

Immigrant Entrepreneurship: Does the Liability of Foreignness Matter?

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Abstract

The *liability of foreignness* is a phenomenon scarcely studied in the entrepreneurship literature. While immigrants seem to be prone to create new firms, they face different sorts of barriers to launch new businesses. We apply a binomial logistic regression on Global Entrepreneurship Monitor data to compare immigrants' and natives' entrepreneurial intentions to the actual self-employment activity of each group, and the factors affecting potential differences. We found that immigrants are more likely to have self-employment plans than natives but less likely to end up becoming self-employed. We explain this gap by the liability of foreignness hypothesis, i.e. additional difficulties faced by immigrants when entering the job market or starting up a business in a new country such as poor language skills, the lack of labour experience, the lack of human and social capital endowments specific to that country, and institutional restrictions including discrimination.

Keywords: Immigrants, Entrepreneurship, Liability of foreignness hypothesis, Institutional theory

1. Introduction

Over the last decades, the increase in the entrepreneurial activity of immigrants in Europe has been driven by the larger number of immigrants from less developed countries. While the emergence and growing presence of immigrants' businesses and the so-called *ethnic economies* in Canada, the United States, the United Kingdom, and, more recently, in other western European countries such as France, Germany and the Netherlands, have led to important advances in the research on ethnic and immigrant entrepreneurship (e.g., Light 1972, 1979, 1990, 1993; Bonacich 1973, 1987; Portes 1986, 1989, 1990; Aldrich & Waldinger 1990; Waldinger, Aldrich & Ward, 1990; Bates 1997; Rath 2000, 2002; Rath & Kloosterman 2000; Zimmermann, Constant & Schachmurove, 2003; Zimmermann, Bonin, Constant & Tatsiramos, 2006), the entrepreneurial behaviour of immigrants has not been sufficiently examined in some European countries such as Spain, where international migration is a more recent phenomenon. However, the number of entrepreneur immigrants in these countries is increasing rapidly enough that deserves to be addressed. In 2011, when Spain was going through a very severe recession period and the unemployment rate reached 25% of the total population, the number of foreign-owned companies increased 4.9% (Secretary of State for Social Security 2011).

Studies on immigrant entrepreneurship suggest that immigrants are relatively more likely to become self-employed than natives (Hammarstedt 2001; Schuetze 2005; Levie 2007). This pattern has been explained by cultural and environmental factors, such as the higher entrepreneurial propensity of immigrants from certain countries and the opportunity structure of the country of residence. According to the "disadvantage hypothesis" (Light 1972, 1979), a widely accepted postulate to explain inter-group differences in entrepreneurial activity, immigrants choose self-employment as an alternative to unemployment and non-satisfactory job conditions. High unemployment rates and poor employment conditions have also been cited by other scholars as the main factors that push immigrants into entrepreneurship in many European countries (Baycan-Levent & Nijkamp 2010). Most immigrants to Spain come from economically less developed countries. Despite the fact that immigrants' educational level is similar to that of

Spaniards according to the 2007 National Immigration Survey (National Statistics Institute 2007), the same year's mean unemployment rate was higher among immigrants (12.2%) than among the native population (7.6%) (Pérez Infante, 2008).

In 2006, the year after data collection for this study, immigrants' self-employment rate was five times the average rate for the total population (Spanish Federation of Self-employed Associations 2007). Interestingly, even during 2011, recession period in Spain, immigrants kept opening businesses while local people had to shut them down: the number of foreign-owned companies in December 31, 2011 was 4.9% higher than a year before, whereas the number of locally-born entrepreneurs decreased 1.1% during the same period (Secretary of State for Social Security 2011). Thus, this topic deserves the attention of scholars and policy makers. However, the growth in the ratio of self-employed foreigners relative to self-employed natives in Spain between 1999 and 2005, the time period before data collection for this study, was much lower than the relative increase in the number of foreigners (Irastorza 2010). Furthermore, preliminary analysis of our data reveals that immigrants show a greater desire to become self-employed than natives, while the relative number of natives who end up starting businesses is higher than that of immigrants. This gap between immigrants' self-employment intentions and the fulfillment of these intentions raises the following questions: why are immigrants more inclined to start business than natives? Is self-employment an alternative to unemployment or non-satisfactory job conditions for immigrants as stated by the disadvantage hypothesis or are they opportunity-driven entrepreneurs? Why is actual entrepreneurship higher among natives, when more immigrants declare the intention to start businesses? Do immigrants face additional barriers in the entrepreneurial process compare to natives? We aim to answer these questions by analyzing factors affecting immigrants' entrepreneurial plans versus factors affecting the realization of those intentions, in comparison to those of natives.

Our study contributes to the immigrant entrepreneurship literature in at least two ways. First, we compare immigrants' and natives' start up intentions with their respective entrepreneurial activities. While individuals may intend to create new ventures, they may actually never do so for different reasons such as the emerging of more attractive job opportunities or non-expected obstacles. As far as we know, this gap between immigrants' entrepreneurial intentions and the realization of them has not been addressed in the entrepreneurship literature. This paper compares immigrants' plans for self-employment to their actual start-ups as well as the factors explaining each process. Second, we analyze the combined effect of individual and environmental factors on immigrants' entrepreneurial behaviour. Most studies on immigrant entrepreneurship stress the existence of inter-ethnic differences in self-employment resulting from migrants' cultural characteristics and their adjustment to the host society's opportunities (see Light 1972; Aldrich & Waldinger 1990; Butler & Herring 1991; Constant et al. 2003). In very few studies (e.g., Bates 1997; Constant & Zimmerman 2004; Levie 2007) has the heterogeneous nature of individuals within the various immigrant groups been explicitly recognized. Indeed, individuals who belong to the same 'ethnic' group have often been attributed homogeneous characteristics, and the differences derived from their human capital endowments and personal entrepreneurial skills have been ignored. Thus, little is known about the effect of individual and environmental factors on immigrants' entrepreneurial projects. We aim to fill these gaps in the literature by adopting a holistic approach (which involves individual, cultural and environmental factors) to analyze the entrepreneurial intentions and propensity of immigrants in Spain.

An overview of factors explaining immigrants' propensity for self-employment follows. We draw on human capital, social cognition and institutional theories to build our conceptual framework. After describing the methodology and research design applied to conduct our empirical work, key findings are discussed. Main conclusions and policy implications are presented in the last section.

2. Immigrants' self-employment

We build upon the specific literature on immigrant entrepreneurship (disadvantage theory) and on mainstream entrepreneurship literature (e.g. human capital theory, cognitive theories, and institutional theory) to analyze immigrants' entrepreneurial intentions and propensity. Based on previous studies (Bearse 1982; Wagner & Sternberg 2004; Collins & Low 2010), our conceptual framework is comprised of two major sets of determinants: individual and environmental factors. We consider human capital endowments, psychological traits and perceptual variables as individual factors to explain immigrants' entrepreneurial propensity. Environmental factors include the effect of formal and informal institutions such as individuals' culture of origin, the socio-economic milieu and macroeconomic conditions. We claim that, in the absence of market and institutional imperfections, factors driving the intent to create new firms should also influence actual venture creation for both immigrants and natives.

2.1 Individual factors

The entrepreneurship literature shows that human capital factors such as work experience, education and business skills are important explanatory factors of firm creation. Older individuals as well as those with entrepreneurial experience are found to be more likely to create firms than their counterparts. Mature individuals are more likely to have accumulated the business expertise, built the extended social networks over time and amassed the personal savings that trigger venture start-ups (Butler & Herring 1991; Bates 1997; Mata & Pendakur 1999; Arenius & Minniti 2005). In addition, the work experience of immigrants correlate with the number of years lived in the host country. While some studies confirm a positive relationship between the number of years spent in the host country and the probability to start firms (Razin 1999; Hammarstedt 2001, 2004; Schuetze 2005), others show the opposite (Hjerm 2004) or no significant effect is found (Bauder 2005). We argue that immigrants who have lived in the host country for a longer period of time should be more familiar with the local socio-economic system and market rules, would have access to broader social networks and would have time to put some money aside for a start-up. Those individuals who better adjust to the local conditions for creating new businesses will be more likely not only to start new firms, but also to succeed (Audretsch & Peña, 2012; González, Peña & Vendrell, 2012).

Scholars have not reached a consensus on the effect of education on the propensity to create firms. Some studies find that highly educated people are more likely to create firms (Evans 1989; Razin 1999; Bates 1997; Peña, 2004), while others show the opposite (Mata & Pendakur 1999; Hammarstedt 2001, 2004). We argue that immigrants need to develop additional skills and get familiar with the local system to create and run new businesses successfully in a foreign country and that those with richer human capital endowments are more likely to achieve them. Thus, we expect that older immigrants and those with higher education, entrepreneurial experience (Guerrero, Hornsby & Peña, 2013; Guerrero & Peña, 2013) and a larger number of years living in the host economy will be more prone to become self-employed than their counterparts.

Specific psychological traits and cognitive processes such as leadership, initiative, and risk taking have been widely analyzed in the entrepreneurship literature as distinctive factors that explain certain individuals' higher entrepreneurial behaviour. Entrepreneurial cognition and perceptions are mental processes through which individuals evaluate and consider the decision to start firms (Mitchell et al. 2002b). Entrepreneurial cognition involves the evaluation of self-efficiency, risk perception, as well as opportunity recognition among others. Recent empirical studies show that a higher tolerance to risk leads to a higher preference for self-employment, whereas fear of failure is found to have the opposite effect (Lee, Wong & Ho 2005; Arenius & Minniti 2005; Verheul, Thurik & Grilo, 2006; Levie 2007). Similarly, a high self-perception of entrepreneurial abilities and skills has a positive effect on firm creation (Mitchell, Smith, Seawright & Morse, 2000; Lee et al. 2005; Arenius & Minniti 2005; Levie 2007). Finally, Levie (2007) finds that immigrants who see good entrepreneurial opportunities in the local economy are more likely to start businesses. Based on these studies we expect that immigrants who perceive themselves as self-sufficient and risk -tolerant and who seek entrepreneurial opportunities in the host country will be more likely to start businesses than their counterparts.

Furthermore, it has been stated that risk-taking behaviour is one of the most salient characteristics of immigrant entrepreneurs, who not only bear risk in leaving their home country, but also try to make a living by starting up firms in unknown host economies. Zimmermann et al. (2003) argue that the immigrants' decision to become entrepreneurs may be linked to that of migrating from their home countries. In both cases, individuals seek self-realization, face an uncertain future, and bear risk by giving up the status they held in previous employment or their country of origin. According to this hypothesis, immigrants are self-selected entrepreneurs and as such, they are more likely to choose the self-employment path than natives.

2.2 Environmental factors

Environmental factors such as institutions, macroeconomic conditions and the socio-economic milieu (e.g. the existence of agglomeration economies, entrepreneurial innovation systems, as well as demographic and geographical factors) are influential factors on venture creation and performance (Audretsch, Link & Peña, 2013; González, Kuechle & Peña, 2013). Veciana & Urbano (2008) elaborate on North's ideas to explain that the process of becoming entrepreneur is highly conditioned by the formal and informal institutions and thus, it can be explained through the institutional theory. North (1991) defines institutions as man-made constraints that structure political, economic and social interaction. They consist of informal constraints (such as values, norms, sanctions, taboos, customs, traditions, and codes of conduct), and formal rules (e.g. constitutions, laws, economic rules, property rights, and contracts). He claims that organizations and individual entrepreneurs exist because of the opportunities provided

by the institutional framework. Together with macroeconomic forces, formal rules determine transaction and production costs and thus, also the profitability and feasibility of engaging in economic activity.

Environmental factors pertaining to immigrants' culture of origin can therefore be considered informal institutions that may influence individuals' motivations and decisions to become self-employed. Individuals learn from the environment in which they develop their knowledge and skills by interacting with others in that context (Wood & Bandura 1989). The entrepreneurial attitude and behaviour embedded in the environment should thus influence the desire and propensity of immigrants to create firms. According to Veciana & Urbano (2008) the first author in approaching the entrepreneurial phenomenon from a socio-cultural perspective was Max Weber when, in his book "The Protestant Ethic and the Spirit of Capitalism", he claimed that the behaviour of the capitalist-entrepreneur is strongly conditioned by religious beliefs. Since then, many scholars have shown that cross-country idiosyncrasies affect entrepreneurial cognition and the propensity to create ventures (e.g. Busenitz & Lau 1996; Mitchell et al. 2000; Mitchell et al. 2002a; Uhlaner & Thurik 2003). More specifically, immigrants' origin, ethnic group, self-employment tradition and religion have been found to be relevant factors that explain inter-group differences in self-employment (Light 1972; Aldrich & Waldinger 1990; Butler & Herring 1991; Clark & Drinkwater 2000; Hammarstedt 2001; Constant et al. 2003; Levie 2007). We should note that immigrants bring their own cultural backpack to the country of residence and that it may influence their attitude towards entrepreneurship, particularly if the latter is highly valued in the home country. Hence, we expect that the entrepreneurial culture embedded in the country of origin of immigrants will affect immigrants' propensity for entrepreneurship.

As for the regulatory dimension of institutions, laws, regulations, and government policies constitute formal institutions that can enhance, support or inhibit entrepreneurship as they increase or reduce the risks for individuals starting a new firm, and facilitate entrepreneurs' efforts to acquire resources (Veciana and Urbano, 2008; Arando, Peña & Verheul, 2009). Our study was conducted in a single country and thus, our data did not allow us to test the effect of different national-level legal frameworks and institutions on immigrants' entrepreneurial projects. However, Wagner and Sternberg (2004) state that most empirical studies on entrepreneurship have been carried out at the national level, ignoring the inter-regional differences within a particular country. Based on these ideas, we included a variable describing the number of firms created per 1,000 inhabitants in each Spanish region as a proxy for inter-regional institutional differences that may boost or hinder business creation. The rest of the environmental variables (i.e. unemployment rates and foreign population) also correspond to the regional level.

Macroeconomic conditions such as the economic cycle constitute additional significant factors in explaining self-employment. The economic cycle is often measured by the unemployment rate. However, the effect of unemployment on firm creation is not clear. While some studies suggest that high unemployment is favourable to business start-ups (Clark & Drinkwater 2000; Wagner & Sternberg 2004), others show the opposite (Reynolds et al. 1995a). The motivations and profile of people who choose the self-employment path as an alternative to unemployment, i.e. necessity-driven entrepreneurs, is different than those of opportunity-driven entrepreneurs. Thus, while non-favourable macroeconomic conditions may push one group into self-employment, they may have the opposite effect on other group. Reynolds et al. (1995a) explain the latter by arguing that high unemployment rates contribute to diminishing demand, and, therefore, potential entrepreneurs are discouraged from creating firms. Since most entrepreneur immigrants in Spain are necessity-driven rather than opportunity-driven, we expect that high unemployment rates will push immigrants into self-employment.

Within the immigrant entrepreneurship literature, on the other hand, there seem to be a consensus on the effect of the economic cycle on firm creation. Light's *disadvantage hypothesis* (1972, 1979) stipulates that immigrants choose self-employment as an alternative to unemployment and non-satisfactory job conditions. In other words, entrepreneurial activity becomes an avenue for the socioeconomic advancement of the disadvantaged (Constant et al. 2003; Constant & Zimmermann 2004; Bauder 2005). Furthermore, it has been stated that high unemployment rates and low status are the main factors that push immigrants into entrepreneurship in many European countries (Baycan-Levent & Nijkamp 2010). In 2007, the mean unemployment rate of immigrants living in Spain was 12.2%, 4.6 percentage points higher than that of natives (Pérez Infante, 2008). Based on the literature, numbers and trends, it would be logical to expect that immigrants to Spain will be more likely to become self-employed than locally-born people. Nevertheless, entrepreneurial plans not always end up in business creation and this may happen for many reasons: potential entrepreneurs may give up when more attractive employment opportunities emerge during the planning stage of firm start-up; they may face more obstacles (such as difficulties in raising funds, complex paperwork requirements and lack of networks) than opportunities which distract them or discourage them from pursuing their project; or they may realize that their business plan was not likely to be feasible or profitable. On top of the commonly mentioned bureaucratic deterrents, immigrants have been claimed to experience some degree of

liability of foreignness, i.e. additional difficulties when entering the job market or starting up a business in a new country such as poor language skills, the lack of labour experience, the lack of human and social capital endowments specific to that country, and discrimination (Irastorza, 2006; Irastorza 2010). Solé & Parella (2005) reported initial financial difficulties due to a shortage of savings and limited access to formal credit institutions, difficulties in obtaining a work permit, the suspiciousness of native people towards firms created by immigrants and the abusive prize of premises they are asked to paid in comparison to natives, as additional obstacles experienced by immigrants who try to start and run businesses in Catalonia. Based on these studies, we pose that immigrants will be more likely to intend to start businesses but less likely to actually become self-employed than natives.

In addition to institutional and macroeconomic conditions, venture creation also responds to the socio-economic milieu of a geographical area, i.e. to the existence of agglomeration effects, the size and type of firms, main industry sectors, as well as demographic and geographical factors such as the size and composition of the population of an area. Rekers & van Kempen (2000) suggested that the spatial context has an effect on the start of ethnic and mainstream enterprises. Entrepreneurs often prefer to start up their firms in metropolitan areas due to the agglomeration economies arising in a concentrated location (Fotopoulos & Spence 2000; Morales & Peña 2003; Wagner & Sternberg 2004; van Stel, Storey & Thurik, 2006). Demographic factors, such as high population density and the existence of established ethnic groups, increase the demand for goods and services in general, and for certain *ethnic* products in particular; they also facilitate the creation of business networks. A lively commercial enclave with a high concentration of immigrant entrepreneurs with their own commercial networks not only can bring together co-ethnics looking for products from their places of origin, but the enclave can also constitute an attraction for those individuals who, not belonging to the same ethnic group, demand products that they perceive as different or even exotic. In turn, these factors are expected to increase the probability of venture creation and the performance of these firms (Reynolds et al. 1995a; Rekers & van Kempen 2000; Razin 1999; Belso Martínez 2004).

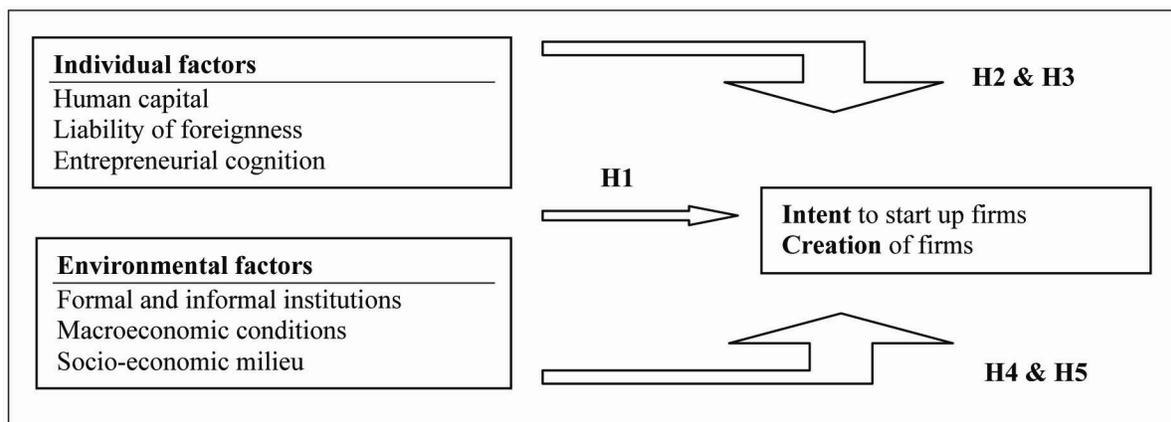


Figure 1. Factors affecting immigrants' entrepreneurial intentions and actual projects

In sum, the entrepreneurship literature shows that immigrants' firm creation varies over economic cycles, across individuals, ethnic groups, and institutional and socio-economic milieus. Based on these studies we argue that both individual and environmental factors combine to explain entrepreneurial behaviour. This comprehensive view, where individual and contextual factors are linked to the entrepreneurial intent and subsequent outcomes, is summarized in Figure 1.

3. Methodology and Research Design

The entrepreneurial activity of immigrants in Spain has increased significantly over the last years. Nevertheless, immigrants' likelihood of self-employment has caught the attention of few researchers participating in the Global Entrepreneurship Monitor (GEM) project. This study aims to fill this gap in the literature by comparing the intent of immigrants to start up firms (potential entrepreneurs) and the fulfilment of this ambition (actual entrepreneurs). These analyses will be replicated for natives, used as a control group.

Table 1. Characteristics of the sample

	Potential entrepreneurs				Actual entrepreneurs			
	Immigrants		Natives		Immigrants		Natives	
	N	%	N	%	N	%	N	%
Educational level								
College level	62	53.9	491	57.3	63	68.5	1209	49.9
Lower level	53	46.1	366	42.7	29	31.5	1215	50.1
Total	115	100	857	100	92	100	2424	100
Shut down a business								
Yes	2	1.7	18	2.1	3	3.3	65	2.7
No	113	98.3	839	97.9	89	96.7	2356	97.3
Total	115	100	857	100	92	100	2421	100
Business angel experience								
Yes	6	5.2	54	6.3	14	15.2	183	7.5
No	109	94.8	803	93.7	78	84.8	2241	92.5
Total	115	100	857	100	92	100	2424	100
Know an entrepreneur								
Yes	32	43.2	482	68.1	51	56	1173	48.4
No	42	56.8	226	31.9	40	44	1225	51.1
Total	74	100	708	100	91	100	2398	100
Gender								
Male	50	43.5	476	55.5	44	47.8	1376	56.8
Female	65	56.5	381	44.5	48	52.2	1048	43.2
Total	115	100	857	100	92	100	2424	100
High income								
> 1800 €	15	15.3	238	34.4	25	32.9	797	43.5
<1800 €	83	84.6	454	65.6	51	67.1	1035	56.5
Total	98	100	692	100	76	100	1832	100
Fear of failure								
Yes	18	24	245	35	24	26.1	531	22.3
No	57	76	455	65	68	73.9	1851	77.7
Total	75	100	700	100	92	100	2382	100
Business opportunity								
Yes	40	62.5	320	55.8	43	56.6	929	46
No	24	37.5	253	44.2	33	43.4	1090	54
Total	64	100	573	100	76	100	2019	100
Entrepreneurial skills								
Yes	57	78.1	553	79.1	88	98.9	2151	90.1
No	16	21.9	146	20.9	1	1.1	236	9.9
Total	73	100	699	100	89	100	2387	100
Origin								
Asian	0	0	-	-	5	5.4	-	-
Central and South American	101	89.38	-	-	51	55.5	-	-
European	9	7.96	-	-	26	28.3	-	-
Maghrebian	1	0.88	-	-	5	5.4	-	-
North American	0	0	-	-	1	1.1	-	-
Other African	1	0.88	-	-	4	4.3	-	-
Total	113	100	-	-	92	100	-	-
Location								
Rural	16	13.9	143	18.1	12	13.2	409	18.7
Urban	99	96.1	649	81.9	79	86.8	1775	81.3
Total	115	100	792	100	91	100	2184	100

Table 1. Characteristics of the sample (cont'd)

	Potential entrepreneurs				Actual entrepreneurs			
	Immigrants		Natives		Immigrants		Natives	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	33	10.48	38	12.98	39	10.29	43	12.05
Years in Spain	8	11.31	-	-	15	13.70	-	-
Cultural support index	2.02	0.86	1.86	0.87	1.71	0.92	1.70	0.97
Foreign population	393.79	798.03	868.48	1829.43	260.09	198.57	220.85	213.49
Unemployment	10.71	2.51	10.97	3.27	10.33	2.49	10.78	2.95
New firms	70.73	6.83	68.22	7.09	70.81	6.92	69.07	6.96

3.1 Sample Data

We used GEM data to conduct our empirical tests. The GEM research program is an annual assessment of the national level of entrepreneurial activity in relation to economic growth. The study was initiated in 1999 in 10 countries, and over 70 countries from all over the world currently participate in the project. Data collection for the GEM project is based on telephone surveys of representative samples of the adult population of each country, where a minimum of 2,000 individuals are interviewed annually. Exceptionally, some of the research teams involved in the GEM project collect data at the regional level. This is the case for the U.K, Germany and Spain, where a minimum of 2,000 interviews were conducted in several regions (for a more detailed explanation of GEM data collection and process, refer to Reynolds et al. 2005b).

Data describing the characteristics of the individuals and their new ventures were gathered for various Spanish regions (i.e., NUTS 2 level) during the spring and the summer of 2005. Secondary data was collected from the Spanish National Statistics Institute and the Spanish National Unemployment Institute to represent environmental factors.

Our initial sample included 19,000 individuals, involving entrepreneurs, non-entrepreneurs, immigrants and natives. The descriptive statistics and characteristics of our four sub-samples – potential immigrant entrepreneurs, actual immigrant entrepreneurs, potential native entrepreneurs and actual native entrepreneurs – are presented in Table 1. Actual immigrant entrepreneurs stand out because of their higher human capital attributes: college-level education, previous experience as business owners or business angels, and a higher perception of self-entrepreneurial abilities.

Table 1 also shows that native entrepreneurs earn significantly more than immigrant entrepreneurs. The percentage of individuals who earn a high income is also higher among potential native entrepreneurs than among potential immigrant entrepreneurs. Female immigrants represent more than half of the potential and actual entrepreneurs, while native women are a minority. Immigrants are more concentrated in urban areas than natives, and immigrant potential entrepreneurs live in regions with half the population density of those where natives dwell. Finally, nearly 90% of potential immigrant entrepreneurs and more than 55% of actual immigrant entrepreneurs come from Central and South American countries, followed by immigrants from Europe. Self-employed immigrants are older and have been living in Spain twice as long as potential immigrant entrepreneurs.

3.2 Description of Variables

We selected two dependent variables from our GEM database to describe start-up intentions and the actual creation of firms: *Potential entrepreneur* and *Actual entrepreneur*. Our first dependent variable, *Potential entrepreneur*, represents people not yet involved in any entrepreneurial activity, but who expected to become entrepreneurs within three years. This dummy variable answers the following question: “Are you, alone or with others, expecting to start a new business, including any type of self-employment, within the next three years?” Affirmative answers are coded as future start-ups, or potential entrepreneurs. This variable allowed us to distinguish those individuals who intended to start a business, from those who did not. The second variable, *Actual entrepreneur*, represents individuals involved in an entrepreneurial activity and it includes a combination of nascent (i.e., up to 3 months old), baby (i.e., between 3 and 42 months old) and established (i.e., more than 42 months old) firms. The distinction between potential and actual entrepreneurs facilitated the comparison between the intention and the realization of entrepreneurial projects among immigrants and natives.

The independent variables used to predict the probability of individuals to engage in entrepreneurial activities corresponded to both individual and environmental factors. Individual factors included human capital endowments, socio-demographic characteristics and perceptual variables. Some independent variables were coded as binary. This is the case for human capital and socio-economic variables *College* (where a value of 1 is equal to having a college education), *Shut down* (takes the value of 1 if the respondent shut down a firm in the preceding year), *Business angel* (1 represents having been a business angel over the three preceding years), *Know an entrepreneur* (1 indicates knowing someone who started a firm over the two preceding years), *Male* (1 means being male), and *High income* (1 represents an income higher than 1,200 euros/month, the average monthly wage in Spain when the interviews were conducted). The variable *Age* indicates the exact age of the respondent, and we added its square term, *Age²*, to test whether a curvilinear relationship existed between the immigrants' age and their intention to start firms. The variable *Immigrant* was built upon the question "In which country were you born?", a value of 1 representing foreign-born people. Finally, we included three perceptual variables: *Fear of failure* (1 represents the fear of failure that would prevent respondents from starting up firms), *Opportunities* (1 indicates a favourable perception of entrepreneurial opportunities over the following six months), and *Skills* (1 describes a favourable perception of self-entrepreneurial abilities and skills).

Our environmental factors include variables that describe the cultural influence of the country of origin (i.e. informal institutions) as well as the influence of host economies (i.e. formal institutions) on immigrants' entrepreneurial projects. Cultural variables describe the place of origin of immigrants as follows: *C&S America* (a value of 1 for Central or South America), *Asia* (a value of 1 for Asia), *Maghreb* (a value of 1 for the Maghreb) and *South Africa* (a value of 1 for Africa minus the Maghreb). In addition, we included an index used in the GEM project to capture the regional entrepreneurial culture: *Cultural support*. This variable contains information about statements such as, "Starting a new business is a good career choice in my country of origin", "A successful business provides good social standing", and "New successful businesses make the news in my home country." The host economy was described by using data from the Spanish National Statistics Institute, the Spanish National Unemployment Institute and the Spanish Observatory of Immigration. We used regional data for *Foreign population* (percentage of foreigners per Spanish region in 2005), *Unemployment* (average rate per region in 2004 and 2005), and *New firms* (number of firms created per 1,000 inhabitants in each region in 2003). The variable *Urban* takes the value of 1 when respondents live in an urban area of more than 5,000 inhabitants.

Finally, we must note that we created interaction variables by combining human capital and socio-demographic variables. More specifically, we combined the variable *Immigrant* with *College*, *Age*, *Male* and *High income*, to verify whether immigrants with specific profiles were more likely to become entrepreneurs or if more of them actually became entrepreneurs than their counterparts.

3.3 Statistical Method

We applied binomial logistic regression analyses to test our hypotheses. The binomial logistic regression estimates the probability of an event happening, in this case, of individuals engaging in entrepreneurial projects. We ran two sets of regressions for each of the two dependent variables, *Potential entrepreneur* and *Actual entrepreneur*. First, we selected a sample involving all individuals in order to test the effect of the variable *Immigrant*, as well as that of contextual factors, on the probability of being a potential and an actual entrepreneur. We ran three different regressions for each of the two dependent variables in order to avoid multicollinearity problems (see correlation matrices in Appendix 1). Second, we split our samples into two sub-samples: one for immigrants and another one for natives. Due to the lower number of cases included in the binomial regression for the sub-sample of immigrants and in order to overcome eventual problems with the degrees of freedom of these models, we had to eliminate some variables from the models estimated in the previous step. Finally, we compared the results obtained for each of the dependent variables (*Potential* and *Actual entrepreneurs*) for immigrants and natives.

4. Are immigrants more enterprising than natives?

Our results reported in Table 2 show that, as expected, immigrants are more likely to intend to start businesses than natives. However, the binomial regression analysis for the actual entrepreneurs' model shows the opposite results, i.e. immigrants are less likely to actually create firms than natives. This result supports our hypothesis about the negative effect of immigrants' liability of foreignness on the realization of entrepreneurial projects in Spain, but does not confirm previous findings by Hammarstedt (2001), Schuetze (2005), and Levie (2007). We argue that the liability of foreignness faced by immigrants (i.e. additional difficulties with raising funds, lack of familiarity with the market system and social networks, complex paperwork requirements, and discrimination) may deter entrepreneurs from completing their business plans and thus, explain this gap.

Table 2. Binomial logistic regression: Total sample

	Potential entrepreneurs						Actual entrepreneurs					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
Individual factors												
<i>College</i>	0,32(†)	0,72	0,32(†)	0,73	0,33(†)	0,72	0,09	1,09	0,11	1,11	0,09	1,09
<i>Shut down</i>	-0,28	1,32	-0,3	1,35	-0,27	1,31	-0,37(*)	0,69	-0,37(*)	0,69	-0,38(*)	0,68
<i>Business angel</i>	0,35	0,7	0,37	0,69	0,3	0,74	-0,91(†)	0,40	-0,91(†)	0,40	-0,91(†)	0,40
<i>Know an entrepreneur</i>	1,16(†)	0,31	1,16(†)	0,31	1,17(†)	0,31	-0,29(†)	0,75	-0,29(†)	0,75	-0,29(†)	0,75
<i>Age</i>	-0,09(†)	0,92	-0,09(†)	0,91	-0,09(†)	0,91	0,06(†)	1,06	0,05(†)	1,06	0,06(†)	1,06
<i>Age2</i>	0,00(**)	1,00	0,00(†)	1,00	0,00(**)	1,00	-0,01(†)	1,00	-0,01(†)	1,00	-0,01(†)	1,00
<i>Male</i>	0,21(*)	0,81	0,24(**)	0,79	0,22(**)	0,8	-0,38(†)	0,68	-0,37(†)	0,69	-0,38(†)	0,69
<i>High income</i>	-0,37(†)	1,44	-0,33(†)	1,39	-0,36(†)	1,43	-0,47(†)	0,63	-0,48(†)	0,62	-0,46(†)	0,63
<i>Immigrant</i>	1,14(†)	0,32	-	-	-	-	-0,31(*)	0,74	-	-	-	-
<i>Immi*College</i>	-	-	0,09	0,91	-	-	-	-	-0,25	0,78	-	-
<i>Immi*Age</i>	-	-	0,04(†)	1,04	-	-	-	-	0,01	1,00	-	-
<i>Immi*Male</i>	-	-	-0,49	1,64	-	-	-	-	-0,29	0,75	-	-
<i>Immi*Highincome</i>	-	-	-0,98	2,68	-	-	-	-	0,18	1,19	-	-
<i>Fear of failure</i>	-0,38(†)	1,46	-0,38(†)	1,47	-0,37(†)	1,45	0,91(†)	2,48	0,91(†)	2,48	0,91(†)	2,48
<i>Opportunities</i>	0,64(†)	0,53	0,64(†)	0,53	0,63(†)	0,53	-0,1	0,90	-0,11	0,90	-0,1	0,90
<i>Skills</i>	1,35(†)	0,26	1,36(†)	0,26	1,35(†)	0,26	-2,16(†)	0,11	-2,16(†)	0,12	-2,17(†)	0,11
Environmental factors												
<i>C&S America</i>	-	-	-	-	1,54(†)	0,21	-	-	-	-	-0,18	0,83
<i>Maghreb</i>	-	-	-	-	-18,52	0,018	-	-	-	-	-1,27	0,28
<i>Rest of Africa</i>	-	-	-	-	0,8	0,45	-	-	-	-	-1,24	0,29
<i>Asia</i>	-	-	-	-	-19,75	0,03	-	-	-	-	-1,62	0,20
<i>Urban</i>	0,21	0,81	0,23	0,8	0,2	0,82	0,01	1,01	0,01	1,01	0,01	1,01
<i>Foreign population</i>	0,01	1,00	0,01	1,00	0,01	1,00	0,01	1,00	0,01	1,00	0,01	1,00
<i>Unemployment</i>	-0,04(*)	0,96	-0,04(*)	0,96	-0,04(**)	0,96	0,02	1,02	0,02	1,02	0,02	1,02
<i>New firms</i>	0,13(*)	1,14	0,14(*)	1,15	0,14(**)	1,15	0,07	1,07	0,07	1,07	0,07	1,07
Constant	1,54(*)	4,68	-0,83	0,44	-35,54	0	-0,89(*)	0,41	-0,82	0,44	3,11(*)	22,36
N	8761		8761		8761		9176		9176		9176	
-2 log likelihood	2520,41		2518,47		2509,91		6232,60		6228,67		6229,03	
Nagelkerke's R	0,19		0,19		0,19		0,27		0,27		0,27	
Chi square	495,39(†)		497,33(†)		505,89(†)		1558,18(†)		1562,11(†)		1561,75(†)	

(†) Significant at the 0.01 level; (**) Significant at the 0.05 level; (*) Significant at the 0.1 level.

4.1 Factors affecting immigrants' versus natives' entrepreneurship

The significant differences between immigrants' and natives' likelihood to create businesses lead us to explore whether factors affecting this phenomenon also differed between immigrants and natives. In order to do so, we split our initial sample into two sub-samples: immigrants and natives, as illustrated in Table 3. We found that, as immigrants lived longer in Spain, they became less likely to intend to start up firms. This might be due to the fact that the opportunity cost of entrepreneurship increases, along with immigrants' skills and knowledge of the host

economies, over time; consequently, immigrants may find more satisfactory employment opportunities in the long run. Indeed, our results show that a high monthly income largely decreases the intention of immigrants (and, to a lesser extent, that of natives) to become self-employed. However, the effect of this variable is not significant for actual immigrant entrepreneurs. This difference in the effect of income on immigrants' self-employment plans versus the realization of these plans may be explained by the disadvantage hypothesis and the liability of foreignness hypothesis: low-income immigrants may see self-employment as an alternative to improve their employment situation and thus, they may have entrepreneurial dreams; but their liability of foreignness may difficult the fulfilment of such dreams.

Table 3. Binomial logistic regression: Immigrants versus natives

	Potential entrepreneurs				Actual entrepreneurs			
	Immigrants		Natives		Immigrants		Natives	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
<i>Business angel</i>	10,47(†)	0	0,46	0,63	-1,49(**)	0,23	-1,00(†)	0,37
<i>Age</i>	-	-	-0,02(†)	0,98	-	-	-0,01(**)	0,99
<i>Years in Spain</i>	-0,27(**)	0,76	-	-	0,03	1,03	-	-
<i>Male</i>	3,14(†)	0,04	0,25	0,78	-0,22	0,80	-0,36(†)	0,70
<i>Fear of failure</i>	-5,49(**)	241,93	-0,37(*)	1,44	-0,75	0,47	-0,51(†)	0,60
<i>Opportunities</i>	-1,68	5,39	-0,22	1,25	0,98(*)	2,66	0,94(†)	2,57
<i>Skills</i>	1,55	0,21	0,47(†)	0,63	-0,56	0,57	-0,04	0,96
<i>Constant</i>	-2,47(**)	11,82	1,67(†)	0,19	-20,56	0,00	-2,16(†)	0,12
	0,14	1,15	0,11	1,12	-0,25	0,78	-0,10(**)	0,91
	5,16	174,32	-1,37(**)	0,25	1,17	3,22	0,34	1,41
	85		3709		120		4458	
-2 log-likelihood	36,05		1061,48		96,23		3085,37	
Nagelkerke's R	0,55		0,11		0,45		0,27	
Chi-square	29,45(†)		111,20(†)		44,93(†)		746,40(†)	

(†) Significant at the 0.01 level; (**) Significant at the 0.05 level; (*) Significant at the 0.1 level.

Female immigrants show less interest in creating firms than their male counterparts but this variable is not significant for becoming actual entrepreneurs. In contrast, native females are more likely to start up firms than native males. Interestingly, we found that, while having some business angel experience is significant and has a very strong positive effect on the intent of immigrants to become self-employed, it has the opposite effect on actual entrepreneurs. This human capital asset is not significant for native individuals.

Perceiving good business opportunities in the local economic environment increases the probability that native individuals will intend to start up firms, whereas the effect of this variable is not significant for immigrants. This may be explained by the fact that immigrants are usually necessity-driven entrepreneurs rather than opportunity-driven ones. Fear of business failure has a positive effect on both immigrants' and natives' likelihood of starting firms, but is not significant in the potential entrepreneurs' models. Self-employed individuals' natural concern for succeeding and realistic view of the market situation may be reflected in this finding. Finally, a positive self-perception of entrepreneurial abilities and skills increases natives' probabilities to have entrepreneurial plans, but the opposite effect is found for immigrants. In other words, immigrants who are not confident about their business skills are more likely to show entrepreneurial intentions than immigrants who feel more confident about them. It is possible that the latter have better job opportunities than those who do not trust their abilities and thus, do not have such a strong will to improve their situation.

To sum up, whereas some factors have similar effects on the self-employment propensity of immigrants and natives, others do not. It is noteworthy to mention that, considering the magnitude of the coefficients, high-income immigrants are much more reluctant to intend to start up firms than high-income natives. Furthermore, although low-income immigrants intend to become entrepreneurs, they do not seem likely to do so. In contrast, low-income natives are more likely to actually become entrepreneurs. We suggest that the *liability of foreignness* arising from imperfect local markets and institutional systems, and additional entry barriers experienced by immigrants may explain this state of affairs.

4.2 *The effect of individual factors on entrepreneurship*

The literature on entrepreneurship suggests that individual factors matter when starting up a business. Interestingly, we found that individual factors do not have the same effect on the intention to create firms and the actual creation of firms. For instance, highly educated individuals, those who know entrepreneurs and men are more likely to have self-employment plans, but less likely to actually become self-employed. While a U-shape relationship exists between age and the intent to create firms, an inverse U-shape relationship prevails between age and firm creation in the actual entrepreneurs' model. In sum, individuals with richer human capital endowments seem more optimistic when they intend to become entrepreneurs but, when faced with the crucial decision to actually create ventures, they do not go ahead. This behaviour is more pronounced amongst immigrants and does not support our hypothesis on the positive effect of richer human capital attributes on immigrants' self-employment. It is possible that the higher opportunity cost of entrepreneurship for more experienced and highly educated individuals, who are more likely to be in a better employment situation than their counterparts, may be behind this unexpected finding.

All the perceptual variables were significant and consistent with the literature in the potential entrepreneurs' models. Individuals who perceive good business opportunities, do not fear failure and are very self-confident are more likely to intend to start up firms. However, the sign of coefficients for the last two variables is the opposite in the actual entrepreneurs' models. Two hypotheses may explain this finding: (i) individuals who are more likely to create firms are not as optimistic as those who only intend to start ventures; or (ii) most individuals who start small businesses in Spain are necessity-driven entrepreneurs. The expected negative sign of the variable *High income* shown in both models indicates support for the latter hypothesis.

4.3 *Environmental influence: Institutions and the host economy*

Based on institutional theory, and on the ethnic and immigrant entrepreneurship literature, we stated that culture is an informal institution that may influence the motivation to create a company. Likewise, we argued that people who migrate from a country characterized by a highly entrepreneurial culture would be more likely to become self-employed in the host country than those who migrate from less entrepreneurial areas. We found that immigrants from Central and South America are more likely to have entrepreneurial plans than immigrants from other world regions. Nevertheless, we found no significant evidence that the actual propensity to start up firms varied across immigrant groups. This could suggest the existence of some difficulties in the fulfilment of the desire to start on the entrepreneurial path. In order to refine our analysis, the variable *Cultural support*, an index suggested by the GEM project to measure the impact of national and regional entrepreneurial culture on the entrepreneurial activity, was included in our second set of regressions. This variable was only significant for the probability of native individuals to become entrepreneurs. Thus, our findings do not provide enough evidence to support our hypothesis about the effect of the entrepreneurial culture on the immigrants' likelihood of self-employment.

Macroeconomic conditions and formal institutions such as the legal framework and its consequences in the demographic and economic milieu of a geographical area can also boost or hinder venture creation. We found that individuals are more likely to have entrepreneurial plans in regions with higher density of new firms per capita and/or lower unemployment rates. In other words, people are more likely to consider the possibility of starting up firms in wealthier Spanish regions and/or in regions with a more favourable entrepreneurial ecosystem. These findings are consistent with previous studies by Fotopoulos & Spence (2000), Morales & Peña (2003), Wagner & Sternberg (2004), and van Stel et al. (2006). The fact that none of the environmental variables were found to be significant for the actual entrepreneurs' models may suggest the existence of (i) constraints in the business start-up process in Spain or (ii) non-significant inter-regional differences in formal institutions that promote or hinder self-employment.

5. Conclusions and implications

Immigrant entrepreneurship is increasingly seen as a powerful economic force and a contributor to solving structural labour market imbalances and resolving social tensions (Baycan-Levent & Nijkamp 2010). While immigrants' self-employment and their business performance have been widely examined in Western countries with older immigration histories, this topic has not been sufficiently explored in some European countries such as Spain. Besides, scholars have not paid attention to what happens when potential immigrant entrepreneurs try to start up. We aimed to contribute to the literature by comparing immigrants' entrepreneurial projects to the implementation of these projects in Spain. Our study shows that there is a gap between immigrants' desire to start businesses and the realization of their ambitions. We argue that their liability of foreignness, i.e. additional difficulties with raising funds, lack of familiarity with the market system, complex paperwork requirements and discrimination, may deter immigrants from entrepreneurship, and thus explain this gap.

Wagner & Sternberg (2004) claim that most empirical studies on entrepreneurship are conducted at the national level, ignoring potential inter-regional differences within a particular country. We aimed to contribute to the literature by examining the influence of regional environmental variables on the intent to create firms. We used a comprehensive conceptual framework to examine simultaneously the effect of individual, cultural and environmental factors on entrepreneurial behaviour. Our results show that, while individual attributes are significant explanatory factors of both the intent and the actual start up of businesses, environmental factors describing formal and informal institutions, as well as economic cycles are less relevant to explain the behaviour of potential entrepreneurs in Spain. We argued that this may be due to (i) certain constraints in the business start-up process in Spain or (ii) non-significant inter-regional differences in formal institutions that promote or hinder self-employment.

The results of this study should be interpreted with caution since some sub-samples comprised a limited number of observations. Besides, our data include individuals from a European country where immigrant entrepreneurship is a relatively recent phenomenon and ethnic enclaves are not as established as in older immigration countries; hence, caution should be used when extrapolating our findings to other settings. In addition, the variable representing immigrants' region of birth could be disaggregated into further categories in order to capture the effect of various cultures and institutional settings more accurately.

Our study involves several policy implications. Policy makers should bear in mind that entrepreneurial intentions do not always result in business creation due to market and institutional barriers; often, the immigrant population, as a socio-economically disadvantaged group, is more likely to be hindered by these difficulties. Therefore, policies should focus on reducing discrepancies in labour market access and conditions of employment between immigrants and natives, and on eliminating the additional barriers to immigrant entrepreneurship. Some of these policies may include speeding up the work permit application process, recognizing foreign credentials, adopting measures to combat discrimination towards salaried immigrants, and facilitating initial financing.

Further in-depth analysis of immigrants' entrepreneurial initiatives is needed to explain the gap between entrepreneurial projects and the realization of these projects; and identify the barriers that prevent the creation and performance of ventures.

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Appendix 1A.
Correlation matrix: Potential entrepreneurs

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 College																								
2 Shut down	0.007																							
3 Business angel	.025(**)	.086(**)																						
4 Fear of failure	-.046(**)	.027(**)	.021(**)																					
5 Opportunities	.072(**)	-0.004	.024(**)	-.086(**)																				
6 Skills	.129(**)	.073(**)	.060(**)	-.226(**)	.128(**)																			
7 Know an entrepr	.114(**)	.023(**)	.113(**)	-.065(**)	.146(**)	.229(**)																		
8 Age	-.132(**)	0.009	-0.006	0.005	-0.037(**)	-.033(**)	-.098(**)																	
9 Age 2	-.138(**)	0.006	-0.006	0.001	-.036(**)	-.033(**)	-.100(**)	.888(**)																
10 Male	.019(*)	.024(**)	.015(*)	-.040(**)	.025(**)	.022(**)	.052(**)	-.035(**)	-.036(**)															
11 High income	.257(**)	-0.003	.041(**)	-.065(**)	.075(**)	.080(**)	.079(**)	-0.005	-0.01	.030(**)														
12 Urban	0.013	0.011	0.005	-0.018(*)	0.009	-0.005	-0.007	-0.017(*)	-0.014	-.027(**)	.017(*)													
13 Foreign population	.055(**)	-.016(*)	0.006	-.030(**)	.022(*)	0.011	-0.003	0.014	.020(*)	-.040(**)	.062(**)	.212(**)												
14 Unemployment	-.073(**)	0.007	-.016(*)	.016(*)	-.020(*)	0.001	-0.005	-.039(**)	-.038(**)	-0.009	-.069(**)	0.011	-.349(**)											
15 New firms	-0.003	-0.003	.016(*)	-.021(**)	.028(**)	-0.011	0.003	0.006	0.001	.030(**)	0.011	.062(**)	.385(**)	-.276(**)										
16 Immigrant/College	.131(**)	-0.008	0.009	-0.026(**)	.032(**)	.063(**)	.030(**)	-.048(**)	-.050(**)	-.034(**)	0.002	0.003	.026(**)	-0.012	-0.004									
17 Immigrant/Age	.025(**)	-0.006	.019(*)	-.025(**)	.031(**)	.052(**)	.016(*)	-.027(**)	-.025(**)	-.063(**)	-0.017	0.012	.031(**)	-0.017(*)	-0.015(*)	.679(**)								
18 Immigrant/Male	.030(**)	-0.009	.024(**)	-.025(**)	.031(**)	.045(**)	.032(**)	-.037(**)	-.038(**)	-.087(**)	-0.001	0.013	.030(**)	-0.018(*)	0.013	.429(**)	.470(**)							
19 Immigrant/Highincome	.035(**)	-0.007	0.004	-0.002	.020(*)	.035(**)	0.009	-0.019(*)	-.021(**)	-.019(*)	.122(**)	0.009	0.012	-0.001	-0.004	.437(**)	.456(**)	.285(**)						
20 Immigrant	.023(**)	-0.009	0.013	-.030(**)	.034(**)	.050(**)	.016(*)	-.061(**)	-.063(**)	-.067(**)	-0.019(*)	0.013	.029(**)	-0.018(*)	-0.009	.704(**)	.956(**)	.486(**)	.457(**)					
21 C&S America	0.012	-0.012	.024(**)	-.033(**)	.051(**)	.047(**)	.017(*)	-.060(**)	-.061(**)	-.061(**)	-.022(*)	0.013	.039(**)	-0.023(**)	-0.003	.513(**)	.701(**)	.301(**)	.308(**)	.762(**)				
22 Maghreb	-0.002	-0.003	-0.004	-0.005	-0.001	-0.001	0.008	0.006	0.007	-0.007	0.004	0.014	0.003	0.005	-0.005	.108(**)	.224(**)	.131(**)	.124(**)	.184(**)	.194(**)			
23 South Africa	0.013	-0.002	-0.002	-0.011	0.002	0.014	0.013	-0.018(*)	-0.017(*)	-0.019(*)	-0.012	0.008	0	0.003	-0.004	.127(**)	.063(**)	.230(**)	-0.001	.112(**)	-0.001	-0.002	-0	
24 Asia	0.013	-0.002	-0.002	-0.004	0.01	0.003	0.005	-0.003	-0.004	-0.009	0.002	-0.001	0.01	-0.001	0.007	.127(**)	.114(**)	.045(**)	.071(**)	.112(**)	-0.002	-0.002	0	

** Correlation is significant at 0.01 level; * Correlation is significant at 0.05 level.

Appendix 1B.
Correlation matrix: Actual entrepreneurs

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 College																								
2 Shut down	,015																							
3 Business angel	,041	,095																						
4 Fear of failure	-,051	-,024	-,029																					
5 Opportunities	,072	,010	,040	-,070																				
6 Skills	,129	,070	,080	-,264	,132																			
7 Know an entrepr	,117	,037	,124	-,088	,152	,244																		
8 Age	-,127	,002	-,011	,002	-,041	-,028	-,098																	
9 Age2	-,133	,000	-,012	,000	-,039	-,037	-,100	,989																
10 Male	,023	,030	,033	-,049	,031	,042	,066	-,035	-,037															
11 High income	,260	,005	,056	-,083	,085	,110	,087	-,003	-,009	,040														
12 Urban	-,017	-,004	-,001	,023	,005	-,009	-,015	,008	,008	,000	-,016													
13 Foreign population	-,005	-,009	,017	-,004	,025	-,005	-,014	,038	,034	,006	,013	,212												
14 Unemployment	-,017	,006	-,008	,016	-,027	-,012	-,005	-,028	-,025	-,038	-,038	,011	-,349											
15 New firms	-,004	-,004	,013	-,020	,009	-,004	,000	-,002	-,005	,086	-,008	,062	,385	-,276										
16 Immigrant*College	,132	-,006	,022	-,028	,030	,062	,031	-,043	-,046	-,030	,006	-,010	-,003	-,015	-,032									
17 Immigrant*Age	,031	-,004	,026	-,024	,031	,050	,015	-,019	-,023	-,058	-,014	-,005	-,003	-,014	-,059	,702								
18 Immigrant*Male	,034	,001	,035	-,030	,027	,049	,035	-,038	-,039	,090	,001	-,001	,012	-,025	-,018	,460	,487							
19 Immigrant*Highincome	,042	-,008	,017	-,006	,019	,039	,014	-,016	-,018	-,015	,122	-,011	-,001	-,006	-,026	,478	,487	,321						
20 Immigrant	,031	-,004	,026	-,028	,037	,055	,022	-,061	-,063	-,059	-,019	-,006	-,005	-,016	-,059	,728	,958	,530	,482					
21 C&S America	,019	-,006	,033	-,030	,043	,048	,021	-,057	-,058	-,054	-,025	-,004	,003	-,017	-,041	,532	,705	,345	,310	,757				
22 Maghreb	-,003	-,004	,005	-,007	,003	,005	,014	,000	,000	,002	,006	,011	-,001	,005	-,022	,108	,217	,188	,146	,201	-,004			
23 Rest of Africa	,005	-,002	-,004	-,006	,015	,018	,001	-,021	-,020	,009	-,008	,010	,007	-,010	-,006	,102	,102	,169	,036	,135	-,003	,001		
24 Asia	,017	-,003	,010	,001	,018	,013	,010	-,005	-,005	-,017	,005	-,001	,000	-,001	-,006	,156	,144	,025	,094	,142	-,003	,001	,000	

** Correlation is significant at 0.01 level; * Correlation is significant at 0.05 level.