

ESSAYS IN ENTREPRENEURSHIP AMONG
FOREIGN INDIVIDUALS

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Introduction

Entrepreneurship among foreigners is often considered a consequence of discrimination in salaried work or social exclusion. However, entrepreneurship among foreigners may result from their diverse entrepreneurial skills, which contribute to economic growth and job creation in the host country. Thus, it is important to understand the entrepreneurial behavior of foreigners.

In the first chapter, we study how countries of origin affect foreigners' choice between salaried work and entrepreneurship upon arrival to the host country. We find that foreigners from countries that are more dissimilar to the host country and those from wealthier countries are more likely engage in entrepreneurship upon arrival. In addition, we use a change in the Portuguese immigration law to evaluate the effect of a reduction in regulations on entrepreneurship upon the probability of engagement in entrepreneurship upon arrival. Foreigners from countries outside the European Economic Area, who are subject to legal requirements that those from countries within this area are not, are less likely to engage in entrepreneurship upon arrival than those from countries within this area. Our findings suggest that reducing these legal requirements may encourage foreigners to engage in entrepreneurship upon arrival, although not significantly.

In the second chapter, we study transitions from salaried work to entrepreneurship. We find that foreign individuals are less likely than natives to leave salaried work to engage in entrepreneurship. According to our results, the opportunity cost of leaving salaried work is higher for foreigners than it is for natives. We find that individuals from countries that are more dissimilar from the host country have higher probabilities of switching to entrepreneurship. We also find that individuals from less developed countries are more likely to switch to entrepreneurship the wealthier their country of origin is, while for those from countries more developed than the host country the opposite occurs.

The third chapter addresses the survival of firms created by foreign entrepreneurs. We find that these firms survive less than comparable firms created by natives. Foreigners from countries that are more dissimilar to the host country are more likely to survive than those coming from countries that are relatively similar. Likewise, those from wealthier countries are more likely to survive.

Entrepreneurship among recently arrived immigrants: the impact of countries of origin and host country regulations

Abstract

We study how countries of origin affect foreign individuals' choice between salaried work and entrepreneurship upon arrival to the host country. Using a change in the Portuguese immigration law we evaluate the impact of reducing regulations on entrepreneurship upon the probability of foreign individuals choose entrepreneurship upon arrival. We find that foreigners from countries more dissimilar to the host country and those from wealthier countries are more likely engage in entrepreneurship upon arrival than those from similar countries. Foreigners from countries outside the European Economic Area, who have to fulfil requirements that are not required to those from countries within this area, are less likely to enter the labor market as entrepreneurs than those from countries within this area. According to our findings reducing legal requirements to foreign entrepreneurship may encourage foreigners to engage in entrepreneurship upon arrival, although such impact is not considerable.

1. Introduction

The number of foreign individuals has increased in several countries. Foreign-born people living in OECD countries accounted for 9% of total population in 2009/2010, which represents an increase of 33% relative to 2000/2001 (OECD, 2012). Therefore, the integration of foreigners in the host country arises as an important question. Immigrants face obstacles to their integration in host countries, which arise in several areas, such as in the labor market, housing (Ahmeda & Hammarstedt, 2007), health care access, education or credit markets (OECD, 2012); (Chan et al., 2005).

One factor creating obstacles to integration is unfamiliarity. Unfamiliarity is two-sided: foreigners are unfamiliar with the host country and local actors are unfamiliar with foreigners. For example, foreigners may not have the necessary knowledge on employment legislation or practices concerning job search or the workplace while employers may not be able to properly assess the value of foreigners' qualifications and skills. Therefore, the skills of foreigners may not be fully transferrable to the host country, which may hinder their opportunities in the labor market and thus create obstacles to their integration. For example, western countries are the ones that usually set the standards for the recognition and accreditation of occupations and these standards end up improving the mobility of western skilled workers while limiting the mobility of non-western workers (Iredale, 2002). Discrimination against foreigners is not uncommon (Mayda, 2006) and represents another obstacle to integration in the host country. For instance, foreigners with strong ethnic identities may have a lower probability of being employed (Bisin et al., 2011).

Several studies have looked to how foreigners fare in the host country labor market. Evidence suggests that foreigners have obstacles in the labor market of the host country. Foreigners may face obstacles in finding jobs and often employment rates of foreigners are lower than those of natives (OECD, 2012). Foreigners are found to have a wage gap relative to natives (Chiswick, 1978; Friedberg, 2000). Entrepreneurship may be an alternative for the integration of foreigners' in the host country, in particular of those who face more obstacles in paid employment (Portes & Zhou, 1996). Self-employment rates among foreigners are often found to be higher than the ones of natives (Yuengert, 1995; Li, 2001; Clark & Drinkwater, 1998).

However, foreigners' engagement in entrepreneurship in the host country may also be subject to obstacles arising from differences between home and host countries. Differences between home and host countries may contribute to a higher unfamiliarity with the host country and to greater discrimination against foreigners.

We address the following questions. What is the impact of relaxing legal constraints concerning the entry of foreigners into entrepreneurship upon their choice to enter the labor market? Which foreigners more likely to enter as paid employees and as entrepreneurs? What is the impact of home countries characteristics upon foreigners' decision to enter the labor market? We consider foreign individuals that enter the Portuguese labor market for the first time between 2002 and 2009, whether as paid workers or as entrepreneurs and we study how countries of origin affect the choice of foreigners concerning entry in the labor market. Using a change in the Portuguese immigration law we evaluate the impact of a reduction in entry regulations upon the probability of foreign individuals enter the labor market as entrepreneurs. Portugal is a member of the European Economic Area, an area within which individuals can move freely, and thus individuals whose country of origin belongs to this area are not affected by the change in the immigration law. Therefore, we compare foreign individuals arriving from countries within the European Economic Area with those from countries outside this area, concerning their choice between wage employment and entrepreneurship upon arrival to Portugal. Our data includes foreigners from over 60 nationalities.

We find scant evidence that entrepreneurship among foreigners may be encouraged by a reduction in legal restrictions imposed to them. Countries of origin do affect individuals' choice concerning entry into entrepreneurship upon arrival.

This paper organized as follows. A review of previous research is presented in Section 2. In Section 3 we briefly characterize immigration on Portugal focusing on the period under analysis. Section 4 describes our data and estimation procedures. In Section 5 we discuss our results. Lastly, Section 6 concludes the paper.

2. Previous Research

The integration of foreign individuals in the labor market is particularly relevant to achieve integration in the society of the host country. Obstacles to integration in the labor market may arise due to unfamiliarity and discrimination.

Foreigners' unfamiliarity with the host country may prevent them from doing an effective job search. Frijters et al. (2005) find that immigrants are less successful searching for jobs than natives. Foreigners may not be familiar with the language (of the host country) in which the employment ads are advertised or with labor market practices and legislation. They may resort to job search strategies that rely more on their personal networks but that may not be the most efficient ones to get a job (Battua et al., 2011). Local actors have imperfect information about immigrants' abilities or qualifications and thus foreigners' skills and qualifications may not be fully transferable to the labor market of the host country (Donohue, 2005).

Discrimination against foreigners is also found to create obstacles to labor market integration. For instance, ethnic minorities are found to have employment rates that are lower than those of their majority counterparts (OECD, 2012). Bertrand and Mullainathan (2004) sent resumes with randomized white and African-American sounding names to newspaper employment ads in the US and found that white names receive 50% more callbacks for interviews than African-American names. Moreover, they found that this gap holds across occupation, industry and employer size. Foreigners may not be able to obtain adequate returns on their skills in wage employment. Foreigners may have a wage gap relative to natives (Chiswick, 1978; Friedberg, 2000) and the jobs they are able to obtain may not be adequate. Across OECD countries, almost 15% of employed immigrants have temporary contracts, 16% work in low-skilled jobs and 28.3% of the highly educated immigrants are overqualified for the jobs they hold. For natives these figures are 10%, 7% and 17.6% respectively (OECD, 2012).

Entrepreneurship may be a way to overcome lack of integration in the host country, in particular for those facing more obstacles in salaried work (Clark & Drinkwater, 1998). Constant and Zimmerman (2006) find that, besides earnings, the feeling of being discriminated against is an additional factor leading immigrants to self-employment. By engaging in entrepreneurship, foreigners may take advantage of their skills while avoiding, at least partially, the problem of lack of skill transferability from home to host countries. Entrepreneurship can also be a mean to exploit advantages that foreigners may have over natives, such as those resulting from the identification of opportunities missed by natives. Such advantages can arise, for example, from serving markets related with their countries of origin (Zhou, 2004;

Drori et al., 2009), or from creativity benefits resulting from exposure to multicultural experiences, (Leung et al., 2008; Shi and Hoskisson, 2012).

However, unfamiliarity and discrimination may also create obstacles to entrepreneurship among foreigners. Foreigners wishing to engage in entrepreneurship may lack the necessary knowledge to meet the preferences of the host market. As a consequence consumers may not buy their products (Kaynak & Kara, 2002; Balabanis et al., 2001), which decreases the likelihood of success of foreign entrepreneurs. Discrimination against foreigners by local consumers and local capital markets may also hinder the success of foreign entrepreneurs. Local consumers may consider the products supplied by foreigners to be worse than those supplied by natives (Nardinelli & Simon, 1990; Watson & Wright, 2000) and thus refuse to buy them. Investors are often biased towards local firms (French & Poterba, 1991) and thus may discriminate foreigners in capital markets (Bell et al., 2012) preventing them from obtaining appropriate financing in the host country.

Several studies find evidence that foreigners assimilate in the host country over their stay, as they may learn about the host country and become more accepted in the society. Foreigners' job search performance improves over their stay in the host country (Frijters et al., 2005). The wages of foreigners tend to increase and approximate those of natives over their stay in the host country (Chiswick, 1978), although wage penalties may persist over time (Cabral & Duarte, 2013). Foreigners are also more likely to engage in entrepreneurship as they assimilate (Borjas, 1986).

Foreigners' labor market choice upon arrival is likely to affect how they assimilate in the host country. Lofstrom (2002) finds that the earnings of self-employed immigrants converge to the earnings of natives faster than the earning of immigrants in salaried work. Therefore, factors affecting foreigners' labor market choice upon arrival, such as legal constraints on entrepreneurship, may have long run effects. Legal constraints on entrepreneurship affect the characteristics of foreigners who come to the host country, foreigners' countries of origin (Borjas, 1994, Borjas, 1992, Winkelmann, 1999) and the perceptions of natives about foreigners (Miller, 1999). Thus, these legal constraints affect the performance of foreigners in the labor market (Baker & Benjamin, 1994, Bloom et al., 1995) and their assimilation in the host country. For example, countries that have a generous immigration policy and grant a considerable share of visas to asylum seekers and refugees tend to have low shares of labor market participation among immigrants (Bauer et al., 2001).

Foreigners are not all alike. Countries of origin shape individuals' characteristics, beliefs and behaviors and also determine the regulations that foreigners are subject to in the labor market of host country. Barrett (1998) finds significant differences in the labor market quality of immigrants across countries. The author finds that the impact of the absence of labor market quality criteria in immigration policy in the US depends on immigrants' country of origin. For countries of origin such as Mexico the consequence is an inflow of low skilled workers while for countries as Sweden or the Netherlands this does not hold, as immigrants from the later countries tend to be of higher quality regardless immigration criteria.

Differences between home and host countries may aggravate the obstacles foreigners face in the labor market, both in salaried work and in entrepreneurship. On the one hand, these differences increase the difficulty of foreigners understand and adapt to the host country while, on the other hand, they also increase the difficulty of locals understand foreigners (Orr and Scott, 2008). Individuals from countries that are more dissimilar to the host country may experience greater unfamiliarity with the host country as well as greater discrimination against them.

In the host country we study, differences between home and host countries will determine which foreigners may or may not enter freely into the labor market, since Portugal is a member of the European Economic Area, an area that allows free movement of individuals. In particular, individuals from countries outside the European Economic Area wishing to engage in entrepreneurship have to fulfill legal requirements that to those from countries within this area do not. Regulations on entry into entrepreneurship increase the cost of entry or may even prevent it. As a consequence, these regulations reduce entry into self-employment (Prantl & Spitz-Oener, 2009) and hamper the creation of new firms (Klapper et al., 2006). Ardagna and Lusardi (2008) find that those not able to find jobs or those pursuing business opportunities are less likely to become entrepreneurs in countries with high levels of regulation on entry into entrepreneurship. A reduction in this type of entry costs is found to increase the likelihood of entry into entrepreneurship (Bruhn, 2011; Kaplan et al., 2011; Ardagna & Lusardi, 2008; Rostam-Afschar, 2013), which in turn may lead to an increase in the number of firms and in employment (Branstetter et al., 2013).

Studying foreigners' labor market decision concerning salaried work or entrepreneurship upon arrival, and how countries of origin influence these decisions

may thus provide useful insights concerning their future integration in the labor market of the host country.

3. Immigration in Portugal: Trends and Law

Immigration is a relatively recent phenomenon in Portugal. Foreign individuals represented 1.2% of the population in 1992 while in the period between 2002-2009 this figure was around 4% (Sources: Statistics Portugal, *Serviço de Estrangeiros e Fronteiras*, PORDATA). Portuguese speaking African countries were traditional sources of immigration into Portugal representing 45% of foreigners in the country in 2002. In the following years, the countries of origin of new immigrants became more diverse. Brazil increased its importance, accounting for 13.9% of foreigners in 2007 compared to 10.4% in 2002. Eastern European countries emerged as important sources of immigrants. The share of Ukrainian individuals rose from 0.1% in 2002 to 8.5% in 2007. Likewise, those from Romania and Moldova accounted for a joint share of 0.3% in 2002 that increased to 7.1% in 2007. The share of individuals from countries within the European Economic Area decreased from 28% in 2002 to 23% in 2007 (Statistics Portugal).

Immigration in Portugal is greatly driven by labor market opportunities and employment rates of immigrants that recently arrived to Portugal are usually high. The 2004/2005 average employment rate for immigrants in Portugal for less than five years is 81.7% for men and 56.5% for women, which are in both cases higher than those of natives (OECD, 2008).

Immigrants have also engaged in entrepreneurship in Portugal. The number of foreign entrepreneurs increased from 4000 in 1998-2000 to 7000 in 2007-2008, while, in the same period, the number of native entrepreneurs decreased from 74000 to 42000. The self-employment rate of foreigners is usually below the one of natives. In the period 2005-2006 self-employment rates of foreigners and natives were 12.1% and 19.3% respectively. However, self-employed foreigners are more likely to employ paid labor than self-employed natives (OECD, 2008). Employees in firms owned by foreigners account for 4.7% of employment in the firms of all entrepreneurs in 1998-2000 and 5.7% in 2007-2008 (OECD, 2011). This suggests that foreign entrepreneurs' contribution to employment creation is not negligible.

Portugal is a member of the European Economic Area and thus entry into entrepreneurship is subject to different regulations for immigrants from the European Economic Area and for those outside this area. Immigrants from the European Economic Area have very few restrictions, while those outside this area are subject to a more stringent immigration law (see Oliveira (2010) for more detail). Between 2002 and 2006 no changes occurred in the Portuguese immigration law. The admission of immigrants to undertake salaried work in Portugal was contingent on the existence of employment opportunities. Priority in the fulfillment of employment opportunities was given to Portuguese citizens, those from the European Union, Economic European Area and countries with which Portugal has agreements of free movement of people, and immigrants already residing in Portugal. There were four types of work visas, according to the type of activities the immigrant was going to work on: sports, show business, services and salaried work. To apply for work visas immigrants had to have a work contract, means of subsistence, access to housing, be registered in the social security, a proof of their fiscal situation, and allow the consultation of their criminal record. The initial period for immigrants undertake salaried work could not exceed two years; in the case of seasonal work it would be 6 months for each 12 months period.

Immigrants were only allowed to engage in entrepreneurial activities under two legal statuses: residence permit and a work visa specific for independent activities. The way to obtain these legal statuses depends on whether individuals were arriving to the country or if they were already working in Portugal under other statuses. To obtain a residence permit allowing them to engage in entrepreneurial activities, those entering the country had to have means of subsistence, access to housing and to provide one document proving the registration of an investment operation in Portugal and one document certifying that the individual was qualified to do it. If a specific skill was required, immigrants had to apply for recognition of their qualifications. This means that immigrants had first to establish their entrepreneurial activities in Portugal in order to request the residence visa to engage in such activities. To do so, they could request a short-term visa with the purpose of setting up their businesses or have someone already with residence in Portugal to represent them. To apply for a work visa for independent activities, immigrants had to prove they hold a promise to contract service provision and that they were qualified to do the activity

involved in the service provision. Proof of qualification had to be done with a declaration from the respective professional order.

Those who were already working in Portugal had to change the type of visa they held in order to be able to engage in entrepreneurial activities. To do so they had two options: to wait between 3 to 5 years before and then convert their visas into residence permits or they could leave the country and request a type III visa or a residence visa in a Portuguese consulate in their countries of origin. Those who were working in Portugal with a stay permit were particularly restricted, as they had to work uninterruptedly for 5 years in order to convert their status into a residence permit. This was the case of many Ukrainian and Brazilian individuals, which represented a considerable share of workers with stay permits.

In 2007 the Portuguese immigration law was changed. A single residence visa was created, which was granted according to the purpose of immigrants' stay in Portugal (for example, salaried work, independent activities or research). The admission of immigrants to undertake salaried work in Portugal did not change notably with the new law. However, for the first time, the law explicitly recognized entrepreneurial activities as a specific purpose of immigrants coming to Portugal. As in the previous law, immigrant wishing to come to Portugal to engage in entrepreneurship had to have means of subsistence and access to housing. However, they are not forced to establish their businesses prior coming to Portugal anymore. Requirements are now to provide evidence of investments already made in Portugal or that they have the intention to invest and the necessary financial resources in Portugal to do so.

Those already working in Portugal could change to an entrepreneurial activity in two ways. First, as under the previous law, they could return to their countries of origin and request a residence visa to undertake an entrepreneurial activity. Second, unlike the previous law where they had to wait a minimum period to change their professional status, immigrants could make an application at the Portuguese immigration office, which would be analyzed on a case-by-case basis.

4. Methods

4.1 – Data Source

The source of our data is Quadros de Pessoal, a mandatory annual survey conducted by the Portuguese Ministry of Employment that covers all firms employing paid labor in Portugal. The dataset has information on all individuals working at each firm and includes their occupational status (employee or employer) and nationality. The longitudinal nature of the data allows us to follow individuals over time and thus identify when they first enter the Portuguese labor market.

Our study uses a sample of foreigners that entered the Portuguese labor market for the first time in the years between 2002 and 2009, whether as salaried workers or as entrepreneurs. Our dataset starts in 1985 and thus we are able to identify which individuals appear for the first time in the data in the years between 2002 and 2009. We start in 2002 because information on nationalities is only available from this year onwards. We identify around 250 000 foreign individuals that entered the labor market in the period 2002-2009. Around 16 000 were from countries within the European Economic Area and 234 000 from countries outside this area.

To study the effect of relaxing legal constraints concerning the entry of foreigners into entrepreneurship we use the change in the Portuguese immigration law occurred in 2007, which is described in the previous section. It is unclear what was the impact of this change in the year 2007, as it was enforced in August of that year. Moreover, in 2007 agents may not had the necessary time to adjust their decisions in response to the change in the law. Thus, to be on the safe side we exclude the year 2007 from our sample and we focus on those individuals that entered the Portuguese labor market for the first time before and after the law was enforced: years 2005 to 2006 and 2008 to 2009, respectively. In 2005/2006 around 37 000 foreign individuals entered the Portuguese labor market while this figure was around 50 000 in 2008/2009.

4.2 – Estimation

To estimate the probability that foreigner individuals choose to enter the labor market as entrepreneurs we use a probit model, including individuals' characteristics and variables accounting for differences between home and host countries.

To evaluate the effect of the change in the Portuguese immigration law we follow a differences-in-differences approach. We compare the probability of individuals entering the labor market as entrepreneurs before and after the change in the law for both those coming from countries outside the European Economic Area and those from within this area. Individuals from countries within the European Economic Area serve as a control group because are not affected by the change in the immigration law, as Portugal is a member of this area and this allows them to freely move to Portugal.

To be on the safe side concerning the composition of the sample of foreigners entering Portugal before and after the change in the law as well as the composition of the sample of foreigners from the European Economic Area and those outside this area, we compare the probability of individuals entering the labor market as entrepreneurs before and after the change in the law using a propensity score matching model. That is, we define a control and a treatment group and select individuals of the control group who are similar to those in the treatment group. We considered two scenarios for the matching model. First, we seek to avoid confounding effects arising from changes in the composition of immigrants coming to Portugal that may result from the change in immigration law. Thus, we match the characteristics of individuals from each group (European Economic Area and outside this area) in 2008/2009 to the characteristics of individuals in the same group in 2005/2006. That is, we want individuals who come to Portugal after the law to have similar characteristics to those arriving before the new law. We do not impose that individuals from the European Economic Area have characteristics similar to those outside this area. Our sample for this scenario is obtained with the following procedure. We estimate the probability that each individual is in the period 2005/2006 using individuals' characteristics: schooling, age and gender. This estimation is done separately for those from the European Economic Area and those outside this area. Using this estimation and individuals' observed characteristics we predict the probability that each individual is in 2005/2006. Then, for each individual in 2005/2006 we searched in 2008/2009 for the individual with the closest probability to the former, provided that the distance between these probabilities does not exceed a small value. This small value was 0.009, which was calculated based on the standard deviation of the estimated probabilities of being in the period 2005/2006. We obtained 72 816 individuals with similar characteristics in 2005/2006 and 2008/2009: 67 278

individuals from outside the European Economic Area and 5 538 individuals from within this area.

In the second scenario, we want to avoid confounding effects arising from differences in the characteristics of individuals from the European Economic Area and those outside this area. We want to consider as a control group those individuals from the European Economic Area that have characteristics similar to those from outside this area, before and after the change in the law. Here we do not impose that individuals within each group in 2005/2006 have characteristics similar to individuals within the same group in 2008/2009. To select individuals to our sample for this scenario, we estimate the probability that each individual is from outside the European Economic Area using individual characteristics: schooling, age and gender. The estimation is done separately for 2005/2006 and for 2008/2009. With this estimation and individuals' observed characteristics we predicted the probabilities of individuals come from outside the European Economic Area. For each individual from countries outside the European Economic Area, we then searched among those from this area for the one having the probability that is closest to the former, provided that the distance between these probabilities does not exceed a small value. This value was 0.01 and it was calculated based on the standard deviation of estimated probabilities of being from outside the European Economic Area. We obtained 12 218 individuals comparable across both groups: 5 706 in 2005/2006 and 6 512 in 2008/2009.

4.3 – Variables

Our dependent variable is a binary variable taking the value 1 if an individual entered the labor market as an entrepreneur and 0 if he entered as a paid worker.

We include the following individual characteristics: gender, education and age. Gender is accounted for with a dummy variable equal to 1 for males and 0 for females. Education is measured by individuals' schooling years. Individuals' age is directly reported in our dataset.

To account for differences between home and host countries we use national culture, political institutions and the level of economic development. We measure cultural distance between home and host countries with four cultural dimensions: power distance, uncertainty avoidance, individualism and masculinity (Hofstede,

2001). To aggregate this dimensions into a single measure we use Kogut and Singh Index (Kogut & Singh, 1988), defined as follows:

$$CD_j = \sum_{i=1}^4 \frac{\{(I_{ij} - I_{iP})^2 / V_i\}}{4}$$

where I_{ij} is the distance score for the i th dimension and j th country, V_i is the variance of the score of i th dimension, P stands for Portugal and CD_j is the national distance between the j th country and Portugal.

To measure political distance between home and host countries we use a measure by (Berry et al., 2010) that aggregates five dimensions: policy-making uncertainty (institutional actors with veto power), the size of the state (as a percentage of GDP), a democracy score, whether or not countries are WTO members, and if they belong to the same trading block. In countries with high levels of political uncertainty policies may change in a subjective manner, as these countries are often associated with governments with low democracy levels, few institutional constraints, high levels of state ownership and lack of credibility (Murtha & Lenway, 1994; Henisz, 2000). This makes it more difficult for foreigners to anticipate such changes and thus to adapt to them. Close political ties often support commercial relations, which in turn potentiate the exchange of information. Consequently, foreigners from countries with which the host country maintains commercial relations may be more familiar with the host country than those from countries that lack these relations (Brewer, 2007). This measure of political distance is only available until 2007 and thus for the years 2008 and 2009 we assume that each country had the same political distance to Portugal as in 2007.

Countries' level of development is measured with GDP per capita in constant prices of 2000 adjusted for purchasing power parity, obtained from the United Nations World Development Indicators Database.

5. Results

5.1 – Entry in the Portuguese Labor Market

Table 1 displays sample averages of individual characteristics of foreigners coming from countries within the European Economic Area and those from countries outside this area. Individuals from countries within the European Economic Area are on average older, more educated and represented by a higher share of women than

those from countries outside this area. Individuals from countries within the European Economic Area are, on average, culturally more distant from Portuguese than those coming from countries outside this area. Not surprisingly, countries within the European Economic Area are politically more similar to Portugal and have a higher GDPpc than countries outside this area.

Table 1. Sample Averages: 2002 - 2009

	EEA	No EEA	t Statistic
Age	34.821	31.674	41.837
Schooling Years	10.364	6.581	102.303
Male	0.580	0.602	-5.279
Cultural Distance	71.095	19.296	318.78
Political Distance	0.870	1.291	-57.392
GDPpc	21 900.450	3 553.551	137.505
Number of Observations	15 438	144 274	

Table 2 has sample averages for those entering the labor market as entrepreneurs. Individuals entering by entrepreneurship are older, culturally more different and wealthier than those that enter as workers and this holds for those outside and within the European Economic Area. However, while individuals from the EEA that enter through entrepreneurship are less educated, with a higher share of males coming from countries with higher political distance compared to those entering as workers, for individuals from countries outside the EEA the opposite happens.

Table 2. Sample Averages: labor market entries through entrepreneurship

	EEA	No EEA	t Statistic
Age	43.086	35.770	20.912
Schooling Years	9.668	7.790	9.766
Male	0.704	0.605	5.729
Cultural Distance	86.113	26.428	47.495
Political Distance	0.759	1.667	-24.240
GDPpc	23 772.040	5 255.995	24.506
Number of Observations	1 276	1 888	

Table 3 displays the number of foreign individuals that entered the Portuguese labor market between 2002 and 2009. Most foreigners come from countries outside

the European Economic Area. However, the share of those from countries outside the European Economic Area entering as entrepreneurs is considerably lower than that of foreigners from that area. The share of entrepreneurs among those from the European Economic Area does show a clear pattern over time, going from 10.2% to 16.7% between 2002 and 2003 but then remaining around 12% to 14% in the following years. A clearer pattern emerges from the figures concerning the share of entrepreneurs among those from outside the European Economic Area. This share has been increasing in particular from 2005 onwards, that is, before the new immigration law was enforced.

Table 3. Entries in the Labor Market by Year

	EEA			No EEA		
	Entrepreneurs	Workers	% Entrep.	Entrepreneurs	Workers	% Entrep.
2002	176	1551	0.102	304	38588	0.008
2003	231	1149	0.167	230	23518	0.010
2004	188	1317	0.125	255	19812	0.013
2005	234	1651	0.124	337	20925	0.016
2006	212	1391	0.132	376	16275	0.023
2007	241	1705	0.124	481	19330	0.024
2008	277	1684	0.141	683	28712	0.023
2009	201	1397	0.126	481	18655	0.025

Figure 1 shows the number of individuals entering the Portuguese labor market by country of origin. We only display the top twenty countries with the largest number of individuals coming to the Portuguese labor market between 2002 and 2009 (see Table 11 in the appendix for a complete set of countries of origin of individuals coming to the Portuguese labor market). The share of individuals that enter the Portuguese labor market through entrepreneurship tends to be higher among those from countries within the European Economic Area than among those outside this area. Countries accounting for higher inflows are not necessarily those that contribute the most for foreign entrepreneurship upon arrival. Accounting for considerable inflows are countries from Eastern Europe and Africa and the particular case of Brazil.

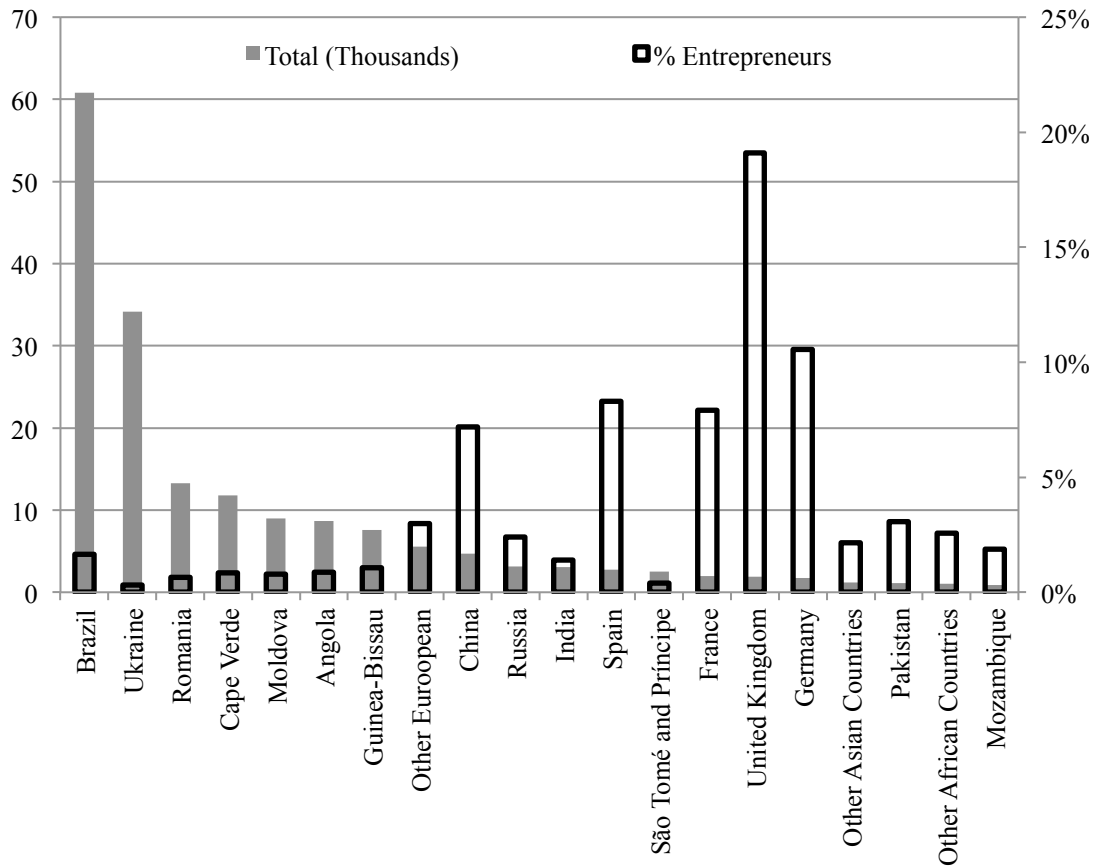


Figure 1. Labor Market Entries by Country

Results of our first regressions are reported in Table 4. These regressions include a dummy variable indicating whether individuals entering the labor market come from countries outside the European Economic Area. This dummy is negative thus indicating that those from countries outside the European Economic Area are less likely to enter the labor market as entrepreneurs than those from the European Economic Area. This result still holds if we control for individuals characteristics. Controlling for individual characteristics (column (2)), the probability of entry through entrepreneurship is, on average, 5.7% for those from within the EEA and 1.4% for those outside this area.

Table 4. Regression Results

	(1)	(2)	(3)	(4)	(5)	(6)
No EEA	-0.838*** (0.017)	-0.641*** (0.020)	-0.363*** (0.026)	-0.693*** (0.020)	-0.441*** (0.028)	-0.253*** (0.031)
Cultural Distance			0.005*** (0.000)			0.004*** (0.000)
Political Distance				0.099*** (0.008)		0.099*** (0.008)
ln(GDPpc)					0.095*** (0.010)	0.107*** (0.010)
Male		0.069*** (0.016)	0.071*** (0.016)	0.057*** (0.016)	0.082*** (0.016)	0.074*** (0.017)
Schooling		-0.038*** (0.005)	-0.036*** (0.005)	-0.033*** (0.005)	-0.038*** (0.005)	-0.031*** (0.005)
Schooling ²		0.004*** (0.000)	0.004*** (0.000)	0.003*** (0.000)	0.004*** (0.000)	0.003*** (0.000)
Age		0.054*** (0.005)	0.056*** (0.005)	0.053*** (0.005)	0.057*** (0.005)	0.058*** (0.005)
Age ²		-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Constant	-1.446*** (0.029)	-3.048*** (0.104)	-3.454*** (0.107)	-3.107*** (0.104)	-4.011*** (0.143)	-4.514*** (0.147)
Log Likelihood	-14427.0	-13757.7	-13603.9	-13683.7	-13706.5	-13498.5
Number of Obs.	159712	159712	159712	159712	159712	159712

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests). Standard errors in parentheses.

Results concerning individual characteristics are in line with our expectations. Men are more likely to enter the labor market as entrepreneurs than women, which is consistent with Minniti and Nardone (2007) who find that women are less likely than men to be involved in entrepreneurship. Education has a nonlinear effect upon the probability of individuals enter the labor market as entrepreneurs. Among low skilled individuals (those with at most 4 schooling years) those with more schooling years are more likely to enter the labor market as salaried workers rather than entrepreneurs. Among those individuals with 5 or more schooling years, the opposite happens. Those with higher education are more likely to engage in entrepreneurship upon arrival rather than undertake salaried work. This is not surprising, as education can develop or increase individuals' skills and ability to evaluate market opportunities (Robinson & Sexton, 1994). Age has an inverted U-shaped effect upon the probability of entering the labor market as an entrepreneur. However, this probability reached its

maximum at an age of 74 years old. Therefore, we conclude that, during the relevant age span, older individuals are more likely than younger ones to enter the labor market as entrepreneurs. Older individuals are less likely to be hired in paid employment (Daniel & Heywood, 2007), although they may hold greater human capital than younger ones. Older individuals may go abroad to engage in entrepreneurship as a way to avoid unemployment or to prolong their active life beyond retirement (Kibler et al., 2012).

We discussed earlier that unfamiliarity and discrimination create obstacles to the integration of foreigners in the labor market of the host country. These two factors influence integration both in paid employment and in entrepreneurship. Thus obstacles to entrepreneurship do not arise exclusively from regulations. Differences between home and host countries may affect the labor market choice of foreigners upon arrival as they may contribute to a higher unfamiliarity with the host country and to a greater discrimination experienced by foreigners. We add variables accounting for differences between home and host countries to our previous specification to see how these differences affect the labor market choice of foreigners upon arrival. Results are in columns (3) to (6) of in Table 4. Foreigners whose countries of origin are more dissimilar to the host country in cultural and political terms are more likely to enter the labor market through entrepreneurship than those from countries similar to the host country. This result suggests that differences between countries create stronger obstacles to entry into salaried work than into entrepreneurship. Both, entry into salaried work and into entrepreneurship, require individuals to go through procedures with which they are not completely familiar. However, once these procedures are completed engagement in entrepreneurship is dependent on individuals' will, while entry into paid employment is contingent also on employers' will to hire. Employers' unfamiliarity (or even prejudice) with individuals from countries with greater dissimilarity from the host country may bias them towards hiring workers from similar countries (OECD, 2006). The skills of those from countries dissimilar to the host country may be less transferable than the skills of those from similar countries in what paid employment is concerned. Therefore, upon arrival differences between countries seem to be particularly relevant in the integration of foreigners through paid employment.

Foreigners from wealthier countries are more likely than those from poor countries to enter the labor market as entrepreneurs. Foreigners from high income

countries are likely to have more wealth than those from poor countries (Akresh, 2011). This is of particular importance as foreigners may be discriminated in the credit markets of the host country. Individuals from wealthier countries are thus less likely to be financially constrained than those from poor countries. Financial constraints are found to be a critical factor determining who engages in entrepreneurship (Evans & Jovanovic, 1989). Therefore, those from wealthier countries are less likely to be excluded from entrepreneurship due to lack of funding. Our results are consistent with (Fairlie & Meyer, 1996) who find that groups with advantages in terms of capital have higher self-employment rates. Results concerning individuals' characteristics remain qualitatively the same.

5.2 – Change in Immigration Law

Table 5 displays sample averages for individuals from countries within the European Economic Area and those outside this area, before and after the change in the law. We can see that, within each group, individuals' characteristics do not change dramatically after the law was changed. Nevertheless, differences are on average larger among those from countries outside the European Economic Area. Overall, after the law was changed, those coming to Portugal were, on average, younger individuals with more education and a higher share of females who come from countries politically more dissimilar to Portugal. After the change in the law, those from countries outside the European Economic Area came from richer countries culturally more similar to Portugal. By contrast, those from countries within the European Economic Area came from poorer countries culturally more different from Portugal.

Table 6 reports sample averages for the sample obtained by matching individuals from each group, European Economic Area and outside this area, before and after the change in the law without imposing that individuals have similar characteristics across groups. As expected, differences in characteristics after the change in the law are, on average, smaller in this sample. Differences remain in cultural and political distances and GDPpc, which did not enter in the matching model.

Table 5. Sample Averages: Before and after the change in the law

EEA			
	Before	After	Difference
Age	34.974	34.432	-0.542*
Schooling Years	9.951	10.646	0.695***
Male	0.585	0.579	-0.006
Cultural Distance	71.933	73.755	1.822
Political Distance	0.817	0.949	0.132***
GDPpc	22 719.680	21 958.500	-761.180***
Number of Observations	2 862	3 204	
No EEA			
	Before	After	Difference
Age	31.757	30.897	-0.860***
Schooling Years	6.253	6.864	0.611***
Male	0.598	0.567	-0.031***
Cultural Distance	19.299	18.316	-0.983***
Political Distance	1.249	1.411	0.162***
GDPpc	2 961.331	4 565.213	1 603.882***
Number of Observations	22 720	35 444	

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

Table 6. Sample Averages: matched sample over time

EEA			
	Before	After	Difference
Age	34.482	34.474	-0.008
Schooling Years	10.273	10.201	-0.072
Male	0.592	0.596	0.004
Cultural Distance	71.637	73.977	2.340*
Political Distance	0.817	0.945	0.128***
GDPpc	22 703.680	22 051.050	-652.630***
Number of Observations	2 769	2 769	
No EEA			
	Before	After	Difference
Age	32.214	32.417	0.203***
Schooling Years	6.387	6.442	0.055
Male	0.601	0.596	-0.005
Cultural Distance	19.271	18.446	-0.825***
Political Distance	1.248	1.434	0.186***
GDPpc	2 962.769	4 475.960	1 513.191***
Number of Observations	33 639	33 639	

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

Sample averages for our second matched sample are in Table 7. This sample was obtained by matching the characteristics of individuals from the European Economic Area and the characteristics of those outside this area before and after the change in the law without imposing individuals within each group in 2005/2006 to have characteristics similar to individuals within the same group in 2008/2009. As expected, the characteristics of individuals in both groups, EEA and No EEA, are more similar. Individuals from countries outside the European Economic Area in this sample are older, with higher educational levels, with a lower share of males and come from wealthier countries that are culturally more dissimilar to Portugal.

Table 7. Sample Averages: matched sample across groups

Before the New Law			
	EEA	No EEA	Difference
Age	34.858	38.978	4.120***
Schooling Years	9.926	9.823	-0.103
Male	0.584	0.540	-0.044***
Cultural Distance	71.880	20.671	-51.209***
Political Distance	0.818	1.224	0.406***
GDPpc	22 715.990	3 550.273	-19 165.717***
Number of Observations	2 853	2 853	
After the New Law			
	EEA	No EEA	Difference
Age	34.195	39.575	5.380***
Schooling Years	10.567	10.265	-0.302***
Male	0.576	0.575	-0.001
Cultural Distance	73.668	20.609	-53.059***
Political Distance	0.949	1.438	0.489***
GDPpc	21 951.000	8 335.258	-13 615.742***
Number of Observations	3 256	3 256	

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

To evaluate the impact of changing the immigration law, we extend our previous model to include a dummy variable indicating the period after the change in the law (2008/2009) and an interaction of this variable with the dummy indicating that individuals come from countries outside the European Economic Area. That is, our model allows for a group effect (dummy No EEA), a time effect (variable After the

Law) and a time effect specific to those that are subject to the change in the law (No EEA×After the Law). If the change in the law did incentive entrepreneurship then we would expect the sign of the interaction between “No EEA” and “After the Law” to be positive. Table 8 displays the results of estimating this extended model for our three samples. We can see in column (1) that the interaction term “No EEA×After the Law” is positive and significant, thus suggesting that the change in the law did provide incentives for foreigners engage in entrepreneurship upon arrival.

Table 8. Regression Results: Change in the Law

	(1)	(2)	(3)
	Unmatched	Matched 1	Matched 2
No EEA	-0.742*** (0.037)	-0.244*** (0.039)	-0.718*** (0.057)
After the Law	0.037 (0.043)	0.064 (0.045)	0.055 (0.044)
No EEA×After the Law	0.114** (0.048)	0.066 (0.051)	0.076 (0.074)
Male	0.061*** (0.020)	0.065*** (0.022)	0.132*** (0.037)
Schooling	-0.046*** (0.006)	-0.050*** (0.007)	-0.046*** (0.012)
Schooling ²	0.005*** (0.000)	0.005*** (0.000)	0.004*** (0.001)
Age	0.047*** (0.006)	0.043*** (0.007)	0.111*** (0.012)
Age ²	-0.000*** (0.000)	-0.000*** (0.000)	-0.001*** (0.000)
Constant	-2.693*** (0.121)	-2.613*** (0.136)	-4.114*** (0.241)
Log Likelihood	-9318.836	-7840.770	-3058.573
Number of Obs.	87 177	72 816	12 218

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests). Standard errors in parentheses.

In columns (2) and (3) we have results from estimation with matched samples. Results in both matched samples reveal that the impact of changing the law on the probability of foreigners engaging in entrepreneurship upon arrival is not statistically significant, although it remains positive. This suggests that changing the law may be

also changing the characteristics of foreigners coming to Portugal, which may in turn be increasing the likelihood of entrepreneurship upon arrival.

Table 9 presents the results of estimating the probability of individuals that enter the Portuguese labor market in 2005/2006 and in 2008/2009, choose to do so as entrepreneurs. Estimation is done using the three samples considered in Table 8. We can see that foreigners from within the European Economic Area are always more likely to engage in entrepreneurship upon arrival than those from outside this area. These differences are statistically significant in all cases, as t statistics in rows are all between 12.296 and 13.049.

Foreigners are more likely to enter as entrepreneurs in 2008/2009 than in 2005/2006. However, for individuals from countries outside the European Economic Area probabilities before and after the new law are statistically different with all samples, while for those from countries within this area probabilities before and after the new law are never statistically different.

To evaluate if the change in the law had a significant impact upon the probability of foreigners enter the labor market as entrepreneurs, we compare the variation in the probabilities of both groups by taking the difference of the differences ΔP across groups (column (5)). If changing the law was to increase the probability of entrepreneurship upon arrival figures in column (5) should be positive, as the change did not affect those from within the area. However, DID in column (5) are positive with the unmatched sample but negative with both matched samples, and never statistically significant. We thus conclude that changing the law seemed to increase the likelihood of entrepreneurship upon arrival but not in a significant way. We saw earlier that the share of foreigners engaged in entrepreneurship upon arrival began to increase in 2005 before the new law was in force. Thus, the increase in the likelihood of entrepreneurship upon arrival can also be a consequence of a change in the pattern of immigrants coming to Portugal.

Table 9. Predicted Probabilities: Before and after the change in law

	(1)	(2)	(3)	(4)	(5)	(6)
	t_0 :	t_1 :		$\Delta P = \Pr(t_1) - \Pr(t_0)$	DID	t Stat. DID
	2005/2006	2008/2009			$\Delta P_{NoEEA} - \Delta P_{EEA}$	
Unmatched Sample						
			t Stat.			
EEA	7.62%	8.14%	0.860	0.005		
No EEA	1.61%	2.29%	6.946	0.007	0.0016	0.2646
t Stat.	13.049	12.843				
Matched Sample 1						
			t Stat.			
EEA	7.63%	8.56%	1.407	0.009		
No EEA	1.67%	2.27%	5.505	0.006	-0.0033	0.4899
t Stat.	12.440	12.296				
Matched Sample 2						
			t Stat.			
EEA	12.61%	13.68%	1.233	0.012		
No EEA	3.52%	4.57%	2.236	0.003	-0.0002	0.0141
t Stat.	12.769	12.855				

5.3 – Robustness: change in immigration law

We performed a robustness check to estimations in Table 9. In 2006 the information that the immigration law was going to change could already be public and thus individuals could be already adjusting their choices. In 2008, individuals could still be adjusting their choices in response to the change in the law enforced in 2007. Therefore, in our robustness check we repeated estimation in Table 9 in a sample restricted to those entering the labor market in 2005 and in 2009, rather than in 2005/2006 and 2008/2009. We also repeated the matching process described earlier in a sample restricted to those entering the labor market in 2005 and in 2009, rather than in 2005/2006 and 2008/2009. Results of this robustness check are in Table 10, and remained qualitatively the same as those in Table 8: changing the law may have increased the likelihood of entrepreneurship upon arrival but not significantly.

Table 10. Robustness: Change in the law - 2005 vs 2009

	(1)	(3)	(5)
	Unmatched	Matched 1	Matched 2
No EEA	-0.623*** (0.057)	-0.574*** (0.061)	-0.433*** (0.088)
After the Law	0.096 (0.064)	0.148** (0.067)	0.127* (0.066)
No EEA×After the Law	0.139* (0.075)	0.043 (0.079)	0.038 (0.119)
Male	0.057* (0.033)	0.072** (0.035)	0.160*** (0.058)
Schooling	-0.035*** (0.010)	-0.036*** (0.011)	-0.004 (0.019)
Schooling ²	0.884*** (0.001)	0.004*** (0.001)	0.002* (0.001)
Age	0.071*** (0.011)	0.075*** (0.012)	0.133*** (0.019)
Age ²	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)
Constant	-3.382*** (0.212)	-3.459*** (0.230)	-4.906*** (0.400)
Log Likelihood	-3303.099	-2971.267	-1281.645
Number of Obs.	28541	25208	4835

Significance is indicated as follows * $p < 0.10$ ** $p < 0.05$ *** $p < 0.001$ (two tailed tests). Standard errors in parentheses.

6. Conclusion

We study foreigners' choice between salaried work and entrepreneurship upon arrival to the host country. We study how this choice is affected by individuals' characteristics, differences between home and host countries, and host country regulations on entry into entrepreneurship. We find that individuals' country of origin affects their choice concerning entry into entrepreneurship upon arrival. Foreigners whose countries of origin are more dissimilar of the host country are more likely to enter the labor market as entrepreneurs than those from similar countries, after controlling for individual characteristics. Differences between countries may decrease the transferability of individuals' skills and qualifications to the labor market of the host country. This is particularly critical in salaried work as employers may not be able to properly assess candidates from dissimilar countries and prefer to hire those perceived as more similar to local workers. According to our findings, foreigners from wealthier countries are more likely than those from poor countries to enter the

labor market as entrepreneurs. This finding suggests that financial constraints may be less binding for those from wealthier countries and thus they are less likely to be excluded from entrepreneurship due to lack of funding.

Individuals from countries outside the European Economic Area wishing to engage in entrepreneurship have to fulfill requirements imposed by the Portuguese immigration law that are not required to those from countries within this area, because Portugal is a member of the European Economic Area. Foreigners whose countries of origin are outside the European Economic Area are less likely to enter the labor market as entrepreneurs than those from countries within this area, even after controlling for individual characteristics and differences between home and host countries. Reducing legal restrictions on entrepreneurship imposed to foreigners from outside the European Economic Area may encourage them to choose entrepreneurship. However, according to our results, the impact of this reduction upon entrepreneurship is not significant. The share of foreign entrepreneurs began to increase around 2005 that is before the new law was in force. Thus, the increase in the likelihood of entrepreneurship upon arrival can result from a change in the pattern of immigrants coming to Portugal.

The integration of immigrants in the labor market of the host country is crucial to promote their integration in the society of that country. Entrepreneurship may be an alternative way for foreigners' integration in the labor market of the host country, as salaried work may not allow them to fully exploit their skills. Several countries have implemented policies to attract foreigners to engage in entrepreneurship (OECD, 2010). According to our results, policies that help foreigners learn about the host country and that allow foreigners to get acquainted with locals and locals with them may improve the prospects of foreign entrepreneurs and thus their integration in the labor market of the host country. Likewise, policies that help foreigners get access to funding are of particular importance to promote entrepreneurship among them. For example, (Ramsden, 2008) finds that, in the UK, providing capital and loan guarantees to foreigners contributes to the success of their entrepreneurial ventures. Therefore, our results suggest that providing foreigners the means to engage in entrepreneurship or helping them to obtain such means can be more effective in fostering entrepreneurship than decreasing legal constraints on foreign entrepreneurship.

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Appendix

Table 11. Entries in the Labor Market by Country of Origin

	Entrepreneurs	Workers	% Entrepreneurs
Brazil	1008	59816	1.66%
Ukraine	111	34003	0.33%
Romania	87	13180	0.66%
Cape Verde	100	11704	0.85%
Moldova	70	8914	0.78%
Angola	76	8628	0.87%
Guinea-Bissau	80	7508	1.05%
Other European Countries	165	5377	2.98%
China	340	4385	7.20%
Russia	76	3074	2.41%
India	43	3041	1.39%
Spain	228	2519	8.30%
São Tomé and Príncipe	10	2491	0.40%
France	156	1816	7.91%
United Kingdom	368	1559	19.10%
Germany	185	1569	10.55%
Other Asian Countries	26	1189	2.14%
Pakistan	34	1070	3.08%
Other African Countries	27	1024	2.57%
Mozambique	17	894	1.87%
Morocco	14	727	1.89%
Italy	80	617	11.48%
Poland	6	659	0.90%
Venezuela	27	621	4.17%
Senegal	4	621	0.64%
Bangladesh	21	562	3.60%
Netherlands	123	435	22.04%
Other South American Countries	23	494	4.45%
Guinea	1	467	0.21%
Lithuania	0	367	0.00%
Cuba	13	275	4.51%
Belgium	33	244	11.91%
USA	21	253	7.66%
Sweden	8	186	4.12%
Austria	15	162	8.47%
Canada	19	143	11.73%
Ireland	42	118	26.25%
Switzerland	22	127	14.77%
Czech Republic	3	132	2.22%
Servia	3	126	2.33%
Other Central American	3	118	2.48%

Countries			
Philippines	1	113	0.88%
Hungary	3	90	3.23%
Slovakia	0	86	0.00%
Latvia	4	79	4.82%
Japan	4	64	5.88%
Denmark	13	54	19.40%
Turkey	7	60	10.45%
Finland	4	56	6.67%
Mexico	2	48	4.00%
Greece	8	41	16.33%
Estonia	4	45	8.16%
Other Oceania Countries	5	44	10.20%
Luxembourg	2	37	5.13%
Slovenia	0	35	0.00%
Norway	5	27	15.63%
East Timor	0	18	0.00%
Iceland	0	10	0.00%
Malta	0	9	0.00%
Cyprus	1	2	33.33%
Liechtenstein	0	2	0.00%

Transitions to entrepreneurship: the impact of countries of origin and experience in the host country

Abstract

We compare foreign and native individuals in their transition from wage employment to entrepreneurship. We find that foreign individuals are less likely than natives to switch to entrepreneurship, even after controlling for individuals' characteristics and industries. The opportunity cost of leaving wage employment is stronger for foreigners than it is for natives. Individuals from countries that are more dissimilar from the host country have higher probabilities of switching from wage employment to entrepreneurship. Individuals from less developed countries are more likely to switch to entrepreneurship the wealthier their country of origin is, while for those from countries more developed than the host country the opposite happens.

1. Introduction

The number of foreign individuals engaged in entrepreneurial activities has been increasing around the world. The average share of foreign-born individuals in the population of 21 countries in the OECD increased from 13.1% to 15.2%, between 2001 and 2008 (OECD Migration Databases). In the same period, the share foreign-born individuals who were self-employed rose from 11.3% to 12.6%, while the share of self-employed natives rose from 11.6% to 12%.

Several countries have implemented policies to support foreign entrepreneurs already in the host country and also to attract new ones (OECD, 2010). Foreign individuals may be a source of diverse entrepreneurial skills, thus contributing to job creation and economic growth (Van Praag & Versloot, 2007; Wildeman et al., 1990). Between 1998 and 2008, foreign entrepreneurs' contribution to employment was equivalent to 1.5 – 3% of the total labor force employed in OECD countries (OECD, 2011). Thus, it is important to understand the entrepreneurial behavior of foreigners in order to improve integration policies, which in turn may help economic growth and job creation in the host country.

Most studies on entrepreneurship by immigrants focus on self-employment (Clark & Drinkwater, 1998; Clark & Drinkwater, 2000; Fairlie & Meyer, 1996; Borjas, 1986; Yuengert, 1995; Nee et al., 1994). Self-employment is often considered a strategy to avoid labor market exclusion or discrimination (Clark & Drinkwater, 1998). Discrimination against immigrants in the labor market may result in a wage gap relative to natives (Reimers, 1983). These hurdles in paid employment reduce the opportunity cost of self-employment thus increasing its attractiveness relative to wage employment (Clark & Drinkwater, 1998; Hammarstedt, 2006). Therefore, self-employment rates are often found to be higher among immigrants than among natives (Yuengert, 1995; Li, 2001, Clark & Drinkwater, 1998, OECD, 2010).

Immigrants' entrepreneurial activities may go beyond the traditional ethnic businesses. Recent studies find that immigrants account for an important share of high skilled workers and high tech entrepreneurs (Wadhwa et al., 2007; Saxenian, 2002; Kerr, 2013; Stephan & Levin, 2001). Therefore, the perspective that immigrants resort to self-employment as a response to obstacles in paid employment ignores that they may use entrepreneurship to exploit comparative advantages (Clark & Drinkwater, 2000).

Another common finding is that self-employment rates and earnings vary considerably among immigrants (Borjas & Bonars, 1989; Borjas, 1987; Borjas, 1986; Yuengert, 1995; Fairlie & Meyer, 1996). Social norms and attitudes within societies as well as economic constraints shape individuals' decisions. Thus, countries of origin may affect the entrepreneurial behavior of foreigners in the host country. Most studies consider one or few nationalities often related with specific ethnic groups that are at a disadvantaged position in the host country. Small sets of specific nationalities do not allow us to confirm if the uncovered patterns hold for a broader set of nationalities, that is, for foreigners in general.

In this study, we are interested in those individuals who already have a job as paid workers and decide to start a firm employing paid labor. The self-employed or those firms that employ only the entrepreneur and unpaid family workers are thus excluded from our analysis. We study how countries of origin and experience in the host country determine the entrepreneurial behavior of foreign individuals. We compare foreign and native individuals concerning their probability of leaving wage employment to engage in entrepreneurship. We use data on individuals who are paid workers in Portugal in each year between 2002 and 2009 and see if they switch to entrepreneurship in the following period. We have data on foreign individuals from over 60 nationalities, which allows us to study the effect of country of origin. We find that foreign individuals have lower probabilities of switching to entrepreneurship when compared to natives and these probabilities depend of their country of origin and of the magnitude of their experience in the host country.

This paper is organized as follows. In Section 2 we characterize immigrants in the Portuguese labor market. Section 3 reviews previous research. In section 4 we discuss the framework in which we conduct our analysis. Section 5 presents the empirical model and the data that we will use in the empirical estimation. In Section 6 we discuss our results. Lastly, we provide concluding remarks in Section 7.

2. Immigrants in the Portuguese Labor Market

Immigration is a relatively recent phenomenon in Portugal. According to the Population Censuses the share of foreign individuals increased from 1% in 1992 to 4% in the period 2002-2009. In the last decade the increase in the number of immigrants had origin in countries that were not traditional sources of immigration

before. The share of foreigners from Portuguese speaking African countries decreased from 56% in 2001 to 25% in 2011. In contrast, Brazilian individuals increased their share from 14% in 2001 to 29% in 2011. The share of Ukrainian individuals among foreigners, which was negligible in 2001, increased to 11% in 2011. In the same period, individuals from European Union countries represent more than 20% of the total number of foreigners.

Employment rates among immigrants in Portugal are usually high as a result of immigration flows that are substantially driven by work opportunities. In 2005/2006 the average employment rate of immigrants was 75.4%, which is higher than the 73.6% of natives. Immigrants in Portugal work in a small number of sectors, in particular construction (26%) and hotels and restaurants (15%), and they are mostly in low-skilled occupations. In fact, a considerable share of immigrants is overqualified for the jobs they hold. In 2005/2006 36.6% of highly qualified immigrants were in low-medium skilled jobs, while for natives this figure was 21.1%. Perhaps, as a consequence immigrants earn less than Portuguese workers. This wage gap was around 20% in 2005(OECD, 2008). Another relevant difference between immigrants concerns their employment stability. Only 55.6% of immigrants hold permanent contracts, while 81.2% of natives do so.

The contribution of foreign individuals to entrepreneurship has increased in Portugal. The average number of foreign entrepreneurs increased from 4000 in 1998-2000 to 7000 in 2007-2008, while for natives these figures were 74000 and 42000 respectively. The share of individuals in the labor force who were not self-employed in the previous year and became self-employed in 1998-2000 was 1.19% for foreigners and 1.13% for natives; in 2007-2008 this share increased to 1.14% for foreigners while for natives it decreased to 0.65%. Firms owned by foreign and native entrepreneurs are mainly small. Around 30-33% of firms have 2 to 10 employees, 5-6% have between 11 and 49 employees and only 1% has 50 or more employees. The average number of jobs created in firms with less than 50 employees is around 1.6 to 2.5 both in firms owned by foreigners and natives. Employees in firms owned by foreign entrepreneurs represent 4.7% of employment in the firms of all entrepreneurs in 1998-2000 while in 2007-2008 this number increased to 5.7% (OECD, 2011).

3. Previous Research

The entrepreneurial behavior of foreign individuals has been studied with a focus on self-employment. Self-employment appears as a response to lack of alternatives or obstacles in paid employment, such as discrimination (Bisin et al., 2011). These obstacles may result in an earnings gap between immigrants and natives, in particular in paid employment (Chiswick, 1978; Friedberg, 2000). As a consequence, discrimination may push immigrants into self-employment to a larger extent than those who are not discriminated against (Constant & Zimmermann, 2006). Consistent with this argument, Hammarstedt (2006) finds that, in Sweden, an increase in the differential between the earnings in self-employment and paid employment, increases the self-employment rate among immigrants. Likewise, Lofstrom (2002) finds that self-employed immigrants fare better in the labor market than immigrants in paid employment. In fact, self-employment is often pointed out as an alternative for immigrants to achieve economic success (Portes & Zhou, 1996).

Immigrants may have comparative advantages in serving specific markets, such as those related with their countries of origin (Zhou, 2004; Drori et al., 2009). This may pull immigrant to engage in entrepreneurial ventures to exploit these advantages. Immigrants may take advantage of ethnic enclaves (geographical concentration of individuals of the same origin) and serve their own ethnic communities in the host market. Borjas (1986) finds that, in the US, the self-employment rates of immigrants exceed those of natives and part of this differential can be explained by an enclave effect. He finds that Hispanics are more likely to be self-employed in areas with larger Hispanic populations and this effect is larger for Hispanics than for natives. Likewise, Evans (1989) and Le (2000) find that enclaves can explain the higher self-employment rates among particular groups of immigrants in Australia. Immigrants may also provide natives with products coming from their countries of origin, acting like middleman minorities (Bonacich, 1973).

Most immigrants are often found to have self-employment rates higher than the ones of natives. Nevertheless, self-employment rates of immigrants vary considerable between groups (Borjas, 1986; Yuengert, 1995; Clark & Drinkwater, 1998; OECD, 2010). For example, Fairlie (1999) finds that African American men are less likely than natives to be self-employed. These differences may occur even among groups of similar origins. Fernandez & Kim (1998) find that Koreans have the highest

self-employment rates among Koreans, Chinese, Asian Indians and Vietnamese. Moreover, while there are proportionally more Korean college-graduates engaged in self-employment, among other Asian groups college graduates show the lowest self-employment rates.

Individuals' characteristics may explain some differences within and between groups (Hammarstedt, 2004). However, substantial differences persist, even after controlling for some characteristics. Peoples' attitudes and behaviors may also determine their entrepreneurial behavior. Attitudes and behaviors are to a great extent shaped by national culture. Hofstede's culture dimensions (Hofstede, 2001) have been extensively used in the literature to characterize countries cultural profiles (see (Kirkman et al., 2006) for a review). Some works have addressed the influence of culture in phenomena related to entrepreneurship, such as inventions (Shane, 1992) or innovation (Shane, 1993). However, to our knowledge, few works study a direct relationship between culture and entrepreneurship and findings are not consensual. In a study across nine countries, Mueller & Thomas (2001) found that individualistic cultures with low uncertainty avoidance are more conducive to entrepreneurship. In Norway, Vinogradov & Kolvereid (2007) found that individuals from countries with low power distance are more likely to become self-employed. In a broader study comprising 23 OECD countries, Wildeman et al. (1990) found that countries with high power distance and high uncertainty avoidance have more self-employed individuals.

4. Entrepreneurship among foreign individuals

We are interested in the entrepreneurial behavior of foreign individuals who already hold a job in the host country. Our focus is on foreigners that choose to engage in entrepreneurship rather than in those that resort to entrepreneurship because they do not have other labor market alternatives. Our aim is to compare the entrepreneurial behavior of foreign individuals with that of natives and see how countries of origin and experience in the host country influence the entrepreneurial behavior of foreigners. In particular, we want to see how differences between home and host countries affect individuals' engagement in entrepreneurship.

Foreignness and differences between home and host countries can be sources of obstacles for foreign individuals in the host country. These types of obstacles were

emphasized in international business literature under the name of liabilities of foreignness. These liabilities arise from unfamiliarity with the local environment, lack of legitimacy, constraints imposed by host countries, and cost associated with distance (Zaheer, 1995). As a consequence, foreign firms operating abroad were found to perform worse than their domestic counterparts (Zaheer, 1995; Zaheer & Mosakowski, 1997). International business literature looks to multinational corporations. However, as knowledge exists only in individuals (Grant, 1996), we believe that there are liabilities of foreignness also at the individual level. Mezias (2002) found that, while foreign firms in the US face more labor lawsuits than domestic firms, they could reduce the number of such lawsuits by using American top officers. This suggests that the liabilities of foreignness experienced by firms can, to some extent, arise from individuals.

The knowledge and experience individuals acquired outside the host country may not be entirely appropriate there and thus foreigners are likely to feel some degree of unfamiliarity with the host country. Consequently, foreigners that seek to engage in entrepreneurship may lack the knowledge necessary to adequate their products to the preferences of natives. Thus, their entrepreneurial opportunities may be hindered, as consumers will not buy products that are not adequate to their preferences (Balabanis et al., 2001; Kaynak & Kara, 2002).

Discrimination against foreigners in the host country is not an uncommon phenomenon (Mayda, 2006). As we discussed earlier, foreigners may have a wage gap relative to natives (Chiswick, 1978; Reimers, 1983) and they may be discriminated even within firms. Harvey et al. (2005) suggests that foreign employees of multinational corporations who work in the corporation's home country can be stigmatized and stereotyped by native employees. Mezias & Mezias (2007) provide evidence that, in one firm with headquarters in the US, salary increases of foreigners are lower than those of natives in the same firm. Discrimination can also occur when foreigners engage in entrepreneurship. Foreigners may be discriminated against by local consumers (Nardinelli & Simon, 1990) who perceive products supplied by foreigners as worse than those provided by natives (Watson & Wright, 2000). Likewise, foreign entrepreneurs may be discriminated against in capital markets (Bell et al., 2012) as investors are often biased towards local firms (French & Poterba, 1991). This bias may prevent foreigners from obtaining capital in the host country, thus aggravating their liquidity constraints.

The liabilities of foreign individuals are accentuated by differences between home and host countries. These differences may increase the difficulty of foreigners to understand and adapt to the local environment (Orr & Scott, 2008) and the difficulty of locals understand foreigners. Thus, foreigners from dissimilar countries are more unfamiliar with the local environment than those from similar countries. These individuals are also more likely to be perceived by natives as less legitimate and thus more susceptible to experience discriminatory treatments. As foreigners learn how to comply with the host environment and assimilate in the host country their disadvantages relative to natives are often reduced. For example, Chiswick (1978) found that after 10 to 15 years the earnings of foreign born men equal or even exceed those of native born men in the United States.

Much attention has been given to the negative aspects of foreignness and differences between home and host countries. However, foreignness and differences between home and host countries are not necessarily a handicap as they may provide advantages and benefits. Exposure to multicultural experiences may increase creativity (Leung et al., 2008) and thus foreign individuals can be a source of creative ideas and innovations that are outside the usual parameters of the host country's society (Shi & Hoskisson, 2012). Foreigners can be able differentiate themselves from locals and thus reduce competition (Deephouse, 1999). As discussed earlier, foreigners have advantages over natives in serving markets related with communities of the same or similar nationalities residing in the host country. The more different these communities are from native population the greater these advantages, as local entrepreneurs may not be familiar enough with the preferences of consumers from these communities. Foreigners' lack of embeddedness in the host country can also work in their favor. Foreigners are detached from prevailing norms and attitudes within the host country. Thus they are able to identify and exploit opportunities missed by natives, by deviating from standard practices adopted in the host country. For example, Siegel et al. (2011) find that American firms are able to take advantage of discrimination against women in South Korea by hiring a higher share of female managers compared to local firms. This would be unlikely if both countries had similar practices, as American firms would see discrimination against women as standard procedure.

Empirical studies on the impact of foreignness upon entrepreneurship are focused on self-employment and provide mixed evidence. For example, while Borjas

(1986) finds that the self-employment rates of several immigrant groups exceed those of their native-born counterpart, Borjas & Bonars (1989) find that self-employment rates are lower for foreign groups than for natives, even after controlling for individuals' characteristics. The impact of differences between the attitudes and behaviors of foreigners and natives upon their entrepreneurial behavior is also left undone. The interplay between home and host countries may affect individuals' entrepreneurial behavior, as attitudes and behaviors are greatly shaped by national culture.

5. Data and Estimation

5.1 – Empirical Model

We follow a comparative advantage framework to study what makes an individual leave paid employment to become an entrepreneur (Rees & Shah, 1986; Constant & Zimmermann, 2006; Carrasco, 1999). Individuals choose between paid employment and entrepreneurship by comparing the gains (pecuniary or non-pecuniary) they expect to obtain in each case (Borjas, 1986). Individuals switch to entrepreneurship if the expected gains of this option exceed those of paid employment.

We do not observe individuals' expected gains, only if an individual switches to entrepreneurship, at a given period. Let w_i and e_i denote individual i expected wage and expected gains from entrepreneurship, respectively. We define

$$E_i^* = e_i - w_i = \beta X_i + \gamma D_i + v_i \quad i = 1, 2, \dots, I \quad (1)$$

where X_i is a vector of observable individual characteristics, D_i contains variables characterizing differences between individuals' home and host countries and v_i is an error term. The probability that a paid worker in period $t-1$ becomes an entrepreneur in period t if given by

$$\Pr(E_{i,t}^* \geq 0 | X_{i,t-1}, D_i) = F(\beta X_{i,t-1} + \gamma D_i) \quad (2)$$

where F is specified as the standard normal cumulative distribution function.

We use a probit model to estimate the probability of transition to entrepreneurship. We consider individuals' characteristics in the period before they switch (or not) to entrepreneurship in order to avoid confusing causes and

consequences of transition to entrepreneurship. Individual characteristics such as education, age or gender are expected to affect wages and earnings of entrepreneurship. Older males with higher education levels are likely to have higher wages but also better prospects regarding entrepreneurial earnings. The net effect of such characteristics upon the probability of transition to entrepreneurship will depend on whether they affect more entrepreneurial earnings or wages. Differences between home and host countries determine, on the one hand, the extent of the unfamiliarity and lack of legitimacy experienced by foreigners and, on the other hand, the relative advantage they may have over natives. Unfamiliarity and lack of legitimacy harm both the wages and entrepreneurial earnings of foreigners, while the relative advantage they may have over natives improves their prospects regarding wages and entrepreneurial earnings. Overall the impact of differences between home and host countries upon the probability of transition to entrepreneurship will depend on which effect dominates in the case of wages and in the case of entrepreneurial earnings.

5.2 – Research Sample

Our analysis is based on the whole population of individuals who were paid workers in Portugal from 2002 to 2009. The source of our data is Quadros de Pessoal, a dataset that is obtained from a mandatory annual survey conducted by the Portuguese Ministry of Employment and covers all firms employing paid labor in Portugal. The dataset includes information on all the individuals working at each firm including their occupational status, distinguishing between employees and employers (business owners), and their nationality. Its longitudinal nature, with individual identified by a unique number, allows us to follow them over time and also avoid stock sample biases. Although data are available from 1985 to 2009, we start in 2002 because information about nationalities is available only from this year onwards. Overall, we track over 4.4 million individuals of the whole population working in firms that employ paid labor during the period 2002-2009. Over 26.000 individuals switch from paid employment to entrepreneurship, of which 610 are foreign of over 60 nationalities.

5.3 – Variables

Our dependent variable is a binary variable taking the value 1 if an individual that was a worker switches to entrepreneurship and 0 otherwise.

We consider the following individual characteristics determining their choice between paid employment and entrepreneurship: experience in the host country labor market, tenure in the firm, prior experience in entrepreneurship, hourly wages, education, gender, and age. Experience in the host country is measured by the number of years that an individual has been in the host country labor market. Because we have data available starting in 1985 we were able to identify participation in the labor market from that year onwards. In addition, we can account for the experience of a person who is in the files in 1985 but started working in that firm earlier, as our data has information about the date at which each person started working in a firm. Tenure in the firm is measured by the number of years that an individual was at that firm. Prior experience in entrepreneurship is accounted for with a dummy variable that is equal to 1 if an individual was previously an entrepreneur since he entered our dataset and zero otherwise. We include hourly wages earned in the period before individuals switch or not to entrepreneurship, because they provide a good benchmark to the future wages they will earn if they remain in paid employment. Hourly wages are measured by total work compensations in 2009 euros divided the number of hours worked. Education is measured by the number of schooling years of each individual. Gender is indicated by a dummy variable taking the value 1 for male individuals and 0 otherwise. A variable with the age of individuals is available in our dataset. We include in our model industry dummies concerning the sector in which individuals were as paid workers before switching (or not) to entrepreneurship, in order to control for possible sector-specific effects in the probability of entrepreneurship (Bates, 1995). Year dummies are also included to control for the macroeconomic environment.

To account for differences between home and host countries we use national culture, political institutions and the level of economic development. Cultural distance is measured using four cultural dimensions: power distance, uncertainty avoidance, individualism, and masculinity (Hofstede, 2001). These dimensions are aggregated with the Kogut and Singh Index (Kogut & Singh, 1988), which is defined as follows.

$$CD_j = \sum_{i=1}^4 \frac{\{(I_{ij} - I_{iP})^2 / V_i\}}{4}$$

where I_{ij} is the distance score for the i th dimension and j th country, V_i is the variance of the score of i th dimension, P stands for Portugal and CD_j is the national distance between the j th country and Portugal.

Political distance is accounted for with a measure developed by (Berry et al., 2010), which combines five indicator variables: policy-making uncertainty (institutional actors with veto power), the size of the state (as a percentage of GDP), a democracy score, whether or not countries are WTO members, and if they belong to the same trading block. Political uncertainty is often associated with countries where governments have low levels of democracy, few institutional constraints, high levels of state ownership, and that often lack credibility (Murtha & Lenway, 1994; Henisz, 2000). In countries that have high levels of political uncertainty policies may change almost arbitrarily. Thus, it is more difficult for foreigners to adapt in countries with high political uncertainty because it is more difficult for them to foresee such changes. Close political ties between countries may support the exchange of information through commercial relationships. Thus, foreigners from countries with commercial relations with the host country may be more familiar with the host country than those from countries without such relations (Brewer, 2007).

Economic development is measured by GDP per capita in constant prices of 2000 adjusted for purchasing power parity. Data were collected from the United Nations World Development Indicators Database.

6. Results

6.1 – Differences between foreign and native individuals

Table 12 reports sample averages of foreign and native individuals. The age and education of foreigners are similar to those of natives but foreigners have a higher share of male individuals. Foreigners and natives have different levels of experience in the host country, as one would expect. Both labor market experience and entrepreneurial experience of foreigners in Portugal is considerably lower than those of natives. Native individuals have an experience of around 13 years in the labor market while foreigners have only approximately 3 years. Among natives, 2% of

individuals have been previously engaged in entrepreneurship while for foreigners this figure is below 0.5%. Foreigners also reveal lower tenure and slightly lower wages when compared to natives. These differences result, to some extent, of the fact that foreigners are in the local labor market for a shorter length of time. Compared to those remaining paid workers, individuals switching to entrepreneurship have lower labor market experience in the host country and lower tenure, and higher shares of them are younger males who were previously engaged in entrepreneurship.

Table 12. Sample Averages: Unmatched Sample

Unmatched Sample			
All Sample	Native	Foreign	Difference = N - F
Host Country Experience	13.297	3.157	10.140***
Previously Entrepreneur	0.021	0.003	0.018***
Tenure in Firm	8.795	2.977	5.818***
Hourly Wage	6.443	5.323	1.120***
Male	0.572	0.658	-0.086***
Schooling Years	8.276	6.997	1.279***
Age	37.621	35.143	2.478***
Number of Individuals	2 921 984	103 493	
Number of observations	11 331 680	249 880	
Switch to Entrepreneurship	Native	Foreign	Difference = N - F
Host Country Experience	10.668	2.805	7.863***
Previously Entrepreneur	0.108	0.033	0.075***
Tenure in Firm	5.518	2.300	3.218***
Hourly Wage	7.341	4.351	2.99***
Male	0.676	0.736	-0.060***
Schooling Years	9.657	6.354	3.303***
Age	34.668	34.150	0.518
Number of Individuals	25517	603	
Number of observations	25 617	605	

Figure 2 displays the number of individuals by country of origin and the rates at which they switch to entrepreneurship. We only display the 33 groups with positive switching rates and thus Figure 2 does not display all nationalities in our sample as some of them have switching rates equal to zero. Switching rates vary across countries with individuals from some countries revealing rates above the ones of natives and others below. No obvious pattern emerges from Figure 2. The group of countries with the highest switching rates comprises countries like China, Switzerland, Pakistan, Bangladesh, and the United Kingdom. Worth noticing is that

Portuguese speaking countries account for a considerable number of workers in our sample but are among those with the lowest switching rates.

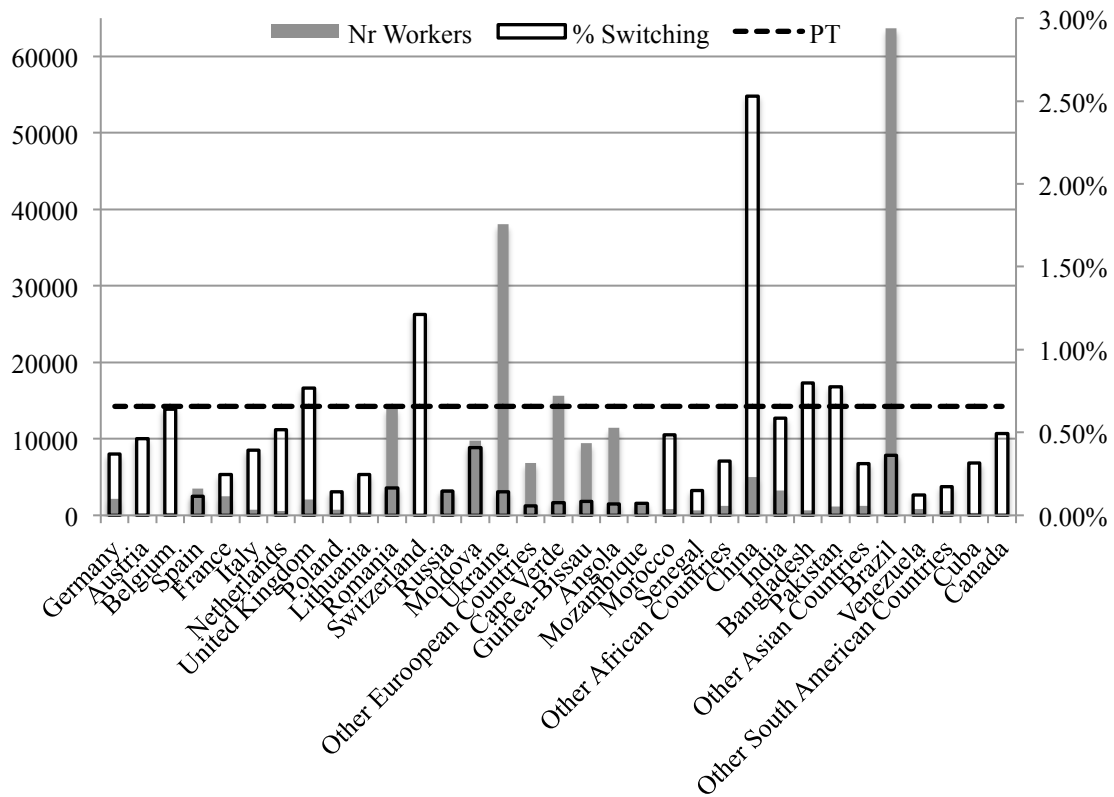


Figure 2. Individuals By Country of Origin

In order to select natives that are similar to the foreigners in our sample, we match natives and foreigners that have comparable characteristics in each year. To do this matching we estimated a propensity score indicating the probability of an individual being foreign using the whole sample of foreigners and natives in each one of the years 2002 to 2008. These probabilities were estimated using as covariates individuals' host country experience, a dummy variable indicating if the individual was previously engaged in entrepreneurship in the host country, tenure in the firm, hourly wages, gender, schooling, age and sectors. For each foreigner we selected the native with the probability that is closest to the one of the foreigner, ensuring that the distance between these probabilities does not exceed a small value (0.01). A total of 13.623 foreigners (3% of all foreigners in our sample) were excluded because we did not find a native with a probability within the considered distance. Our matched

sample has the same number of observations for foreigners and natives in each year, which correspond to a total of 101.638 foreigners and 202.985 natives. The number of natives in our sample is larger than the number of foreigners and thus when searching for natives with characteristics similar to the ones of foreigners we find several candidates for the matching. That is, for a particular foreign, his native match in one year does not have to be the same native match in a different year, as we have a considerable pool of natives to do the matching. As a result, native individuals are less repeated in the sample than foreigners and thus have a greater number of observations than the later.

Table 13 report descriptive statistics for the unmatched and matched samples respectively. We can see that native and foreign individuals in the matched sample are indeed more similar to each other.

Table 13. Sample Averages: Matched Sample

Matched Sample			
All Sample	Native	Foreign	Difference = N - F
Host Country Experience	3.326	3.224	0.102***
Previously Entrepreneur	0.003	0.003	0.000***
Tenure in Firm	3.045	3.019	0.0260***
Hourly Wage	4.897	5.344	-0.447***
Male	0.636	0.656	-0.02***
Schooling Years	7.341	7.195	0.146***
Age	35.159	35.082	0.077***
Number of Individuals	198 250	100 269	
Number of observations	265 767	242 736	
Switch to Entrepreneurship	Native	Foreign	Difference = N - F
Host Country Experience	2.667	2.894	-0.227
Previously Entrepreneur	0.025	0.035	-0.010
Tenure in Firm	2.514	2.343	0.171*
Hourly Wage	5.018	4.375	0.643***
Male	0.716	0.727	-0.011
Schooling Years	8.244	6.671	1.573***
Age	33.935	33.970	-0.035
Number of Individuals	851	573	
Number of observations	851	575	

Table 14 shows the education levels of individuals switching to entrepreneurship. We can see that, among those switching to entrepreneurship, foreigners have education levels lower than those of natives. The share of foreigners

with schooling between zero and four years is higher than the corresponding share for natives, while for the remaining schooling classes the opposite happens.

Table 14. Education Levels of Individuals Switching to Entrepreneurship

	Foreign	%	Native	%
[0,4]	252	0.440	210	0.247
[5,9]	184	0.321	371	0.437
[10,12]	106	0.185	186	0.219
[13, ...]	31	0.054	82	0.097

Table 15 displays the distribution of transitions into entrepreneurship by sectors. Transitions into entrepreneurship occur mainly in wholesale and retail trade, accommodation, professional, scientific and technical activities, real estate activities and restaurants. Within the top exit sectors, foreigners account for higher shares *vis-a-vis* natives mainly in retail trade and real estate, while within the top entry sectors, the same happens in accommodation, real estate activities and restaurants.

Table 15. Exit and Entry Sectors

Panel a. Exit	Foreign	Natives
Construction	153	235
Hotels and restaurants	128	191
Wholesale trade and commission trade, except of motor vehicles and motorcycles	44	43
Other business activities	28	74
Land transport; transport via pipelines	23	43
Other service activities	13	19
Agriculture, hunting and related service activities	12	19
Health and social work	11	0
Manufacture of food products and beverages	8	28
Real estate activities	8	17
Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	8	19
Recreational, cultural and sporting activities	6	6
Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	6	103
Manufacture of fabricated metal products, except machinery and equipment	4	17
Manufacture of other non metallic mineral products	4	11
Supporting and auxiliary transport activities; activities of travel agencies	0	6

Table 4. Exit and Entry Sectors (cont.)

Panel b. Entry	Foreign Natives	
Agriculture, hunting and related service activities	15	29
Construction	162	231
Health and social work	16	25
Hotels and restaurants	115	154
Land transport; transport via pipelines	16	27
Manufacture of fabricated metal products, except machinery and equipment	11	18
Manufacture of food products and beverages	14	28
Manufacture of furniture; manufacturing	0	8
Manufacture of other non metallic mineral products	6	9
Manufacture of wood, products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	4	0
Other business activities	85	105
Other service activities	5	10
Real estate activities	5	10
Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	36	54
Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	12	21
Wholesale trade and commission trade, except of motor vehicles and motorcycles	33	33

The results of our first regressions are reported in Table 16. Column (1) displays the results of estimating a probit model using the unmatched sample and including a dummy variable that indicates whether an individual is a foreigner or not. This foreign dummy is positive indicating that, on average and unconditionally, foreign workers are more likely than native ones to leave paid work to engage in entrepreneurship, which is consistent with the observation that immigrants are often more entrepreneurial than native individuals. However, this result does not hold after controlling for individual characteristics, as we can see in column (2) that foreigners are less likely than natives to switch to entrepreneurship. Thus, we ran similar regression in the matched sample we obtained following the methods described above. Results are shown in columns (3) - (4) and reveal that foreigners are less likely to switch to entrepreneurship whether or not we control for individual characteristics. That is, the disadvantages that foreign individuals have may prevent them from leaving paid employment to engage in entrepreneurship. Moreover, these liabilities

seem to outweigh the advantages foreigners may have over natives in entrepreneurial activities.

Table 16. Probability of Entrepreneurship: Individual Characteristics

	(1)	(2)	(3)	(4)	(5)		
	Unmatched Sample		Matched Sample		Matched Sample		t Stat.
					Native	Foreign	
Foreign	0.024*	-0.063***	-0.098***	-0.111***			
	(0.013)	(0.014)	(0.018)	(0.018)			
ln(Experience)		-0.007**		0.008	0.004	0.021	1.05
		(0.003)		(0.012)	(0.015)	(0.018)	
Tenure in Firm		-0.013***		-0.031***	-0.017***	-0.052***	3.00
		(0.0004)		(0.006)	(0.007)	(0.010)	
Prev. Entrepreneur		0.554***		0.832***	0.769***	0.930***	1.14
		(0.008)		(0.070)	(0.096)	(0.104)	
ln(Hourly Wage)		-0.008*		-0.073***	-0.013	-0.166***	3.26
		(0.005)		(0.022)	(0.029)	(0.037)	
Male		0.172***		0.170***	0.141***	0.202***	1.34
		(0.005)		(0.022)	(0.029)	(0.035)	
Schooling Years /100		1.308***		-2.353***	0.592	-3.459***	2.85
		(0.225)		(0.686)	(1.022)	(0.986)	
Schooling Years ² /10000		7.743***		21.590***	9.988	21.115***	1.21
		(1.197)		(4.382)	(6.122)	(6.878)	
Age /1000		43.185***		53.113***	53.008***	52.047***	0.24
		(1.702)		(7.910)	(10.612)	(12.081)	
Age ² /1000000		-		-762474***	-792.168***	-731.546***	0.28
		(21.555)		(107.991)	(145.277)	(163.948)	
Constant	-2.810***	-3.357***	-2.754***	-3.787***	-3.751***	-4.184***	1.00
	(0.005)	(0.048)	(0.029)	(0.211)	(0.277)	(0.330)	
Log Likelihood	-189336.3	-176258.5	-9765.4	-9428.1	-9293.8		
Number of Obs.	11881701	11574001	508503	493986	477288		

Note: The linear and quadratic terms of schooling and age are not jointly significant: χ^2 statistics of 0.81 and 0.08 respectively.

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

Results concerning the coefficients estimated for individual characteristics in columns (2) and (4) are not surprising. The higher the wages individuals earn the less likely they are to switch from wage employment to entrepreneurship. Although higher wages may allow individuals to face smoother financial constraints when switching to entrepreneurship, they also represent a higher opportunity cost for those leaving wage employment. Our result suggests that the opportunity cost effect dominates individuals' decisions to switch to entrepreneurship (Amit et al., 1995). Consistent with Minniti and Nardone (2007), we find that male individuals are more likely to switch to entrepreneurship than females. Education decreases the probability of

entrepreneurship until around 5 schooling years and increases it for higher educational levels. As education may develop or increase the skills necessary to evaluate market opportunities (Robinson & Sexton, 1994), individuals with higher education have a higher probability of switching to entrepreneurship. The effect of age upon the probability of entrepreneurship peaks at around 35 years old and decreases thereafter, that is, younger individuals are more likely to start a firm (Lévesque & Minniti, 2006; Minniti & Arenius, 2005). Industry characteristics also determine the probability of entrepreneurship, as industry dummies are jointly significant ($\chi^2(69)=245.95$, $p<0.0001$).

We account for three possible types of experience that individuals may have in the host country: experience in the labor market, entrepreneurial experience and the tenure they have in a firm before deciding switch or not to entrepreneurship. While experience in the labor market does not significantly affect the probability of individuals switch to entrepreneurship, specific experience in a firm and entrepreneurial experience will affect the probability of individuals leave paid employment to engage in entrepreneurship. Those with longer tenures in a firm have a lower probability of switching to entrepreneurship. Workers' tenure in a firm is an indicator of the quality of the match between employer and employee. Therefore, better employer employee matches are likely associated with longer tenures and less incentives to leave the firm. Incentives to leave a job to engage in entrepreneurship may be related to individuals' predisposition to engage in entrepreneurship. Previous engagement in entrepreneurship may be indicative of individuals inclination towards this type of activity and also that they already have some knowledge on how to do it. Consistent with this premise, we find that those who were previously engaged in entrepreneurial activities have higher probabilities of leaving their jobs to engage in entrepreneurship again.

We discussed earlier that foreigners might have disadvantages and advantages relative to natives. It is reasonable to conjecture that these disadvantages and advantages shape the behavior of foreigners and thus our explanatory variables may have different effects upon the probability of foreigners and natives switch to entrepreneurship. To account for this possibility, we allow the variables in regression of Column (4) to have different effects on the probability of entrepreneurship of foreigners and natives. We replicate the regression in column (4) including

interactions between dummies for foreigners and natives and each one of the considered variables. Column (5) reports the results of such estimation as well as statistics for the equality of coefficients for native and foreign individuals (joint tests for the linear and quadratic effects of Schooling and Age).

Differences in the coefficients for foreign and native individuals are particularly relevant in what concerns wages, previous experience as an entrepreneur in the host country and tenure in the firm. The impact of wages upon the likelihood of transition to entrepreneurship is negative for both, foreigners and natives. Work experience accumulated in the host country reflects skills valued in paid employment, which in turn translates into higher wages (Dustman & Costas, 2005) and thus into a higher opportunity cost of leaving wage employment. This opportunity cost effect is stronger for foreign individuals as we can see from the coefficients associated with tenure and wages ($\chi^2(1)=12.28, p=0.0005$ for tenure and $\chi^2(1)=10.45, p=0.0012$ for wages respectively). The impact of tenure in the firm upon the likelihood of transition to entrepreneurship is also negative for foreign and native individuals. Unfamiliarity and lack of legitimacy are additional hurdles foreigners face in the process of finding and keeping adequate jobs. This implies that, for a given employment status, foreigners are likely to have spent an amount of effort larger than the one spent by natives to achieve that status. Therefore, it is costlier for foreigners to renounce a given wage or a given job in order to become an entrepreneur.

Entrepreneurial experience in the host country is of particular importance in the case of foreigners as it increases their probability of switching to entrepreneurship more than it does for natives ($\chi^2(1)=3.89, p=0.0486$). Individuals with previous experience in entrepreneurship are more likely than those without such experience to switch to entrepreneurship again (Carroll and Mosakowski, 1987) because they are more likely to have a deeper understanding of entrepreneurship and to see it as an alternative to wage employment. In the case of foreigners, entrepreneurial experience in the host country reflects the additional knowledge they acquired about being an entrepreneur in a foreign land.

Host country experience yields positive coefficients for both foreigners and natives with a larger coefficient for foreigners. However, these coefficients are not significant. Because we are considering individuals who already have a job and we are controlling for their tenure and previous entrepreneurial experience in the host

country, the benefits of host country experience may not be as evident as they would be for those just arriving to the host country. In fact, foreigners who already have a job must have learned enough about the host country in order to obtain that job. Likewise, foreigners who already had some entrepreneurial experience in the host country must have acquired some knowledge about how to do it.

6.2 – Differences between home and host countries

Our previous results reveal that foreigners are less likely than natives to switch to entrepreneurship. This suggests that the impact of liabilities of foreignness dominates the impact of its possible creativity benefits. We argued earlier that differences between home and host countries would affect foreigners' entrepreneurial behavior as they can, on the one hand, exacerbate the liabilities foreigners experience and, on the other hand, allow foreigners to exploit opportunities missed by natives.

We extend our model to include variables accounting for differences between individuals' home and host countries, in order to study the impact of such differences upon the probability of switching to entrepreneurship. Results are displayed in Table 17. Political and cultural distances between home and host countries increase the probability that foreigners switch to entrepreneurship. Adaptation in the host country is harder for those that are more unfamiliar with it. Thus, it may be more difficult for such individuals to find adequate job matches. For example, across OECD countries, almost 15% of employed immigrants have temporary contracts, 16% work in low-skilled jobs and 28.3% of the highly educated immigrants are overqualified for the jobs they hold. For natives these figures are 10%, 7% and 17.6% respectively (OECD, 2012). This implies that adaptation and integration is harder for individuals from countries that are more dissimilar to the host country. As a consequence, individuals from countries that are less similar to the host country may face greater discrimination and have worse job matches than individuals from more similar countries. This, in turn, increases the relative attractiveness of entrepreneurship, as discrimination may induce entrepreneurship among those who feel discriminated against (Constant and Zimmerman, 2006). On the other hand, as we argued earlier, foreigners' detachment from the prevailing norms and attitudes within the host country may work in their favor. Therefore, those from dissimilar countries may be at a better position *vis-a-vis* foreigners from similar countries, to exploit opportunities resulting from such

detachment. Some of these opportunities arise from the greater relative advantage over natives in serving consumers of the same nationality or ethnic group than individuals from similar countries. Therefore, the relative gains of entrepreneurship are higher for those coming from countries that are more different from the host country than they are for those from similar countries.

Our results suggest that individuals from wealthier countries are more likely to become entrepreneurs than those from poorer countries. Individuals from high-income countries are more likely to have access to financial resources than those from poorer countries. For example, in the US, immigrants from Western Europe, Australia, Canada, and New Zealand were found to have higher levels of total wealth compared to other immigrant groups (Akresh, 2011). Personal savings are a major source of funding for those engaging in entrepreneurship. They are of particular importance to foreigners as they may be discriminated against in credit markets. Those from high-income countries are thus less likely to be financially constrained and excluded from entrepreneurship than those from low-income countries. For example, Fairlie & Meyer (1996) find that self-employment rates are higher among foreigners from groups with an advantage in terms of capital.

The level of economic development of individuals' countries of origin can determine how successfully they assimilate in wage employment. Haley and Taengnoi (2011) found that, in the US, the degree to which individuals can transfer the skills they acquired abroad is lower for those from less developed countries *vis-a-vis* those from developed countries. As a consequence, immigrants from less developed countries tend to be less successful in wage employment than those from developed countries. Therefore, the skills of individuals from less developed countries may be perceived in the host country as less legitimate or even inferior to the skills of those from developed countries (Chiswick & Miller, 2012). In column (5) of Table 17 we allow GDPpc to have different impacts upon the probability of entrepreneurship depending on whether it is above or below the GDPpc of Portugal. Individuals from countries less developed than Portugal are more likely to switch to entrepreneurship the higher the GDPpc of their home countries, while the opposite happens for individuals from countries more developed than Portugal. This suggests that individuals from less developed countries experience greater liabilities in wage employment than those from developed countries. Thus, the relative attractiveness of entrepreneurship appears to be higher for those coming from less developed countries,

despite the higher financial constraints they face. Entrepreneurship may be a way to capture returns on skills that are not recognized in wage employment.

Table 17. Probability of Entrepreneurship: Home Country Characteristics

	(1)	(2)	(3)	(4)	(5)
Cultural Distance (in entry year)	0.005*** (0.001)			0.003*** (0.001)	0.009*** (0.001)
Political Distance (in entry year)		0.100*** (0.021)		0.110*** (0.023)	0.094*** (0.025)
ln(GDPpc/10000)			0.084*** (0.018)	0.091*** (0.022)	0.184*** (0.031)
GDPpc Above PT×ln(GDPpc/10000)					-1.024** (0.338)
GDPpc Above PT					0.146 (0.262)
ln(Experience)	0.021 (0.021)	0.064** (0.028)	0.034 (0.021)	0.081** (0.029)	0.070** (0.029)
Tenure in Firm	-0.050*** (0.011)	-0.055*** (0.013)	-0.051*** (0.011)	-0.057*** (0.014)	-0.050*** (0.014)
Previously Entrepreneur	0.872*** (0.114)	1.156*** (0.160)	0.887*** (0.114)	1.102*** (0.160)	1.130*** (0.160)
ln(Wage)	-0.253*** (0.044)	-0.155** (0.047)	-0.269*** (0.045)	-0.205*** (0.048)	-0.154** (0.049)
Male	0.208*** (0.039)	0.204*** (0.043)	0.227*** (0.039)	0.201*** (0.043)	0.190*** (0.044)
Schooling/100	-2.727** (1.215)	-3.822** (1.281)	-3.360** (1.201)	-2.713** (1.302)	-2.714** (1.310)
Schooling ² /10000	17.409** (8.445)	25.266** (8.980)	19.821** (8.414)	15.159* (9.198)	16.878* (9.233)
Age/1000	58.497*** (13.437)	42.953** (15.460)	58.036*** (13.431)	51.466*** (15.614)	46.972** (15.674)
Age ² /1000000	-778.773*** (181.773)	-558.569** (211.510)	-744.214*** (181-254)	-697.745** (213.844)	-635.717** (214.432)
Constant	-5.382*** (0.397)	-4.371*** (0.435)	-5.243*** (0.396)	-4.716*** (0.441)	-4.341*** (0.446)
Log Likelihood	-2722.6	-2327.9	-2738.2	-2300.0	-2283.7
Number of Obs.	132829	106839	132829	106839	106839

Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

7. Conclusion

We study the transition of foreign and native individuals from paid employment to entrepreneurship. We see how individuals' characteristics affect their entrepreneurial decisions and how differences between home and host countries affect

the entrepreneurial behavior of foreigners. Our interest is on foreigners that choose to engage in entrepreneurship rather than in those that resort to entrepreneurship because they excluded from other occupational alternatives.

We find that, after controlling for individual characteristics, foreign individuals have lower probabilities of switching to entrepreneurship when compared to natives. This suggests that foreign individuals may have disadvantages relative to natives that affect their entrepreneurial behavior. Foreigners are less familiar with the local environment and local agents may discriminate them because they see foreigners as less legitimate than natives.

Our results suggest that foreigners have an opportunity cost of leaving wage employment higher than natives. Tenure in the firm and wages decrease the probability of individuals switch to entrepreneurship and this effect is stronger in the case of foreigners. Foreigners are required to spend an additional effort in learning about the host country and building legitimacy and thus they are less likely than natives to abdicate of a given job or a given wage in order to become an entrepreneur. Entrepreneurial experience in the host country increases the probability of both natives and foreigners switch to entrepreneurship again but the effect is stronger for the latter.

Individuals' country of origin affects their probability of switching to entrepreneurship. Individuals from countries culturally and politically more dissimilar from the host country have higher probabilities of engaging in entrepreneurship. This suggests that the relative value of entrepreneurship is higher for individuals from dissimilar countries than for those from similar countries. Individuals from less developed countries are more likely to switch to entrepreneurship the wealthier their country of origin is, while for those from countries more developed than the host country the opposite happens. Host country's employers may perceive the skills of individuals from less developed countries as less legitimate than the skills of those from developed countries. Thus, despite the higher financial constraints they face, individuals from less developed countries may engage in entrepreneurship in order to obtain a better return on their skills.

Many countries have been encouraging entrepreneurship (Román et al., 2013) as a mean to boost job creation and economic growth. Such encouragement has targeted not only local individuals but also foreigners (OECD, 2010). Migration policies facilitating the entry and stay of immigrants willing to create their businesses

have played an important role among the measures to encourage entrepreneurship among foreigners (OECD, 2010). Our results suggest that along with these migration policies, it is also necessary to provide foreigners with tools allowing them to reduce or overcome their liabilities. These tools may include training that helps them learn about the host country or the promotion of interactions with local actors in order to build legitimacy. For example, Hiebert (2008) finds that, although Canada welcomes foreign entrepreneurs, their success can be compromised by poor language skills or misunderstanding of labor codes and regulations, among others. In addition, measures that improve foreigners' access to credit are also important, as banks are often reluctant to finance foreigners because they are associated with a higher risk of default. Evidence from the UK shows that providing foreigners with capital and loan guarantees promotes the success of their entrepreneurial ventures (Ramsden, 2008).

Policies supporting the reduction of obstacles to entrepreneurship are particularly important for those with greater liabilities. Those from countries that are more different from the host country may be more unfamiliar with the local environment and face more discrimination. Nevertheless, our results suggest that these individuals may also be those that are more likely to start entrepreneurial ventures. They may be a source of diverse entrepreneurial skills and thus policies supporting their engagement in entrepreneurship may also be appropriate.

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The impact of country of origin and experience in the host country upon the survival of firms created by foreigners

Abstract

We study the survival of firms created by foreigners and reach the following findings. Survival of firms created by foreigners is lower than that of comparable firms created by natives. Survival of firms created by foreigners is particularly low for those originating from less developed countries and from countries for which cultural and political distances to the host country are smaller. Previous experience in the host country increases the prospect of survival of firms created by foreigners.

1. Introduction

Businesses operated by foreigners are now very common in most of the developed countries and the numbers have been rising. This is a consequence of the increased mobility of individuals in today's world and the relative high propensity of foreigners to create new firms. Between 2001 and 2011 the proportion of foreigners in the population increased in 22 of the 24 countries for which the OECD reports data for those years, leading to a rise of the overall proportion of foreigners among the population from 4.9% to 6.4% (OECD 2013, p. 360-1). During a comparable period (from 1998-2000 to 2007-2008), the proportion of self-employed in the OECD increased from 12.2% to 12.6% for foreigners, while it remained constant at 12.0% for natives (OECD, 2011 p. 144).

Academics of different disciplines have long paid attention to firms created by immigrants (Light 1979, 1984, Wilson & Portes 1980, Waldinger, Ward, & Aldrich 1985, Borjas 1986, Razin 1988) and these efforts have led to the development of the field of immigrant entrepreneurship. Most of the studies in this tradition have focused on self-employment by foreigners. Self-employment has largely been seen as a response to social exclusion or, more specifically, to discrimination in the labor market. While some earlier studies posited that lack of alternatives in the labor market would be a leading reason for the creation of firms by immigrants (e.g. Light 1979), it has been acknowledged that immigrant firms are diverse (Portes 1995) and that they may have comparative advantages in serving certain markets, in particular those that are related to their countries of origin (Drori et al. 2009, Zhou 2004). This may be either because immigrant entrepreneurs serve their own ethnic communities in the host market, giving rise to what is known as "ethnic enclaves" (Wilson & Martin 1982), or because they specialize in providing natives with products coming from their countries and act as "middleman minorities" (Bonacich 1973).

Not all immigrants are poorly educated or live at the margins of the host country society, however. An emerging literature has reported that immigrants in the U.S. represent an important and increasing share among high skill workers, and that they have a high propensity to engage in high-tech entrepreneurship (Saxenian 2002, Wadhwa 2007, Kerr 2013). Some immigrants do very well in the host country, as reported in 2013 by the Forbes magazine: "*This year, nearly one in every ten fortunes on The Forbes 400 was created by people born outside of the U.S.*" (Forbes

9/18/2013). Perhaps due to this perceived success, immigrant entrepreneurs have also gone under the radar of many governments, and several countries have designed and implemented programs to attract immigrant entrepreneurs. This is the case of Canada (cic.gc.ca/startup), U.K. (siriusprogramme.com), and Chile (startupchile.org), and others are considering developing similar programs.

We know, very little on how foreign entrepreneurs perform in comparison to locals, however. This is because most of the studies on immigrant entrepreneurship focus on a single nationality (Kalnins & Chung (2006) or a small number of nationalities (Bates 1997) and few discuss any aspect of performance, including survival. In one of the few studies that have examined the survival of immigrant businesses, Kalnins & Chung (2006) found that establishments operated by Gujarati immigrants with access to high quality resources provided by other members of the same community had higher chances of survival than those that did not have such access. Because the focus was on a single ethnic group, this study was not able to provide any clue on how the survival of those immigrant firms compare to that of natives or to that of other immigrant groups. Several studies on domestic entrepreneurship have found that the individual characteristics of the founding entrepreneurs, such as human capital, age, and gender, affect the chances of survival of the new businesses (e.g. Taylor, 1999; Bates, 1990, Gimeno et al., 1997; Boden & Nucci, 2000), but none has included nationality of the owner among the explanatory variables. Therefore, we know very little on how the survival of firms created by foreigners compares with that of their counterparts created by natives or by foreigners of different nationalities.

In contrast, studies in international business developed after Zaheer (1995) have argued that foreign owned firms suffer from a liability of foreignness which puts them at a disadvantage *vis-à-vis* their domestic counterparts and leads to increased chances of exit of foreign firms relative to those of local firms. While the liability of foreignness literature has arisen with the multinational corporation in mind, we argue that this liability largely resides in the persons that make decisions at firms. Entrepreneurial firms created by foreigners may thus be particularly adequate to appraise the effect of the liabilities of foreignness, as the influence of the owner is paramount in such firms and they are less likely to enjoy the “ownership advantages” enjoyed by multinationals that allow them to profitably do business in countries other

than their own and that may confound the identification of the aforementioned liabilities (Nachum, 2010a).

In this paper we analyze the survival of firms that were created and run by foreigners in Portugal during the period 2002 – 2007. We focus neither on those individuals who may enter self-employment because they are excluded from society or labor market in the host country, nor on those who create new businesses to take advantage of their uncommon skills. Instead, we examine common individuals who create standard firms that get involved in normal businesses and that represent the bulk of new entrepreneurial businesses creation by foreigners. Our dataset includes foreign entrepreneurs from 40 nationalities, which enables us to analyze the effect of country of origin and see if the patterns that we uncover are specific to some nationalities in particular or if they hold across the board. We also evaluate the impact of the length of the experience of foreigners in the host country as a factor that diminishes the liability of foreignness.

Before proceeding any further, it is convenient to be clear about our unit of observation. Because we want to focus on entrepreneurial firms, from the whole set of newly created firms, we retained only those in which there was at least one owner actively working in the firm. This excludes new ventures that are subsidiaries of other firms or those that are owned by a set of investors that do not have a direct activity in the firm. We selected all of those firms whose owners are all reported to be foreign and selected a comparison sample of firms whose owners are all Portuguese. Foreignness is defined by citizenship rather than by place of birth. This is due to data constraints. However, since immigration is a relatively recent phenomenon in Portugal, the distinction between immigrants and foreigners is likely to be less pronounced than it is in countries that have experienced immigration for much longer periods.

Our foreign entrepreneur is not the typical immigrant considered in the immigration entrepreneurship literature. All of our new firms employ paid labor, which also excludes many of those that might resort to self-employment due to lack of opportunities in the labor market. In addition, before creating these firms, most of the entrepreneurs had been in the country for some time and had worked legally as wage employees in other firms. Also, many of our entrepreneurs come from other European Union countries. Since citizens of the European Union are legally entitled to move

freely within the Union, these are typically individuals that are in the host country legally and that can hardly be seen as residing at the society's margin.

Having previously worked as employees in other firms and working actively in their firms does not exclude the possibility that our entrepreneurs have other activities. Still, this makes it less likely that our firms are part of entrepreneurial ventures being established simultaneously in several countries, as studied in the international entrepreneurship literature (Zahra 2004, Oviatt and McDougall 2005, Knight & Cavusgil 2004). Those firms, often called new international ventures or born-globals, are likely to possess some kind of "ownership advantage" that persuades their owners to start operations simultaneously in several countries and that may confound the identification of the liabilities of foreignness.

Although our work does not focus on these firms or on multinationals, by putting the individual at the center of the liabilities of foreignness, our results may also be relevant for these types of firms, given the prominent role that entrepreneurs play in many new international ventures and the need that multinationals have to staff their subsidiaries. The literatures on new international ventures and on multinationals have acknowledged that the international experience of individual managers can be important for the strategy and success of these firms, and that to some extent, it can be a substitute for the lack of international experience of firms (e.g. Reuber & Fischer 1997, Sapienza, Autio, George, & Zahra 2006, Sambharya 1996). Very little, however, has been done with respect to the type of country where this experience has been gained and our focus on country of origin may prove to be relevant to these contexts as well.

The paper is organized as follows. We begin by reviewing the literature and deriving a set of hypotheses on the impact of foreignness upon the survival of entrepreneurial firms. We then discuss the Portuguese context in which we conduct our analysis, and we subsequently move to the methods employed and discuss the data and statistical models used in our analysis. We then present and discuss the empirical results. Finally, we offer concluding comments.

2. Literature Review and Hypotheses

Survival

The literature on the survival of new firms has acknowledged that survival depends on the environment in which firms operate, the characteristics of firms, and attributes of the founders.

A literature that occupies a prominent place among these studies is the organizational ecology literature. Organizational ecology places great emphasis on the dynamics of the populations over the long run. In this approach, population density (the number of firms in the population) is the most important determinant of how favorable conditions are for new entrants. When the numbers are small (low density) an increase in the number of firms operating in a market translates into increased legitimacy and favors survival. At greater numbers (high density) the effect of competition dominates. Further increases in the number of firms exacerbate competition, and this translates into increased mortality (see, e.g., Hannan & Carroll 1992, Carroll & Hannan 2000). Among the other features of the environment that affect the survival of firms, industry and location are probably those that have received the most attention. Different industries may have different competitive conditions, operate under different technological regimes, and be in different stages of the industry development, and firms in different locations may confront different cost conditions and different access to buyers (see e.g. Stearns et al. 1995, Audretsch & Mahmood 1995, Agarwal & Sarkar 2002).

Another aspect of the environment in which firms compete that is potentially relevant for the survival of new entrepreneurial firms is the characteristics of the nation in which these new entrepreneurial ventures are started. There have been many studies comparing entrepreneurship in different countries, but comparative studies on survival are scarce. In a recent survey Terjesen, Hessels, & Li (2013) covered 259 studies published between 1989 and 2010, comparing different aspects of entrepreneurship across countries, but survival was not among the topics that were identified in the survey. Two studies have investigated the determinants of the longevity of entrepreneurial ventures in different countries. Millán, Congregado, & Román (2012) investigated the impact of public policy, while Williams (2004) covered different attitudes toward child care. In both cases, the analysis is restricted to self-employment and to Europe, presumably because there is a lack of comparable

data across a larger number of countries. The same reason probably lies behind the lack of such comparative studies on the survival of firms. To the best of our knowledge, a study by Bartelsman, Haltiwanger, & Scarpetta (2009) is the only that has attempted to compare the survival of firms across countries. This was based on a pioneering effort by the World Bank and the OECD that collected data on the survival of firms in 14 countries, including Western and Eastern European countries, the USA, and Latin American countries. The findings of this study indicate that Eastern European countries tend to have the highest survival rates, while Latin American countries have the lowest, and Western Europe and the USA are somewhere in the middle. Still, there is some within group variability in the groups above. Given the relatively small number of countries in the project, strong conclusions cannot be derived.

Two of the characteristics of firms that have received greater attention are firm size and firm age, many studies having found a relationship between survival and size and age (Dunne, Roberts, & Samuelson, 1989; Audretsch & Mahmood, 1994; Mata & Portugal, 1994; Mitchell, 1994; Haveman, 1995; Sharma & Kesner, 1996). Organizational ecologists have thoroughly examined the relationship between age and survival, having suggested different mechanisms for different relationships between age and survival, and coining terms for them such as liabilities of newness, adolescence, senescence, and obsolescence (see Carroll & Hannan 2000 chap. 13). While organization ecologists have often suggested that liabilities of smallness may be variants of liabilities of newness (see Carroll & Hannan 2000 chap. 14), economists have offered different explanations for an effect of size that is independent of age. Larger firms may have cost advantages due to economies of scale (Audretsch & Mahmood, 1994) and firm size may be related to access to superior resources (Lucas, 1978), or operation under lower constraints (Zingales, 1998).

Finally, the role of founders upon the survival of their firms has also been extensively examined, with human capital (education and experience) receiving the greatest attention (e.g. Taylor, 1999; Bates, 1990, Brüderl et al. 1992 Gimeno et al., 1997; Boden & Nucci, 2000, Gimmon & Levie 2010, Cooper, Gimeno-Gascon, & Woo 1994, Dencker et al. 2009, Agarwal, et al. 2004). Other studies have focused on gender (Boden & Nucci 2000), and others on strategies adopted by founders (Brüderl et al 1992, Gimmon & Levie 2010), including actions taken by domestic founders to

legitimize their organizations (Delmar & Shane 2004). None of these studies have attempted to discriminate between native and foreign entrepreneurs.

Immigrant entrepreneurship

The prevalence of entrepreneurial ventures among foreigners in a country has long been studied in the field of immigrant and ethnic entrepreneurship. The focus of this literature is on self-employment by immigrants, and these have been found to be more prone to start entrepreneurial ventures than are natives. Immigrant communities are typically viewed in this literature as being, to some extent, at the margins of society in the host country (Portes 1995). While this literature initiated in the United States, considerable attention to immigrant entrepreneurship has also been paid in Europe in more recent times (Clark & Drinkwater 1998, 2000 Kloosterman & Rath 2001, Hjerm 2004, Constant & Zimmermann 2006, Baycan-Levent & Nijkamp 2009).

Earlier studies in this tradition posited that immigrants would resort to self-employment as a consequence of discrimination in the labor market and as a response to lack of alternatives (Light 1979). More recent studies have acknowledged that the minorities make more money in self-employment than in wage employment, and this evidence has been indicated as pointing out that self-employment is a rational choice between alternatives rather than a response to the inexistence of alternatives (Portes 1995). As this finding contrasts with what has been found in the comparison between earnings of self-employed and wage earners in general (Hamilton 2000), it suggests that the hurdles that the typical immigrant confronts in entrepreneurship are, at least, less important than discrimination encountered in the labor market, and self-employment would be a means for immigrants to make their way toward wage work (Raijman & Tienda 2000).

The type of firm that is commonly considered in this literature has a strong ethnic component. In addition, the countries of origin of these immigrant entrepreneurs are typically much less developed than the host countries where they create their entrepreneurial ventures. For example, the nationalities mentioned for the typical immigrant entrepreneur in the USA are Chinese, Mexican, Indian, Dominican, Korean, Cuban, and Vietnamese (Portes & Rumbaut 2006 p. 21). Studies in this tradition pay great attention to the social processes associated with the national community to which immigrants belong to explain different degrees of success of

firms created by immigrants of these communities in the host country (Roberts 1995, Rajjman & Tienda 2000). Many use a small number of nationalities (e.g. Bates, 1997) or even narrower samples, as in the case of one of the few studies on the survival of immigrant firms (Kalnins & Chung 2006), which focuses on a single US state, a single industry, and a single ethnic minority.

We extend this analysis in a direction that has been suggested in the international business literature. This literature emphasizes foreignness as such, and differences in the home countries as determinants of the performance of foreign firms and of their survival. This literature suggests that foreignness creates specific liabilities, arising from unfamiliarity with the local environment, lack of legitimacy, constraints imposed by host countries, and costs associated with distance such as coordination costs (Zaheer 1995). These liabilities affect the ability of foreign firms to do business in a host country and may lead foreign firms to be less profitable (Zaheer, 1995), exhibit poorer performance (Miller & Parkhe, 2002), and confront greater exit rates (e.g. Zaheer & Mosakowski, 1997) than their domestic counterparts.

The extent to which the liabilities apply depends on the specific persons that make decisions in firms. First, as pointed out by Grant (1996), knowledge exists only in individuals. And indeed, Mezas (2002) found that, while foreign firms operating in the US faced more labor suits in American courts than did their local counterparts, the presence of Americans among the foreign firm's top officers reduced the number of these labor suits. In addition, while the concept of liabilities of foreignness was developed with the multinationals in mind, recent work has started to recognize that the liabilities of foreignness may apply to individuals as well. For example, Harvey et al. (2005) suggested that individual "inpatriate" managers, that is foreigners working at establishments located in the home country of organizations, may be stigmatized by native managers as a consequence of their foreignness, and Mezas & Mezas (2007) showed that foreigners working in one US firm get lower salary increases as compared with comparable US citizens working in the same firm. While these two examples suggest discrimination, other mechanisms may apply. Fang et al. (2013) found that the performance of immigrants relative to that of natives in their job-search efforts is particularly bad when they use rich media job-search methods, such as social networks and recruitment agencies, in comparison to when they rely on lean media job-search methods, such as newspaper ads and the internet. This suggests that the liabilities of foreignness come mostly from unfamiliarity with the local environment.

This is consistent with the finding by Nee, Sanders, and Sernau (1994) that, as the number of years in the US and the number of previous jobs held by Asian immigrants increases, they tend to move away from personal ties to find jobs and to increasingly rely on more impersonal means for their job search.

The effect of foreignness may be particularly evident in entrepreneurial firms that are created and directly run by foreigners. A key difference between entrepreneurial businesses and multinational corporations is the strong influence of the founder upon the firm (Barringer et al., 2005). This makes the link between the individual founder characteristics and firm outcomes more direct and pronounced in the context of entrepreneurial firms than in their multinational counterparts (Chandler & Hanks, 1994; Reuber & Fischer, 1997).

Entrepreneurial firms started by foreigners may suffer from some of the liabilities of foreignness, as founders are likely to be somewhat unfamiliar with the local environment and to be perceived by natives as less legitimate than those created by domestic entrepreneurs. These firms rely on the knowledge possessed by entrepreneurs on how to do business rather than on knowledge residing in the organization (Shrader, Oviatt, & McDougall, 2000). However, human capital and experience of individuals lose value when they go abroad (Friedberg, 2000). Upon arrival in a foreign country, even individuals who are experienced in their home country will find themselves at a disadvantage relative to locals. Legitimacy, in turn, is important for gaining access to critical resources for survival and growth (Zimmerman & Zeitz, 2002; Rutherford et al., 2009). Foreign entrepreneurs may be at a disadvantage here, as discrimination against foreigners seems to be pervasive in attitudes toward immigration (Mayda 2006), in the labor market (Chiswick 1978, Reimers 1983), and on the part of consumers (Nardinelli & Simon 1990).

We thus hypothesize that

Hypothesis 1: Firms created by foreigners exhibit higher exit rates than firms created by domestic entrepreneurs.

Host Country Experience

In his seminal work, Stinchcombe (1965) suggested that the hazards of new firms decrease with age, that is, that new firms suffer from a liability of newness because new organizations must spend resources learning about the business

operations, developing internal structures and external relations, and making themselves acceptable to others (see Hannan et al. 2007, part 2). While subsequent research found more complex patterns (Le Mens et al. 2011), the arguments of Stinchcombe still hold in these more complex patterns, and are of particular relevance for our study because lie at the root of two sources of what have been identified as liabilities of foreignness: lack of knowledge and lack of legitimacy.

Similar to the liability of newness, the liabilities of foreignness tend to disappear as foreigners get to know the host country better and increase their legitimacy in the eyes of the locals. Zaheer & Mosakowski (1997) find that foreign trading rooms are more likely to exit than domestic ones but, with long enough tenure, exit rates of foreign trading rooms approach those of their local counterparts. This suggests that the costs of doing business abroad decline as firms gain more familiarity and legitimacy in the local environment. This effect may apply even among domestic firms. Dahl & Sorenson (2012) find that firms operating in locations where their founders lived longer tend to survive longer and have greater profits. Given that firms operated by these local entrepreneurs show greater profits than others, the result with respect to survival appears to stem from greater familiarity with these locations rather than from a preference to remain close to family and friends.

Firms may attempt to build legitimacy by conforming to the local environment (Suchman, 1995) and the same applies to individuals. Learning about the host country can be seen as a pre-requisite for gaining legitimacy because one cannot conform to something one does not know. As learning does not happen overnight, the length of stay in the host country plays an important role in the development of capabilities applicable to that country (Barkema et al., 1996). The longer the host country experience, the easier it is to adapt practices to the local environment (Luo, 1997; Delios & Henisz, 2003) and to develop social knowledge and harmonious relationships with local actors (Sohn, 1994; Zhou et al., 2007). As a consequence, firms that have been in the host country for longer have been found to survive longer and perform better than newcomers (Delios & Beamish, 2001, Luo & Peng, 1999).

While these arguments refer to business units, it is plausible that the length of experience of the foreigner business founders in the host country also helps to dissipate the liabilities of foreignness. Integration in the host economy over the course of the stay in the country has also been found to occur for individuals. Chiswick

(1978) showed that there is a gap in the wage earnings of foreign-born individuals relative to natives and that this gap narrows over their stay in the host country. The narrowing of this gap may come from being better acquainted with the host country labor market and being able to better use its mechanisms for job search (Nee, Sanders, and Sernau 1994, Fang et al. 2013).

Because host country experience allows foreign entrepreneurs to reduce liabilities related to unfamiliarity and lack of legitimacy, we hypothesize that:

Hypothesis 2: Firms created by foreigners with long host country experiences have lower exit rates than those created by foreigners with short host country experiences.

Cultural and political differences between home and host countries

A major reason why doing business abroad may pose a particular predicament is because people in different countries have different attitudes and behaviors and different ways of doing business. Since the pioneering work of Hofstede (1983) differences in culture have received most of the attention in the literature (see reviews in Tihanyi, Griffith & Russell 2005 & Kirkman, Lowe & Gibson 2006). Culture alone may, however, be insufficient to capture all the major aspects that shape people's attitudes and behaviors, and other aspects have long been emphasized as well (e.g. Goodnow & Hansz 1972, Evans & Mavondo 2002). Political or administrative differences between countries' institutions are widely considered to be important by scholars of different traditions (Ghemawat 2001, Berry et al. 2010, Salomon & Wu, 2012), including economic (North 1991) and organizational (Scott 1995) approaches to institutions. The organizational approach distinguishes three dimensions of institutions: regulatory, cognitive and normative. "The cognitive and normative dimensions of the country institutional context are conceptually close to culture, whereas the regulatory dimension is unique to country institutional context and not captured by culture" (Kostova, 1999, p. 314). The economic approach to institutions distinguishes between formal and informal institutions (North 1991). Formal institutions include property rights, constitutions, and laws. These are close to the regulatory dimension of the organizational approach, and tend to be associated with the political organization of a country. In contrast, informal institutions include

sanctions, taboos, customs, traditions, and codes of conduct and tend to be related with the prevailing culture.

The interaction of agents from different countries creates a two-sided relationship between their institutional background and a host country's institutional profile. On the one hand, countries' institutional profiles affect foreigners' attitudes toward that country (Makino et al., 2004; Meyer et al., 2009). Firms' choices regarding entry and ownership have been found to be affected by factors such as corruption, regulations, and expropriation hazards in the host country (Rodriguez et al., 2005; Delios & Henisz, 2003; Peng & Heath, 1996), and the performance of foreign affiliates has been found to worsen with the level of institutional development (Chan et al., 2008). On the other hand, agents' institutional background influences their behavior toward foreign environments. For instance, investors exposed to corruption may seek countries where corruption prevails rather than countries engaged in deterring this phenomenon (Cuervo-Cazurra, 2006).

One important consequence arising from differences between home and host countries' institutions is an exacerbated liability of foreignness (Eden & Miller, 2004; Kostova & Zaheer, 1999). The more different home and host countries are, the more difficult it is for foreigners to understand and adapt to the local environment (Orr & Scott, 2008). Similarly, it is more difficult for local actors to understand foreigners and the latter are perceived to be less legitimate (Kostova & Zaheer, 1999). Foreigners are more likely to face discriminatory treatments inflicted by local governments, consumers, and suppliers (Eden & Miller, 2004). This exacerbated liability of foreignness may be among the reasons why firms are less likely to enter institutionally dissimilar countries (Berry et al., 2010).

Several authors argue that embeddedness in host country institutions is necessary to overcome liabilities associated with being a foreigner or an outsider (Johanson & Vahlne, 2009; Henisz, 2003) and isomorphic strategies are often used by foreign firms as a means to benefit from compliance with the host environment (e.g. Rosenzweig & Nohria, 1994). However, foreignness and distance from host country need not be a handicap. Institutional distance may also have its own benefits and conformity need not always be good for business.

First, being an outsider may facilitate the adoption of certain profitable business practices that are not well accepted by the insiders. Granovetter (1995) makes the point that over time traders have been outsiders relative to the society they

do business in, largely because “it is difficult to pursue commercial roles within a community that is close-knit and stresses a norm of mutual help and obligation [... and ...] any cultural device that can decouple one group from another may facilitate commerce” (Granovetter 1995 p. 146-148).

Second, if conformity may help to gain legitimacy, differentiation may reduce competition (Deepphouse, 1999). Foreigners are in a good position to differentiate their strategies from locals’. In Shi and Hoskisson’s (2012 p. 102) words, “being foreign can lead to a generation of creative ideas and unorthodox breakthroughs for individuals” as creativity is enhanced by familiarity with different contexts (Leung et al., 2008). Miller & Eden (2006) show that in environments where competition for the same resources is intense, differentiation from the strategies of local firms may actually increase the performance of foreign firms. And, indeed, Siegel et al. (2010) find that in South Korea less embedded foreign firms were able to recognize that women were discriminated against in the labor market and to take advantage of that by hiring a disproportionate share of female managers compared to local firms. In the same vein, Edman (2009) points out that the ability to escape the norms of the host country was critical for Citibank in Japan to develop practices that differed from the dominant practices of local firms and that allow it to stay in niches with little competition. Using a larger sample of firms, Regnér & Edman (2013) provide evidence that the ability to see beyond current norms and regulations enabled multinationals to come up with “responses to institutions that are unavailable to domestic players”.

Third, while countries that are institutionally close to the home country may be better understood and provide more familiar environments, such a feeling of closeness may also hinder relevant learning (O’Grady & Lane, 1996). Embeddedness in host country institutions may be useful to overcome liabilities, but if it prevents foreigners from exploiting advantages they may have, such embeddedness may itself become a liability (Sun et al., 2010).

While these arguments were originally advanced in the context of multinational firms, these effects of country of origin are likely to be even more pronounced in the case of entrepreneurial firms. The management practices of multinationals have been found to be much more consistent over the world than the practices of local firms (Bloom and van Reenan 2010). Multinationals may be able to carry the best practices to the host market at the same time that they escape the

constraints created by the cultural and political institutions of their countries of origin by hiring local executives (Mezias 2002) to an extent that entrepreneurial firms cannot imitate.

As discussed above, we consider both the political and cultural distances as instances of institutional distance, and therefore our next two hypotheses are formulated as

Hypothesis 3: Firms created by foreigners coming from countries with a greater cultural distance to the host country experience lower exit rates than those coming from countries that are close.

Hypothesis 4: Firms created by foreigners coming from countries with a greater political distance to the host country experience lower exit rates than those coming from countries that are close.

Income level in the home country

The economic development of the home country of the entrepreneurs may affect the survival of their firms is that otherwise identical individuals coming from different countries are likely to have access to different amounts of resources.

First, countries with higher incomes tend to have greater variety of products available (Funke & Ruhwedel 2001, Falkinger and Zweimüller 1996). Individuals coming from higher income countries are therefore likely to be familiar with a wider range of products than those coming from lower income countries. While greater unfamiliarity with consumers' habits and preferences in the host country may hinder the chances of success, it is arguably more difficult for individuals coming from less developed countries to understand more complex consumers than it is for those coming from more developed countries to understand less complex consumers.

Second, productivity varies widely across countries. There is a very strong correlation between total factor productivity at the country level and GDP per capita (Jones and Romer 2010), which largely comes from the extent to which management practices differ across countries, and the extent to which inferior practices are prevalent in the country. In a recent investigation of how management practices vary across firms and countries Bloom & Van Reenen (2010 .p 205) report: "Most of the

difference in the average management score of a country is due to the size of the "long tail" of very badly managed firms. For example, relatively few U.S. firms are very badly managed, while Brazil and India have many firms in that category.

“ Individuals coming from high income countries are thus more likely to have had contact with good management practices (both as managers and as employees) than those coming from low income countries.

Finally, entrepreneurs coming from low income countries are also likely to have poorer access to financial resources than those coming from high income countries. Access to funding has been found to play an important role in determining entrepreneurial survival, with easier access to capital leading to better survival chances (Taylor, 1999; Bates, 1990; Gimeno et al., 1997). In general, entrepreneurs rely on their personal savings as a primary source of funding. Obtaining external funding can be particularly challenging for foreign entrepreneurs, since investors seem to prefer to invest in local firms rather than in foreign ones because they are more familiar with the former than with the latter (Chan et al., 2005). Foreign entrepreneurs may therefore face an aggravated liability of foreignness in capital markets (Bell et al., 2012). Being financially constrained is especially likely for those entrepreneurs that had fewer opportunities to accumulate wealth, as is the case of those coming from lower income countries.

Note that, unlike Tsang & Yip (2007), for example, we are not arguing for an effect of “economic distance”. Unlike distance, income per capita is directional. A country with 15,000 dollars of income per capita and another with 5,000 dollars per capita would be at the same “income distance” from a third country with 10,000 dollars of income per capita. Yet, the amount of resources available in the two countries would be very different. Also, political and cultural distances are multi-item scales while income per capita is a single-item variable.

These arguments lead us to the following hypothesis:

Hypothesis 5: Firms created by foreigners coming from countries that have low incomes are more likely to exit than those coming from countries with high incomes.

3. Context

Our study is performed with data on foreigners that started their businesses in Portugal. Immigration in Portugal is relatively recent, the proportion of foreigners recorded in the Population Censuses having increased from 1% in 1991 to 2% in 2001 and 4% in 2011. Most of the countries for which entrepreneurship by foreigners has been analyzed are wealthy countries and immigrants come from less developed countries. In contrast, Portugal is a mid-income country, one of the poorest in Western Europe. While most foreigners come from relatively low-income countries, there is a fair number of people coming from countries whose incomes are higher than Portugal's and many of the individuals that start new firms come from these countries. More than 20% of the total number of immigrants in both 2001 and 2011 were citizens of another European Union country and, as we shall see later in the paper, citizens of these countries are overrepresented among those that create new businesses. The increase in the number of immigrants in the last decade came from countries that were not the traditional sources of immigration. As a result, citizens from Portuguese speaking African countries that were dominant (56%) in 2001, make up no more than 25% of the total number of foreign citizens in 2011, while those from Brazil were 14% and 29% in the same periods.

Two different laws regulate the presence of citizens from European Union and other countries. European Union citizens have very few restrictions, as Portugal is a member of the European Union. While a new law from 2006 replaced the earlier one from 1993, no substantive changes were made to the freedom of residence and of establishment of business initiatives. Non-European citizens are subject to greater number of restrictions, namely to visa requirements and residence permits. While the visa and residence requirements for setting up an entrepreneurial activity were somewhat intricate (see Oliveira 2008), the most important point for our study is that these requirements remained essentially unchanged between 1998 and 2007, when a new foreigners' law was passed (see Peixoto, Sabino & Abreu 2009 for a discussion of immigration laws up to 2007). In particular, the 2007 law created a new type of residence permit that was granted to those that wanted to come to the country with the explicit goal of starting a business activity (with or without employees) from the beginning of their stay. While the new law was published in July 2007, most of its effects took place only in 2008. Indeed, from August to December 2007, only 24

residence permits of this kind were issued, a number that compares to 602 permits issued in 2008 (see Oliveira, 2010, p. 131). As the firms that we analyze were created in the period 2002-2007 and our data refer to the month of October of each year, it is unlikely that the firms in our sample were affected by this change of regime.

Individuals entering Portugal as foreigners may apply to acquire Portuguese citizenship, provided they meet the requirements specified in the nationality law, of which being married to a Portuguese citizen for at least three years or residing legally in the country for a minimum period of time are probably the most relevant. A new nationality law that was passed in 2006 made naturalization easier. The minimum period of residence was reduced from ten to six years (previously only the citizens from Portuguese speaking countries could apply after six years) and the administrative process was expedited. During the period under study, the total number of persons who were naturalized is small: between 2002 and 2006, the numbers of those that acquired Portuguese nationality were between 939 and 2222 per year. In 2007 naturalizations reached a record of 6020, as a consequence of the new nationality law. Still, this compares with a total population of 10 million and a stock of foreign residents that varied between 200 thousand and 400 thousand.

The unit of our analysis is the firm created and operated by foreigners. Our operational definition requires that the firm employ paid labor and therefore excludes the self-employed or those ventures that employ only the entrepreneur and unpaid family workers. The number of firms such as ours is not irrelevant, and has increased in importance in comparison with the numbers of self-employed, for both foreigners and natives. For natives, the proportion of employers in the population has gone up from 3.1% in 1981, to 6.2% in 1991 and to 9.8% in 2001. Foreigners show slightly higher figures, but the same evolution (5.1%, 7.7% and 10.2%, respectively). In contrast, the proportion of self-employed in the population decreased during the same period. Comparable figures for the self-employed are 15.2%, 13.1% and 6.1% for natives and 8.9%, 11.4%, and 4.5% for foreigners (Oliveira 2008, p. 108). In the beginning of our period of observation, therefore, this type of venture corresponds to 2/3 of the total number of business ventures that were created by foreigners, and this proportion has been increasing over time.

These business ownership rates (employers and self-employed) are somewhat higher than in most developed countries, but are in line with what has been observed, not only in other Southern European countries, but also in countries such as Ireland,

Canada, Australia, and New Zealand (Baptista & Thurik 2007). New firm creation and survival is also in line with the average rates in the European Union. Birth rates in 2001 were 7.5% in Portugal and 8.3% on average in the EU. Survival rates after two years were reported to be 72% in Portugal, which compares to a minimum of 64% in Denmark and a maximum of 78% in the UK (European Union 2004 p. 32 and p. 47).

4. Methods

Data

The data used in this study come from *Quadros de Pessoal*, a dataset that is obtained from a mandatory annual survey conducted by the Portuguese Ministry of Employment covering all firms employing paid labor in Portugal. The dataset includes information on all the individuals working at each firm, including their nationality and occupational status, which distinguishes between employees and employers (business owners). Business owners are included only if they do some work at the firm, thereby excluding individuals that may have a passive investment in the firm. In addition, the data have a longitudinal nature with unique numbers identifying firms and individuals over time. Such characteristics make this dataset a unique and excellent source to compare entry and survival of firms created by foreign and domestic entrepreneurs. We identify new firms by locating the first year their identifier appears in the data and using the data on individuals we identify the owners of such firms and their nationality.

We track almost 100,000 new firms during the period 2002-2007. Although data are available from 1985 to 2009, we start in 2002 because information about nationalities is available only from this year. We stop in 2007 because we define firm exit as an absence from the data in at least two consecutive years. For selecting our sample of firms created by foreign entrepreneurs, we selected those new firms in which all of the owners are foreigners and that remain exclusively owned by foreigners while they remain in the sample. For our comparison sample of domestic entrepreneurs, we selected those that are exclusively owned by Portuguese individuals throughout their lives. We therefore excluded those firms in which some owners are foreigners and others are Portuguese and those that, having been created by foreigners, were later sold to Portuguese individuals and vice versa.

We identified 1629 new firms as being exclusively owned by foreigners. During our observation period the share of foreign entrepreneurs operating in our host country increased from around 1% to nearly 2.5%. These figures are consistent with a higher propensity of foreigners to become employers when compared to natives (OECD, 2010) and with an increase in the entrepreneurial activities of foreigners in Portugal. They are also consistent with the data reported above based on the whole population of immigrants and natives.

Foreign entrepreneurs in our sample come from 40 different countries, as shown in Figure 3. Some of these firms may have more than one owner, and the number of entrepreneurs from each country may, therefore, be higher than the number of firms from that country.

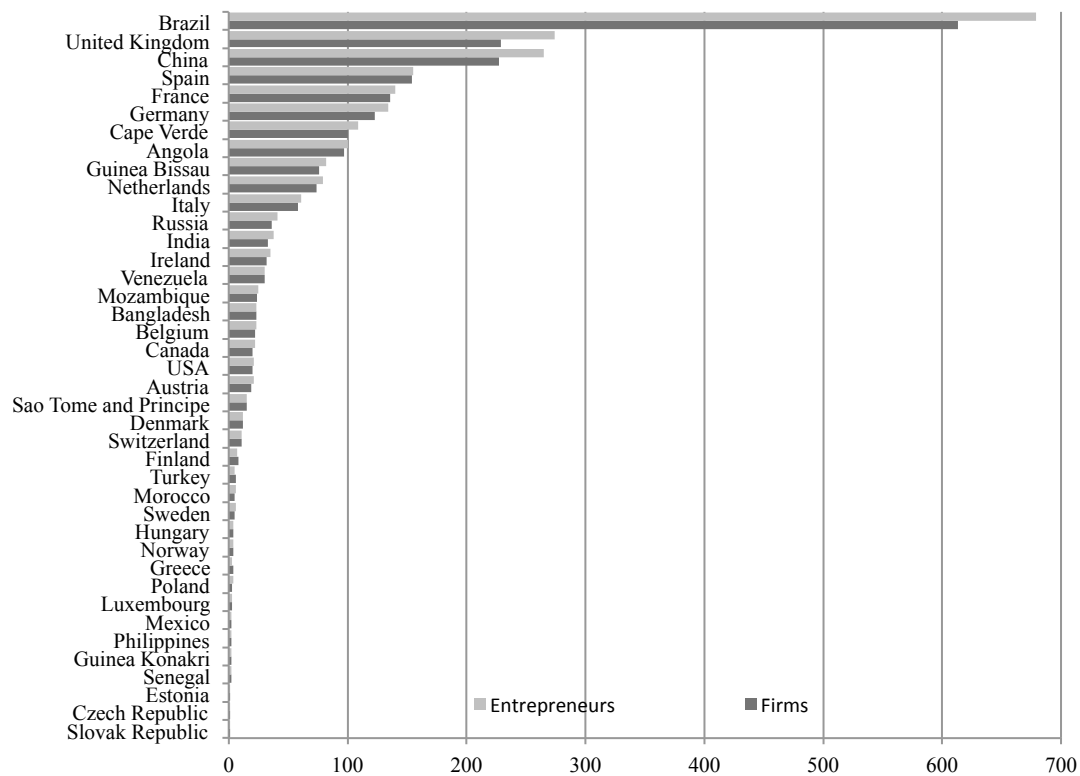


Figure 3. Entrepreneurs and Firms by Country of Origin

Dependent Variable and Estimation Model

Exit can occur at any date and is therefore a continuous variable. However, in our data we observe firms only once a year, and our continuous variable is thus observed only at discrete intervals. For modeling survival we therefore use a complementary log log (cloglog) model, which has the desirable property of being specified for continuous duration processes that are observed only at discrete intervals

(Prentice and Gloeckler 1978, Jenkins 1995). Our unit of observation is the firm in each year of activity. Firms that are active in our data for several years are included in the dataset as different observations, and each of such observations is identified by the age of the firm in that year. Our indicator variable is a dummy variable that takes the value 1 if the firm exits in that year and 0 otherwise. Therefore, a positive coefficient associated with a given independent variable indicates that the impact of that variable upon exit is positive.

Independent Variables

We define a firm as foreign if all of its owners are foreign. Our variable Foreign Owners is thus a dummy variable taking the value 1 for such firms and 0 otherwise. A more restrictive sample includes only firms that are created by a single entrepreneur. We run the same regressions with such sample and all our results hold.

For robustness checks we defined several other dummy variables, which decompose our Foreign Owners dummy in two. For each nationality, we defined a dummy that takes the value 1 for firms of that nationality and 0 otherwise and another that takes the value 1 if the firm has foreign owners but not of that given nationality and 0 otherwise. We did the same for groups of countries: Portuguese speaking countries versus non-Portuguese speaking countries, European Union countries versus non-European Union countries, and counties whose income per capita is higher than Portugal's versus those whose income per capita is lower.

Our measure of experience is the number of years that an individual has been in the host country labor market, before he/she creates a particular firm. As our data start in 1985, we were able to trace participation in the labor market from that date on. Our proxy is a lower bound to the actual experience in the host country. We cannot measure with great precision lengths of stay that are very long. Still, we are able to accurately measure experience up to 17 years (firms created in 2002 by persons that were already in the files in 1985). This is unlikely to be a major problem, as fewer than 2% of the foreign entrepreneurs in our sample reveal local experiences greater than 17 years. Furthermore, because the data include information on the date each person started working in the firm, if someone who is in the files in 1985 started working in that firm earlier, we can account for that experience, also. We enter our measure of experience in logarithms, which minimizes the effect of this imprecision. For robustness checks, we defined classes of experience: 0 experience, greater than 0

and not greater than 2 years, greater than 2 and not greater than 4 years, greater than 4 and not greater than 10 years, and greater than 10 years. Regressions were alternatively run with experience measure with these classes.

In line with earlier literature, we consider political institutions as our relevant formal institutions and national culture as our informal institutional component (e.g. Salomon & Wu, 2012). We measure political distance using data obtained from Berry et al. (2010). Berry et al.'s index combines five political indicator variables: policy-making uncertainty (institutional actors with veto power), the size of the state (as a percentage of GDP), a democracy score, whether or not countries are WTO members, and if they belong to the same trading bloc. The rationale to aggregate these indicators is that governments with low levels of institutional constraints, low levels of democracy, and high levels of state ownership often have low credibility and, as a consequence, foreigners perceive a higher political instability in countries with such governments (Murtha & Lenway, 1994; Henisz, 2000). High political uncertainty leads to policies that are more likely to change arbitrarily and to a country context that is more difficult to predict. Consequently, it is more difficult for foreigners to adapt, which may negatively affect their performance (Knack & Keefer 1995). Existing commercial relationships between countries may reflect close political ties that are expected to encourage the exchange of information. Therefore, those from countries with commercial ties with the host country may have greater knowledge about the local environment (Brewer, 2007). To take into account political distance for each of the owners of the firm, our variable of political distance is averaged across all the firm owners.

Cultural distance is measured using the Kogut and Singh (1988) Index. We use this index rather than data provided by Berry et al. (2010) because the latter does not include a cultural distance measure for Portugal. Earlier studies have used five dimensions to measure cultural distance (see for example Tihany, Griffith, & Russell, 2005): power distance, uncertainty avoidance, individualism, masculinity, and long-term orientation (Hofstede, 2001). However, a measure for long-term orientation is available for only a small number of countries. Therefore, following Kogut & Singh (1988), we use the other four dimensions only: power distance, uncertainty avoidance, individualism, and masculinity. This approach to measure cultural distance has been widely used (e.g. Shenkar, 2001; Brouthers & Brouthers, 2001).

The cultural distance index is defined as follows.

$$CD_j = \sum_{i=1}^n \frac{\{(I_{ij} - I_{iP})^2 / V_i\}}{n}$$

where n stands for the number of dimensions included, I_{ij} is the distance score for the i th dimension and j th country, V_i is the variance of the score of i th dimension, P stands for Portugal and CD_j is the national distance between the j th country and Portugal. For each firm we averaged cultural distance across firm owners.

The level of economic development of entrepreneurs' home country is measured by the average of owners' home countries' GDP per capita in a given year. GDP per capita data are in constant prices of 2000 adjusted for purchasing power parity and were collected from the United Nations World Development Indicators Database. Researchers (e.g. Tsang & Yip, 2007) and international organizations (e.g. United Nations) commonly use this variable to measure the level of economic development of countries. One year lagged values of GDP per capita were used in our regressions.

Control Variables

We control for factors related to characteristics of entrepreneurs, firms, industry, and economy wide effects that have been found to affect the survival of firms.

The human capital of entrepreneurs has been found to affect the survival of firms they create (Bates, 1990; Gimeno et al., 1997) and so we control for such effects using entrepreneurs' schooling, measured by the average number of years of schooling of all owners in a firm. The second characteristic we include is entrepreneurs' age, which is calculated by averaging the ages of all owners in each firm. Older entrepreneurs are less likely than younger ones to find better outside options (Van Praag, 2003). As a result, older entrepreneurs are found to be more willing than younger ones to accept lower returns and still continue in business (Gimeno et al., 1997). We also include a quadratic term for entrepreneurs' age to account for retirement age (Van Praag, 2003) and for a possible non-monotonic relationship with self-employment earnings (Hamilton, 2000). We control for gender using the proportion of males among the firm owners. Firms owned by women have been found to be smaller and have lower growth (Fischer et al., 1993) and lower survival rates than their male-owned counterparts (Boden & Nucci, 2000).

At the firm level we control for firm size and age and for the number of owners. Firm size has been found to correlate with firm survival (e.g. Gimeno et al., 1997; Mata, Portugal, & Guimarães, 1995). Our measure is the number of persons employed by the firm and employment is included in logarithms. Age is measured by difference between the year in which the firm was created and current time, and enters the regressions as a set of dummies. Our observations are concentrated in the earlier years of firms' lives and thus, in line with earlier findings (Mata & Portugal, 1994; Mitchell, 1994), we expect that the probability of firm exit decreases as firms age. Third, we control for the number of owners in each firm, computed by the sum of all persons classified as owner in a firm. The number of owners is also included in the regressions in logarithms. Having several owners may indicate that the firm is more able to gather resources and therefore to have lower exit rates, as a result (Cressy, 1996).

The survival of firms also depends on the conditions in the industry in which entry is attempted and also on economy wide conditions (e.g. macroeconomic conditions). We control for industry using a set of 62 industry dummies and for economy wide conditions with a set of six year dummies. The organizational ecology literature suggests that density is an important determinant of the population dynamics (Carroll & Hannan 2000) and that density has a curvilinear effect. We control for density effects with the total number of firms whose owners are from one given country and the square of that number.

Sample

Following the procedures described above we identified 1628 firms created by foreign entrepreneurs and 94226 firms created by Portuguese ones. The two samples are described in columns (1) and (2) of Table 18. The table shows that while foreigners have considerably less experience in the host country labor market than do domestic entrepreneurs, the other variables do not exhibit big differences and do not indicate that foreigners are particularly disadvantaged. The average age is quite similar for domestic and foreign entrepreneurs and foreign entrepreneurs have a slightly greater number of years of schooling than domestic ones. Foreigners create firms that are slightly larger and their firms have fewer owners.

On average, the income level of the home countries of the foreign entrepreneurs is close to that of Portugal, but there is wide variation (for the sample of

domestic entrepreneurs, variation in GDP per capita comes only from the time series variation in the GDP of Portugal, while for foreigners it comes from both time variation and cross-country variation). As seen before, with the exception of China, the twelve top nationalities in Figure 3 are either European Union or Portuguese speaking countries. Income per capita in the other European countries is considerably higher than in Portugal, while both China and Portuguese speaking countries have substantially lower GDPs.

Table 18. Sample Averages at Time of Creation

	Unmatched Sample			Matched Sample		
	(1)	(2)	t Stat.	(3)	(4)	t Stat.
	Domestic	Foreign		Domestic	Foreign	
Host Country Experience	10.23 (8.13)	2.90 (4.27)	67.18	2.96 (4.33)	2.96 (4.30)	0.011
Home Country GDPpc	11559.97 (322.81)	10773.73 (10977.84)	2.89	11564.22 (420.31)	10583.29 (10922.45)	3.55
Owners' Schooling Years	9.19 (4.07)	10.12 (4.13)	-8.93	10.29 (4.16)	10.08 (4.15)	1.46
Owners' Age	39.47 (10.00)	39.15 (9.38)	1.4	39.14 (9.53)	39.07 (9.42)	0.22
Share of Male Owners	0.70 (0.42)	0.73 (0.43)	-2.27	0.72 (0.43)	0.72 (0.43)	-0.26
Employment	3.58 (7.62)	3.77 (6.40)	-1.15	3.57 (6.43)	3.79 (6.44)	-0.96
Number of Owners	1.36 (0.66)	1.16 (0.43)	17.97	1.17 (0.46)	1.17 (0.43)	0.28
Number of Firms	94226	1628		1594	1594	

Except regarding experience, the differences in firms in the two samples are not large (although education and number of owners are significantly different in statistical terms). We selected a sample of domestic entrepreneurs that closely matches our sample of foreigners, in their experience in the labor market and in the sectoral composition and geographic location. For that, we estimated a propensity score matching model (Caliendo & Kopeinig, 2008), using the whole sample of firms owned by foreign and domestic entrepreneurs. The idea of the propensity score matching model is to estimate the probability of being in the treatment group (foreigners in our case) for the whole population and use the estimated probabilities to select elements of the control group (domestic entrepreneurs in our case) that are similar to those in the treatment group. We modeled the probability of a firm being

foreigner owned at the year of founding as a function of variables describing the characteristics of the entrepreneurs that created them, namely their age and years of education, the number of entrepreneurs in the firm, the proportion of men among them, and the size of firm and two sets of dummies corresponding to the industries and locations in which the firms operated. Because the probability of being foreign is very low, a rare events logit (King and Zeng. 2001) was used to estimate the matching model. With the estimated model and the observed characteristics of each individual, we predicted the probability that each observation is foreign. We then selected the domestic firm whose probability of being foreign is closest to each one of the foreign firms, provided that the difference in probabilities was not greater than a small value (0.003). Thirty-four foreign firms were excluded, as we could not find a domestic firm within such a distance. We were left with samples with identical numbers of foreign and domestic firms (1594) that are similar at start-up. Columns (3) and (4) of Table 18 report the descriptive statistics for these matched samples. The two samples are not statistically different for any of the variables in the table, except for GDP per capita, which did not enter the matching model. Firms in these two samples were followed over time to investigate their patterns of survival.

Sample correlations between the independent variables are shown in Table 19. Two correlation tables are shown, one for the sample of firms started by domestic entrepreneurs and the other for those started by foreigners. Most correlation coefficients are low, especially in the sample of domestic firms (Political and Cultural distances are always zero for the domestic sample and therefore correlations are not defined for this sample). In the foreigners' sample there is a rather high correlation between cultural distance and income per capita, which raises concerns with the possibility of estimating precisely the effects of income and institutional distances. We will be deal with these concerns during the presentation of our results. However, not only are the two measures conceptually distinct, there are huge empirical differences between the two. For example, China and Cape Verde have the similar levels of income per capita and the same applies to the comparison between Germany and France. Cultural distance to Portugal however is 2.5 times greater for China than for Cape Verde and it is 2 times greater for Germany than for France. Cultural distances from Portugal to France and to India are at similar levels and the same happens to distances to Brazil and to Mozambique. Yet, income per capita is 40 times greater in France than in India and 11 times greater in Brazil than in Mozambique.

Table 19. Sample Correlations at Time of Creation

	1	2	3	4	5	6	7	8	9
Firms owned by foreign owners									
1 ln(Host Country Experience)	1.000								
2 ln(Home Country GDPpc)	-0.180	1.000							
3 Owners' Schooling Years	-0.135	0.385	1.000						
4 Owners' Age	0.061	0.275	0.061	1.000					
5 Share of Male Owners	0.044	-0.034	-0.122	0.072	1.000				
6 ln(Employment)	0.129	-0.258	-0.205	-0.078	0.097	1.000			
7 ln(Number of Owners)	0.000	-0.018	-0.046	-0.037	0.025	0.206	1.000		
8 Cultural Distance	-0.060	0.581	0.173	0.299	0.016	-0.177	0.047	1.000	
9 Political Distance	0.058	0.022	0.032	0.062	-0.054	-0.071	0.006	0.278	1.000
Firms owned by domestic owners									
1 ln(Host Country Experience)	1.000								
2 ln(Home Country GDPpc)	0.004	1.000							
3 Owners' Schooling Years	0.057	0.053	1.000						
4 Owners' Age	-0.033	0.006	-0.325	1.000					
5 Share of Male Owners	0.068	-0.013	-0.108	0.028	1.000				
6 ln(Employment)	0.066	-0.006	-0.114	0.022	0.067	1.000			
7 ln(Number of Owners)	0.166	-0.053	-0.029	-0.026	-0.016	0.259	1.000		

5. Results

The results of our first regressions are reported in Table 20. The first column shows the results of the estimation of our cloglog model assuming common coefficients for domestic and foreign firms and including the dummy variable that indicates whether the firm has a foreign entrepreneur or not. Column (2) reports the result of estimating a model in which we allow for different effects of the covariates upon the survival of the two types of firm. Column (3) reports a more parsimonious specification, in which the effects of those variables whose impact upon domestic and foreign firms was found to be not statistically different in columns (2) and (3) are constrained to be identical. Before looking at the estimated coefficients, note that the number of firms in our regressions is 136 firms smaller than the number of firms in our sample. This is because some firms were in industries for which the industry dummy completely predicts exit and thus cannot be used in the regression.

The foreign dummy in column (1) is positive and clearly significant, indicating that firms owned by foreigners are certainly more likely to exit. The coefficient estimate 0.483 is very close to that which was obtained in a model with no other covariates (0.492). Evaluated at the means of all the covariates, our model predicts that firms for which all the owners are foreigners have a probability of exit that is 53% percent higher than those that are owned by domestic entrepreneurs only. The same result holds when we restrict the estimation to firms that have a single owner (the estimated coefficient is 0.491, implying an increase of 53.5% in the probability of exit compared to local firms). These results confirm Hypothesis 1.

Experience has a negative impact upon exit in this regression, although the effect is not statistically significant. We will return to the effect of experience further below. The effects of the remaining individual characteristics of the entrepreneurs are in line with our expectations. Education decreases the likelihood of exit, but its effect is not significant, which can be due to the fact that education increases the ability to run the new venture, but also to the opportunity costs for the business owners (Gimeno et al. 1997). The effect of age is curvilinear, minimum exit being found at the age of 53. Gender, the proportion of males among the owners, is not significant in this regression. As to firm characteristics, larger firms and firms with more owners involved are less likely to exit. Industry characteristics also matter, as industry dummies are jointly significant ($\chi^2(62)=76.79, p=0.0001$).

Table 20. Regression Results: Determinants of Exit

	(1)	(2)	(3)
Foreign	0.492*** (0.054)		0.279** (0.111)
ln(Experience)	-0.038 (0.026)	0.014 (0.038)	0.024 (0.035)
<i>ln(Experience) × Foreign</i>		-0.125** (0.054)	-0.121** (0.047)
Owners' Schooling Years /10	0.030 (0.075)	0.153 (0.116)	0.017 (0.075)
<i>Owners' Schooling Years /10 × Foreign</i>		-0.227 (0.158)	
Owners' Age /10	-0.584** (0.191)	-0.560* (0.294)	-0.606** (0.191)
<i>Owners' Age /10 × Foreign</i>		-0.075 (0.394)	
Owner's Age ² /100	0.055** (0.022)	0.058* (0.035)	0.058** (0.022)
<i>Owner's Age² /100 × Foreign</i>		0.000 (0.046)	
Share Male Owners	0.041 (0.065)	-0.110 (0.094)	-0.175** (0.087)
<i>Share Male Owners × Foreign</i>		0.347** (0.135)	0.426*** (0.122)
ln(Employment)	-0.249*** (0.039)	-0.341*** (0.059)	-0.244*** (0.038)
<i>ln(Employment) × Foreign</i>		0.189** (0.079)	
ln(Number of Owners)	-0.119 (0.103)	-0.095 (0.147)	-0.151 (0.103)
<i>ln(Number of Owners) × Foreign</i>		-0.010 (0.215)	
Log Likelihood	-3635.522	-3283.723	-3450.752
Number of Observations	6171	6433	6717
Number of Firms	3175	3039	3175

Notes: Regressions include industry dummies, firm age dummies, and year dummies. Standard errors in parentheses. Significance is indicated as follows * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

To allow for individual characteristics to have different effects upon exit by foreign and domestic entrepreneurs, we run a regression in which each variable is interacted with our Foreign variable and column (2) of Table 20 reports the estimated coefficients. Regression in this column was restricted to the industries for which we could estimate a fixed effect for domestic firms and a separate one for foreign firms. Thus, in this column we have a smaller number of observations and do not have an estimate for the Foreign dummy. Results reveal that experience and gender (measured

by the share of male owners) are the only two variables that exert a statistically different impact upon the survival of firms run by domestic and foreign entrepreneurs. The two sets of industry effects were also not significantly different and the same occurred to the year dummies that account for economy wide variations in survival and to firm age effects. Column (3) then reports the results of estimating the same model, but allowing only gender and experience to have different effects for domestic and foreign firms. Looking at gender first, our results indicate that while, among the Portuguese, males are less likely than females to have their firms closed, the opposite occurs with foreigners. A possible explanation for this result lies in the belief that male immigrants have greater geographic mobility than do female immigrants, and thus tend to have a higher propensity to outmigrate (Lam, 1994). With respect to experience in the local labor market, our regression tells us that after taking age and education into account, labor market experience has little impact on the exit of firms owned by domestic entrepreneurs, but it has a considerable impact upon the corresponding foreign firms. Therefore, Hypothesis 2 receives support, suggesting that in a domestic setting there is little to be gained from having an additional year of experience in the labor market. On the contrary, in a foreign environment such additional experience plays an important role because it allows for adaptation to the foreign environment.

Specific estimates for the probability of exit derived from our model (Table 21) reveal the same picture: the probability of exit remains between 17.5% and 19% for firms created by domestic entrepreneurs, regardless of their experience. For foreigners these probabilities are estimated to go from 31% immediately upon arrival to 24% after ten years in the country. For at least the first ten years in the country, the probability of exit is significantly higher for firms owned by foreigners than for firms owned by domestic entrepreneurs (Table 21).

Table 21. Estimated Probabilities of Exit for Different Host Country Labor Market Experience

Experience	Domestic	Foreign	t Statistic
0	0.1747	0.3118	6.0556
1	0.1785	0.2861	7.7904
2	0.1803	0.2748	7.8683
3	0.1814	0.2675	7.1568
4	0.1823	0.2621	6.3190
5	0.1830	0.2579	5.5812
10	0.1853	0.2448	3.4641
15	0.1867	0.2371	2.5318
20	0.1878	0.2317	2.0050

Notes: t statistics are for the equality of the probabilities of exit at the corresponding age.

The finding that the gap in the survival between firms created by foreign and domestic entrepreneurs decreases with the length of stay of individuals in the host country suggests that the liabilities of foreignness decrease with experience. This is consistent with the findings of Zaheer & Mosakowski (1997) and Mata & Portugal (2002) that the gap between survival of foreign and domestic firms tends to converge as firms get older. These findings were interpreted as being a consequence of foreign firms getting more accustomed to the host country over time. We can also test for the impact of the age of firms upon survival and see if the experience of running a firm in the host country also contributes to a reduction of the liability of foreignness. We re-estimated the regressions reported in column (3) of Table 20 allowing the age effects to differ for domestic and foreign firms and we calculated the exit probabilities of two hypothetical firms (one foreign and one domestic) in which firms and entrepreneurs would maintain the same characteristics (the sample's average) during the firms' lifetime. These probabilities are reported in Table 22. The exit rates decrease as firms age, although not by very much. The hypothesis of constant exit rates is not rejected for foreign firms ($\chi^2(5) = 8.11, p = 0.150$) while for domestic firms we can only reject it at a 5% significance level ($\chi^2(5) = 11.99, p = 0.035$). Firms created by foreigners are more likely to exit than those created by locals ($\chi^2(5) = 66.10, p < 0.001$), and this does not change significantly as firms get older. In fact, we are not able to reject the hypothesis that the difference between the effects of firm age for both types of firms is constant over time ($\chi^2(5) = 2.29, p = 0.807$).

Table 22. Estimated Probabilities of Exit for Firms of Different Ages

Firm Age	Domestic	Foreign	t Statistic
0	0.2003	0.3008	6.2514
1	0.1632	0.2520	4.1073
2	0.1905	0.2537	1.9596
3	0.1623	0.2168	1.2649
4	0.1255	0.2559	2.0785
5	0.1450	0.2605	1.0817

Notes: t statistics are for the equality of the probabilities of exit at the corresponding age.

Neither Zaheer & Mosakowski (1997) nor Mata & Portugal (2002) studied entrepreneurial firms, nor did they account for the host country experience of those managing such firms. Our results relative to experience of the entrepreneurs and those relative to the age of firms reveal that firms created by foreigners are more likely to exit, and are thus indicative of the existence of a liability of foreignness. However, our evidence suggests that this liability decreases more with the duration of the stay of the entrepreneur in the host country than with the age of the firm. This indicates that the knowledge accumulated by individuals is a key ingredient to reduce the liability of foreignness, something that is consistent with the findings of Mezias (2002) that Japanese firms employing top American officers were less likely to suffer from the liability of foreignness in the US.

To discuss the impacts of the differences between host and home countries upon the survival of new firms, we now restrict our attention to firms with foreign entrepreneurs. We augment our previous specification with Cultural Distance, Political Distance, and GDPpc and estimate alternative specifications using different combinations of these variables. Results of these estimations, shown in Table 23, are performed with 1581 out of the 1594 firms in our sample of foreign entrepreneurs, again due to the need of estimating industry effects. The table reports only the estimates for the effects of these distances, but regressions included all the variables that were included in the previously reported regressions. Results for these variables remain qualitatively the same.

Table 23. Determinants of Foreign Exit: Home Country Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Cultural Distance / 100	-0.699*** (0.183)			-0.654** (0.210)	-0.568** (0.193)		-0.455** (0.225)
Political Distance / 10		-0.556** (0.181)			-0.363** (0.164)	-0.563** (0.179)	-0.405** (0.174)
ln(Home Country GDPpc)/10			-0.070** (0.029)	-0.015 (0.034)		-0.072** (0.030)	-0.034 (0.035)
Log Likelihood	-1546.577	-1548.573	-1551.616	-1546.475	-1543.990	-1545.609	-1543.508

Notes: Sample includes and 2707 observations corresponding to 1581 firms. Regressions include the same control variables as in Table 3. Standard errors in parentheses. Significance is indicated as follows: * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests)

Columns (1) to (3) of Table 23 report the results of adding a single variable to our benchmark regression and columns (4) to (6) report regressions with sets of two variables. Column (7) includes all three variables simultaneously. Results are strikingly robust. All coefficients are negative and they are significant in most specifications. As Cultural Distance and (the log of) GDPpc are highly correlated, their effects are difficult to estimate precisely. Political Distance is always significant regardless of the specification, and its coefficient does not change much. There are almost no differences between the estimates from columns (2) and (3) and column (6) and there are also no big changes between columns (1) and (2) and column (5). Looking at the values of the log-likelihoods, we can see that columns (5) and (6) are virtually indistinguishable and column (7) does not add much relative to either column (5) or (6).

Overall, the message is very clear. Entrepreneurs coming from countries that are politically close to the host country are more likely to exit than those coming from more distant ones. Our results thus clearly support Hypothesis 3. Results also support Hypothesis 4, which predicted that entrepreneurs coming from countries that are culturally close to the host country are more likely to exit than those coming from more distant ones, and Hypothesis 5, which predicted that entrepreneurs coming from wealthier countries would exit less. The two latter effects are not easy to distinguish, however.

Table 24 quantifies the impact of each of the institutional distance variables, by evaluating the likelihood of exit at different percentiles of the distribution of these variables (the remaining variables are all set at the sample's average). The estimates are evaluated using the coefficients from columns (1)-(3), as those from column (7) are measured with low precision. These results do not show a clear pattern. Comparing the difference in the estimates at the 25th and 75th percentiles the impact of Political Distance is 2.5 percentage points, Cultural Distance is 4 percentage points, and GDPpc is 2 percentage points. A similar comparison between the 5th and 95th percentiles yields estimates of 7 percentage points for Political Distance, 7 percentage points for Cultural Distance, and 4 percentage points for GDPpc. The effect of cultural and political distance, although non-negligible, is not sufficient to eliminate the effect of foreignness. Even at the 95th percentile of the corresponding distributions, the probability of exit of foreign firm is still 0.23, while the corresponding probability of a similar domestic firm is 0.18.

Table 24. Estimated Probabilites of Exit for Different Institutional Distances and Levels of GDPpc

Percentiles	5%	25%	50%	75%	95%
Cultural Distance	0.2987	0.2985	0.2835	0.2551	0.2258
Political Distance	0.3041	0.2954	0.2831	0.2696	0.2309
Home Country GDPpc	0.2984	0.2843	0.2760	0.2620	0.2605

Robustness checks

We re-ran the regressions reported in Table 24 including the number of firms held by citizens of each national community and its square to control for density effects. Neither the linear term alone nor the linear and quadratic terms were significant. The inclusion of these terms did not produce any significant change in the other results. A possible explanation for this lack of change is that the rationale provided by organizational ecologists for the effect of density is essentially of a time series nature, while in this study we have essentially cross-section variation.

Some nationalities have a strong weight in our sample, and this may raise concerns that the results are driven by these nationalities. We ran the same regressions, excluding each of the largest communities: Brazil, United Kingdom, China, Spain, France, and Germany. Results did not change.

To check if our result that foreign firms exit more than domestic was driven by some specific nationalities, we ran regressions similar to that whose results are displayed in column (1) of Table 20, but instead of having the foreign dummy we included two dummies: one that accounts for the specific effect of one nationality and the other that accounts for the effect of the remaining foreign nationalities. Such a model cannot be estimated for those nationalities for which there are very few exits, as the coefficient of the corresponding dummy cannot be identified in these cases, but we were able to estimate it for 31 out of the 38 nationalities. In 17 out of the 31 cases, the coefficient of the dummy was positive and significant. In another 9 cases, the coefficient was positive although not significant. In only 5 cases was the coefficient negative, but in these cases it was never statistically significant. This is evidence that our result is not driven by a small number of nationalities.

We performed a similar exercise for groups of nationalities: owners from Portuguese speaking countries versus non-Portuguese speaking countries, owners from European Union countries versus non-EU countries, owners from countries whose income per capita is greater than Portugal's versus those whose income per capita is lower. Results in Table 25 indicate that foreigners from high income countries confront lower exit rates than those confronted by foreigners from low income countries, but higher than those confronted by the Portuguese (column 1). Those coming from a European Union country confront exit rates that are lower than those of foreigners from other countries, but higher than those confronted by the Portuguese (column 2). Finally, citizens from Portuguese speaking countries confront exit rates that are higher than those confronted by foreigners from other countries, which is evidence that language is not a sufficient advantage to compensate for other characteristics of the Portuguese speaking countries, possibly their lower income (column 3).

Table 25. Determinants of Foreign Exit: Groups of Countries

	(1)	(2)	(3)
Income greater than Portugal	0.328*** (0.075)		
Income lower than Portugal	0.596*** (0.065)		
European Union		0.368*** (0.076)	
Non-European Union		0.560*** (0.064)	
Portuguese speaking countries			0.666*** (0.071)
Non-Portuguese speaking countries			0.362*** (0.065)
Log Likelihood	-3454.831	-3457.307	-3452.633

Notes: Sample includes and 6717 observations corresponding to 3175 firms. Regressions include the same control variables as in Table 3. Standard errors in parentheses. Significance is indicated as follows: * p<0.10 ** p<0.05 *** p<0.001 (two tailed tests).

We also excluded firms with more than one owner and results did not show any significant changes. Results were also the same when we excluded entrepreneurs with no labor market experience and when we controlled for experience using a set of experience classes. To check whether the results might be contaminated by changes in immigration laws that changed in 2007, our regressions were run without those firms that were created during 2007. Results did not change.

6. Conclusion

In this paper we investigate the differences in the probability of survival of firms created by foreign and domestic entrepreneurs to evaluate the extent to which foreign entrepreneurs suffer from a liability of foreignness. In addition, we study the impact of cultural and political distance between the home and the host country upon the probability of survival of firms created by foreigners of different origins.

We find that after carefully controlling for characteristics of the entrepreneurs, firms, and industries, firms created by foreigners are 50% more likely to exit than comparable firms created by natives. Two reasons why foreigners may be disadvantaged relative to natives is that they may be less familiar with the local environment and they may suffer from a lack of legitimacy in the eyes of local economic agents. Experience in the country is likely to reduce these liabilities of foreignness, because over time individuals learn about the host economy and may become more accepted by locals. We find that the disadvantage of foreigners is clearly reduced for those who have been in the

host country for longer. In our sample, the average foreigner has an exit rate right upon his arrival in the country that is 75% higher than a local. Three years later this figure is around 43% and ten years later around 27%.

We find that the survival prospects of firms created by foreign entrepreneurs are related to the distance between the institutional environments in home and host countries. While this distance may create additional hurdles to foreign entrepreneurs, it may also create opportunities that are more likely to be perceived if individuals come from countries that are quite different from the host country than if they come from countries that are similar. We account for both formal and informal institutions, measured respectively by political and cultural distance between Portugal and the country of origin of the foreigner entrepreneur. Our findings indicate that foreigners coming from countries that are culturally and politically more dissimilar from the host country are less likely to close their firms than those coming from countries that are relatively similar. We also find that firms created by those that come from wealthier countries are more likely to survive. This may be related to the fact that these individuals are more likely to have access to greater pools of resources and likely to be less severely cash constrained than those coming from poorer countries. Due to the attributes of our sample, we find it difficult to empirically discriminate between this effect and that of cultural distance.

The result that firms originating from more distant countries may be in an advantageous position to spot and exploit opportunities that more embedded firms may neglect has been previously found in studies focusing on multinational firms. Our findings show that this applies to entrepreneurial firms as well. This is especially remarkable because these firms are not particularly sophisticated. This is also significant because the decision maker is clearly identified in our firms – and the country of origin of that decision maker matters.

Our results indicate that firms that were created by foreigners show some reduction in the likelihood of exit over their first years in the market, but that the pace of this reduction is not significantly different from the reduction in exit that is experienced by firms created by domestic entrepreneurs. On the contrary, the previous experience of the foreign founder with the local environment critically affects the likelihood of survival of the new venture. This puts the individual in the center of the liabilities of foreignness that have been identified in the international business literature. For management in general the implication is that, when a firm is considering entering a new country, there may be important payoffs in choosing a management team with considerable knowledge of that country rather than relying mostly on the learning process that will occur after entry takes place.

Our results have important implications for individuals who are considering entering entrepreneurship in foreign countries. Historically, immigrants have been typically attracted by

high-income countries (Harris & Todaro, 1970). This may hold for those seeking jobs as employees because wages are higher in such countries, and also for those looking for a place to start a business, because the purchasing power of the potential clients is higher and the potential gain from such ventures is greater than the corresponding potential gain in lower income countries. However, our finding that the survival of firms is substantially lower if the entrepreneur comes from a low-income country indicates that these entrepreneurs may lack resources that are critical for the survival of their initiatives.

This suggests that if an individual is considering different countries in which to start a firm, he/she would have to weigh the potential gain against the likelihood of not being able to obtain it, and he/she may be better off by choosing a low income country. And, indeed, in our sample we find that foreigners from countries whose incomes are higher than Portugal are not at all unusual and that these individuals have a higher propensity to start their own businesses than those from countries with lower income.

If one is already in a foreign country and is considering starting his/her own business, he/she should be careful in evaluating whether he/she has access to the relevant resources required for running a business. In particular, one should be certain that one has adequate knowledge of the host economy and is seen by others as a legitimate business party. Petersen & Pedersen (2002) showed that foreign firms may improve their performance by actively seeking to learn about their host country, and foreigners considering going into entrepreneurship should consider this active learning strategy as well. This may be a strategy with an especially high payoff if one comes from a country that is considered to be similar to the host country. Similarity may create a false sense of comfort and may hinder learning about specificities of the host country which, in turn, may lead to failure. Entrepreneurs whose country of origin is politically and culturally more distant from the host country may also be at an advantage in identifying opportunities missed by natives or by those coming from countries that are more similar.

Our results may also have implications for research on the internationalization of other types of firms, more specifically, on the impact of international experience of managers on the internationalization of firms. Sapienza, Autio, George, & Zahra (2006) posited that the international experience of managers can be a substitute for the lack of international experience of firms that wish to go into international markets. Some studies have attempted to control for diversity of international experiences of managers (Carpenter, Sanders, & Gregersen 2001) and diversity of nationalities among management team members (Nielsen & Nielsen, 2011). The learning from international experience may, however, be different depending on the country where it was obtained, and benefits of this learning may also depend on the country it is applied to. There may be

gains from extending this research in a direction that takes into account the institutional specificities of the countries where experience is gained and where this experience is put to work.

Finally, our results will also speak to policy-makers because many countries pursue active policies designed to promote entrepreneurship and help entrepreneurs start their firms, and some of them have even implemented specific policy initiatives seeking to attract immigrants who wish to start a business there. Our results indicate that it may be useful to tailor the support provided to new businesses when the promoters are foreigners, especially by providing training that helps potential entrepreneurs to learn about the host country.

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