

# The influence of social capital on risk-taking propensity. A study on Chinese immigrant entrepreneurs

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**ABSTRACT** 

This paper studies the influence of social capital on immigrant entrepreneurs' risk-

taking propensity. The paper has a particular focus on Chinese immigrants and also

explores the effects of the so-called "guanxi", a specific form of social capital for

Chinese communities. The empirical research is based on a survey conducted in 2012

on Chinese immigrant entrepreneurs in Andalusia (Spain). An ordinal logistic

regression specification was employed to test the hypotheses. The results show that the

Chinese immigrant entrepreneurs with greater structural, relational and cognitive social

capital and better "guanxi" have a higher risk-taking propensity in their business

activity.

Keywords: risk-taking; social capital; entrepreneur; Chinese immigrant; guanxi

Introduction

The increase in business activities undertaken by immigrants in many countries around

the world remains a subject of growing interest for policy makers and theorists (Levie

2007; Fairchild 2008; Clark and Drinkwater 2010; Hormiga and Bolívar-Cruz 2014).

Migrant entrepreneurship is increasingly seen as a major driver for socioeconomic

development of the host and/or home countries (Dana 2007; Herman and Smith 2009;

Kloosterman and Rath 2010).

High rates of self-employment and entrepreneurship among migrants can have many

positive effects, such as bringing new skills to the labour market (Hunt 2011),

increasing domestic demand, and creating jobs with positive consequences on both

employment rates and social security systems (Lacomba and Lagos 2010). The

immigrants' businesses contribute significantly to innovation, the increase in

competition in the market, and the GDP growth (Anderson and Platzer 2006; Sole,

Parella, and Calvacanti 2007). This set of benefits is likely to be particularly relevant in

times of recession when standard employment opportunities fall and unemployment

rates increase.

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In the case of Spain, according to the Ministry of Employment and Social Affairs (MEYSS 2015), there are about 241,377 foreign workers registered as self-employed in the Social Security system. Immigrant self-employment represents around 7.7 % of all the self-employed in Spain. Likewise, both EU and non-EU immigrants presented higher entrepreneurial activity rates than the native Spanish population during the period 2005-2011 (Hernández 2012).

Studies in this field reveal that immigrants are people with strong motivation towards entrepreneurship, but have to face, to varying degrees, obstacles and situations of uncertainty associated with unfamiliarity with the culture and society of the host countries. However, immigrants tend to develop strong ties with other migrants in their own ethnic community within the host region. They may use this ethnic social capital to overcome some of the previously mentioned limitations. Ethnic social capital may also encourage immigrants to perceive business activity as a less risky situation.

This paper aims to contribute towards a better understanding of the influence of social capital on risk-taking by immigrant entrepreneurs. To the best of our knowledge, no empirical research has examined this influence in previous studies. Therefore, an adequate explanation of these interrelations has yet to be provided.

Social capital can exist in various forms. This paper, following Nahapiet and Ghoshal (1998), differentiates between the structural, relational, and cognitive dimensions of social capital. Chinese migrants benefit from a type of social capital, known as 'guanxi', which is specific to Chinese culture and has very strong historical roots in Chinese society. 'Guanxi' represents a socio-cultural institution consisting of personal ties, delimited by implicit moral contracts, which establish the basis for long-term relationships of mutual commitment and loyalty. In this paper, we defend the thesis that social capital, and particularly 'guanxi', influences the entrepreneurial risk-taking in Chinese immigrants' businesses.

The paper is organised as follows. The second section reviews the literature, presents the theoretical framework, and proposes the research hypotheses to be tested. The third section presents the research methodology and some descriptive results. In the fourth section, our research hypotheses are tested using ordinal logistic regression models. The paper ends by discussing the results and presenting the final conclusions.

# Literature review and theoretical framework

In this section, firstly the main theories on migrant entrepreneurship are presented. Secondly, the role of risk in entrepreneurship is analysed, dedicating special attention to risk-taking by migrant entrepreneurs. Thirdly, we reflect on how the migrant entrepreneurs' social capital influences their business activity. Finally, the research hypotheses to be tested in the empirical section are proposed.

# Theories of migrant entrepreneurship

In recent times, the subject of immigrant entrepreneurship has gained momentum among entrepreneurship researchers as a consequence of the increase in business activities undertaken by groups of immigrants in economically advanced countries. Research in this area seeks to identify the factors behind the rise of immigrant entrepreneurs, the differences between these immigrant entrepreneurs and native entrepreneurs, and also between various ethnic groups of immigrants.

The analytical approaches adopted in this field range from those that focus on cultural aspects of the immigrant population (Light and Gold 2000; Engele 2001), to those that consider contextual and structural elements in the host societies (Drori, Honig, and Wright 2009; Urbano, Toledano, and Ribeiro-Soriano 2011).

The first group of theories stresses the role of values and ethnic resources in entrepreneurial activity, and refers to all the socio-cultural elements that the immigrant entrepreneurs use to set up and develop their businesses, and from which they benefit actively or passively (Ram et al. 2013; Smallbone, Bertotti, and Ekanem 2005). Ethnic resources may materialise into something tangible (financing) or intangible (information, advice, guidance) (Light and Gold 2000), and may have their origin in the confidence and friendship that the entrepreneur maintains with other people of the same ethnic group (Rieta et al. 2014).

The second group of studies focuses on the various contextual elements that encourage immigrants towards self-employment, such as barriers to enter paid employment, low wages, workplace discrimination, and the particular business structure of a given host country or region (Timmermans 1986). These obstacles operate as 'push' factors that positively affect the immigrants' decision to become entrepreneurs (Light and Gold

2000). Seeking a way to make a living constitutes, in these cases, the immigrants' main reason for becoming self-employed.

In addition, the contextual perspective emphasises the importance of the socioeconomic, institutional and regulatory conditions in the host country in the explanation for entrepreneurship in the immigrant population (Ram and Jones 1998). These elements determine the opportunities and threats which influence the decision and process of business creation by immigrants (Light and Gold 2000; Ndoen et al. 2002; Brzozowski, Cucculelli, and Surdej 2014). Together with economic benefit and improvement in quality of life, self-employment, as a way of maintaining certain independence and of achieving greater integration into the host society, is the main justification for the setting up of businesses by the immigrant group from this last perspective.

Despite the diversity of theories formulated in this field of research, and the large number of empirical studies, an adequate explanation of this phenomenon has yet to be provided (Kloosterman and Rath 2010), and an in-depth study of the determinants of migrant entrepreneurship is therefore necessary. Specifically, to date, very little empirical research has explicitly examined the relationship between social capital and risk-taking behaviour of migrant entrepreneurs.

## Migrant entrepreneurs and risk-taking

As mentioned earlier, recent studies suggest that immigrants tend to be a collective with a high entrepreneurial spirit (Levie (2007) for the UK; Collins (2002) for Australia; Fairlie and Robb (2008) for the United States). These two processes, immigration and entrepreneurship, have the assumption of risk in common (Verheul et al. 2002).

On the one hand, risk and uncertainty has been associated to entrepreneurship for centuries. Cantillon (1755) first proposed the term entrepreneur linked directly to the willingness to take risks. Later, Knight (1948) developed this idea and defined the entrepreneur as a person who adopts responsible decisions in an environment of uncertainty. Risk-taking has since become one of the most commonly used concepts by researchers to describe entrepreneurship.

Various studies in this field show the positive and significant relationship between risk tolerance and self-employment (Ekelund et al. 2005; Van Praag and Cramer 2001). Researchers have considered the propensity for risk-taking as a personality characteristic of entrepreneurs, and several empirical studies show that entrepreneurs

have a high capacity for risk-taking in economic activity (Sexton and Bowman 1985; Buttner and Rose 1988). Other researchers have suggested that entrepreneurial success and performance depends on the risk-taking propensity (Stewart et al. 1999), and the capacity to adapt to and tolerate ambiguity (Bhide 2000). Therefore, it is generally accepted that individuals with lower risk aversion are more likely to start a business (Van Praag and Cramer 2001), and entrepreneurs are considered as more inclined to take risks than other people (Douglas and Shepherd 1999; Anh 2010).

However, empirical studies do not provide conclusive support for this claim (Gartner and Liao 2012), and numerous authors reject the relationship between risk tolerance and entrepreneurship by asserting no significant differences from the rest of the population (Brockhaus 1980; Macko and Tyszka 2006). According to a number of authors, entrepreneurs are unwilling to take more risk than non-entrepreneurs (Busenitz and Barney 1997; Gartner and Liao 2012). Indeed, certain authors claim that entrepreneurs do not actually perceive themselves to be doing anything risky at all (Palich and Bagby 1995; Simon, Houghton, and Aquino 2000).

This lack of consensus concerning entrepreneurs' propensity to take risk may be partly explained by the fact that many entrepreneurs seem to take risks only after carefully analysing the situation and evaluating the probability of outcomes. Likewise, Macko and Tyzska (2009) consider entrepreneurs are actually more risk-prone than other people, but only in skill-related risky situations and not in purely chance-related risky situations. The difference between these two kinds of risk is the extent to which the entrepreneur has control over the outcome. Thus, it is believed that entrepreneurs accept moderate risks in situations where they have a certain degree of control or skill in realising a profit (Sarasvathy, Simon, and Lave 1998). From this perspective, it is suggested that entrepreneurs are able to venture into a new business because they have a different perception of risk (Palich and Bagby 1995; Simon et al. 2000). Entrepreneurs have to develop their businesses and make decisions in an uncertain environment (Cramer et al. 2002), and therefore they hold certain beliefs about future outcomes and chances for success when estimating the riskiness of the situation (Baron 1998).

The risk associated with running a business venture is related to the experience, abilities and knowledge of the entrepreneur (Gifford 2003). Hence, risk as perceived by entrepreneurs depends on their self-confidence regarding their entrepreneurial knowledge, skill and abilities (Krueger and Dickson 1994), and on the perception of

control on the outcomes of their entrepreneurial behaviour (Sitkin and Weingart 1995; Markman, Balkin, and Baron 2005). This result supports the view that some knowledge of the entrepreneurial context can influence future entrepreneurs' confidence and reduce their perception of uncertainty (Caliendo, Fossen, and Kritikos 2014; Hormiga and Bolivar-Cruz 2014).

## Entrepreneurship and social capital

Although many authors have addressed the definition of social capital (Bourdieu 1977; Coleman 1988; Putnam 1993), the precise delimitation of this concept remains a complicated issue. Among other reasons this is due to the fact that social capital exists in different forms and dimensions (Koka and Prescott 2002; Landry, Amara, and Lamari 2002). In this paper, we follow Nahapiet and Ghoshal (1998), who classified social capital into three dimensions: the structural, the relational and the cognitive dimensions:

- a) Structural social capital refers to the relationships between the actors in the form of social connections and in different configurations of the social network (in terms of features such as density, connectivity, stability or ties).
- b) Relational social capital refers to the nature of the personal relationships developed through a history of interactions (Granovetter 1973), and takes the form of trust, norms, obligations and identification with other individuals, among other aspects. Relational capital is manifested in 'strong' versus 'weak' ties, where weak ties (those characterised as distant and by infrequent interaction) are more likely to be sources of new information than are strong ties. Strong ties tend to be connected to others who are close to a knowledge seeker and so likely to be conveying information that the seeker already knows. Trust, the element that has received the most attention in the literature from among these interpersonal factors (e.g. Fukuyama 1996), plays a pivotal role in the classification of strong and weak ties.
- c) Finally, cognitive social capital refers to resources such as shared codes, common languages, narratives and interpretations, and shared visions and values, all of which are frequently derived from a common cultural background.

Previous research has emphasised that the influence of social networks on entrepreneurship is crucial, since it conditions both the process of new business creation and the later entrepreneurial success (Johannisson 1995; Greve and Salaff 2003). In particular, the literature argues that social capital plays an important role by facilitating the acquisition of knowledge, information, funding, labour, and other resources for individuals and organisations (Davidsson and Hoing 2003; Gedajlovic et al. 2013).

Through social relationships, entrepreneurs can obtain useful information and knowledge and make reasonable business decisions. Difficulties in financing often hinder entrepreneurship. Nevertheless, network ties and mutual trust can facilitate the access to informal finance, a resource widely used by immigrants (funding from family, friends and fools (FFF) or other members of the ethnic community, even from suppliers). Social relationships can also prove helpful in the process of recruitment and selection of workers, and can act as a factor towards increasing their work commitment through personal relationships, mutual trust, common values and a common vision shared by the business owner and the staff. In addition, social capital can facilitate the detection of business opportunities (Doh and Zolnik 2011), can reduce the transaction costs both in the market and within organisations (Landry et al. 2002), and may favour collective action in the entrepreneurial process.

Furthermore, social capital allows risks to be shared and reduced from an individual perspective. Members of a social network might expect to receive support from other members when experiencing problems or failing in their business ventures. Therefore, social capital might stimulate members of a social network to start up a business, engage in innovations and assume higher risk levels (Macke and Dilly 2010).

This broad set of resources may also increase entrepreneurs' self-efficiency and perception of control on the results of their entrepreneurial behaviour, and can therefore reduce uncertainty and the risk perceived in the entrepreneurial activity (Lipparini and Sobrero 1994; DeCarolis, Litzky, and Eddleston 2009).

The extent to which entrepreneurs are embedded inside networks of relationships may offset the risk of entering into new ventures (Janney and Dess 2006). Indeed, in one of the few studies on the influence of various dimensions of social capital on risk perception, Nigama and Jawaha (2011) found that the cognitive dimension and structural dimension of social capital positively influence risk perception of an entrepreneur. However, they observed an inverse relationship between the relational dimension and the risk perception.

## 'Guanxi' as a form of social capital

In recent years, the Chinese term 'guanxi' has often appeared in Western scientific studies and gained status as a relevant socio-cultural construction in the literature on cultural Anthropology, Sociology, Psychology, political science and management and business administration studies (Hwang 1987; Xin and Pearce 1996; Chen et al. 2013). Furthermore, several studies have explored the influence of 'guanxi' on entrepreneurial activity and firm performance (Tsang 1998; Troilo and Zhang 2012).

'Guanxi' can be defined at different levels and from different perspectives. In this paper, we follow Chen and Chen (2004), who define it as a casual and unique personal connection between two individuals that is delimited by an implicit psychological contract. This contract implies complying with social norms and maintaining a long-term relationship based on a mutual commitment of loyalty associated with certain obligations. A good quality 'guanxi' is also characterised by mutual trust between individuals derived from numerous interactions within a framework of reciprocity. Hwang (1987) and Xin and Pearce (1996) noted that 'guanxi' is a form of social capital since it implies an exchange of favours and obligations.

There are various typologies of 'guanxi' with different features. Family, personal, and informal 'guanxi' are characterised by a more affective nature, whereas non-family, impersonal, and contractual 'guanxi' are relatively more instrumental. Friends, colleagues, and acquaintances fall in between, although close friendship can be family-like. In the workplace and in business relationships, 'guanxi' presents a mixture of family and non-family, personal and impersonal characteristics (Chen et al. 2013). In this respect, 'guanxi' works in concentric circles: the closest and strongest relationships, as the ones with relatives, are situated at the centre of the circle. Other relationships, such as those with colleagues, friends and other acquaintances, are distributed in outer circles with distances to the centre that indicate the strength of relationships and the confidence level (Yang 1994).

A combination of different 'guanxi' is designated by the Chinese term 'guanxiwang', which refers to a network of 'guanxi'. Thus, the 'guanxiwang' of an individual is formed by his/her network of social relations including all the direct and indirect 'guanxi'. 'Guanxi' is manifested by the 'renqing' and 'mianzi'. The 'mianzi' is an intangible asset that represents the power and personal status determined by the

individual's social position and material wealth (Park and Luo 2001). When an individual has a high level of 'mianzi', he/she can attain multiple favours within the 'guanxiwang' and can also provide significant help to other members of the 'guanxiwang' thanks to his/her sound socio-economic position. The 'renqing' is another Chinese cultural institution related to 'guanxi' (Park and Luo 2001). 'Renqing' can be defined as an informal social obligation derived from the use of 'guanxi', and represents a private advantage of a member within 'guanxiwang'. The rules of reciprocity also regulate renqing (Tsui and Farh 1997). Those who fail to follow these rules lose their position in the 'guanxiwang' and thus lose the benefits that derive from it.

# Risk, Social capital and migrant entrepreneurship. Some research hypotheses

Risk and uncertainty are central to migration behaviour. Migration, irrespective of the individual's origin or ethnicity, often constitutes a high-risk situation characterised by uncertain income (Katz and Stark 1987), an uprooting experience, and significant social stress (Noh and Avison 1996). Migrants move towards an unfamiliar place, a new social, economic, and political context. They must face numerous decisions with imperfect knowledge about the host country. Many may even have left secure jobs or sold their homes in their homelands in the hope of finding better conditions in their new country of residence. Indeed, migrants tend to be favourably 'self-selected' towards risk-taking. Therefore, their decision to venture into a migration process provides an indicator that they are more likely than non-migrants to be risk tolerant (Levie 2007) and have a greater capacity for risk-taking (Constant and Zimmermann 2006).

Moreover, it has been suggested that exposure to the migration experience might modify risk perceptions and, thus, increase the inclination to become involved in entrepreneurial activity. In this respect, several studies suggest that immigrants have a greater capacity for risk-taking (Zimmermann 1995; Constant and Zimmermann 2006; Clark and Drinkwater 2010).

Immigrants have to overcome particular obstacles when trying to start up and develop a business project due to their insufficient language skills, the difficulty that they experience accessing the formal financial sector and, sometimes, due to their irregular legal or administrative status. Social capital is especially relevant for migrant entrepreneurship since immigrants are highly dependent on access to local contacts and support from local people to acquire sufficient knowledge about a new society and

business opportunities (Zhou 2004; Salaff, Greve, and Wong 2006). Immigrant entrepreneurs' business success depends on their integration into local business networks because these are essential for finding business opportunities and resources. However, migrants usually have weak social links with the native population in the host region.

In contrast, immigrants often have pre-existing links with other migrants in their destination area and tend to develop strong ties with other migrants in their own ethnic community within the host region. In this respect, 'guanxi', as an ethnic form of social capital, can allow Chinese immigrant entrepreneurs access to potential customers, suppliers, financiers, and other resources. Guanxi also acts as a security blanket for the entrepreneur and could bolster not only the sense of control over an uncertain outcome, but also augment risk propensity (Lipparini and Sobrero 1994). Furthermore, a high level of interpersonal trust in a society can enable immigrant entrepreneurs to engage in risky new initiatives because they can count on others and are less afraid of failure.

To sum up, the risk perceived by entrepreneurs depends on the self-confidence in their entrepreneurial knowledge, skill and abilities, and on their perception of control over the outcomes of their entrepreneurial behaviour. Furthermore, the set of resources provided by social capital may increase entrepreneurs' self-efficiency and perception of control. In this paper, we consequently propose that a high level of social capital stimulates risk-taking in migrant entrepreneurs' businesses.

Specifically, we propose the following four core hypotheses:

H1: A high level of structural social capital stimulates risk-taking by Chinese immigrant entrepreneurs.

H2: A high level of relational social capital stimulates risk-taking by Chinese immigrant entrepreneurs.

H3: A high level of cognitive social capital stimulates risk-taking by Chinese immigrant entrepreneurs.

H4: A better 'guanxi' stimulates risk-taking by Chinese immigrant entrepreneurs.

## **Data and variables**

Our empirical research is based on a survey conducted in August and September of 2012 through personal interviews with 288 Chinese immigrants in Andalusia (Spain), of whom 130 were business owners and 158 were paid employees. Chinese people who had lived in Spain for at least three months were considered immigrants to differentiate them from mere tourists. Chinese immigrants between 15 and 65 years old were included in our target population regardless of their administrative status in Spain (even if they had obtained Spanish nationality). The sample obtained was representative of the working-age population of Chinese immigrants in Andalusia (about 11,760 Chinese people, when excluding individuals with a student visa) with a sample error of 6% and a confidence level of 95%. For the purposes of the current research, only the data for the Chinese business owners interviewed were considered.

The questionnaire comprised various aspects related to the personal characteristics of the immigrants interviewed, to their social capital resources, and also to their business activity. The questions regarding social capital were adapted from the questionnaire employed by Liu (2009). Since many Chinese immigrants do not have a good enough level of Spanish, a Chinese version of the questionnaire was employed in the fieldwork. The survey was conducted through personal interviews by Chinese interviewers. These two facts allowed for a very high response rate of above 90%.

Based on the information obtained in the survey, most of the Chinese immigrants had lived in Spain for a short time. Regarding the motivation for entrepreneurship, intrinsic motivation was stronger among the self-employed in the sample than extrinsic motivation. Furthermore, most of the Chinese immigrant entrepreneurs had no other business owner in the family (see Table 1).

## INSERT TABLE 1 AROUND HERE

Among the business owners interviewed, 36.2% managed restaurants and 56.2% retail trade businesses. The remaining 7.6% of the entrepreneurs surveyed had launched cybercafés or Internet points, travel agencies, real estate agencies and warehouses. Regarding the number of employees in the company, all Chinese businesses surveyed were small businesses with fewer than 50 workers.

In order to test the hypotheses proposed in Section 2, an empirical analysis has been carried out considering the following variables:

A. *Dependent variable: Risk-taking*. Our dependent variable is an ordinal variable which measures the Chinese immigrant entrepreneurs' attitude towards high-risk projects. This variable takes values between 1 and 7, value 1 indicating the lower level of risk-taking and value 7 indicating high willingness to tackle risky projects.

The average of this variable in our sample was 4.3, which indicates a medium-level predisposition towards high-risk projects. This value is higher than that obtained in a separate survey carried out in 2010, which included the same question but was addressed to native business owners in Andalusia. In that study, the risk-taking variable presented an average value of 3.1. This result seems to indicate that Chinese immigrants are characterised by a higher capacity to take risks compared to native business owners. This could be explained, as previously mentioned, by the self-selection associated to immigration and also by changes in the perception of risks that could be caused by the immigration experience.

- B. *Explanatory variables*. Our explanatory variables are measurements of the social capital and 'guanxi' resources of Chinese immigrants. The indicators employed (which aim to capture the different dimensions of social capital and 'guanxi') were obtained from a principal component analysis of the responses to the questions on social capital included in the questionnaire.
- Structural Social Capital (SSC): Those interviewed were asked to what extent they agreed with the descriptions presented in Table 2. The answers were coded using a Likert scale from 1 to 7, 1 indicating total disagreement and 7 absolute agreement. There is obviously a high correlation between the variables created from the answers to these questions. We therefore tried to capture the underlying factors among this group of variables by carrying out a principal component analysis. The value of the Kaiser-Meyer-Olkin (KMO) statistic was 0.868 and Bartlett's sphericity test showed a significant value for the Chi-square statistic. All the communalities attained values greater than 0.54. As a result of this analysis, only one principal component was obtained that captures 68.0% of the total variance (Table 2).

## INSERT TABLE 2 AROUND HERE

- Relational Social Capital (RSC): As for the structural social capital, those interviewed were asked to what extent they agreed with the descriptions presented in

Table 3. In this case, after carrying out a principal component analysis, a 0.898 value of the Kaiser-Meyer-Olkin statistic was obtained, indicating a very high level of sampling adequacy. Bartlett's test also showed a significant level. All the commonalities were greater than 0.647. The only principal component obtained explains 75.3% of the total variance (Table 3).

#### INSERT TABLE 3 AROUND HERE

- Cognitive Social Capital (CSC): Those interviewed were asked to what extent they agreed with the descriptions presented in Table 4. In this case, a KMO value of 0.838 was obtained and the Bartlett test also showed a significant result. The values of the communalities varied between 0.537 and 0.798, thereby meeting the conventional minimum requirement set. As a result, one principal component was obtained which captures 67.8% of the total variance (Table 4).

### **INSERT TABLE 4 AROUND HERE**

- *Guanxi*: this variable tries to capture the importance of the 'guanxi' relationships for the Chinese immigrants and is also measured from the questions presented in the survey. Interviewed were asked about their level of agreement with the descriptions presented in Table 5 (using a Likert scale from 1 to 7, with 1 meaning total disagreement, and 7 absolute agreement). In this case, the KMO value was 0.829, which is a sufficiently high level. Bartlett's test was also significant. The values of the commonalities varied between 0.678 and 0.793. As a result of this analysis, one component principal was obtained (Table 5).

#### INSERT TABLE 5 AROUND HERE

- C. *Control variables*. In the regression models presented in the following section, several control values were also considered in order to isolate the effect of the social capital variables on the dependent variable:
- *Time in Spain* (Time\_Spain): It is reasonable to presume that the longer Chinese immigrants are in Spain, the better they can assess risks because they have better understanding and more information of the rules of the Spanish market. In this respect, a variable indicating the number of years that Chinese immigrants had stayed in Spain was included in the analysis.

- Business owner in the family (Ent\_Fam): Having an entrepreneur in the family can facilitate access to information and experience that can be used for the evaluation of the potential risks and benefits. To capture this effect, a dummy variable was included that takes the value 1 when the respondents had a relative who was a business owner and takes the value 0 otherwise.
- Intrinsic motivation (In\_Mot): This variable captures the desire for independence as an entrepreneurship motivation. The entrepreneurs interviewed were asked about their degree of agreement with the statement 'wanting to be my own boss'. The answers were coded as an ordinal variable taking values from 1 to 7: 7 meaning full agreement, and 1 complete disagreement.
- Extrinsic motivation (Ex\_Mot): This variable captures the need to supplement family income as a business motivation. The answers were coded as an ordinal variable taking values from 1 to 7: 7 meaning full agreement, and 1 complete disagreement.

# Methodology and empirical results

An ordered logistic regression specification was employed to test our hypotheses. Since 'guanxi' is a special form of social capital within the Chinese community, its measurement, contents and characteristics are similar to those of social capital. Moreover, our variables for social capital capture both interactions with the 'locals' and with other Chinese immigrants. Therefore, when estimating the regression models, the inclusion of the 'guanxi' variable and other social capital variables together would, to a certain extent, have been redundant and would have caused multicollinearity problems. For this reason, our social capital variables and our 'guanxi' variable were separately incorporated into different models.

The results obtained are presented in Table 6 where Model 1 includes only the control variables, Model 2 includes the control variables and the social capital variables, and Model 3 gathers the control variables and the 'guanxi' variable.

Values of the Variance Inflation Factor (VIF) of the variables in these models are always less than 5. Furthermore, the highest value of condition indices of the variables is 17.456. These results allow serious multicollinearity problems to be ruled out.

The ordered logistic regression model involves the assumption that the parameters are the same for all categories such that the estimation results are a set of parallel lines, one for each category of the variable dependent. The test of parallel lines is used to evaluate the plausibility of this hypothesis by comparing the estimated model, which as a single set of coefficients for all categories, with a model, which has separate sets of coefficients for each category. In our case, the test of parallel lines showed no significant result, which indicates that the ordered regression model is suitable for this case.

None of the control variables included in the models is observed to be statistically significant. In the case of the variables for the time spent in Spain and the presence of other business-owners in the family, the signs of the coefficients vary, whereas in the case of the intensity of the two types of entrepreneurial motivation considered, the signs are positive.

The variables of social capital and 'guanxi' have positive signs and the effects are statistically significant in all the models. Consequently, H1, H2, H3, and H4 hypotheses were supported by our results.

Regarding the comparison of the social capital variables from the coefficients of the estimation, the structural social capital is the dimension that exerts a stronger influence on risk-taking. Next in importance is the relational dimension, followed by the cognitive dimension of social capital. The explanation for this may be that entrepreneurs need a lot of information to evaluate risks and a dense network of weak social ties can facilitate access to this information. Therefore, the Chinese immigrant entrepreneur's risk perception is particularly affected by this structural dimension of social capital.

### INSERT TABLE 6 AROUND HERE

As can be seen in Table 6, the goodness of fit of Model 3 with 'guanxi' is lower than in Model 2, with the variables of social capital. This fact may indicate that the manifestations of social capital in the form of collective relations with the Spaniards are particularly important as a factor in the willingness of Chinese entrepreneurs to take on risky projects. While our variables for social capital capture all the social interactions in which the interviewed were involved, the 'guanxi' variable is exclusively related to the social capital resources within the Chinese community. From this perspective, the

results indicate that both types of social capital resources are relevant and that those Chinese entrepreneurs who are more integrated into Spanish society have a higher willingness to take on risky projects.

#### Discussion

This study has sought to increase our understanding of the characteristics of immigrant entrepreneurship from a social perspective. Its aim was to empirically assess the impact of social capital on risk-taking propensity by Chinese immigrant entrepreneurs. The results reveal that social capital does indeed play a highly significant role in stimulating risk-taking by Chinese immigrant business owners in Andalusia (Spain). This seems to be due to the influence of social capital as a source of information and a mechanism to facilitate risk sharing and risk distribution within social groups.

However, the notion of social capital is considerably broad and we have differentiated between three dimensions: the structural social capital, the relational social capital, and the cognitive social capital. In this respect, and according to our results, all of these dimensions hold a significant positive influence on the risk-taking and entrepreneurial activities of Chinese immigrants. Nevertheless, this paper shows that the most important influence on risk-taking by Chinese immigrant entrepreneurs comes from structural social capital, followed by the effect of relational social capital. We maintain this may be because entrepreneurs need a lot of information to evaluate risks, and a dense network of weak social ties is the key factor that can provide access to this information.

The results of our paper are only partially in line with Nigama and Jawahar's (2011) study on opportunity recognition process. These authors found that the three dimensions of social capital are relevant determinants of risk perception for Indian entrepreneurs. However, in their study, cognitive social capital was found to be the most important determinant of risk perception, whereas the relationship between the relational dimension of social capital and the risk perception was found to have an inverse nature. The differences between these results and ours may be explained by the special cultural characteristics of the population and the dissimilar contextual environment in the two studies. Further research is needed in order to reach definitive conclusions in this respect.

This paper also applies the concept of 'guanxi', as a particular delimitation of social capital which is specific to Chinese society and its culture. To date, very few studies have explored the impact of 'guanxi' on entrepreneurial activity and, to the best of our knowledge, this is the first to address the effects of 'guanxi' on risk-taking. The analysis of the effects of 'guanxi' is especially relevant in the case of Chinese immigrants, since they often represent an enclave social group within their host societies. The analysis carried out shows a clear positive effect of 'guanxi' on risk-taking by Chinese immigrant entrepreneurs. This could constitute the one crucial explanatory factor for the survival and growth of Chinese businesses in Spain and other countries. However, our results also suggest that the bridging social capital linking Chinese immigrants with the host society also contributes towards increasing the immigrants' capacity to risk-taking. This type of social capital can particularly help to reduce uncertainty and increase the immigrants' perception of control given the fact that they operate in an unfamiliar environment.

From a policy perspective, our analysis implies that the entrepreneurship development programs for immigrants should take the social capital factor into consideration. The strong statistically-significant relationships between the immigrant entrepreneurs' risk-taking propensity and the social capital measurements suggest that greater social capital resources and higher social integration can effectively promote the development of immigrants' businesses.

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 Table 1. Descriptive indicators

	Chinese immigrant			
	business owners			
Risk-taking (average and s.d.)	4.3 (0.14)			
Time in Spain (average number of years and s.d.)		7.5 (0.14)		
Intrinsic motivation (mean and s.d.)		5.6 (0.71)		
Extrinsic motivation (mean and s.d.)		1.5 (0.51)		
Entrepreneurs in the family	Yes (%)	27.8		
	No (%)	82.5		

s.d.= standard deviation

Table 2. Structural social capital. Matrix of principal components

	Component 1
You can get information easily through your social network	0.874
You can always get valuable information through your social network	0.852
You often receive information through your social network	0.860
You frequently share information with other members of your social network	0.735
You often communicate with other members of your social network	0.760
Compared with other members of your social network, you have access to more resources	0.827
Generally, you are located in an important position in the social network	0.855

 Table 3. Relational Social Capital. Matrix of principal components

	Component 1
You maintain frequent interaction with the members of your social network	0.864
You care about commitments to other members of your social network	0.830
There is a high level of trust among the members of your social network	0.885
You are very sure of the capacity of the members of your social network	0.908
You like to share information with the members of your social network	0.804
You often collaborate with members of your social network	0.911

 Table 4. Cognitive Social Capital. Matrix of principal components

	Component 1
There is a very similar language in your social network	0.732
The members of your social network often have a common vision with regard to personal development	0.893
The members of your social network often have a common vision regarding the group's decisions	0.849
The members of your social network often have similar goals	0.793
You think that collaboration is a good way to solve problems	0.841

Table 5. Analysis of principal components of 'guanxi'

	Component 1
You can always get valuable information from 'guanxi'	0.860
You have given much 'renqing' to other members of 'guanxi'	0.891
You have received much 'renqing' from other members of 'guanxi'	0.824
Generally, you have a lot of 'mianzi' in the 'guanxiwang'	0.879

**Table 6.** Ordinal logistic regression regarding risk

	MODEL 1			MODEL 2			MODEL 3		
	В	S.E.	Sig	В	S.E.	Sig	В	S.E.	Sig
(Risk = $2.00$ )	2.752	1.333	**	0.954	2.597		1.779	2.406	
(Risk = 3.00)	4.946	1.325	**	7.573	2.640	**	5.721	2.434	**
(Risk = 4.00)	5.235	1.329	**	8.470	2.657	**	6.373	2.442	**
(Risk = 5.00)	5.641	1.337	**	9.717	2.690	**	7.379	2.461	**
(Risk = 6.00)	6.496	1.368	**	12.723	2.861	**	10.104	2.581	**
Control variables									
Time_Spain	0.250	0.065		-0.056	0.139		0.128	0.125	
Entr_Fam	0.269	0.226		-0.242	0.438		0.246	0.408	
Intrisic_ motiv.	0.043	0.135		0.238	0.260		0.153	0.243	
Extrinsic_motiv.	0.552	0.167		0.574	0.320		0.369	0.304	
Social capital and	guanxi								
SSC				2.023	0.459	**			
RSC				1.747	0.392	**			
CSC				0.893	0.300	**			
Guanxi							2.498	0.332	**
Goodness of fit									
Chi-squared	29.282		147.365		107.756				
-2 log-likelihood	273.758		264.502		297.180				
Nagelkerke	0.210		0.708		0.588				
R-squared			0.700						

Note: S.E.: = Standard Error. \* Significant at the 90% confidence level. \*\*Significant at the 95% confidence level. \*\*\*Significant at the 99% confidence level. N = 129 valid cases.