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No. 1940 | July 2014

Web: www.ifw-kiel.de

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An Inquiry into the Determinants of Graduate Entrepreneurship in Hong Kong and Guangzhou (Mainland China)*

Frank Bickenbach, Dirk Dohse, and Wan-Hsin Liu

Abstract:
Based on original survey data, this paper analyses and compares the role of personal traits and social capital in determining entrepreneurial intentions of students in Hong Kong and in Guangzhou (mainland China). The two cities are culturally closely related but differ strongly with respect to their formal institutions and the maturity of their business environment. Our findings suggest that the determinants of entrepreneurial intentions among students in Hong Kong very much resemble those found in Western economies, whereas the entrepreneurial mindsets of students in Guangzhou differ substantially from previous findings.

Keywords: entrepreneurial intention, self-employment preference, personal traits, social capital, China, Hong Kong.

JEL classification: M13, O15

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* We thank Prof. Li Xun (Sun Yat-Sen University), Dr. Fu Wenying (South China Normal University) and Ms. Mandy Lao (University of Hong Kong) for their support for carrying out the student surveys in Guangzhou and in Hong Kong. We thank Ms. Liao Yen-Chun for excellent research assistance. We thank participants at the IfW-KIT Research Workshop (Sep., 2013), Chinese Society of World Economy Conference (Nov., 2013), Kiel Special Staff Seminar (March, 2014), and DFG Megacity Project Follow-up Workshop (May, 2014) for their valuable suggestions and comments on the previous versions of the paper. Financial support from the cooperative project 'Regional Agility in the Wake of Crisis: Towards a New Growth Model in the Greater Pearl River Delta' funded by the German Research Foundation (DFG) (Priority Program 1233: Megacities – Megachallenge: Informal Dynamics of Global Change) is gratefully acknowledged.

1 Introduction

Scholars of the Chinese economy are faced with the puzzling observation that in a formally communist country a vibrant entrepreneurial economy has emerged. Politically as communist as ever, the stepwise economic reforms (beginning in 1978) have introduced more and more economic freedom and transformed the economy into a 'socialist market economy', allowing China to grow faster than any other major economy in the world in recent decades.

Although other factors – such as state-owned enterprises, FDI by overseas investors and massive infrastructure investment by the Chinese government – have all played their role, the impressive growth performance of the Chinese economy since the 1990s has been mainly fuelled by the emergence of a dynamic private sector. The state sector's share of GDP decreased from over 90% in 1978 (the year when the reform process in China started) to less than 50% in 2012 and almost all new job creation during the last decade came from private companies (Forbes 2012). Cross-country comparative indicators as those provided by the *Global Entrepreneurship Monitor* suggest that China's economy today is highly entrepreneurial, not just in terms of actual start-up rates, but also in terms of entrepreneurial intentions, perceived opportunities, (low) fears of failure, high social status of and high public interest in entrepreneurship (Kelley et al. 2012). According to Pistrui et al. (2001) the People's Republic of China "… provides a unique living laboratory in which to explore entrepreneurship, family business, and SME development".

A particularly important – yet under-developed and under-researched – form of entrepreneurship is graduate entrepreneurship in China. Graduate Entrepreneurship has received little attention so far although highly skilled entrepreneurs are pivotal for the transformation of the country into a modern knowledge based society. China's Prime Minister Li Keqiang himself has just recently pledged more policies to encourage entrepreneurial activity across China, putting particular emphasis on student entrepreneurs who are seen as key agents of innovation, but face increasingly difficult employment prospects (Financial Times, January 31, 2014). Since university enrolment expansion in the late 1990s the number of students has increased rapidly, while at the same time university graduates face increasing difficulties to find jobs (CRN, China Review News 2009; Qunlian 2011; IWEP 2013; XinhuaNet 2013). Employment rates of university graduates decreased from around 85% in 1999 to 67.9% in 2009, suggesting that graduates are not only pulled by opportunity, but also pushed into self-employment out of necessity (Qunlian 2011, p. 229).

The current paper investigates the factors determining students' self-employment preferences and their intentions for actually becoming self-employed. Personal traits of the students are

considered as well as their (individual) social capital. The analysis is focussed on two culturally similar but institutionally rather diverse regions, namely Hong Kong and Guangzhou (province Guangdong) in mainland China. Both regions belong to the economically strongest and most business-friendly regions of the PRC.[1] Hong Kong (HK)'s colonial history, the impact of British rule and institutions and the special status of HK within the PRC make it a particularly interesting place to look at. As a region of reference in mainland China we chose the province Guangdong with focus on its capital Guangzhou (GZ). These two regions differ from each other particularly with respect to the legal system, the reliability and accountability of institutions and the maturity of the business environment. Despite such differences, HK and GZ share some common features and interact intensively with each other. GZ is located in the Pearl River Delta, where China's economic reform began more than three decades ago and HK firms acted as the first-mover investors on site. HK and GZ are close to each other not only in the geographic term, however. People in the two regions share a common language (Cantonese) and culture and a majority of citizens of HK are either born or are descended from Guangdong (Child and Möllering 2003). In short, these two economic powerhouses of the PRC, are located in close spatial proximity and share a common cultural heritage, but have a very different history and marked institutional, political and economic differences. While HK can be characterized as an advanced market economy, GZ can be characterized as an emerging (city) economy. They are, hence, particularly well-suited objects of comparative analysis.

The structure of the paper is as follows: Section 2 develops the analytical framework of the investigation, based on a brief discussion of the underlying literature. Section 3 describes the survey design and the data, and deals with measurement issues. Section 4 introduces the empirical models for estimation and presents the results of the econometric analysis. Section 5 summarises the main findings and concludes.

2. Analytical Framework and Theoretical Background

2.1 Basic Concepts and Research Questions

The major aim of the current paper is to contribute to a better understanding of the factors that drive entrepreneurial intentions of students in Hong Kong and in Guangzhou (mainland China)

[1] In this paper the word "China" is generally used as a synonym for "mainland China", the geopolitical area under the direct jurisdiction of the People's Republic of China (PRC). HK returned to the PRC in 1997 and has been a special administration zone of the PRC since then. Different from GZ and other cities in mainland China, the history as a British colony enabled HK to build a well-established legal system and a highly developed modern economy. After HK's return to the PRC, it is still granted broad autonomy in dealing with economic and internal affairs.

and to investigate differences between these two groups. We focus on senior students (i.e., students who are in their third year of studies or higher) as they are facing actual major career decisions in the near future.

The core variable to be explained in the current paper is university students' entrepreneurial intention, i.e., the intention to become self-employed immediately or sometime after graduation. Forming an intention to develop an entrepreneurial career is the first – and arguably most important – step in the often long process of venture creation (Gartner et al. 1994). As is well-established in the literature, starting a business is a conscious and intended act (Bird 1988). Self-employment intentions can serve as the key for understanding the entrepreneurial process as they guide subsequent action and motivation to create a new venture (Boyd and Vozikis 1994; Krueger et al. 2000; Souitaris et al. 2007). Studying intentions rather than actual start-ups has two key advantages. First, they are typically considered the best predictors of behaviour, such as becoming an entrepreneur that is rare, difficult to observe or involves unpredictable time lags (Ajzen 1991). Second, they directly reflect higher-level influences without being distorted by a potential survival bias, an ex-post rationalization by the respondents, or the risk of identifying consequences instead of determinants of self-employment. Moreover, there is ample empirical evidence that entrepreneurial intentions correlate positively with total entrepreneurial activity in society (Bosma et al. 2012). In a nutshell, "Intentions models offer a coherent, parsimonious and robust framework for pursuing a better understanding of entrepreneurial processes" (Krueger 1993, p. 5).

In the current paper we distinguish between an individual's *self-employment intention* and her *self-employment preferences*. While both concepts are closely related, they are not identical:

Self-employment preferences (s-e-preferences) describe an individual's subjective valuation (desirability) of self-employment as compared to wage-employment. Preferences permit the individual to rank different career alternatives according to the levels of utility they give the individual. Note that preferences for self-employment abstract from feasibility constraints on self-employment, such as consumer preferences in microeconomic theory abstract from consumers' budget constraints. Feasibility does not determine whether an individual likes or dislikes self-employment per se. One can have a strong preference for self-employment but not the financial means or the necessary support by others to perceive self-employment as a realistic career alternative and to form self-employment intentions.

Self-employment intentions (s-e-intentions), by contrast, take feasibility considerations into account. An individual tends to have strong self-employment intentions, if she perceives self-

employment as both *desirable* ***and*** *feasible*. In other words: a strong s-e-preference is not sufficient for an individual to form strong s-e-intentions. She also has to perceive self-employment as feasible in view of the economic and personal constraints she faces. Determinants of s-e-preferences and s-e-intentions are not necessarily the same, as will be discussed in Section 2.3.

2.2 Theoretical Background

Although innovative in its distinction between s-e-preferences and s-e-intentions our approach is closely related to and deeply rooted in the rich and growing literature on individual and contextual determinants of self-employment. According to a recent review article by Heinrichs and Walter (2013), research on the determinants of self-employment can be categorized into six paradigms: the traits perspective, the cognitive perspective, the affective perspective, the intentions perspective, the learning perspective and the economic perspective. The *traits perspective* emphasizes the importance of individual traits and dispositions as crucial determinants of the decision to become self-employed (House et al. 1996). The *cognitive perspective*, advanced by Busenitz and Lau (1996) and Baron (2004), views the decision to become self-employed as mainly driven by cognitive processes, i.e., entrepreneurs are held to access, perceive, process and use information differently than other people. The *affective perspective* (Baron 2008) holds that entrepreneurial decisions are strongly influenced by emotions and feelings. The *intentions perspective* (Ajzen 1991; Shapero and Sokol 1982) emphasizes the role of perceived desirability and perceived feasibility in forming self-employment intentions. The *learning perspective* (Bandura 1977; Scherer et al. 1989) posits that observational learning from role models (often parents or other close ties) is a key feature in the socialisation of entrepreneurs. Finally, the *economic perspective* (Becker 1975; Douglas and Shepard 2002) assumes that individuals rationally weight costs and benefits of self-employment as compared to wage employment.

Our study integrates elements from the *intentions perspective*, the *traits perspective*, the *learning perspective* and the *economic perspective*. We consider the *intentions perspective* by explicitly differentiating between perceived desirability (as expressed in s-e preferences) and perceived feasibility as key determinants of s-e intentions. Our approach is thus very close in spirit to Shapero's model of the entrepreneurial event (Shapero 1975; Shapero and Sokol 1982). Perceived desirability in the model of the entrepreneurial event is defined as the degree to which a person finds the prospect of starting a business to be attractive, whereas perceived feasibility is

understood as the degree to which a person believes that she is personally capable of starting a business (Krueger 1993, p. 8). An additional category that is proposed by Shapero is the so-called "propensity to act", i.e., a person's disposition to actually act upon one's decisions (Krueger 1993, p. 9).[2] A related, intentions-based approach is Ajzen's theory of planned behaviour (Ajzen 1991), that views attitude towards the behaviour, social norms and perceived behavioural control as antecedents of intentions. Perceived desirability roughly corresponds to attitude towards the behaviour (and is also influenced by social norms), whereas perceived feasibility roughly corresponds to Ajzen's concept of perceived behavioural control.

A second perspective considered in our approach is the *traits perspective*. As shown by Heinrichs and Walter (2013), *risk-taking propensity* (Stewart Jr. et al. 1999), *need for achievement* (Hansemark 2003) and *need for independence* (Caird 1991) are among the most frequently studied and most important individual traits that predestine people for an entrepreneurial career. We consider all three and go one step further in differentiating *need for achievement*, i.e., the expectation of doing things better and faster than others or than one own's previous accomplishments (Hansemark 2003), into two categories: *work-related need for achievement* and *benefit-related need for achievement*.[3] This distinction appears to be particularly important in the Chinese context as earlier research on Chinese entrepreneurship (Djankov et al. 2006a and 2006b suggests).

A third perspective entering our approach is the *learning perspective*, emphasizing that individuals tend to learn from others whom they perceive as role models (Bandura, 1977; Scherer et al., 1989). Early exposure to entrepreneurial role models within the family is often held to have a positive impact on children's preference for self-employment. Role models in entrepreneurial families are influential for the motivation to become self-employed, as children are exposed to entrepreneurial lifestyle and entrepreneurial values; thus they have more chances to observe the positive feedback which self-employment has brought to their families (Evans and Jovanovic 1989; Chlosta et al. 2012). While parents and other close relatives have an outstanding importance as entrepreneurial role models (e.g., Dunn and Holtz-Eakin 2000; Mueller 2006; Chlosta et al. 2012), recent research (Dohse and Walter 2012) has shown that effective role models can also be found in the circle of friends and acquaintances and in the regional environment (the region of residence) of an individual.

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[2] We do not explicitly consider "propensity to act" in our approach because it is unclear whether "propensity to act" has a direct influence on the formation of entrepreneurial intentions. It might predict in how far individuals are likely to put their intentions into practice, but is less helpful in explaining the formation of entrepreneurial intentions, which is our core question in this paper.

[3] The exact definitions and measurement details are provided in Section 3.

Finally, we explicitly take into account *economic aspects* that influence the costs and benefits of being self-employed. Earlier work has suggested that the returns to entrepreneurship depend on work experience, management experience and education and training in the formal education system (e.g., Evans and Leighton 1989; Davidsson and Honig 2003; Henley 2004; Arenius and Minniti 2005). As the students in our sample are relatively homogenous with respect to formal educational attainment, there is little sense in considering years or levels of formal education as an explanatory variable. We do, however, control for students' major subjects of studies, which may affect students' employment perspectives and self-employment opportunities after graduation. Most importantly, we also consider the level of support students expect to receive from parents, other relatives, or friends and acquaintances in dealing with critical challenges of starting or running their own business. Such (expected) support, e.g., in securing finance, assessing business relevant information or establishing business contacts, should increase the perceived feasibility of self-employment. Finally, we also consider students' self-employment experience.

2.3 Determinants of Self-employment Preferences and Determinants of Self-employment Intentions

As described above, students can be expected to have intentions to become self-employed, if they perceive self-employment as being desirable *and* feasible. The perceived desirability is reflected in students' s-e-preferences, whereas the joint impact of desirability and feasibility determines s-e-intentions.

Self-employment preferences

According to the pertinent literature we expect that personal traits and dispositions have a strong impact on the desirability of self-employment. We therefore consider *need for achievement*, *need for independence* and *risk-taking propensity* as (potential) determinants that are having a positive impact on students' self-employment preferences. Moreover, *role models* within and outside the family are influential for the motivation to become self-employed, as children are exposed to entrepreneurial lifestyle and entrepreneurial values and have more chances to observe the benefits and challenges that go along with self-employment. We distinguish between three groups of role models: parents, other relatives, and friends and acquaintances and expect them to have a positive impact on s-e-preferences. Finally we consider a number of control variables that are held to be related to the desirability of self-employment, including students' *age*, *gender*, *self-employment experience* and their *major subject of study*.

Self-employment intentions

When moving from s-e-preferences to s-e-intentions, feasibility considerations come into play as well. Some personal traits like need for achievement and need for independence are likely to affect the desirability but not the feasibility of self-employment. Hence, they impact self-employment intentions only indirectly via their impact on *s-e-preferences*. *Risk-taking propensity* is different in this respect as it does not only impact on the desirability but also on the perceived feasibility of self-employment. Therefore, risk-taking propensity is expected to positively affect self-employment intentions both directly *and* indirectly (via s-e-preferences).

A further factor affecting the perceived feasibility of self-employment is social capital in the form of *expected support from parents*, *other relatives* and *friends and acquaintances* (Dohse and Walter 2012). While the cultivation of personal networks, in some form and to some extent, exists in every society, its specific form, *guanxi*[4], and its pervasiveness and importance in daily social and business life are often considered distinctively Chinese (Standifird and Marshall 2000). On the one hand it has been argued that *guanxi* is indigenous to Chinese culture and deeply rooted in its Confucian legacy (Dunning and Kim 2007). On the other hand it has also been argued, however, that personal relationships and networks mainly serve as a substitute for deficient formal institutions of information provision, contract enforcement and property rights protection (Bickenbach and Liu 2010).[5] We thus expect that a student's social capital (i.e., the scope and the leverage of her guanxi network) will have a positive impact on her perceived feasibility of self-employment. Students who expect to receive high levels of support from parents, other relatives or friends and acquaintances when starting their own business are thus expected to have stronger s-e-intentions on average.[6]

As for the control variables *age*, *gender*, *self-employment experience* and *major subject of study*, we assume that they may affect s-e-intentions not only via a possible effect on s-e-preferences but also by affecting the perceived feasibility of self-employment.

The (estimated) relationship between students' self-employment preferences and intentions on the one hand and their personal traits and social capital on the other hand is likely to be affected

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[4] Guanxi "refers to the concept of drawing on established connections in order to secure favours in personal relationships" (Dunning and Kim 2007, p. 329, see also Bickenbach and Liu 2010). In a business environment, guanxi networks provide protection against opportunistic behavior of business partners and improve access to business-relevant information and scarce resources, including finance.

[5] Bickenbach and Liu (2012) argue that in a transition economy, such as current China, personal relations are particularly important for young and small firms.

[6] Relevant forms of support may relate, e.g., to financing business start-ups and operations, securing access to material resources, technological or business information and know-how, or to establishing and maintaining contacts to potential business partners and political decision makers.

by differences in the institutional and economic environment between HK and GZ. While there have been remarkable improvements, over the last decades, of many formal institutions in China in general and in the province of Guangdong (with its capital Guangzhou) in particular (see, e.g., Clarke et al. 2008; Bickenbach and Liu 2010 and 2012)[7], formal legal and economic institutions are still clearly deficient there and certainly much less developed and less business-friendly compared to those in neighbouring HK.[8] Given that personal relationships may serve as a substitute for deficient formal institutions, personal relationships are, therefore, generally conceived to be more important in GZ than in HK both for doing business in general and for starting and running a new business in particular.[9] We may, thus, expect the average level of support students' expect to receive from their personal networks to be higher and the relationship between (individual) social capital and s-e-intentions to be stronger in GZ than in HK.

Another important feature of the Chinese (Guangdong) economy likely to affect our results for the GZ student sample is the difficult labour market situation of university graduates that renders it difficult for many graduates to find adequate salaried employment (see Section 1). This suggests that some of the GZ graduates that intend to become self-employed after graduation may actually do so because they anticipate problems of finding adequate salaried employment. A (possibly) substantial share of students in our GZ sample that are pushed or "forced" into self-employment may dilute the relationship between students' personal traits and social capital on the one hand and their s-e-intentions on the other. It may also affect students' s-e-preferences as self-employment may be perceived more attractive and less risky relative to salaried employment. We will come back to this issue in the discussion of empirical results below.

3 Survey Design and Measurement

3.1 Survey Design

Following our research aim, we base the analysis on two original datasets collected by our own student surveys in HK and in GZ. The two surveys were carried out in summer 2012.

[7] Guangdong has been a pioneer region of the economic reform process in China and formal legal and economic institutions are generally more developed and more business-friendly there than in most other regions in mainland China (World Bank 2008).

[8] HK is generally considered one of the freest and most developed market economies in the world and receives very high rankings in most comparisons of worldwide governance indicators.

[9] This is also confirmed by a survey among senior managers of firms operating in the Pearl River Delta in Guangdong (Bickenbach and Liu 2010).

Comparable survey procedures and questionnaires in Chinese were applied.[10] The HK Student Survey was carried out in three leading Hong Kong universities – University of Hong Kong, Chinese University of Hong Kong and Hong Kong University of Science and Technology –, with a focus on senior students[11] from five major subjects, namely business administration, economics, social sciences/geography, computer sciences, and engineering. Focusing on the same majors the GZ Student Survey was undertaken in Sun Yat-Sen University and South China Normal University – two on-site universities with a long educational history. In total 908 questionnaires were completed and returned, of which 300 were from HK and 608 from GZ.[12]

3.2 Measuring Self-employment Preferences and Intentions

As already discussed in Sections 2.1 and 2.3 we distinguish between an individual's *preference for self-employment* and her *self-employment intention*. Measures for these variables were derived from two survey questions that are displayed in Table A1 in the appendix.

Self-employment preferences

Our measure of students' s-e-preferences (*SEPref*) is derived by calculating the average level of importance assigned by each student to the following seven arguments in favour of becoming self-employed (Cronbach alpha[13]=0.88): As a self-employed person, I would "(1) … be my own boss", "(2) … be able to fulfil myself", "(3) … earn a higher salary than as an ordinary employee", "(4) … deal with challenging tasks", "(5) … bear great responsibilities", "(6) … be able to contribute to the well-being of my home-region or country", and "(7) … receive particular appreciation from society at large". In assessing the individual arguments students were asked to use a five-grade Likert scale, with 1 meaning no importance at all and 5 being

[10] The questionnaires were prepared by the authors based on a questionnaire that was provided by Sascha Walter and applied earlier in Dohse and Walter (2012). Our cooperation partners in GZ and HK tested whether the questionnaires were understandable and adjusted the wordings to the local use. For the survey in GZ, ten student assistants were recruited to distribute the questionnaires in the obligatory courses of the selected majors in the two universities. The student assistants were present, when students answered the questionnaires and they collected the questionnaires immediately after students completing their questionnaires. For the survey in HK, Mandy Lao and her colleagues wrote emails to senior students of the selected subjects in the three universities in HK and invited them for an interview. The interviews were conducted either face by face or by phone strictly based on the questionnaires.

[11] Senior students are bachelor students in the third or fourth year or master students. The definition was applied for both the HK Student Survey and the GZ Student Survey.

[12] As some students did not answer all questions, our regression analyses are based on between 298 and 300 questionnaires from HK and between 519 and 531 questionnaires from GZ.

[13] Cronbach's Alpha, in short Alpha, was proposed by Cronbach (1951) and measures the internal consistency among items considered to explain a certain psychological feature. Thus it is usually used to measure the reliability of psychometric tests.

very important. A student assigning a higher average level of importance is interpreted as one with a stronger s-e-preference.

Self-employment intentions

Information about students' s-e-intentions is obtained from another survey question which asked students to indicate the degree to which they agree with three statements relating to their plans for self-employment using a five-grade Likert scale, with 1 indicating complete disagreement and 5 indicating complete agreement: "(1) It is clear to me that I will try to be self-employed as soon as possible", "(2) I want to become self-employed within five years after my graduation", and "(3) I want to become self-employed someday in the future". Students who assigned a Likert-grade of 4 or higher to at least one of the three statements are categorised as having clear intentions to become self-employed (*SEInt = 1)*, whereas all others are categorised as those without clear intentions (*SEInt = 0)*.

In addition to the binary variable *SEInt*, indicating whether students have clear s-e-intentions or not, we derive a second, ordinal variable, *SEInt_ord*, by making use of the different levels of intensity, or concreteness, of s-e-intentions implied by the different statements. More specifically, students who assigned the critical value of 4 or higher to the first statement mentioned above are considered to be those with a high intensity of s-e-intentions (*SEInt_ord = 3*); those assigning a grade of 4 or higher to the second statement but not to the first statement as being the ones with a medium intensity of s-e-intentions (*SEInt_ord = 2*); and those students assigning a grade of 4 or higher to the third statement but neither to the first not the second statement with a low intensity of s-e-intentions (*SEInt_ord = 1*). Students agreeing (grade 4 or higher) to none of the statements are considered to have no s-e-intentions (*SEInt_ord = 0*).

3.3 Measuring Personal Traits and Social Capital

Personal traits

The four personal traits considered in our model are *work-related need for achievement*, *benefit-related need for achievement*, *need for independence* and *risk-taking propensity*.[14]

Each student's work-related need for achievement (*NA_W*) is derived by calculating her average level of agreement (again using a five-grade Likert scale, with 1 indicating complete

[14] The survey questions that are used to derive the personal traits variables as well as those used to derive the social capital variables (see below) are displayed in Table A1 in the appendix

disagreement and 5 indicating complete agreement) to the statements that they like hard work and that they prefer to do challenging and difficult tasks rather than tasks at which they feel confident and relaxed (Cronbach alpha = 0.57).[15] Similarly, a student's benefit-related need for achievement (*NA_B*) is derived by calculating her average level of agreement (again using the same Likert scale) on four statements relating to her attitudes towards earning a lot of money, having authority over other people, her performance relative to others, and obtaining respect and prestige through her job (Cronbach alpha = 0.58). Students with higher values of the variable *NA_W* (*NA_B*) are considered to display stronger work-related need for achievement (benefit-related need for achievement). Both work-related and benefit-related need for achievement are expected to have a positive impact on students' s-e-preferences.

A similar positive relation is expected between s-e-preferences and students' need for independence. A variable, *NI*, capturing students' need for independence is constructed by calculating her average level of agreement (using the same five-grade Likert scale) to four statements (Cronbach alpha = 0.74) about her attitudes towards having freedom to decide on work-time management, to determine work content, to setting priorities among tasks and towards not being subordinated to others in carrying out group work. Students with a higher value of this variable (*NI*) are considered as having a stronger need for independence.

As the fourth personal trait, we consider students' risk-taking propensity (or risk tolerance). The corresponding variable (*Risk*) is obtained by asking each student which of the two lotteries from overall five pairs of lotteries she would choose and summing up the number of times she decided for the more risky of the two lotteries of a pair. Possible values of our risk-taking propensity variable (*Risk*) thus range from 0 (for students that never chose the more risky variable) to 5 (for students that always chose the more risky variable). Students with higher risk-taking propensity are expected to have stronger preferences for self-employment, which is often characterised by high levels of risk and uncertainty. They may also be expected to perceive the feasibility of self-employment more positively.

Social capital

Following the analytical framework introduced in Section 2, we consider two groups of social capital variables in our econometric analysis.

[15] In the survey, these two statements relating to students' work-related need for achievement were actually formulated in reverse way, e.g., like to "avoid hard work" rather than like "hard work".. In calculating the values of the *NA_W* variable, we therefore reversed the specified Likert values accordingly (i.e., by turning an original value of 1 to 5 and vice versa) before calculating the average value.

The first group of variables relates to the importance of entrepreneurial role models. We distinguish between three groups of role models, namely parents (variable *RM_P*), other relatives (variable *RM_OR*), and friends and acquaintances (variable *RM_F*). These variables take a value of 1 if at least one of the student's parents, other relatives, or friends and acquaintances are or were self-employed and take a value of 0 otherwise. The existence of entrepreneurs within a student's social network is expected to have a positive impact on the student's s-e-preference.

The second group of social capital variables captures the support that students expect to obtain from the three social groups (parents, other relatives, and friends and acquaintances) to deal with critical challenges related to starting or running their own business. We considered six different support categories: financial support, support in accessing business, technological and legal know-how and support in establishing/maintaining business contacts and political contacts. For each of these categories and for each social group we asked students to indicate the level of expected support (using a five-grade Likert scale, with 1 meaning "no support at all" and 5 meaning "very much support") and calculated the average level of support each student expects to obtain from each of the three groups. In this way we obtained three variables measuring expected support by parents (*ExS_P*, Cronbach alpha = 0.93), expected support by other relatives (*ExS_OR*, Cronbach alpha = 0.92), and expected support by friends and acquaintances (*ExS_F*, Cronbach alpha = 0.92), respectively. All three social capital variables are expected to have a positive effect on students' perceived feasibility of self-employment and thus on (the strength of) their self-employment intentions.

Controls

Finally, we consider two sets of control variables, with the first one including students' *age*, *gender* and *self-employment experience.* The variable *Age* is defined as student's age (in years) in the survey year 2012. The gender variable, *Gender*, is codified as a binary variable with 1 for male students and 0 for female students. Our self-employment experience variable, *SEExp*, is a binary variable, which is equal to 1 if a student already had some self-employment experience and 0 otherwise. The second set of control variables captures the individual students' university majors and consists of four binary variables: *BusAd* for business administration, *Econ* for economics, *CompSc* for computer sciences and *Eng* for engineering. The students majoring in social sciences/geography are used as reference group in the regression analyses of the following section.

4 Empirical Model and Results

4.1 Empirical Models

We start with the analysis of students' s-e-preference and then move on to s-e-intentions. All regressions of self-employment intentions are conducted for the binary s-e-intentions variable *SEInt* and, to check the robustness of our results, also for the ordinal intention variable *SEInt_ord.* All regressions are run separately for our samples of Hong Kong students and Guangzhou students.

Self-employment preferences

In order to investigate the determinants of students' s-e-preferences, we run a linear regression (OLS) of our measure of students' s-e-preferences, *SEPref*, on a set of independent variables derived from the previous literature (see Section 2). The set of independent variables includes students' personal traits (*NA_W, NA_B, NI, Risk*) and their social capital in terms of the existence of entrepreneurial role models within their personal networks (*RM_P, RM_OR, RM_F*). It also includes the two sets of control variables as discussed above (*Age, Gender, SEExp*; *BusAd, Econ, CompSc, Eng*).

Self-employment intentions

In a second step, we investigate the role of students' personal traits and social capital for their s-e-intentions. Due to the non-metric nature of our self-employment intention variables we follow a non-linear estimation approach, namely probit estimation models for the binary intention variable *SEInt*, that is measuring the existence of s-e-intentions, and ordered probit estimation models for the ordinal intention variable *SEInt_ord*, that is measuring the intensity of s-e-intentions.

For both s-e-intention variables, the same sets of explanatory variables are considered. Again these variables can be classified into three groups: personal traits, social capital, and control variables. In a first specification, the personal trait variables and the control variables are the same as those considered for the OLS regressions for s-e-preferences, whereas students' social capital is now measured in terms of students' expected support from the three social groups within their personal networks (*ExS_P*, *ExS_OR*, *ExS_F*), which are expected to impact students' perceived feasibility of their self-employment projects.

As our two-stage model assumes that most personal trait variables, namely *NA_W*, *NA_B* and *NI* affect students' s-e-employment intentions only indirectly via their effect on s-e-preferences, we estimate a second model specification, our preferred specification, in which the personal trait

variables, *NA_W, NA_B*, and *NI,* are substituted by the (observed values of the) s-e-preference variable *SEPref* itself. Note that we keep the risk-taking propensity variable (*Risk*) as students' risk-taking propensity is expected to have a significant direct impact on how they perceive the feasibility of self-employment, so that the effect of *Risk* on students' s-e-intentions is expected to be not completely absorbed by the s-e-preference variable *SEPref*. All other variables are the same as for the first model specification.

4.2 Descriptive statistics

Before we come to regression results, we briefly discuss some aggregate descriptive statistics of the main variables entering the regression analysis. The aim is to highlight some similarities and differences between the HK and GZ samples that may turn out to be helpful when interpreting the regression results. The underlying survey questions have been answered by between 299 and 300 students in HK and between 570 and 608 students in GZ, respectively.

[Table 1 about here]

Table 1 summarises the basic statistics of the variables considered in the regression models. On average, students' s-e-preferences, as measured by *SEPref*, are substantially higher in the GZ sample (average value 3.67) than in the HK sample (average value 3.01). Similarly, average values for the *s-e-intentions* variables are also substantially higher in the GZ sample. In particular, 59% of students in GZ have clear entrepreneurial intentions, compared to 37% in HK. This very high share may at least partially be explained by the currently poor wage-employment situation for university graduates in China (see Section 1) and the abundance of business opportunities for newly founded (as well as for existing) business firms (Yan 2013), which may make self-employment a particularly attractive alternative to more traditional employment careers for university graduates in current China. This explanation is in line with additional observations on the distribution of the intensity of s-e-intentions in the two samples (Table 2). No less that 15% of students from GZ have a clear intention to become self-employed as soon as possible compared to only 7% of students from HK.

[Table 2 about here]

The share of students that have self-employed persons in their personal network is also much higher for students from GZ than for those from HK. With 40% the share of students from GZ that have at least one self-employed parent is much higher than the corresponding share of HK students (21%). Similarly, the share of students who know self-employed persons among their other relatives or among their friends and acquaintances is clearly higher in GZ (72% and 69%, respectively) than in HK (42% and 50%, respectively). Another remarkable difference between the two samples is that students from GZ expect, on average, substantially greater support from the members of their personal networks in case they start/run their own business in the future. This is true for all three types of personal relations considered (parents, other relatives, friends and acquaintances). Given that personal relations are generally considered to be of greater importance for doing business in China as compared to HK (see Section 2) and given the larger share of students with self-employed persons in their personal networks in GZ, these observations are clearly in line with expectations.

In contrast, differences between the two samples with respect to the personal traits considered are overall very small. There are hardly any differences with respect to the average values of the variables capturing the students' need for achievement (though for the work-related need for achievement variable, *NA_W*, the variance is somewhat larger for the GZ sample). The need for independence is just slightly larger for the GZ-sample. Students from GZ are also having a slightly higher risk-taking propensity on average. The fact that the differences in (average) personal traits between the two samples turns out to be so small may be surprising at first glance. This may, however, be due to the common cultural heritage and the strong ethnic, cultural and language ties that exist between HK and Guangdong (Section 1).

There are also only very small differences between the two samples as to the control variables *Age* and *Gender*. The average age of students is 22.9 years in HK and 22.2 years in GZ (with a somewhat higher variance in HK). In both samples, a majority of students is male (56% in HK, 57% in the GZ). The share of students with self-employment experience is very low in GZ (4%),[16] whereas it amounts to a remarkable 19% in HK. The distribution of students across different majors is relatively similar between the two samples (the main difference relates to the distribution across the two related subjects business administration and economics) and relatively even across different majors.

[16] As going to universities and getting good grades for a well-paid job in the future is traditionally taken by many Chinese families as the most important task of the young, the low share of students with self-employment experience in GZ is hardly surprising.

4.3 Estimation Results: Self-Employment Preferences

Hong Kong (HK)

The regression results for students' self-employment preferences are displayed in Table 3. For the HK sample (left column) almost all of the explanatory variables have statistically significant effects with the expected sign. Both work-related and benefit-related need for achievement have a statistically highly significant (1%-level) positive effect on students' self-employment preferences. The same is true for students' risk-taking propensity. The effect of need for independence is also positive, but not statistically significant.

[Table 3 about here]

As to the social capital variables, we find that having self-employed among parents or other relatives has a statistically highly significant positive effect on students' self-employment preferences (positive role model), whereas having self-employed among the wider network of friends and acquaintances has no statistically significant effect. These results confirm findings from related research on role models and self-employment that stress the outstanding importance of parents and other close relatives as entrepreneurial role models (see Section 2.2). The outstanding importance of parental role models may be explained by the – often very close – long term relationship between parents and children and by the fact that parents imprint on their offspring's preferences already in their early life. The same argument holds – although to a somewhat lesser degree – for other relatives.

As to the control variables, the estimates show that male students in HK have a statistically significantly greater preference for self-employment than female students, whereas students' age and self-employment experience have no statistically significant effect. The same is true for the subjects of study dummies, suggesting that students from different subjects of study do not differ significantly with respect to their self-employment preferences.

The overall fit of the empirical model is quite good, explaining about 57% of the variation in the dependent variable.

Guangzhou (GZ)

Estimation results for the GZ sample (right column of Table 3), differ substantially from those for HK. In the GZ regression, only the variables measuring benefit-related need for achievement and need for independence have the expected statistically significant positive effect on students'

s-e-preferences. The estimated effects of students' work-related need for achievement and their risk-taking propensity have the expected sign, but are not statistically significant.

The insignificance of the risk-taking propensity in GZ may again relate to the difficult labour market situation for university graduates in current China (see above). High unemployment rates among the high skilled and manifold opportunities for self-employment in current China suggests that planning a career as a salaried employee may actually be as risky and uncertain nowadays in China as a career as a self-employed.

Of the three role-model variables only the variable for "other relatives" is (weakly) significant; the measured effects of self-employed persons among students' parents and friends and acquaintances are (positive but) not statistically significant. While this finding is somewhat unexpected, it could possibly be related to the very high share of students who have self-employed persons within their personal network (Table 1). On the one hand, this suggests that role models may not be scarce and may thus be no pivotal factor in forming self-employment preferences. On the other hand, several of the self-employed within students' personal networks may have become self-employed only after they lost salaried jobs during the economic crises or may otherwise be forced into 'minor' and less attractive forms of self-employment and may thus not be perceived as attractive, positive role models.

Neither of the control variables has a statistically significant effect in the GZ sample. Contrary to the HK sample, this is also true for the gender variable, implying that female students in GZ have, on average, as positive an attitude towards self-employment as their male fellow students.

A comparison of the R^2s shows that our empirical model explains a much smaller share of the variation of the dependent variable in the GZ sample ($R^2 = 0.15$) than in the HK sample ($R^2 = 0.57$).

4.4 Estimation Results: Self-Employment Intentions

Hong Kong (HK)

The regression results for HK students' self-employment intentions are displayed in Table 4. Columns (1) and (2) contain the results for the binary *SEInt* variable, measuring the existence of self-employment intentions, whereas columns (3) and (4) contain the results for the variable *SEInt_ord,* measuring the intensity of self-employment intentions.

Existence of self-employment intentions: Column (1) in Table 4 corresponds to our baseline ("traditional") model of the determinants of students' s-e-intentions. According to this view,

both personal traits of a student and her social capital determine her s-e-intentions. The estimation model of column (1) therefore contains as explanatory variables the full set of our personal traits variables, the social capital variables in terms of expected support from personal networks and the full set of control variables.

[Table 4 about here]

Column (2) corresponds to the idea, introduced in Section 2, that students' s-e-intentions are formed in a kind of „two-stage"-process. In a first stage students' s-e-preferences are formed on the basis of their personal traits and their role models. In the second stage students form their s-e-intentions by combining their s-e-preferences with an assessment of their perceived feasibility of self-employment. This assessment is affected, in particular, by the level of support students can expect from their network of personal relations and possibly also by their risk-taking propensity, which may thus be an important determinant both of the formation of s-e-preference and of the perception of the feasibility of self-employment.

Looking first at column (1), we find that two of the four personal traits variables, namely students' benefit-related need for achievement *(NA_B)* and their risk-taking propensity *(Risk)* have a highly significant positive effect on students' s-e-intentions. The variables describing students' work-related need for achievement and their need for independence have the expected sign, but are not statistically significant.

Among the social capital variables the expected support from parents (*ExS_P*) has the expected positive and statistically highly significant effect. No significant effect is found for the expected support from friends and acquaintances or from other relatives. Hence, parents rather than other network contacts are the ones that students in HK mostly rely on as sources of support for self-employment.

Results for the control variables show that male students are more likely to have s-e-intentions than female students and that students' age has a (weakly) significant, positive impact on their s-e-intentions. The parameter estimates for the dummy variables for students' major subject of study are all negative but only the one for computer science is statistically significant, suggesting that students of computer science are significantly less likely to plan to become self-employed than students of social sciences/geography (the reference category).

Column (2) of Table 4 presents the results of our preferred model specification, in which the personal traits variables work-related need for achievement, benefit-related need for achievement and need for independence are substituted by students' s-e-preferences (see Section 2 for the theoretical argument). In line with expectations, the effect of s-e-preferences on s-e-intentions is positive and highly statistically significant. The effect of the risk-taking propensity variable (*Risk*) remains statistically highly significant and positive, suggesting that students' risk-taking propensity affects their' s-e-intentions not only via its effect on s-e-preferences (see Table 3) but also via its effect on students' perceptions of the feasibility of self-employment, which is risky, by nature.[17] Also in line with the modelling idea underlying specification (2) is the observation that results obtained for the social capital variables are largely unaffected by the substitution of the (first three) personal trait variables by the self-employment preference variable. The results for the control variables resemble those for model (1), with the exception that the effect of gender is no longer statistically significant and that the dummy for business administration as major subject of study becomes weakly significant (in addition to the significance of computer science). A comparison of (McFaddens') pseudo-R^2 of the different specifications reveals that the pseudo-R^2 of model specification (2) is considerably higher than that of specification (1), which may be considered further support for our preferred specification (2).

Intensity of self-employment intentions: We estimated the same specifications as those just discussed for *SEInt* for our second s-e-intention variable *SEInt_ord*, which distinguishes four different levels of s-e-intentions that relate to the "timing" of students' self-employment plans and may be interpreted as different intensities of s-e-intentions (see Section 3). The results are summarized in columns (3) and (4) of Table 4.

Comparing columns (3) and (4) to columns (1) and (2) we find that the estimation results for the *intensity* of self-employment intentions much resemble those obtained for the *existence* of self-employment intentions. An important difference shows up, however, with respect to the impact of personal traits in the baseline model (column (3) and (1), respectively). Whereas only two traits variables (students' benefit-related need for achievement and their risk-taking propensity) are significant for the *existence* of self-employment intentions (column (1)), all four personal

[17] Additional robustness checks, not documented here, show that the benefit-related need for achievement variable is no longer significant in regressions estimates containing all four personal traits variables *and* the self-employment preference variable *SEPref*. This supports the hypothesis underlying specification (2), that the personal traits variables other than students' risk-taking propensity affect student's self-employment intentions only via their s-e-preferences but not via their perceived feasibility of self-employment.

traits variables have a significantly positive effect on the *intensity* of self-employment intentions (column (3)). With respect to the social capital variable, expected support from parents (*ExS_P*) has a highly significant positive effect on both the existence and the intensity of s-e-intentions, whereas the effect of expected support from other relatives and from friends and acquaintances is insignificant in both cases.[18]

Substituting the personal traits variables by the s-e-preference variable *SEPref* in the model for the intensity of s-e intentions (column (4)) yields the expected results. In particular, the estimated effect of the s-e-preference variable is positive and highly significant and the estimated effects of the risk-taking propensity variable (*Risk*) and the expected support from parents (*ExS_P*) remain positive and statistically highly significant.[19] At the same time, As for the *SEInt* case, the pseudo-R^2 is considerably higher for model specification (4) than for specification (3), which may again be considered supportive to the idea underlying specification (4).

Guangzhou (GZ)

The same estimates as those just described for the HK sample were run for the sample of students from the universities in GZ. The results are summarized in Table 5.

Existence of self-employment intentions: The results for our baseline specification (1), suggest that students' benefit-related need for achievement has a statistically highly significant positive effect on their s-e-intentions in GZ (as in the case of HK). The effect of students' need for independence (*NI*) is positive and, contrary to the case of HK, (weakly) significant. The observation that students' risk-taking propensity has no significant effect on their s-e-intentions corresponds to our previous finding that it has no significant effect on GZ students' s-e-preferences either.

[Table 5 about here]

[18] As to the effects of the control variables, it is reassuring to observe that students' self-employment experience has a (weakly) significant positive effect on the intensity (or timing) of s-e-intentions. Apparently, students that are self-employed already during (or even before) their university studies are (more) likely to continue or to restart self-employment soon after graduation.

[19] Additional results, not documented here, show that work-related need for achievement and need for independence are no longer statistically significant in regression estimates containing all four personal traits variables *and* the self-employment preference variable *SEPref*. Benefit-related need for achievement remains statistically significant but at a lower level of statistical significance. Overall this may again be considered as support for specification (2).

Among the social capital variables only the expected support from friends and acquaintances has the expected statistically significant, positive effect. While this is in line with the observation that GZ students expect to receive by far the largest support on average from this group (Table 1), the insignificance of the expected support from parents (which has been significant in the case of HK) and from other relatives runs counter to a priori expectations.

Among the control variables gender has a highly statistically significant positive effect, although it has no significant effect on s-e-preferences in GZ (different from the situation in HK). This suggests that within the GZ sample gender affects s-e-intentions not through a potential effect on s-e-preferences but through an effect on students' perceived feasibility of self-employment.[20] Three of the major dummies are statistically significant, suggesting that students of economics, computer science and engineering are ceteris paribus significantly less likely to intend to become self-employed than students of social science/geography (the reference category). The pseudo-R^2 appears to be quite low (0.11) and certainly much lower than for the HK sample (0.50).

Moving to our preferred specification (2), the s-e-preference variable itself has the expected positive effect and is statistically highly significant. The gender variable remains significant supporting the view that gender affects s-e-intentions mainly via affecting students' perceived feasibility of self-employment. The effect of the expected support from friends and relatives is no longer statistically significant, however, which runs counter to the idea that it affects students' s-e-intentions (mainly) via its effect on perceived s-e-opportunities. And the pseudo-R^2 is even slightly lower in specification (2) than in specification (1).[21]

Intensity of self-employment intentions: The corresponding estimation results for the *intensity* of self-employment intentions are displayed in columns (3) and (4) of Table 5. Overall, the results are qualitatively very similar to those for the *existence* of self-employment intentions (columns (1) and (2)). With respect to the effects of our main explanatory variables (personal traits and social capital variables) the only noteworthy difference is that the positive effect of the expected support from friends and acquaintances (*ExS_F*) is no longer statistically significant in the basic

[20] Again contrary to the situation in HK, the students' self-employment experience has an at least weakly significant positive effect on *SEInt* in specification (1). We know from Table 1, however, that only few students in GZ (4%) do have such experience.

[21] Additional results, not documented here, show that, contrary to the case of HK, the benefit-related need for achievement variable remains highly statistically significant in regression estimates containing all four personal traits variables *and* the self-employment preference variable *SEPref*. This runs counter to the hypothesis underlying specification (2).

specification (3).[22] Of the three major dummies only the one for students of computer science remains statistically significant, which corresponds to results for HK. The pseudo-R^2s are even lower in specifications (3) and (4) than in (1) and (2), respectively.

On the whole, our results are indicative of substantial differences in the factors shaping self-employment intentions in HK and GZ. Students' s-e preferences – driven by personal traits and role models among parents and other relatives – together with their risk-taking propensity and the expected support by parents appear to be the main factors forming students' s-e-intentions in HK. The results for HK thus resemble very much what has been found for advanced Western economies (see, for instance, Davidsson, 1995; Douglas and Shepherd 2002; Dohse and Walter 2012). By contrast, for the GZ sample it is only s-e preferences, gender and subjects of study that have a significant impact on students' s-e intentions. Risk-taking propensity is not significant in GZ, and expected support by personal networks seems to be of minor importance for s-e intentions as well. Overall, the results confirm the view that our empirical model fits the situation in HK much better than that in GZ.

5 Summary and Conclusions

Based on original survey data, this paper has analysed and compared the determinants of self-employment intentions of students in Hong Kong and in Guangzhou (mainland China). Both cities belong to the economically strongest and most business-friendly regions of the PRC. Both situated in the Greater Pearl River Delta, they share a common language (Cantonese) and a common cultural heritage. On the other hand, they differ substantially with respect to their legal system, the reliability and accountability of institutions and the maturity of the business environment. While HK can be characterized as an advanced market economy, GZ can be characterized as an emerging (city) economy, making them particularly well-suited objects of comparative analysis.

Although closely related to and deeply rooted in the rich and growing literature on individual and contextual determinants of self-employment, our analytical approach has a number of innovative features: First, it combines insights and elements from different theoretical approaches, namely the *intentions perspective*, the *traits perspective*, the *learning perspective* and the *economic perspective*. Second, we distinguish between *self-employment preferences*

[22] Another difference relates to the (greater) statistical significance of the effect of students' self-employment experience for the *SEInt_ord* variable. This corresponds to similar effects for the HK sample (see above). However, as mentioned earlier, there are only very few students (4%) in the GZ sample that actually have any self-employment experience.

(reflecting the desirability of self-employment) and *self-employment-intentions* (reflecting both desirability and feasibility of self-employment). Third, we do not only analyse the *existence of self-employment intentions* (as is the standard approach in the literature), but also the *intensity of self-employment intentions*.

Our results reveal substantial differences between HK and GZ.

Descriptive statistics indicate that self-employment preferences and self-employment intentions are, on average, much higher among students in GZ than in HK. Moreover, students in GZ – with its less developed institutional background and business environment – expect, on average, more support from their personal networks to deal with challenges of self-employment than students in HK.

Estimation results for HK show that students' personal traits – work-related need for achievement, benefit-related need for achievement and risk taking propensity – as well as role models among close personal ties (parents and other relatives) have a positive impact on students' s-e-preferences. Male students are also found to have higher s-e preferences than female students. Students' s-e-preferences together with their risk-taking propensity and the expected support by parents appear to be the main factors forming students' s-e-intentions in HK. This holds for both, the existence *and* the intensity of s-e-intentions in HK. The results for HK have a high explanatory power and resemble those for advanced Western economies.

Estimation results for GZ differ substantially from those for HK. In the GZ regression, only the variables measuring benefit-related need for achievement and need for independence have the expected statistically significant positive effect on students' s-e-preferences, whereas risk-taking propensity (and gender) are not significant. Moreover, of the three role-model variables only the variable for "other relatives" is (weakly) significant. As concerns the results for s-e-intentions in the GZ sample, s-e preferences, gender (male) and subjects of study are the only variables that have a robust, statistically significant impact. Expected support by members of personal networks seems to be of little importance: The results for parents and other relatives are insignificant and the results for friends and other relatives are ambiguous. In sum, the results for GZ are quite different from what is observed in advanced industrialized countries (and what is observed, in this paper, for HK) and the explanatory power of our model w.r.t. the GZ sample is much lower than for the HK sample.

There are various reasons that could explain the striking differences between HK and GZ.[23] In particular, there are several indications in the data suggesting that the comparatively poor labour market situation for GZ graduates might play a crucial role here: (i) With almost 60% of all students the share of GZ students that have clear s-e intentions is extremely high and much higher than for HK students. While this may be partially explained by the very vivid private sector economy in Guangdong which offers a lot of self-employment opportunities, it is likely to also reflect a high share of students that anticipate that they may be pushed into self-employment as they may not be able to find an appropriate salaried job after graduation. A high share of "forced" self-employment is likely to dilute the relationship between factors such as students' personal traits and their social capital and students' self-employment intentions. (ii) Very uncertain salaried employment and career prospects for graduates and manifold opportunities for self-employment in current China may also explain why students' risk taking propensity has no significant effect on either their s-e-preferences or their self-employment intentions in GZ: Self-employment may simply not be considered more risky than salaried employment under the prevailing economic conditions. (iii) While the descriptive statistics show that GZ students do on average expect more support from personal networks than students in HK, the level of expected support does not generally have a statistically significant effect on GZ students' self-employment intentions. A possible explanation is that under the current economic circumstances in China, support from personal networks (parents, other relatives or friends and acquaintances) is not only important to deal with the challenges of starting and running a business but may likewise raise the possibility of finding adequate salaried employment.

Overall, we may conclude that state-of-the-art models of entrepreneurial intentions work well in explaining self-employment intentions in the context of an advanced market economy like HK, but clearly less well in the context of an emerging (city) economy, as exemplified by GZ, which is both geographically and culturally very close to HK. In our view this finding is mainly due to the fact that the predominant models of entrepreneurial intentions have been designed to explain *opportunity-driven entrepreneurial intentions* rather than *necessity-driven entrepreneurial intentions*. Hence, there remains scope for future research developing models of *necessity-driven entrepreneurial intentions*, fitting contexts with poor prospects of salaried employment and low opportunity costs of self-employment.

[23] Given the close cultural ties between HK and GZ and given the fact that differences between the two samples with respect to the personal traits considered are overall very small, cultural factors are unlikely to be a main factor.

References

Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, *50*(2), 179–211.

Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, *24*(3), 233–247.

Bandura, A. (1977). *Social Learning Theory*. Englewood Cliffs, N. J.: Prentice-Hall.

Baron, R. A. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship's basis "why" question. *Journal of Business Venturing, 19*(2), 221–239.

Baron, R. A. (2008). The role of affect in the entrepreneurial process. *Academy of Management Review, 33*(2), 328–340.

Becker, G. S. (1975). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education.* New York: National Bureau of Economic Research.

Bickenbach, F., & Liu, W.-H. (2010). On the role of personal relationships for doing business in the Greater Pearl River Delta, China. *China Economic Journal*, *3*(3), 281–306.

Bickenbach, F., & Liu, W.-H. (2012). Firm characteristics and informal governance of business operations in the Pearl River Delta, China. *Zeitschrift für Wirtschaftsgeographie*, *56*(1-2), 25–42.

Bird, B. (1988). Implementing entrepreneurial ideas: The case for intentions. *Academy of Management Review*, *13*(3), 442–453.

Bosma, N., Wennekers, S., & Amorós, J. E. (2012). *Global Entrepreneurship Monitor 2011 Extended Report: Entrepreneurs and Entrepreneurial Employees across the Globe*. Babson Park, MA.: Babson College.

Boyd, N. G., & Vozikis, G. S. (1994). The influence of self-efficacy on the development of entrepreneurial intentions and actions. *Entrepreneurship: Theory & Practice, 18*(4), 63–77.

Busenitz, L. W., & Lau, C.-M. (1996). A cross-cultural cognitive model of new venture creation. *Entrepreneurship: Theory & Practice, 20*(4), 25–39.

Caird, S. (1991). Testing enterprising tendency in occupational groups. *British Journal of Management, 2*(4), 177–186.

Child, J., & Möllering, G. (2003). Contextual confidence and active trust development in the Chinese business environment. *Organization Science*, *14*(1), 69–80.

Chlosta, S., Patzelt, H., Klein, S. B., & Dormann, C. (2012). Parental role models and the decision to become self-employed: The moderating effect of personality. *Small Business Economics*, *38*(1), 121–138.

Clarke, D., Murrell, P., & Whiting, S. (2008). The role of law in China's economic development. In: L. Brandt, & T. G. Rawski (Eds), *China's Great Economic Transformation*. 375–428. New York: Cambridge University Press.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, *16*(3), 297–334.

CRN (2009). *No Easy Life for University Graduates (Daxuesheng "Yizu"huo de bu yi)"*. Hong Kong: China Review News. URL: http://www.chinareviewnews.com/doc/1011/7/8/1/101178139.html?coluid=7&kindid=0&docid=101178139.

Davidsson, P. (1995). *Determinants of Entrepreneurial Intentions*. RENT IX Conference. Piacenza, Italy, Nov 23-24.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, *18*(3), 301–331.

Djankov, S., Qian, Y., Roland, G., & Zhuravskaya, E. (2006a). Who are China's entrepreneurs? *American Economic Review*, *96*(2), 348–352.

Djankov, S., Qian, Y., Roland, G., & Zhuravskaya, E. (2006b). Entrepreneurship in China and Russia compared. *Journal of the European Economic Association*, *4*(2-3), 352–365.

Dohse, D., & Walter, S. (2012). Knowledge context and entrepreneurial intentions among students. *Small Business Economics*, *39*(4), 877–895.

Douglas, E. J., & Shepherd, D. A. (2002). Self-Employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. *Entrepreneurship: Theory & Practice*, *26*(3), 81–90.

Dunn, T., & Holtz-Eakin, D. (2000). Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links. *Journal of Labor Economic*s, *18*(2), 282–305.

Dunning, J. H., & Kim, C. (2007). The cultural roots of Guanxi: An exploratory study. *World Economy*, *30*(2), 329–341.

Evans, D. S., & Jovanovic, B. (1989). An estimated model of entrepreneurial choice under liquidity constraints. *Journal of Political Economy*, *97*(4), 808–827.

Evans, D. S., & Leighton, L. S. (1989). Some empirical aspects of entrepreneurship. *American Economic Review*, *79*(3), 519–535.

Forbes (2012). *What You May Not Know About China*. URL: http://www.forbes.com/sites/jackperkowski/2012/07/20/what-you-may-not-know-about-china/.

Gartner, W.B., Shaver, K.G., Gatewood, E.J., & Katz, J. A. (1994). Finding the entrepreneur in entrepreneurship. *Entrepreneurship: Theory & Practice*, *18*(3), 5–10.

Hansemark, O. C. (2003). Need for achievement, locus of control and the prediction of business start-ups: A longitudinal study. *Journal of Economic Psychology, 24*(3), 301–319.

Heinrichs, S., & Walter, S. (2013). *Who Becomes an Entrepreneur? A 30-Years-Review of Individual-Level Research and an Agenda for Future Research.* URL: http://hdl.handle.net/10419/68590.

Henley, A. (2004). Self-employment status: The role of state dependence and initial circumstances. *Small Business Economics*, *22*(1), 67–82.

House, R. J., Shane, S. A., & Herold, D. M. (1996). Rumors of the death of dispositional research are vastly exaggerated. *Academy of Management Review, 21*(1), 203–224.

IWEP (2013). *A Seasonal Report on Global Macroeconomy*. Beijing: Institute of World Economics and Politics. URL: http://www.iwep.org.cn/upload/2013/07/d20130711143341946.pdf.

Kelley, D., Singer, S., & Herrington, M. (2012) *The Global Entrepreneurship Monitor 2011 Gobal Report*. URL: http://www.gemconsortium.org/docs/download/2409.

Krueger, N. F. (1993). The impact of prior entrepreneurial exposure on perceptions of new venture feasibility and desirability. *Entrepreneurship: Theory & Practice, 18*(1), 5–21.

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

Mueller, P. (2006). Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? *Small Business Economics*, *27*(1), 41–58.

Pistrui, D., Huang, W., Oksoy, D., Jing, Z., & Welsch, H. (2001). Entrepreneurship in China: **c**haracteristics, attributes, and family forces shaping the emerging private sector. *Family Business Review*, *14*(2), 141-152**.**

Qunlian, H. (2011). The major difficulties and countermeasures of current university graduates' entrepreneurship in China. *Journal of Chinese Entrepreneurship, 3*(3), 228–239.

Scherer, R. F., Adams, J. S., Carley, S. S., & Wiebe, F. A. (1989). Role model performance effects on development of entrepreneurial career preference. *Entrepreneurship: Theory & Practice, 13*(3), 53–71.

Shapero, A. (1975). The displaced, uncomfortable entrepreneur. *Psychology Today, 9*, 83–88.

Shapero, A., & Sokol, L. (1982). The social dimension of entrepreneurship. In: C.A. Kent, D.L. Sexton, & K.H. Vesper (Eds). *Encyclopedia of Entrepreneurship.* 72–90. Englewood Cliffs, N. J.: Prentice-Hall.

Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programs raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business Venturing*, *22*(4), 566–591.

Standifird, S. S., & Marshall, R. S. (2000). The transaction cost advantage of Guanxi based business practices. *Journal of World Economics*, *35*(1), 21–42.

Stewart Jr., W. H., Watson, W. E., Carland, J. C., & Carland, J. W. (1999). A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers. *Journal of Business Venturing, 14*(2), 189–214.

World Bank (2008). *Doing Business in China 2008*. Washington, DC: World Bank Group, URL: http://www.doingbusiness.org/subnational/exploreeconomies/China.aspx.

XinhuaNet (2013). *Decent Behaviour is Key to Solve the Unemployment Problem (Jiaotashidi caineng pojie daxuesheng jiuyenan)*. Beijing. URL: http://news.xinhuanet.com/comments/2013-05/18/c_115817919.htm.

Yan Y. (2013). *Entrepreneurship Opportunities in the Next Ten Years in China (Zhongguo jingji weilai shinian de chuangye jihui*). URL (Recruitment Program of Global Experts): http://www.1000plan.org/qrjh/ article/36614.

Appendix: Survey questionnaire (relevant parts only)

SEPref (Preference for self-employment)

When you contemplate whether or not to become self-employed, how important are the following considerations as an argument in favour of becoming self-employed? (1 – not important at all; 5 – very important)	
As a self-employed person, I would be my own boss.	1 2 3 4 5
As a self-employed person, I would be able to fulfil myself.	1 2 3 4 5
As a self-employed person, I would earn a higher salary than as an ordinary employee.	1 2 3 4 5
As a self-employed person, I would deal with challenging tasks.	1 2 3 4 5
As a self-employed person, I would bear great responsibilities.	1 2 3 4 5
As a self-employed person, I would be able to contribute to the well-being of my home-region or country.	1 2 3 4 5
As a self-employed person, I would receive particular appreciation from society at large.	1 2 3 4 5

SEInt (Having clear self-employment intention or not) / *SEInt_ord* (Having no clear s-e-intention or having clear intention with different intensities)

The following three statements are related to your attitude and plan for self-employment. Please indicate how strongly you agree with these statements. (1 – completely disagree; 5 – completely agree)	
(a) It is clear to me that I will try to be self-employed as soon as possible.	1 2 3 4 5
(b) I want to become self-employed within 5 years after my graduation.	1 2 3 4 5
(c) I want to become self-employed someday in the future.	1 2 3 4 5

NA_W (Work-related need for achievement)

To what extent can the following statements be said to apply to you? (1 – completely disagree; 5 – completely agree)	
Hard work is something I like to avoid.	1 2 3 4 5
I would rather do tasks at which I feel confident and relaxed than ones which appear challenging and difficult.	1 2 3 4 5

NA_B (Benefit-related need for achievement)

To what extent can the following statements be said to apply to you? (1 – completely disagree; 5 – completely agree)	
I frequently think about ways to earn a lot of money.	1 2 3 4 5
I believe I would enjoy having authority over other people.	1 2 3 4 5
I care about performing better than others on a task.	1 2 3 4 5
I would like an important job where people look up to me.	1 2 3 4 5

NI (Need for independence)

To what extent can the following statements be said to apply to you? (1 – completely disagree; 5 – completely agree)	
In group work …	
… It is important to me having freedom of choice over when I do my work.	1 2 3 4 5
… I prefer to determine the content of my work as far as possible on my own.	1 2 3 4 5
… I would rather set the sequence of my tasks on my own.	1 2 3 4 5
… I dislike being subordinated to other people.	1 2 3 4 5

Risk (Risk-taking propensity)

In the following you will be confronted with 5 choice situations. In each case you decide between participating in one of two lotteries (lottery A or lottery B). Please, indicate for each case which of the two lotteries you would prefer. In every situation please imagine that you are a person possessing a total wealth of 10,000 HKD.		
Situation (1)	□ lottery A:	a 30% chance of winning 1,300 HKD and a 70% chance of winning 1,100 HKD
	□ lottery B:	a 30% chance of winning 2,500 HKD and a 70% chance of winning 100 HKD
Situation (2)	□ lottery A:	a 40% chance of winning 1,300 HKD and a 60% chance of winning 1,100 HKD
	□ lottery B:	a 40% chance of winning 2,500 HKD and a 60% chance of winning 100 HKD
Situation (3)	□ lottery A:	a 50% chance of winning 1,300 HKD and a 50% chance of winning 1,100 HKD
	□ lottery B:	a 50% chance of winning 2,500 HKD and a 50% chance of winning 100 HKD
Situation (4)	□ lottery A:	a 60% chance of winning 1,300 HKD and a 40% chance of winning 1,100 HKD
	□ lottery B:	a 60% chance of winning 2,500 HKD and a 40% chance of winning 100 HKD
Situation (5)	□ lottery A:	a 70% chance of winning 1,300 HKD and a 30% chance of winning 1,100 HKD
	□ lottery B:	a 70% chance of winning 2,500 HKD and a 30% chance of winning 100 HKD

Note: In the questionnaire for Guangzhou the corresponding amounts were RMB 1,000 yuan (total wealth), 130 yuan and 110 yuan (pay-offs lottery A), and 250 yuan and 10 yuan (pay-offs lottery B), respectively.

RM_P / *RM_OR* / *RM_F* (Existence of entrepreneurial role model among parents, other relatives and friends and acquaintances, respectively)

Do you know anybody from the following social groups who is/was self-employed i.e., a person running a small or large business or working as a free lancer? If yes, how strongly does his/her experience affect your impression of self-employment? (1 – no influence; 5 – very strong influence)	
Parents	□ no □ yes: 1 2 3 4 5
Grandparents and siblings	□ no □ yes: 1 2 3 4 5
Other relatives	□ no □ yes: 1 2 3 4 5
(Previous) classmates/co-workers	□ no □ yes: 1 2 3 4 5
(Previous) neighbours and/or people you know from the same home town	□ no □ yes: 1 2 3 4 5
Other friends and other acquaintances	□ no □ yes: 1 2 3 4 5

Note: Constructing role model variables is based on yes / no answers, only. “Grandparents and siblings” and “Other relatives” are aggregated to “Other relatives” (RM_OR), “(Previous) classmates/co-workers”, “(Previous) neighbours and/or people you know from the same home town” and “Other friends and other acquaintances” are aggregated to “Friends and acquaintances” (RM_F).

ExS_P / *ExS_OR* / *ExS_F* (Expected support from parents, other relatives and friends and acquaintances, respectively)

To deal with various critical challenges for starting/running your own business, how much support do you expect to obtain from the following social groups? (1 – no support at all; 5 – very much support)			
	Parents	Other relatives	Friends and acquaintances (also incl. classmates, co-workers, neighbours, people you know from your home town)
Financing and accessing other material resources	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Getting business information and know-how	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Getting technological information and know-how	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Getting information related to governmental laws and regulations	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Establishing/maintaining business contacts	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Establishing/maintaining political contacts	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
Others:	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

Age (Age in years)

Year of Birth: _____

Gender

Gender: □ Female □ Male

SEExp (Having experience in self-employment or not)

Besides your studies, are you currently running your own business?
□ no
□ yes, the firm is my main source of income.
□ yes, the firm serves as a sideline.

Note: In constructing the *SEExp* variable both yes-options are treated as "yes".

University and major subject of study:

Please specify:
Your university:_____ and your major: _____

Table 1 Descriptive Statistics

		HK					GZ				
Name	**Description**	**Mean**	**SD**	**Min**	**Max**	**Obs**	**Mean**	**SD**	**Min**	**Max**	**Obs**
SEPref	Preference for self-employment	3.01	0.79	1.29	4.71	300	3.67	0.74	1	5	603
SEInt	Having clear self-employment intention (1) or not (0)	0.37	0.48	0	1	300	0.59	0.49	0	1	608
SEInt_ord	Having clear intention and planning to become self-employed … as soon as possible (3), … within 5 years after graduation (2),… someday in the future (1); having no clear intention to become self-employed (0)	0.55	0.86	0	3	300	0.97	1.04	0	3	608
Personal Traits											
NA_W	Work-related need for achievement	2.88	0.55	1.5	4.5	300	2.90	0.93	1	5	606
NA_B	Benefit-related need for achievement	3.35	0.64	1.5	5	300	3.37	0.68	1	5	595
NI	Need for independence	3.07	0.71	1.75	5	300	3.49	0.69	1	5	606
Risk	Risk-taking propensity	2.30	1.72	0	5	300	2.42	1.52	0	5	604
Role Model											
RM_P	At least one parent has been self-employed (1), otherwise (0)	0.21	0.41	0	1	300	0.40	0.49	0	1	584
RM_OR	Knowing at least one relative who has been self-employed (1), otherwise (0)	0.42	0.49	0	1	300	0.72	0.45	0	1	574
RM_F	Knowing at least one friend/acquaintance who has been self-employed (1), otherwise (0)	0.50	0.50	0	1	300	0.69	0.46	0	1	570
Expected support											
ExS_P	Expected support from parents on average	1.66	0.93	1	5	300	2.64	0.99	1	5	586
ExS_OR	Expected support from other relatives on average	1.62	0.70	1	3.67	299	2.74	0.91	1	5	578
ExS_F	Expected support from friends and acquaintances on average	1.93	0.48	1	3.5	299	3.39	0.91	1	5	579
Controls											
Age	Age (in years)	22.9	2.15	20	32	300	22.2	1.26	19	31	605
Gender	Gender: female(0)/ male(1)	0.56	0.50	0	1	300	0.57	0.50	0	1	607
SEExp	Having experience in self-employment (1) or not (0)	0.19	0.40	0	1	300	0.04	0.20	0	1	608
BusAd	Business Administration as major field of study (1), otherwise(0)	0.31	0.46	0	1	300	0.20	0.40	0	1	585
Econ	Economics as major field of study (1), otherwise(0)	0.11	0.31	0	1	300	0.20	0.40	0	1	585
CompSc	Computer Science as major field of study (1), otherwise(0)	0.13	0.34	0	1	300	0.13	0.34	0	1	585
Eng	Engineering as major field of study (1), otherwise(0)	0.25	0.44	0	1	300	0.27	0.44	0	1	585
SoSc	Social Sciences/Geography as major field of study (1), otherwise(0)	0.20	0.40	0	1	300	0.20	0.40	0	1	585

Table 2 Distribution of intensity of self-employment intentions (*SEInt-ord*)

SEInt_gen / Region	0	1	2	3	Total
HK	189 (63%)	77 (26%)	14 (5%)	20 (7%)	300 (100%)
GZ	249 (41%)	219 (36%)	49 (8%)	91 (15%)	608 (100%)

Having no clear intention (0); having clear intention and planning to become self-employed … someday in the future (1), … within 5 years after graduation (2), … as soon as possible (3).

Table 3 Regression results for self-employment preferences

	HK	GZ
Personal traits		
NA_W	0.1760***	0.0363
	(0.0599)	(0.0342)
NA_B	0.2869***	0.2703***
	(0.0814)	(0.0475)
NI	0.0942	0.2173***
	(0.0637)	(0.0482)
Risk	0.0822***	0.0030
	(0.0231)	(0.0207)
Role model		
RM_P	0.4118***	0.0448
	(0.0817)	(0.0639)
RM_OR	0.2619***	0.1331*
	(0.0659)	(0.0750)
RM_F	0.0028	0.0504
	(0.0644)	(0.0729)
Controls		
Age	0.0079	–0.0206
	(0.0165)	(0.0263)
Gender	0.3782***	–0.0075
	(0.0839)	(0.0694)
SEExp	0.0516	0.1324
	(0.0897)	(0.1578)
Majors		
BusAd	0.0589	–0.0970
	(0.0993)	(0.0982)
Econ	0.1874	–0.0416
	(0.1223)	(0.1029)
CompSc	–0.0451	–0.1543
	(0.1214)	(0.1206)
Eng	–0.0144	–0.0107
	(0.1048)	(0.0937)
#obs.	300	519
R^2	0.5665	0.1501
F	26.60***	6.36***

Note: OLS estimates, constant not shown; Standard errors in parentheses; 2-tailed-tests, *** p< 0.01, ** p< 0.05, * p<0.1.

Table 4 Regression results for self-employment intentions (Hong Kong**)**

	SEInt		***SEInt_ord***	
	(1)	(2)	(3)	(4)
Personal Traits				
NA_W	0.2032		0.3199**	
	(0.1973)		(0.1631)	
NA_B	0.7942***		0.7738***	
	(0.2688)		(0.2297)	
NI	0.2776		0.3420**	
	(0.2130)		(0.1726)	
Risk	0.2093***	0.3350***	0.1390**	0.2044***
	(0.0755)	(0.0946)	(0.0657)	(0.0657)
SEPref		2.3361***		1.7018***
		(0.3698)		(0.2235)
Social Capital				
ExS_P	0.6807***	0.5231***	0.3692***	0.2003**
	(0.1356)	(0.1580)	(0.0922)	(0.0989)
ExS_OR	–0.1068	–0.1938	0.1118	0.5703
	(0.1662)	(0.1851)	(0.1235)	(0.1282)
ExS_F	0.1785	0.2488	0.2915	0.2980
	(0.2365)	(0.2961)	(0.1859)	(0.1955)
Controls				
Age	0.0929*	0.1308**	0.0390	0.0637
	(0.0521)	(0.0658)	(0.0411)	(0.0435)
Gender	0.8716***	0.3349	0.9183***	0.6875***
	(0.2779)	(0.3446)	(0.2367)	(0.2589)
SEExp	0.1411	0.0569	0.3920*	0.4515*
	(0.3022)	(0.3687)	(0.2274)	(0.2397)
BusAd	–0.3590	–0.7106*	–0.2084	–0.2508
	(0.3397)	(0.4245)	(0.2917)	(0.3107)
Econ	–0.1671	–0.2832	0.0524	0.1344
	(0.4186)	(0.4650)	(0.3392)	(0.3499)
CompSc	–0.7955**	–0.9158**	–0.7096**	–0.7894**
	(0.3993)	(0.4631)	(0.3566)	(0.3838)
Eng	–0.1596	–0.3147	–0.0810	–0.1796
	(0.3392)	(0.4034)	(0.2892)	(0.3082)
#obs.	298	298	298	298
Pseudo-R^2	0.5037	0.6571	0.4039	0.4926
LR	197.7***	257.9***	232.1***	283.0***

Note: columns (1) and (2) probit estimates, (3) and (4) ordered probit estimates, constant not shown; Standard errors in parentheses; 2-tailed-tests, *** p< 0.01, ** p< 0.05, * p<0.1.

Table 5 Regression results for self-employment intentions (Guangzhou)

	SEInt		***SEInt_ord***	
	(1)	(2)	(3)	(4)
Personal Traits				
NA_W	–0.0039		–0.0167	
	(0.0656)		(0.0553)	
NA_B	0.4971***		0.4353***	
	(0.0947)		(0.0808)	
NI	0.1766*		0.1554*	
	(0.0940)		(0.0797)	
Risk	0.0024	0.0033	0.0093	0.0091
	(0.0392)	(0.0388)	(0.0336)	(0.0334)
SEPref		0.4870***		0.4667***
		(0.0880)		(0.0772)
Social Capital				
ExS_P	–0.0864	–0.0733	–0.0676	–0.0607
	(0.0716)	(0.0710)	(0.0599)	(0.0597)
ExS_OR	0.1039	0.1185	0.0700	0.0850
	(0.0838)	(0.0823)	(0.0707)	(0.0698)
ExS_F	0.1511**	0.1167	0.0861	0.0471
	(0.0717)	(0.0713)	(0.0622)	(0.0622)
Controls				
Age	–0.0360	–0.0167	–0.0308	–0.0108
	(0.0496)	(0.0489)	(0.0420)	(0.0417)
Gender	0.3764***	0.4007***	0.3542***	0.3751***
	(0.1306)	(0.1279)	(0.1100)	(0.1083)
SEExp	0.6098*	0.4589	0.5169**	0.4470*
	(0.3294)	(0.3286)	(0.2457)	(0.2515)
Majors				
BusAd	–0.0940	–0.0130	–0.0037	0.0915
	(0.1898)	(0.1859)	(0.1550)	(0.1533)
Econ	–0.3963**	–0.3370*	–0.2208	–0.1821
	(0.1918)	(0.1880)	(0.1627)	(0.1596)
CompSc	–0.6898***	–0.5755**	–0.4825**	–0.3747**
	(0.2231)	(0.2222)	(0.1894)	(0.1901)
Eng	–0.3537**	–0.3654**	–0.1700	–0.1732
	(0.1787)	(0.1762)	(0.1490)	(0.1476)
#obs.	524	531	524	531
Pseudo-R^2	0.1095	0.1009	0.0584	0.0560
LR	77.3***	72.2***	74.7***	72.4***

Note: columns (1) and (2) probit estimates, (3) and (4) ordered probit estimates, constant not shown; Standard errors in parentheses; 2-tailed-tests, *** p< 0.01, ** p< 0.05, * p<0.1.