Entrepreneurial Education(C) ^a	0.023	.001	0.44	.834 ^b
Entrepreneurial Education(T) ^b	0.153	.023	3.532	.062

a: China; b: Taiwan

Finally, Hypothesis 6 concerns about the effect of social network on entrepreneurial self- efficacy; results are provided in Table 6. Not surprisingly, as Chinese culture respects the value of collectivism, the p-values for China and Taiwan both indicate that Hypothesis 6 cannot be rejected. Social network, as indicated from the literature, does pose significant impact on entrepreneurial self-efficacy.

Table 6 Results of Testing Hypothesis 6

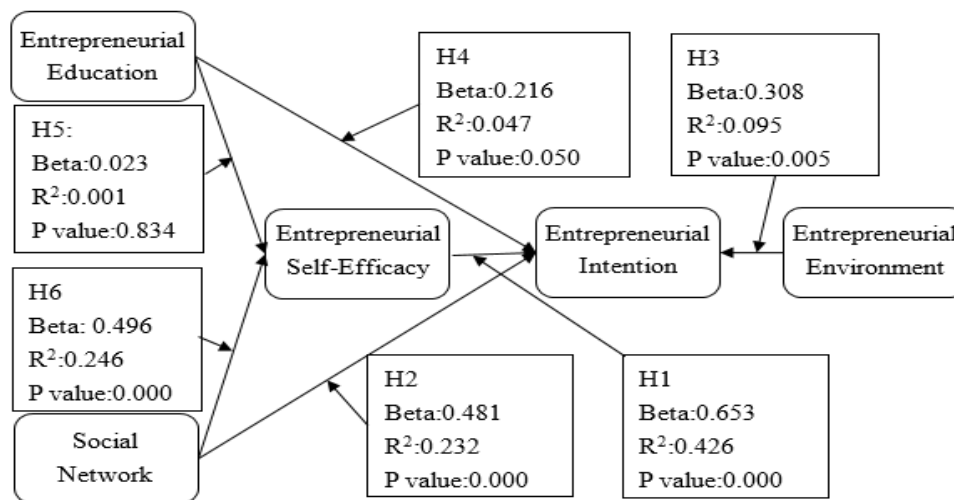
Dependent	Entrepreneurial Self-Efficacy			
	Beta	R ²	F	P
Social Network(C) ^a	0.496	.246	26.431	.000
Social Network(T) ^b	0.427	.182	32.775	.000

a: China; b: Taiwan

Discussion

Before discussing the results of the current study, a recap of regression analysis is provided as follows:

Based on the sample collected in China: Hypothesis 1,2,3, and 6 cannot be rejected, while Hypothesis 4 and 5 are rejected. Based on the sample collected in Taiwan: Hypothesis 1, 2, and 6 cannot be rejected, while Hypothesis 3, 4, and 5 are rejected. Results of regression analysis are summarized in Fig. 2 and Fig. 3.



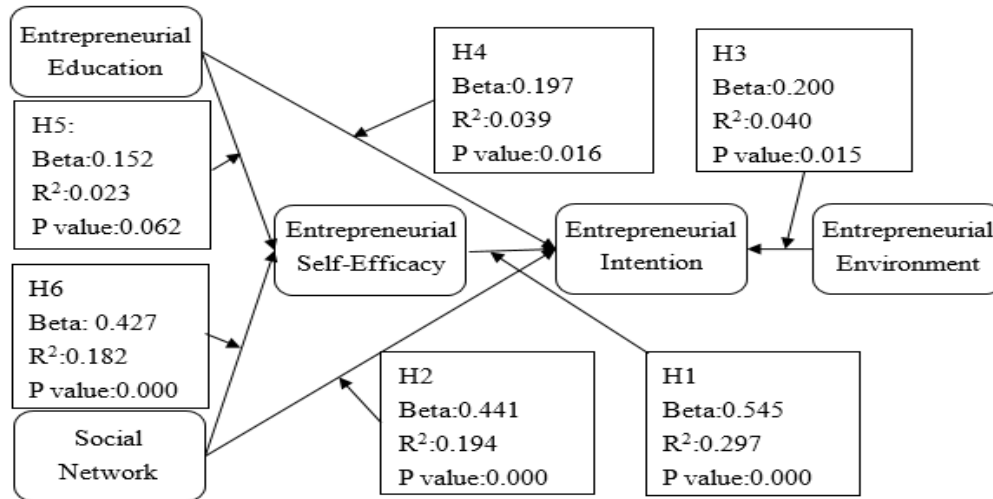


Fig 2. Result of Regression Analysis – China Sample

Fig 3. Result of Regression Analysis – Taiwan Sample

For Hypothesis 1, the results of the current study confirm the effect of entrepreneurial self-efficacy on entrepreneurial intention. The rationale is actually quite straightforward; as individual has higher confidence about his/her capability of conducting entrepreneurial activities, the intention of establishing his/her own business venture would be increased.

For Hypothesis 2, the influence of social network on individual's entrepreneurial intention is also confirmed. Opinions and behaviors of significant others always pose substantial influences on individuals, especially in Chinese society. As nascent entrepreneurs obtain various information and success as well as failed entrepreneurial stories from the social networks, their intention of establishing new business ventures would also be strengthened.

For Hypothesis 3, the effect of entrepreneurial environment on entrepreneurial intention in China is confirmed, while the effect is rejected in Taiwan. The economic development process in China and Taiwan could provide a clearer explanation for the results. In China, the economic development is under the control of the government; in other words, a planned economic system exists in China. However, on the other side of the strait, a comparatively more liberal economic system is operated in Taiwan. Moreover, as the public sector in Taiwan just noticed the importance of entrepreneurship recently, various kinds of official/unofficial institutions, incentive programs, policies, and regulations are still in the infant stage. It would then be understandable that respondents from Taiwan do not consider entrepreneurial environment as a critical cause for increasing entrepreneurial intention. On the contrary, nascent entrepreneurs from China might consider entrepreneurial environment a critical factor before deciding to establish his/her own business ventures as the public sector and private companies would provide more monetary and non-monetary resources to facilitate entrepreneurial activities.

Based on the samples collected from China and Taiwan, the effect of entrepreneurial education on entrepreneurial self-efficacy cannot be confirmed; Hypothesis 4 is then rejected. As proposed by Katz (2003), entrepreneurial education in Asian countries is still in the very early stage; therefore, it is not easy for individuals to learn knowledge, skills, and techniques from formal educational institutes. In fact, informal institutions for providing entrepreneurial education and promoting entrepreneurial behaviors in China and Taiwan are very popular. Comparing to the formal educational institutions and publicly sponsored entrepreneurial programs, informal channels do perform a greater job. Moreover, as measurement items used in the current study were based on previous literature discussing general entrepreneurial education, the values as well as the advantages delivered from informal channels might not be fully appreciated in the current study. Further studies might obtain different conclusions if more emphasis was put on informal entrepreneurial education. It is considered a fruitful direction for further understanding the effect of entrepreneurial education on nascent entrepreneurs.

The reason for the rejection of Hypothesis 5 is somewhat the same as Hypothesis 4. While the current study focused on general entrepreneurial education, the effect of informal entrepreneurial education (more popular in Taiwan and China) on respondent's entrepreneurial self-efficacy might be underestimated. Moreover, the term entrepreneurial education might be a bit confusing for some respondents as well, especially in the context of informal educational institutions. Respondents from the current study might consider themselves receiving a series of entrepreneurial training courses instead of entrepreneurial education, as traditional formal education used to pay more attention to theories than skills and practical techniques.

The results of Hypothesis 6 reinforce the importance of peers, colleagues, partners, and other members in the same social network as they might pose positive effects on the capability of conducting entrepreneurial activities for potential entrepreneurs. The results also reinforce the importance of information sharing for encouraging and inspiring potential entrepreneurs in the same social network. Briefly speaking, seeing more and more people in the same social network successfully start their business ventures might increase the confidence of potential entrepreneurs about his/her own capability of engaging in entrepreneurial activities.

Limitation and Future Directions

As other academic works, the current study got some limitations. The following cautions should be kept in mind for interpreting or applying the results of the current study:

1. The sample size: As a comparative study conducted in two remotely located places, it is not easy for gathering large samples. It's also the reason for not performing other statistical analysis such as SEM. However, during the process of conducting this study, a closer relationship has been established; the authors would be able to collect more samples in future studies.

2. The data collection process: As indicated in the discussion section, respondents might not fully understand of the terms used in the questionnaire. Although the research team did carefully design the instrument and the process for conducting data collection, electronically distributed questionnaire might still suffer from misunderstanding and in turn affect some of the results of the current study.

3. The essence of entrepreneurship: As a cross-sectional perspective is taken for the current study, the longitudinal features of entrepreneurship might not be fully captured. Although the respondents were asked to fill out the questionnaire based on their personal experiences, the results of the current study might still suffer from possible memory lose or misunderstanding as stated above.

Directions for future studies are provided as follows:

1. Compare nascent entrepreneurs from different areas around the globe;
2. Incorporate qualitative investigation into the process of data collection;
3. Utilize multi-level statistical techniques for collecting and analyzing data (individual, team, and company level).

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References

- 1 Acs, Z. J. & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small Business Economics*, 28(2), 109-122.
2. Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. In L. Berkowitz (Ed.) *Advances in experimental social psychology* (pp. 1- 63), New York: Academic Press.
3. Ardichvili, A. & Cardozo, R. N. (2000). A model of entrepreneurial opportunity recognition process.

Journal of Enterprising Culture, 8(2), 103-119.

4. Ardichvili, A., Cardozo, R. & Ray, S. (2003). A theory of entrepreneurial opportunity Identification and development. *Journal of Business Venturing*, 18(1), 105-123.
5. Audretsch, D. B. (2007). *The entrepreneurial society*. New York: Oxford University Press.
6. Audretsch D. B. & Thurik, R. (2000). Capitalism and democracy in the 21st Century: from the managed to the entrepreneurial Economy. *Journal of Evolutionary Economics*, 10(1), 17-34.
7. Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.
8. Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122- 147.
9. Bandura, A. (1983). Self-efficacy determinants of anticipated fears and calamities. *Journal of Personality and Social Psychology*, 45(2), 464-469.
10. Bandura, A. (1994). Self-efficacy. In R. J. Corsini (Ed.) *Encyclopedia of psychology* (2nd ed., Vol. 3, pp. 368-369). New York: Wiley.
11. Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
12. Bandura, A. & Benight, C. C. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behavior Research and Therapy*, 42(10), 1129-1148.
13. Bandura, A. & Locke, E. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88(1), 87-99.
14. Barbosa, S., Gerhardt, M. & Kickul, J. (2007). The role of cognitive style and risk preference on entrepreneurial self-efficacy and entrepreneurial intentions. *Journal of Leadership & Organizational Studies*, 13(4), 86-104.
15. Bird, B. J. (1988). Implementing entrepreneurial Ideas: The case for intention. *Academy of Management Review*, 13(3), 442-453.
16. Blau, P. M. (1977). A macrosociological theory of social structure. *American Journal of Sociology*, 83(1), 26-54.
17. Boyd, N. G. & Vozikis, G. S. (1994). The influence of self-efficacy on the development of

entrepreneurial intentions and actions. *Entrepreneurship Theory and Practice*, 18(4), pp. 63-77.

18. Burt, R. S. (1992). *Structural Holes: The Social Structure of Competition*. Boston, MA:Harvard University Press.

19. Bygrave, W. D. (1997). *The portable MBA in entrepreneurship*. New York: John Wiley and Sons.

20. Carland, J. C. & Carland, J. W. (2010). Entrepreneurship education: Building for the future. *Journal of Business and Entrepreneurship*, 22(2), 40-59.

21. Chen, C. C., Greene, P. G. & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295-316.

22. Chung, S., Singh, H. & Lee, K. (2000). Complementarity, status similarity and social capital as drivers of alliance formation. *Strategic Management Journal*, 21(1), 1-22.

23. Cooper, A. C. (2002). Networks, alliances and entrepreneurship. In Hitt, M. A., Ireland, R. D., Camp,

S. M., and Sexton, D. L. (Eds.) *Strategic entrepreneurship*. Oxford, UK: Blackwell Publishing.

24. Cooper, A. C. (2003). Entrepreneurship: The past, the present, the future. In Acs, Z. J. & Audretsch,

D. B. (Eds.) *Handbook of entrepreneurship research* (pp. 21-34). London: Kluwer Academic Publishers.

25. Covin, J. G. & Slevin D.P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.

26. Cuieford. (1965). *Fundamental Statistics in Psychology and Education* (4th Ed.) New York: McGraw-Hil.

27. Curran, J. & Stanworth, J. (1989). Education and training for enterprise: some programs of classification, evaluation, policy and research. *International Small Business Journal*, 7(2), 11-22.

28. Davidsson, P. & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs.

Journal of Business Venturing, 18(3), 301-331.

29. De Noble, A. F., Jung, D. & Ehrlich, S. B. (1999). Entrepreneurial self-efficacy: The development of a measure and its relationship to entrepreneurial action. *Frontiers of Entrepreneurship Research BCERC Proceedings*, 73-87.
30. Dean, T. J., Brown, R. L. & Bamford, C. E. (1998). Differences in large and small firm responses to environmental context: Strategic implications form a comparative analysis of business formations. *Strategic Management Journal*, 19(8), 709-728.
31. Dean, T. J. & Meyer, G. D. (1996). Industry environments and new venture formations in U.S. Manufacturing: A conceptual and empirical analysis of demand determinants. *Journal of Business Venturing*, 11(2), 107-132.
32. Garavan, T. N. & O’Cinneide, B. (1994). Entrepreneurship education and training programmes: a review and evaluation – Part 1. *Journal of European Industrial Training*, 18(8), 3-12.
33. Dollingers, M. J. (2003). *Entrepreneurship: Strategies and resources*. New Jersey: Prentice Hall.
34. Dubini, P. & Aldrich, H. (1991). Personal and extended networks are central to the entrepreneurial process. *Journal of Business Venturing*, 6(5), 305-313.
35. Fayolle, A. & Klandt, H. (2006). *International entrepreneurship education – issues and newness*. Cheltenham, UK: Edward Elgar.
36. Fiet, J. (2001). The pedagogical side of entrepreneurship theory. *Journal of Business Venturing*, 16(2), 101-117.
37. Forbes, D. P. (2005). The effects of strategic decision making on entrepreneurial self-efficacy. *Entrepreneurship Theory And Practice*, 29(5), 599-626.
38. George von, G., Dietmar, H. & Richard, W. (2010). The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), 90-112.
39. Gnyawali, D. & Fogel, D. (1994). Environments for entrepreneurship development: Key dimensions and research implications. *Entrepreneurship Theory and Practice*, 18(4), 43-62.
40. Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6),

1360- 1380.

41. Greenberg, D. B. & Sexton, D. L. (1988). An interactive model of new venture initiation. *Journal of Small Business Management*, 26(3), 1-7.

42. Hoang, H. & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review.

Journal of Business Venturing, 18(2), 165-187.

43. Johannisson, B., Alexanderson, O., Nowicki, K. & Senneseth, K. (1994). Beyond anarchy and organization: Entrepreneurs in contextual networks. *Entrepreneurship and Regional Development*, 6(4), 329-356.

44. Katz, J. E. & Gartner, W. B. (1988). Properties of emerging organizations. *Academy of Management Review*, 13(3), 429-41.

45. Katz, J. E. (2003). *Machines that become us: the social context of interpersonal communication technologies*. New Brunswick, NJ: Transaction Publishers.

46. Kristiansen, S. (2004). Social networks and business success. *The American Journal of Economics and Sociology*, 63(5), 1151-1171.

47. Krueger, N. F., Reilly, M. D. & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), pp. 411-432.

48. Leong, C. K. (2008). *Entrepreneurial intention: An empirical study among open university malaysia students*. Open University Malaysia, Unpublished Phd Dissertation.

49. Linan, F. & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617.

50. Low, M. B. & MacMillan, I. C. (1988). *Entrepreneurship: Past research and future challenges*.

Journal of Management, 14(2), 139-161.

51. McMullan, W., Chrisman, J. & Vesper, K. (2002). Lessons from successful innovations in entrepreneurial support programming. In: J. J. Chrisman, J. A. D. Holbrook & J. H. Chua (Eds.) *Innovation and Entrepreneurship in Western Canada: From Family Businesses to Multinationals* (pp. 207–223). Calgary, Alberta: University of Calgary Press.

52. Peterman, N. E. & Kennedy, J. (2003). *Enterprise education: Influencing students'*

perceptions of entrepreneurship. *Entrepreneurship Theory & Practice*, 28(2), 129-144.

53. Reynolds, P. D., Hay, M. & Camp, M. S. (1999). *Global Entrepreneurship Monitor 1999 Executive Report*. Babson Park, MA: Babson College; London, UK: London Business School.
54. Saulo, D., Barbosa, J. K. & Brett, R. S. (2008). The road less intended: integrating entrepreneurial cognition and risk in entrepreneurship education. *Journal of Enterprising Culture*, 16(4), 411-439.
55. Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.
56. Shapero, A. (1982). Social dimensions of entrepreneurship. In C. A. Kent, D.L. Sexton, and K.H. Vesper (Eds.) *The Encyclopedia of Entrepreneurship* (pp. 72-90). Englewood Cliff, NJ: Prentice-Hall.
57. Shook, C. L., Priem, L. R. & McGee, E. J. (2003). Venture creation and the enterprising individual: A review and synthesis. *Journal of Management*, 29(3), 379-399.
58. Starr, J. A. & MacMillan, I. C. (1990). Resource cooptation via social contracting: Resource acquisition strategies for new ventures. *Strategic Management Journal*, 11(Special Issue), 79-92.
59. Thiel, P. & Masters B. (2014). *Zero to one: Notes on startups, or how to build the future*. New York: Crown Publishing Group
60. Vesper, K. H. & Gartner, W. B. (1997). Measuring progress in entrepreneurship education. *Journal of Business Venturing*, 12(5), 403-421.
62. Wan, C. C. (1998). International diversification, industrial diversification and firm performance of Hong Kong MNCs. *Asia Pacific Journal of Management*, 15(2), 205-217.
63. Wood, R. & Bandura, A. (1983). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology*, 56(3), 407-441.
64. Zahra, S. A. & Bogner, W. C. (2000). Technology strategy and software new ventures' performance: Exploring the moderating effect of the competitive environment. *Journal of Business Venturing*, 15(2), 135-173.
65. Zahra, S. A. & Neubaum, D. O. (1998). Environmental adversity and the entrepreneurial activities of new ventures. *Journal of Developmental Entrepreneurship*, 3(2), 123-140.
66. Zhao, H., Seibert, S. & Hills, G. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265-1272.