# Entrepreneurial Intentions & Mobility: An Exploratory Study of Chinese Exchange Students at Halmstad University

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## Abstract

In order to extend the literature on predicting entrepreneurial intentions this study aims to test a model incorporating cultural, social, and psychological factors. We investigate the factors behind the entrepreneurial (i.e. starting-up their own business) intentions of Chinese Exchange Students (CES) at Halmstad University College, Sweden. We specifically question "to what extent individual (personal) backgrounds, preferences and knowledge/perception of CES about the Swedish industrial/business environment may play a role in their entrepreneurial intentions". CES share generally similar views on motivations and barriers to entrepreneurship, but with some interesting differences. Further, while cultural and social dimensions explain only a small portion of intentions, psychological self-efficacy (skills, competence) overcoming the local barries are seen as important predictors. The study was restricted to university students. The study suggests directions for continued work on the relationship between cultural and psychological factors in entrepreneurship.

**Keywords**: Entrepreneurial Intentions, Scientific Mobility, Chinese Students, Sweden

## 1. Introduction

Along with the development of the global economy, better standards of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in the developed countries attract talent from less developed areas (Dodani and LaPorte, 2005). Many people start to think about to have a job or start business in abroad for high quality life, high salary, better benefits and favorable living environment. According to Özden and Schiff (2006) international migration, i.e. the movement of people across international boundaries, has enormous economic, social, and cultural implications in both origin and destination countries. It is estimated that some 180 million people (3 percent of the world's population) are living in countries in which they were not born (UN, 2002). Immigration to the EU is likely to continue to increase in the near future, as a result of both the demand for labor and low birth rates in EU countries (Horvat, 2004).

A specific issue in international migration is the mobility of highly skilled work force, e.g. scientists

and students. The term "brain drain" designates the international transfer of resources in the form of human capital and mainly refers to the mobility of relatively highly educated individuals from developing to developed countries (Beine et al., 2006). Recent comparative data show that during the 1990s, the number of skilled immigrants residing in the OECD area has increased by 70% against only a 30% increase for unskilled immigrants, with the vast majority of the new skilled immigrants originating from developing and transition countries (Docquier and Marfouk, 2006). Nunn (2005) categorized reasons behind this phenomenon under 'push' and 'pull' factors. Pull factors are those factors that attract skilled labour from developing countries and relate in the main to conditions in countries that receive skilled migrants. While the push factors may cause people feel unsatisfied with their life in homeland.

Yet, there have been always concerns about the migration of skilled people from developing to developed countries. Empirical studies showed that high and generally increasing poor- to rich-country emigration rates for tertiary-educated workers has heightened concern about brain drain (Docquier and Marfouk, 2006; Dumont and Lemaitre, 2005). Nevertheless, Wadhwa et al. (2007) pointed out students/scientists from India who have started up their business in the US have also contributed to the development of innovative activities back in India. The brain drain may result in a new set of work force in the form of immigrant entrepreneurs. Such imigrant scientists-entrepreneurs may contribute to the destination countries as well as to the development of their home countries. Kuhn and McAusland (2006) pointed out the importance of brain circulation. It means migration to more supportive environments raises global innovation, and some gains flow back to the poor country through the imports of products with improved technology or lower cost, and may strengthen socio-economic development in the future.

Since the early 1960s like many other Western European countries, Sweden had always attracted and invited industrial workers from other countries (e.g. Finland, former Yugoslavia, Turkey) to meet the needs of intensive industrializations. During 1990s Sweden had also received immigrants on the basis of humanitarian reasons from the countries in war, conflicts and crisis, (e.g. Bosnia, Kosova, Somalia, Chile, Iraq, Palestinian, etc.). Another wave of migration is on the basis of education and research. Among other European countries due to several favorable conditions, Sweden has become an attractive destination for many students and scientists/researchers. Hitherto Sweden has not charged foreign students for high tuition fees, government provides free education almost all. Government agents (like SIDA, Swedish Institute), provide scholarships for foreign students. It has also relatively more liberal migration-residence permit rules unlike the UK, US, Denmark, or Australia. At the same time, Sweden's traditionally strong image in several large-scale industrial sectors (e.g. automotives, electronics pharmaceuticals, light manufacturing) and many large companies (like Volvo, Ericsson, IKEA, SAAB, SKF) as well as the working conditions and labour rights attracted both academic and corporate researchers from different countries.

Among other countries, the flow of migration from China both on the grounds of higher education and employment has been on the rise. There are 9441 Chinese people live in Sweden in 2008.[1] Nevertheless one can argue Sweden has not tapped the potential of the scientific immigrants as much as, e.g. US. While some barriers may remain between Swedish and Chinese bilateral business relations,

[1] Accessed, 2010-March-20 http://www.kina.cc/se/kina.htm.

networks between China and Sweden has been intensifying over the years. It is reported that one company sets up subsidiary in China every four days.[2] Overall, relations both at the individual levels (e.g. through student mobility) and organizational levels (corporate and university) are expanding. Therefore it is important to understand what potential role that mobile Chinese students in Sweden can play both in Sweden (as host country) and China (as home country).

Like other immigrants, exchange students who accepted, searched for education and research positions in foreign countries. While they might be attracted to (expected) to have advantages in their new destinations, they also have to adapt to a new and uncertain environment. This process of searching new options, then learning and living in a new culture and society stimulates opportunity recognition and increases entrepreneurial interest. In the expectation of having higher living standards as well as realizing their scientific and business ideas under better working conditions, it is likely that Chinese students would like extend their residence, e.g. by continuing their academic education, looking for jobs, or starting up their own businesses.

However despite their wish to stay and work in Sweden, Chinese students (like many other immigrant groups) may face several problems. They may not be as informed (aware) of the business life and working conditions, bureaucracy as much as a native (local) may know. Moreover they often lack networks and credibility. Therefore foreign students' intentions to start-up their own firms may not be only related to their individual desires, skills and abilities, but are also related to their awareness and knowledge about the foreign environment they are in.

In the light of this brief Introduction, the aim of this paper is to investigate the factors behind the entrepreneurial (i.e. starting-up their own business) intentions of Chinese Exchange Students (CES hereafter) at Halmstad University College (HH hereafter), Sweden. We specifically question "to what extent individual (personal) backgrounds, preferences and knowledge/perception of CES about the Swedish industrial/business environment may play a role in their entrepreneurial intentions, what are the differences among Chinese students who have entrepreneurial intentions and who does not have".

In order to frame our research, the findings of previous studies on entrepreneurial intentions (see Davidsson, 1995; Autio et al., 2001; Wong et al., 2010) have been used as points of departure. However different from these studies, which basically explored entreprenerial intentions among the natives (locals) in their national context, we instead focus on a "non-native group, i.e. Chinese students in Sweden". The results may therefore inform us the role of contextual factors on the entrepreneurial intentions rather than a sole focus on individual (personal) factors. It can also inform us whether adaption processes enhance entrepreneurial capabilities and interest as well as the ability of recognizing entrepreneurial opportunities. The results of this study also re-opens the discussion on how and to what extent organizations and countries can benefit from circulating and hosting international students.

## 2. Literature Review: Scientific Mobility and Entrepreneurship

Generally, people believed that the migration, especially those skilled migrations, make a remarkable contribution to the destination countries. Although many benefits can be acquired by the host countries, they have limited capacity to adopt all the skilled people who have migration intention. Countries set different migration rules to prevent the excessive migration, or attractive those skilled people they are lack of.

[2] Accessed, 2010-March-20 http://mep128.mofcom.gov.cn/mep/xwzx/jmxx/113959.asp.

### 2.1. Brain Drain & Mobility

In this study, brain drain is a product of the aggregate effects of choices of rational individuals seeking the most advantageous result for themselves. In developed economies rational actors cluster toward higher paid, higher value jobs. This then allows foreign labor to move toward places of high labor demand where there are wage differentials between countries. The propensity for migration then is simply shaped by the potential for employment and the differential wage rates between countries (Massey et al., 1994). High skilled migration from the developing world move to the developed world can take up posts that cannot be filled because of a skills shortage (where markets have failed to incentivize domestic skill production). Nunn (2005) pointed out that the 'brain drain', is the flow of skilled professionals out of developing countries, which marks a potentially serious barrier to economic growth, development and poverty reduction. The loss of skilled labour is of vital importance for development and development potential, and academic labour is even more.

An OECD report (1997) on the movement of the highly skilled identifies, and distinguishes between, two main outcomes for their mobility: *"Brain exchange"* and *"brain waste"*. A "*brain exchange"* implies a two-way flow of expertise between a sending country and a host country. Yet, where the net flow is heavily in one direction, the terms *"brain gain" or "brain drain"* is used. A *"brain waste"*, however, describes the waste of skills that occurs when highly skilled workers migrate into forms of employment not requiring the application of the skills and experience applied in the former job (OECD, 1997).

In contrast, destination countries, which attract and received these people will benefit a lot. Wadhwa et al. (2007) found that there was at least one immigrant key founder in 25.3% of all engineering and technology companies established in the US between 1995 and 2005 inclusive. These immigrants come to the US from all over the world to take advantage of the business, technology and economic opportunities in the country. The immigrants have in return become a significant driving force in the creation of businesses and intellectual property in the US. Skilled immigrants are one of US' greatest advantages.

Ackers (2008) argued that mobility is one of the achieving international research collaboration and knowledge transfer. In some contexts people may exercise very high levels of mobility and effective knowledge transfer through repeated very short term stays including research visits and attendance at conferences. Ackers (2008) proposed that mobility has to be able to adapted to different types of careers, different disciplines and different types of family and lifestyles because you may have a family so mobility has to adapt to that diversity.

### 2.2. Reasons behind Scientific Mobility

There are a variety of approaches to understanding the reasons for high skilled migration. Nunn (2005) classified these reasons into two category: 'push' and 'pull' factors. Pull factors are those factors that attract skilled labor from developing countries and relate in the main to conditions in countries that receive skilled migrants. These include: (1) higher wages, (2) Job opportunities, (3) Relatively good working conditions, (4) Freedom from political instability or oppression, (5)The use of selective immigration policies designed to attract high skilled workers, while deterring others seen as less economically beneficial to receiving countries. And the "Push" factors include:(1) A lack of life chances, (2) Low living standards, (3) Political and social instability or repression, (4) A lack of opportunities to utilize skills, (5) Natural disasters and environmental or ecological deterioration.

This imbalance creates the potential for a sizeable reverse brain-drain from the United States to the skilled workers' home countries. The benefits from immigration may flow back to the developing country via returnees with enhanced skills, personal connections, and ideas for innovation (Wadhwa et al., 2007).

Li (2003) found that the changes in immigration regulations in Canada facilitate the entry of business immigrants with large surplus capital. Cervantes and Guellec (2002) indicated that governments can do quite a lot to protect their human capital, for example, the developing centers of excellence for scientific research and framing the conditions for innovation and high tech entrepreneurship can make a country attractive to highly skilled workers, both from within the country and from outside.

### 2.3. Entrepreneurial Intentions

Immigrants, especially skilled immigrants (scientists, students) contribute to the destination country's development. In general immigrants have three ways to sustain their own life in the foreign country: i) find a job; ii) become entrepreneur (self-employed); or iii) marry to local people. Among these, the degree of entrepreneurship has a significant influence on the economic development of a region or country (Wennekers and Thurik, 1999). Successful entrepreneurs create job opportunities for others and thus contribute to business prosperity and society in general.

While the push and pull factors provide a general understanding about why people may migrate, in order to examine skilled or academic people's intention to create business, it is also necessary to pursue a more micro level investigation. We therefore give a brief overview of literature on entreprenuerial intentions. Entrepreneurial intention is a driving force of the entrepreneurial behavior, which plays an important role in the growth and development of the world economy (Wu and Wu, 2008). The following part we will list theories related to entrepreneurial intention in different section.

#### 2.3.1 Affective environmental factors

Among many factors that influence one's entrepreneurial intention, Nasurdin et al. (2009) highlight the importance of affective environmental factors such as role model and social identification. It means that individuals who experience a positive view on entrepreneurship among their immediate contacts are more likely to have a greater intention to become entrepreneurs. Specifically, self-esteem, approval of family, availability of strong role models, and appreciation of friends were important in influencing a person's intention to engage in self-employment (ibid). However, Pruett et al. (2009) suggest cultural values associated with country and family support can explain entrepreneurial intentions but the influence is modest. They argued that the most influential predictor of entrepreneurial intentions is individual's perceptions of his or her own entrepreneurial spirit.

#### 2.3.2 Planned behaviour theory and Expectancy theory

Ajzen (1991)'s theory of planned behavior pointed out three factor that influence one's behavior intention which is attitude toward the behavior, subjective norm, perceived behavioral control. The attitude toward the behavior means the degree to which a person has a favorable appraisal of the behavior. The subject norm refers to the perceived social pressure to perform the behavior. The degree of perceived behavioral control refers to the perceived ease of performing the behavior and to the perceived control over the outcome of it. In the view of Ajzen (1991), the more favorable the attitude and subjective norm with respect to the behavior and the greater the perceived behavioral control, the stronger the intention to perform the behavior should be. While Shapero (1982) use expectancy theory

argued that the perceived feasibility, perceived desirability, and propensity to act influence entrepreneurial intention. Based on these theories, Autio et al.(2001) pointed out that perceived behavioral control and attitude toward entrepreneurship are close to perceived feasibility and perceived desirability which play an important role in entrepreneurial intention. Wu and Wu's (2008) study can also partly support this point which found that Chinese university students' entrepreneurial intentions are influences by the combination of personal attitude and perceived behavioral control while subjective norm does not contribute significantly.

### 2.3.3 Education and entrepreneurial intention

Wu and Wu (2008) showed that educational level and background has impact on entrepreneurial intentions, or in another word, influences one's attitude towards entrepreneurship. Specifically, students with postgraduate degree or majored in engineering showed more positive than those with higher degree and in other major.

Entrepreneurship education should pay attention to entrepreneurial skills as well as inspiring students' interest in entrepreneurship. This view is also in line with Pruett et al. (2009), which indicated that the entrepreneurial intentions can be educated in addition to give students practical managerial tools and knowledge about entrepreneurship, we should also foster their sense of confidence and initiative, because education can change one's knowledge as well as individual's way of perceive himself and the world.

Furthermore, Nasurdin et al. (2009) indicated that the government could perhaps design programs that help promote a more positive image of entrepreneurship in the minds of the targeted group, as well in the minds of one's family members or close friends.

Higher education is the major possibility for international mobility, however, internationalization of higher education and training of local students not only means to work overseas, and foreign students will also work in the local labor market (Mahroum, 1999).

A 1998 survey of European graduates, the Swedish human resources consultancy Universum had found that 82% of European students state that they are interested in an international career and 88% are interested in working and living abroad for at least one year.

### 2.3.4 Network and Entrepreneurial Intention

We mentioned the importance of network because sometimes entrepreneurial ideas are couraged or inspired by their friends, relatives and other contacts, which we call it "network" in briefly (cf. affective factors, e.g. Nasurdin, 2009). Salaff et al. (2006) identified four types of immigrant entrepreneur social networks: (1) family entrepreneurship, (2) collegial, organizational and work ties, (3) transnational networks and (4) ethnic "enclave" or ethnic community networks.

Effective networking can help people more easily start their business and have a high possibility to gain successful, because they can get more information and other support from their networking, have more partners and investors. Many experts notice that there is an increase of the importance of creating, maintaining and developing fittingly networks which makes it much more important to understand the process of networking (Christie et al., 2007).

### 2.3.5 GEM Model

The **G**lobal **E**ntrepreneurship **M**onitor (GEM hereafter) model is another framework helpful for us to

investigate the factors that may influence scientists/or students entrepreneurial intentions. GEM was conceived in 1997 by Michael Hay and Bill Bygrave and a prototype study and was funded by the London Business School and Babson College (Bosma et al., 2009). It is a concept framework which can be used as a link between entrepreneurial environment and entrepreneurship. The assumption is that the framework conditions make up the general context in which new venture creation is stimulated or constrained, and more favorable framework conditions encourage the blossoming of entrepreneurial activity within a country and region (Clercq et al., 2004).

Entrepreneurial environment will influence the trend of entrepreneurial intention, directly or indirectly. GEM conceptual model has nine dimensions of entrepreneurship (Deschoolmeester and Jun, 2006):

- Education and Training

  Entrepreneurship skills can be successfully taught and trained, which will promote better business practices, increased revenues and profits (Karlan and Martin, 2006). In another words, if people received appropriate education about how to start business, they may have stronger intention to have their own business.

- Cultural and Social Norms

  Culture is a complex factor that influences one's entrepreneurial intention in different aspect especially for those immigration. Lipartito (1995) pointed out that one of the contributions of culture is that it offers a new way of appreciating the relationship between the firm and its environment.

- Financial Support

  Financial support is a basic requirement to start a business to a large extend. Grilo and Thurik (2005) argue that financial constraints have a negative impact on the decision to become an entrepreneur, and lack of financial support is an obstacle to starting a new business, which has a direct effect on the fact of being self-employed.

- Government Policy

  In order to develop economies, many policies are devised by government to support small businesses, which usually take the form of direct financial payments and free or subsidized advisory services.

- Government Program

  Government programs include not only financial support and policy supporting projects, but the organization of government with services, support and assistance for starting a business (Gao et al., 2006).

- Research and Development Transfer

  The smooth transfer of technology from the source of knowledge to commercial market will cause people's more interesting to start business. (Gao et al., 2006).

- Commercial, Legal Infrastructure

  Both infrastructure, and access to physical infrastructure, are important to build up the

entrepreneurial environment.

- Market Openness/Barrier to Entry

Both external and internal barriers reduce productive entrepreneurship in an economy (Sobel et al., 2009); They argue that these barriers, through their impact on reducing the number of new resource and goods combinations, result in reducing the rate of entrepreneurship.

- Entrepreneurial Intention

Entrepreneurial intention is a driving force of the entrepreneurial activity, which plays a central role in the growth and development of the world economy (Wu and Wu, 2008).

## 3. Method and Data Collection

Empirically we focus on CES at HH, Sweden. Sweden has been traditionally an attractive country for migration. Sweden been a typical host country for migrants who are seeking for better and improved life and working conditions. However despite its liberal and open attitude towards migration, Sweden hitherto has not been able to harness the potential of its scientific immigrants as much as e.g. US, Australia, Israel had benefitted.

On the other side of migration flow, China is a typical sending country for a long period where a substanstial amount of Chinese people are living abroad and continusly seeking for education and job opportunites abroad. As two Chinese student we want to focus on CES at HH to make this research feasible given the limited time and resources. This research should be taken exploratory and as a first step of a more comprehensive study that is planned to include other exchange students.

Surveys and empirical findings of previous studies have been used to design the specific survey for this study. In line with the literature review, the survey is divided into six sub-groups which is 1.professional intention, 2.entrepreneurial intention, 3.socail valuation, 4.entrepreneurial capacity, 5.entrepreneurial enviroment, 6. individual background.

Before sending out the survey, a small pilot study had been done to control and refine the questions. As CES who accepted to participate in the pilot study had difficulties in answering survey in English, we have to translate our English survey into Chinese.

### 3.1 Data collection

The survey is designed online[3] while printed copies were avalible for those who prefer. The link to the survey link (both in English and Chinese versions) have been sent out to all CES at HH via International Office of HH. Some of the questionnaires in paper version were distributed via students.

### 3.2 Data analysis

All the data description and analysis work is assisted by the statistics software "SPSS". Firstly we get the general information of our respondents such as their gender, age, major and their intention. We then use Cronbach Alpha value to confirm these data's reliability. Coefficient of correlation was also used to reflect the relationship between each item and entrepreneurship intention. For deeper understanding for the factors affect respondents' intention, we use ANOVA analysis to compare each item's score between those who have entrepreneurial intention and not.

[3] http://www.askform.cn/65599-72055.aspx

## 4. Data Analysis

### 4.1 Profile of respondents

In this investigation, a total of 76 respondents completed the survey. Due to so many missing responses we excluded 3 respondents. This makes 73 of the respondents usable. Among these respondents, 33 (45.21%) have stated they have an entrepreneurial intention, i.e. they want to start-up a business. 40 (54.79%) of the CES didn't consider (have intentions of) becoming an entrepreneur.

The male respondents were 41 (56.0%) while the female were 32 (44%). 50% of females showed entrepreneurial intention while 41.5% males showed entrepreneurial intention. The age of the participants in this survey were 51 (69.9%) within 19-24 years old, and 22 (30.1%) within 25-30 years old. In terms of education, 37 in business program and 36 of them in engineer program. However, there are some differences between engineering students and business students. 59.5% students who study in business program interested in becoming an entrepreneur but only 30.6% students who study in engineer program considered becoming an entrepreneur. We assume while business students are much more affected by the discussions on starting-up business or much more inclined with the idea of becoming entrepreneurs, engineering students might have more "cautious expectations" concerning the difficulties of starting-up a business. They may also think it is less likely to start-up an engineering firm just after graduation without necessary professional experiences.

### 4.2 Respondents' general intention

The critical question in the survey is to find out the professional intentions of CES in general. CES were asked what they are planning –intending to do after their graduation (completing their studies). The result shows that "finding a job in China" is the most attracted future plan of CES, and ranked in a significantly higher level when compared with other options like, finding a job in Sweden, staring-up their business, or pursing an academic career. Most CES prefers to find a job after graduation. When comes to start business, their home country still be their first choice which higher than both Sweden as well as other countries. We assume respondents still think find a job or start business in China is more feasible for them.

**Table 1 Professional Intentions**

| | | Mean | Std. Deviation |
|---|---|---|---|
| P1 | Find a job in Sweden | 2.56 | 1.225 |
| P2 | Find a job in China | 4.29 | .825 |
| P3 | Find a job in another country | 2.23 | 1.137 |
| P4 | Start my own business in Sweden | 2.07 | 1.018 |
| P5 | Start my own business in China | 2.90 | 1.249 |
| P6 | Start my own business in another country | 1.79 | .942 |
| P7 | Search for academic jobs in Sweden | 2.07 | 1.206 |
| P8 | Search for academic jobs in China | 2.03 | 1.213 |
| P9 | Search for academic jobs in another Country | 2.12 | 1.290 |

### 4.3 Entrepreneurial intention

In order to better understand the CES' entrepreneurial intention, we asked what are their main motivations to start-up their business. This question can also reflect their intention in different aspects.

The Cronbach's Alpha values for these variables were 0.893 (see in Table 2), signifying the reliability of the data. Other group questions' Cronbach's Alpha is above 0.7 except the group of "social valuation" and "ambition for freedom" (see in table 2). The average of each item (see in table 2) showed that our respondents' entrepreneurial intention is slight higher than median. It is interesting as the response to the yes/no question showed that there are only 33 (45.2%) interested in becoming an entrepreneur.

**Table 2 Mean of each group**

| Group | Cronbach's Alpha | Mean | Std. Deviation |
|---|---|---|---|
| Entrepreneurial intention | .893 | 3.2397 | .74616 |
| Social valuation | .545 | 3.3041 | .52821 |
| Capacity | .847 | 2.3699 | .66912 |
| Skills | .770 | 3.0634 | .55906 |
| Ambition for freedom | .688 | 3.7342 | .66421 |
| Self-realisation | .785 | 3.3630 | .69074 |
| Feasibility | .856 | 2.3630 | .73353 |
| Attractive factors | .843 | 3.8938 | .80571 |
| Network | .815 | 2.8982 | .73250 |
| Barriers | .772 | 3.8014 | .70801 |

After calculating each questions for testing their entrepreneurial intention (see in table 3), clearly that our respondents hold interesting in self-employed although more than half of them choose "no" as their answer. It should be noticed that the answer to option: "if I had the opportunity and resources, I'd like to start a firm" is obviously higher than other questions, which indicated us that if government provide more opportunities and resources, these Chinese students will more interested in start business.

**Table 3 Perceptions about Entrepreneurship**

| | | Mean | Std. Deviation |
|---|---|---|---|
| E2 | My professional goal is becoming an entrepreneur | 2.68 | .926 |
| E3 | I will make every effort to start and run my own firm | 3.07 | 1.122 |
| E4 | I've got the firm intention to start a firm some day | 2.90 | .945 |
| E5 | Entrepreneurship means more advantages than disadvantages to me | 3.29 | 1.034 |
| E6 | Entrepreneurship is attractive for me | 3.33 | 1.042 |
| E7 | If I had the opportunity and resources, I'd like to start a firm | 4.03 | .781 |
| E8 | Being an entrepreneur gives me great satisfactions | 3.63 | 1.099 |
| E9 | I am determined to create a firm in the future | 2.99 | .905 |

21 of respondents left a short reason for their choice these —most of them believed that the most possible choice for them is to find a job in China. Two of our respondents said that the lack work experience make it impossible to start business especially in Sweden. These reasons in line with their answers to entrepreneurial capacity—our respondents do not possess capacity in self-employed and perceived a low feasibility in start their own business (see in table 3).

### 4.4 Regression analyse for CES' entrepreneurial intention

As mentioned above, respondents' capacity and perceived feasibility seems play an important role in

shaping their entrepreneurial intention. Correlation analysis is done by using SPSS to test their relationship (see in table 4). We used Spearman's rho to reflect relationship between respondents' entrepreneurial intention (from yes/no question) and other group questions. From this table, a positive correlation can be found between entrepreneurial intention and motivation (ambition for freedom, self-realization), skills, feasibility, attractive factors and network.

**Table 4 Correlations of each group**[4]

| | E1 | Sm | Cm | Km | Fm | Am | Nm | Bm | Fhh | Shh | Mm | Gd |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E1 | 1.000 | -.113 | -.176 | -.322** | -.319** | -.252* | -.316** | -.096 | -.290* | -.024 | -.295* | -.085 |
| Sm | -.113 | 1.000 | .179 | .124 | -.073 | .203 | .119 | -.081 | -.080 | .177 | .174 | .169 |
| Cm | -.176 | .179 | 1.000 | .486** | .390** | .004 | .264* | -.274* | .026 | -.148 | .187 | -.317** |
| Km | -.322** | .124 | .486** | 1.000 | .344** | .185 | .519** | .029 | -.022 | -.111 | .398** | -.028 |
| Fm | -.319** | -.073 | .390** | .344** | 1.000 | .185 | .584** | .091 | .275* | -.237* | .139 | .030 |
| Am | -.252* | .203 | .044 | .185 | .185 | 1.000 | .370** | .204 | -.046 | .027 | .155 | .015 |
| Nm | -.316** | .119 | .264* | .519** | .584** | .370** | 1.000 | .053 | .230 | -.093 | .355** | .050 |
| Bm | -.096 | -.081 | -.274* | .029 | .091 | .204 | .053 | 1.000 | .236* | -.061 | .109 | .267* |
| Fhh | -.290* | -.080 | .026 | -.022 | .275* | -.046 | .230 | .236* | 1.000 | .098 | .098 | .319** |
| Shh | -.024 | .177 | -.148 | -.111 | -.237* | .027 | -.093 | -.601 | .098 | 1.000 | -.028 | -.173 |
| Mm | -.295* | .174 | .187 | .398** | .139 | .155 | .355** | .109 | .098 | -.028 | 1.000 | .108 |
| Gd | -.085 | .169 | -.317** | -.028 | .030 | .015 | .050 | .267* | .319** | -.173 | .108 | 1.000 |

**. Correlation is significant at the 0.01 level (2- tailed).

*. Correlation is significant at the 0.05 level (2- tailed).

For further understand to what degree each factors influence CES' entrepreneurial intention, binary logistic regression analysis was done at SPSS. The predictor (independents) variables were social norm, feasibility, barriers, capacity, attractive factors and participants' motivation, skills, capacity, network,

[4] E1=Entrepreneurial intention, Sm=Social norms, Cm=capacity, Km=skills, Fm=feasibility, Am=attractive factors, Nm=network, Bm=barriers, Fhh = Faculty and Department at HH, Shh = Study level in HH, Gd = Gender Mm=Motivation (ambition for freedom, self-realization)

gender, their department in HH and study level. Table 5 shows the logistic regression coefficient[5], Wald test, and odds ratio for each of the predictors.

**Table 5 Variables in the Equation**

| | | B | Wald | Sig. | Exp(B) |
|---|---|---|---|---|---|
| Step 1[a] | Sm | -.700 | 1.020 | .313 | .497 |
| | Cm | .484 | .546 | .460 | 1.622 |
| | Mm | -.487 | .722 | .396 | .615 |
| | Km | -1.946 | 4.187 | .041 | .143 |
| | Fm | -.769 | 1.891 | .169 | .464 |
| | Am | -.599 | 2.011 | .156 | .549 |
| | Nm | .330 | .337 | .561 | 1.391 |
| | Bm | .386 | .555 | .456 | 1.471 |
| | Gender(1) | -.208 | .087 | .767 | .812 |
| | Facultyand DepartmentatHH(1) | 1.709 | 5.444 | .020 | 5.525 |
| | StudylevelinHH(1) | .141 | .041 | .840 | 1.151 |
| | Constant | 10.092 | 5.551 | .018 | 24150.908 |

According this table, we can draw the regression equation as following:

$$\ln(\text{ODDS}) = 10.092 - 0.7\text{Social norm} + 0.484\text{Capacity} - 0.487\text{Motivation} - 1.946\text{Skills} - 0.769\text{Feasibility} - 0.599\text{Attractive factors} + 0.330\text{Network} - 0.208\text{Gender} - 1.709\text{Department inHH} + 0.141\text{Study level}$$

The model was able correctly to classify 75.8% of those who have the intention to start business and 85% of those who did not, for an overall success rate of 80.8% (see in table 6). Hence we think this model can explain each factor's effect on CES' entrepreneurial intention on a high degree.

**Table 6 Classification Table**

| Observed | Predicted | | |
|---|---|---|---|
| | E1 Have you ever seriously considered becoming an entrepreneur? | | Percentage Correct |
| | 1 | 2 | |
| E1 Have you ever seriously considered becoming an entrepreneur? | | | |
| 1 | 25 | 8 | 75.8 |
| 2 | 6 | 34 | 85.0 |
| Overall Percentage | | | 80.8 |

[5] Independent which have larger coefficient ("B" value in table 5) and "sig"<0.05 means this independent have important effect on dependent.

**Table 6 Classification Table**

| Observed | Predicted | | |
|---|---|---|---|
| | E1 Have you ever seriously considered becoming an entrepreneur? | | Percentage Correct |
| | 1 | 2 | |
| E1 Have you ever seriously considered becoming an entrepreneur? | | | |
| 1 | 25 | 8 | 75.8 |
| 2 | 6 | 34 | 85.0 |
| Overall Percentage | | | 80.8 |

a. The cut value is .500

Back to Table 5, employing a 0.05 criterion of statistical significance, respondents' department and skills has significant partial effect. CES who possessed entrepreneurial skills will have a high possibility to start business. In the other hand, students in business department showed significant stronger intention (59.5% versus 30.6%) of start business, which mean that HH's business education successfully influenced these CES' attitude toward entrepreneurship. We can conclude that individual's entrepreneurial intention can be influenced by their education, which indicated that government and school can provide entrepreneurial/business curriculum to all students in order to arouse students' interesting to start business. If government/school provides some entrepreneurial curriculum for non-business student, these non-business students will have stronger intention to start business in Sweden.

### 4.5 Differences between CES who have entrepreneurial intention and not

For further understanding the factors affect CES' entrepreneurial intention, we compare the group of respondents who had entrepreneurial intentions vis-à-vis those who do not have entrepreneurial intentions. At the same time, since students from different faculty showed significant differences in terms of entrepreneurial intention, a comparison is also done according to respondents' educational area (business versus engineering).

**Table 7 One-Way ANOVA: Motivations to Start-up**

| Mean of each group | Entrepreneurial Yes (Mean) | Not-Entrepreneurial (Mean) | Sig. | Engineering | Business | Sig |
|---|---|---|---|---|---|---|
| Social valuation | 3.38 | 3.24 | .256 | 3.3611 | 3.2486 | .367 |
| Capacity | 2.52 | 2.25 | .081 | 2.3472 | 2.3919 | .778 |
| Ambition for freedom | 3.9 | 3.60 | .048 | 3.6444 | 3.8216 | .257 |
| Self-realization | 3.55 | 3.21 | .040 | 3.2685 | 3.4550 | .252 |
| Skills | 3.28 | 2.88 | .002 | 3.0313 | 3.0946 | .632 |
| Feasibility | 2.61 | 2.16 | .009 | 2.1852 | 2.5360 | .040 |
| Attractive factors | 4.08 | 3.74 | .068 | 3.9176 | 3.8716 | .813 |
| Network | 3.16 | 2.68 | .006 | 2.7381 | 3.0541 | .065 |
| Barriers | 3.84 | 3.77 | .688 | 3.6157 | 3.9820 | .026 |

As can be seen from table 7, there is a significant difference between respondents who showed entrepreneurial intention and not in terms of ambition for freedom, self-realization, skills and feasibility and network("Sig"＜0.05).On the other hand, this table shows that students in business department perceived a more positive entrepreneurial environment in Sweden than non-business students. CES in business department have significant stronger ability in network building. It indicates us that government can encourage school to set some entrepreneurial/business curriculum for students not in business department which will raise some attitude and the overall entrepreneurial intention.

For further understanding the differences between these two groups, One-Way ANOVA was also done by SPSS for each answer (see in appendix), the questions acquired significant different respondents from these two group are shown in Table 8 (see in table 8).

**Table 8 Questions received significant different answers from student's who have entrepreneurial intention and not**

| | Mean | | F | Sig |
|---|---|---|---|---|
| | Yes | No | | |
| P5 Start my own business in China | 3.30 | 2.58 | 6.623 | .012 |
| E2 My professional goal is becoming an entrepreneur | 3.03 | 2.40 | 9.347 | .003 |
| E3 I will make every effort to start and run my own firm | 3.27 | 2.90 | 2.023 | .159 |
| E4 I've got the firm intention to start a firm some day | 3.24 | 2.63 | 8.521 | .005 |
| E5 Entrepreneurship means more advantages than disadvantages to me | 3.73 | 2.93 | 12.650 | .001 |
| E6 Entrepreneurship is attractive for me | 3.76 | 2.98 | 11.729 | .001 |
| E7 If I had the opportunity and resources, I'd like to start a firm | 4.33 | 3.78 | 10.447 | .002 |
| E8 Being an entrepreneur gives me great satisfactions | 4.06 | 3.28 | 10.446 | .002 |
| E9 I am determined to create a firm in the future | 3.42 | 2.63 | 17.28 9 | .000 |
| S2 My friends approve decision | 4.15 | 3.78 | 5.830 | .018 |
| MF2 Be one's own master | 4.45 | 4.05 | 4.195 | .044 |
| MF5 I want to develop my hobby in business | 4.39 | 3.58 | 14.434 | .000 |
| MS2 I wanted to put myself to the test | 4.09 | 3.60 | 4.964 | .029 |
| MS3 I want to command and motivate others | 3.52 | 3.03 | 3.994 | .049 |
| K1 I can recognize opportunities | 3.64 | 3.20 | 5.310 | .024 |
| K2 I am innovative-creative ideas | 3.88 | 3.10 | 18.060 | .000 |
| K3 I have leadership and communication skills | 3.64 | 3.15 | 6.231 | .015 |
| F1 It is possible for me to start my firm in Sweden | 2.79 | 2.13 | 7.433 | .008 |
| F2 It is easy for me to get information about how to start business in Sweden | 2.15 | 1.80 | 4.329 | .041 |
| F4 The new firm will be able to get all the permits and licenses during a week if I start a business | 2.61 | 2.05 | 6.870 | .011 |
| F6 If I have my firm, it is easy for me to recruit people in Sweden | 2.91 | 2.38 | 5.079 | .027 |
| N2 I am working on to create a large network with business community (firms, industrial actors, investors…) in Sweden | 2.30 | 1.85 | 5.060 | .028 |
| N3 I am working on to create a large network with business community (firms, industrial actors, investors…) in China | 2.67 | 2.15 | 5.865 | .018 |
| N4 I am planning to keep my relations active in China even if I start to work in Sweden | 4.12 | 3.40 | 8.034 | .006 |
| N5 I am planning to start business/work in China and keep my networks in Sweden active | 3.55 | 3.03 | 4.084 | .047 |
| N6 My networks (family, friends, public, private, academic) in China will help me to start my business in Sweden (or somewhere else) | 3.15 | 2.75 | 4.357 | .040 |

Clearly those students who have entrepreneurial intention give a distinct high soccer in the statement of "find a job in China", it indicated that China is their first choice whatever they want to find a job or

start business. It can be seen that student's with contrary entrepreneurial intention showed different characteristic such as seeking freedom, self-challenge. Furthermore, students who have entrepreneurial intention possessed of higher skills and network building/maintain talent. A significant difference can also be read in their perception of feasibility. It indicated a strong relationship between "perceived feasibility" and entrepreneurial intention, which is also supported by Table 4's figure.

## 5. Concluding Remarks

The aim of this study is to the aim of this paper is to investigate the factors behind the entrepreneurial (i.e. starting-up their own business) intentions of Chinese Exchange Students (CES hereafter) at Halmstad University College (HH hereafter), Sweden. We specifically question "to what extent individual (personal) backgrounds, preferences and knowledge/perception of CES about the Swedish industrial/business environment may play a role in their entrepreneurial intentions". The findings of previous studies on entrepreneurial intentions (see Davidsson, 1995; Kruger, 1999; Autio et al., 2001; Wong et al., 2010) have been used as points of departure. However different from these studies, which basically explored entreprenerial intentions among the natives (locals) in their national context, we instead focus on a "non-native group, i.e. Chinese students in Sweden". The results may therefore inform us on the role of contextual factors on the entrepreneurial intentions rather than an exclusive focus on individual (personal) factors.

The survey reveals that most Chinese students want to find job in China although they admit that Sweden is attractive for them. Even for those who are interested in becoming entrepreneur, they tend to start business in China but not in Sweden. Over half of Chinese students are attracted in self-employee. However, due to the lack of social and work experiences, they still prefer to find a job first. The respondents' a low level in entrepreneurial capacity and network building ability can explain this result to a great extent. In addition, familiar with Chinese environment (culture, language etc.), existing network in China and the obligation of take care of parents also contribute to their decision.

As we expected, CES' skills, education background, network and to what extent they want self-realization have a positive relationship with their entrepreneurial intention. However, we cannot observe significant influence from CES's study level and gender.

However, individual's characteristics such as ambitious of freedom and self-realization have limited effect on their entrepreneurial intention when compared to skills and education background. Respondents who have intention to start business are more confident in their skill and perceived a high feasibility in terms of start business. Thus we proposed that entrepreneurship education may serve students better by increasing its focus on creativity and confidence-building. Further, curricula should be adapted to specific cultures – for example, problems faced by Chinese students would be further discussed in detail.

## Limitations & Further study

This is an exploratory study where we can only cover the factors that may influence the decision of Chinese Exchange Students to start-up their business or not. Due to time and resource constraints we have limited ourselves to the Chinese Exchange Students as Halmstad University College. We expect a larger study that compromises other exchange students and scientists at other universities will be very interesting. Moreover a complementary qualitative study of a smaller sample of students will reveal

further factors concerning mobility and entrepreneurship, which had not been discussed in the literature so far.

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Questionnaire in English and Chinese version will be avaliable upon request.