

# **ENTREPRENEURIAL EFFORTS BY IMMIGRANTS:**

## **A LONGITUDINAL STUDY FOR PORTUGAL**

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### **ABSTRACT**

We employ longitudinal data for entrepreneurs and firms from the Portuguese economy for the year 2003, to understand if immigrants exhibit different entrepreneurship rates than those of native individuals. Specifically, our study concentrates on the impact of human capital upon immigrants' participation in entrepreneurship and in the process of starting-up a firm. We provide estimates from a logistic regression on the determinants of being an entrepreneur among various immigrant groups and native-born individuals. Results show that immigrants have higher participation rates in entrepreneurship rather than native individuals and human capital has a significant and positive impact on both immigrant and native entrepreneurship whether for start-ups or already existent firms.

### **INTRODUCTION**

A variety of recent studies examine the determinants of entrepreneurial efforts among immigrants (Borjas, 1986; Fairlie and Meyer, 1996; Lofstrom 2002). In general, studies point out that migrant status and ethnicity affect the individual propensity to start a new business (Levie, 2006) and that self-employment rates among immigrants are higher than those of natives (Yuengert, 1995). However, research also show that the survival probabilities in entrepreneurship are lower for immigrants than for non-immigrants (see, e.g., Georgarakos and Tatsiramos, 2007 – for Mexican and Hispanic immigrants in the US; Vinogradov and Isaksen, 2007 – for immigrants in Norway). Additionally, firm closures among minority owners are observed to be disproportionately unsuccessful closures (Bates, 2005).

The literature shows that skills are important in the process of shaping the economic performance of immigrants both in the immediate post-migration period and over the long-run (Borjas, 1999). In fact, higher levels of human capital are observed to increase entrepreneurship rates (Light and Rosenstein, 1995) and are positively related to business longevity and profits (Bates, 1994) among all ethnic and racial groups and categories.

We use a human capital theoretical framework (Becker, 1975) to assess the importance of entrepreneurs' education and different types of previous occupational experience (e.g., in paid-employment, non-employment, business-ownership and in different firms across time) in explaining entrepreneurship among immigrants. Therefore, our goals are twofold: First, to understand if – in line with the literature – immigrants in Portugal exhibit higher participation and start-up rates than those of Portuguese-born entrepreneurs. Second, to test if immigrants with higher human capital are more likely to be entrepreneurs and to start-up a firm, than those immigrants endowed with lower levels of human capital.

The article is structured as follows. The next section describes the main underlying theoretical contributions on immigrant entrepreneurship, defines the research goals and propositions of the present study. The following section presents the data, discusses the key issues in variable construction and describes the empirical methods used in this

research. The subsequent section displays results from estimations and, finally, the last section provides some discussion and concluding remarks.

## **THEORETICAL BACKGROUND AND HIPOTHESES BUILDING**

Immigrants are naturally risk takers. They are people that take the risk of leaving their own country to search for a better life in a foreign country, many times without knowing what they will find. They usually have strong personal incentives to succeed in the foreign country. Therefore, they may be more prone to start their own businesses if this is an option for success. In addition, immigrants may face difficulties to find jobs, and may have lower opportunities for success in the labor market. Once in the labor market, it may be more difficult for immigrants to get promotions, and their earnings are generally lower (Chiswick and Miller, 2008). All these may serve as motivations to search for opportunities in self-employment, which make immigrants more likely to be drawn into self-employment. For example, Fairlie and Meyer (1996) point out that self-employment has served as a way to achieve economic advancement in some ethnic groups in the US, such as the Chinese and the Japanese.

Self-employment might be important in determining immigrants' success in the host country, and may provide a way for people to establish themselves in a new country. In addition, immigrants may use self-employment to escape unemployment. Accordingly, Georgarakos and Tatsiramos (2007) observe that immigrants tend to switch to self-employment from situations of unemployment or inactivity. Moreover, after experience as self-employed their value in the labor market may increase and it might become easier to find opportunities in paid-employment. In agreement, Georgarakos and Tatsiramos (2007) found that immigrants are more likely to switch from self-employment to paid-employment. This evidence indicates that self-employment is in fact an intermediary choice to reach paid-employment.

Research provides evidence that immigrants have higher self-employment rates than natives, and has tried to examine the determinants of self-employment among immigrants (Borjas 1986, Fairlie and Meyer 1996, Lofstrom 2002). Self-employment is riskier than paid-employment (Hamilton, 1995), and the less risk-adverse people are more likely to engage in self-employment. Another reason that may explain the high self-employment rates amongst immigrants is their ability to provide special goods and services to compatriots within the same region (Borjas, 1986). In addition, there are differences in self-employment rates by immigrants according to the country of origin. Fairlie and Meyer (1996) show that self-employment rates vary greatly across 60 ethnic and racial groups in the US. These differences may be consequence of different cultural backgrounds from the countries of origin and may play a role in determining immigrants' higher propensities towards self-employment. Different origins mean different exposure to cultural and psychological conditions that can affect attitudes toward risk and management skills (Hout and Rosen, 2000). Immigrants coming from countries where owning a business is more common, may be more prone to see self-employment as an occupational choice in a new country (Yuengert, 1995; Fairlie and Meyer, 1996). However, the evidence for this relationship is not clear cut (Schuetze and Antecol, 2005). Furthermore, individual characteristics such as age, education and year of immigration may account for at least part of these differences (Fairlie and Meyer, 1996).

Nevertheless, it might be harder for immigrants to establish a new business. Immigrants may have more difficulty to access funding for their activities, and may not be able to actually start a business due to financial constraints (Evans and Jovanovic, 1989). In addition, immigrants may find it harder to obtain important information for the establishment of their businesses. These constraints may also explain lower survival probabilities experienced by immigrants' businesses. If access to finance is harder for immigrants, their firms are bound to suffer from liquidity constraints that lead to lower survival probabilities. For instance, Fairlie (2005) finds that disadvantaged groups, where immigrants are included, present low rates of entry into self-employment and high rates of exit. Georgarakos and Tatsiramos (2007) present a study on survival of immigrants in the US, and they observe lower survival probabilities in entrepreneurship for foreign-born individuals.

The comparison between successive cohorts of immigrants to the United States unequivocally demonstrated the importance of skills in the process of shaping the economic performance of immigrants both in the immediate post-migration period and over the long-run (Borjas, 1999). Fairlie and Meyer (1996) also found the level of education of immigrants to be an important determinant of self-employment.

Empirical literature on self-employment by immigrants has shown that, for the US, self-employed immigrants have higher incomes than salaried immigrants and self-employed natives (Borjas, 1986); that self-employed immigrants have a better education and earn more than paid-employed ones (Lofstrom, 2002).

Entrepreneurial behavior of immigrants is generally less studied in Europe. Nevertheless, immigration may play an important role in fulfilling the needs of the EU labor market; and immigration can have an increasing impact on entrepreneurship (EU, 2005 Green Paper on “Managing economic migrations, p.4). For example, Constant *et al.* (2005) study entrepreneurial activities by Turkish immigrants in Germany and observe that Germany exhibits low rates of self-employment, especially among immigrants, and self-employed immigrants in Germany earn twice as much as the immigrants in paid-employment. In the present study, we attempt to add to this body of literature by investigating entrepreneurial efforts by immigrants on another European Country – Portugal – which has been scarcely investigated in what concerns immigrant entrepreneurship.

Drawing on the literature, in general, studies on immigrant entrepreneurship show that human capital is important and has a positive impact on shaping the occupational choice of immigrants in being entrepreneurs (e.g., Borjas, 1994; Fairlie and Meyer, 1996). In order to shed light on these findings, we will test the hypothesis that highly educated immigrants are more likely to be business owners than less educated immigrants.

## DATA AND METHODOLOGY

### Data Description

The data source is the “Quadros de Pessoal” (QP) Micro Data set, a unique database gathered from mandatory information submitted yearly by Portuguese firms to the Ministry of Social Security and Labor. The longitudinal matched employed-employee data include extensive information on the mobility of firms and business owners. QP includes yearly data from all private firms with at least one wage-earner in the Portuguese economy. Data relative to business owners for each firm include age, gender, tenure, and schooling. Moreover, records of entrepreneurial experience can be collected for employers and employees alike.

Previous research reports more than 40% of immigrant workers come from former Portuguese colonies such as Angola, Mozambique, Cape Verde, Guinea-Bissau, São Tomé & Príncipe and East-Timor. Twenty-two percent are from some of the former Soviet Union (Russia, Ukraine, Moldova and others), 16% from developed countries (Western Europe, USA, Canada and Japan), 11% from Brazil and the remainder 9% are from a wide range of countries (Carneiro, Fortuna and Varejão, 2006).

In our data it is possible to look with more detail at the percentage of immigrant business owners, disaggregated by a wide array of countries of origin. Figure 1 illustrates the distribution of the total number of immigrant workers and immigrant business owners across continents in 2000-2006<sup>1</sup>. There are differences between the two groups. People coming from EU countries represent a high share of immigrant business owners (35%), but a much smaller part of total immigrant workers (8%). The opposite observation is visible for people coming from other European countries which are not part of the EU; they represent 41% of the total number of immigrant workers, but a minor part of the immigrant business owners (22%). Even though 27% of immigrant workers come from Africa, they represent a smaller percentage of the immigrant business owners (14%). People coming from countries in South and Central America are almost equally represented amongst immigrant workers (20%) and immigrant business owners (15%). There are a smaller percentage of people coming from North America and Oceania in both groups.

In 2000-2006 there are 593931 individuals that are not Portuguese, corresponding to a total of 4% of the total number of individuals. When considering the nationality of the business owners in our sample, there are a total of 17254 immigrant individuals who are business owners, corresponding to 1.6% of the total number of business owners. In terms of their levels of education, we observe in our data set that 11.8% of all immigrant business owners between 2000 and 2006 have a tertiary level of education. This percentage is higher than the equivalent for native

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<sup>1</sup> Despite the data goes back to 1986, information concerning the nationality of individuals is available in the data set only from 2000-2006. Therefore, this introductory description focuses individuals that are present in the database between 2000 and 2006.

business owners, where 7.7% of all native business owners in the period 2000-2006 have a university degree or equivalent.

Tables 1 and 2 display descriptive statistics of the data used in the econometric analysis of the paper. While Table 1 describes immigrants, Table 2 focuses on native individuals. Both Tables 1 and 2 distinguish business owners from paid-employees and look separately at individuals starting and working in new firms (start-ups).

We observe that there are more male individuals in the data set, which is a constant finding throughout all the groups under analysis. Business owners are on average older than paid-employees, and immigrants are younger than natives, both for business owners and for paid-employees. In addition, native and immigrant individuals starting a firm are younger than the entire sample of business owners.

Concerning education, 6% of native employees have a university degree, so do 8% of native business owners. The number of people with higher education increases when considering the native business owners who started new companies (11%). Looking at the immigrants, 16% of business owners have higher education; this value increases slightly for immigrants starting their own firm (17%). On the other hand, the immigrants in paid-employment are less educated (5%).

Variables concerning different types of experience show that immigrant business owners have, on average, less past experience in employment than native business owners, and that this is true for the three different types of experience measures used. This may be just consequence of age (they are on average younger) and of less time in the county's labor market. In addition, immigrant business owners have less experience in paid-employment and in non-employment than immigrant paid-employees, but have more experience in business ownership.

In what concerns the firms, the descriptive show that immigrants have higher share of foreign capital in their firms than those from native business owners and paid employees. There are no significant differences in terms of the size of firms of the two groups of individuals

### **Variables Construction and Econometric Technique**

For the purpose of assessing the main variables influencing native and immigrant individuals' participation in entrepreneurship, we perform separate estimations for natives and immigrants. First, we focus on all native individuals who are present in the dataset by 2003 to build a binary dependent variable distinguishing native business owners (with value 1) from native paid-employees (value 0). Then, we build a similar dependent variable distinguishing immigrant business owners (with value 1) from immigrant paid-employees (with value 0). Therefore, with regard to nationality of individuals, we can make intragroup (e.g., being an immigrant business owner vs. immigrant paid-employee) and intergroup (e.g., immigrant business owners vs. native business owners) comparisons.

To proxy for individuals' level of human capital, we include a dummy variable named "Tertiary Education" accounting whether natives and immigrants have university education (value 1, otherwise 0). Additionally, in order to study the influence of different types of occupational experience individuals had in the labor market, several other independent variables are built. Specifically, we depart from all individuals present in 2003 (which is our cohort of interest) and use the whole QP longitudinal data on entrepreneurs and firms from the Portuguese economy to look retrospectively at their career profiles, until 1986. This allows accounting for the exact number of years individuals have spent in paid-employment, in entrepreneurship and in non-employment<sup>2</sup>. A variable measuring the number of prior entrepreneurial experiences in different firms is also built and included in the estimations. We believe this variable may play an important role in providing individuals with organizational skills that may influence their likelihood of being entrepreneurs.

In addition to human capital, several other factors have been shown by the literature to impact upon individuals' participation in entrepreneurship. Some of those factors are considered in the present study through the inclusion of

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<sup>2</sup> In this study, "non-employed" are defined as individuals who are disengaged from any firm (i.e. exit the database) for two or more years, either because they are unemployed or because they exited the job market.

control variables. To control for owner demographic traits we include individuals' "Age" and "Gender" (value 1 if the individual is a female; 0 if male).

Estimations also control for sector of economic activity because specific business environments may impact differently upon firms' profitability and performance, as well as on the probability individuals are, or not, entrepreneurs. Seventeen dummy variables are employed to account for industry specificity<sup>3</sup>.

We control for the existence of foreign capital in the initial investment. The variable "Foreign initial investment" is expressed in terms of the percentage of all initial investment needed for starting the firm. This variable will act as proxy for the extent immigrants use financial support from their countries of origin to establish a local business. Finally, number of workers within the organization is included to control for size heterogeneity among different firms.

In order to investigate how immigrants and natives participate in entrepreneurship, the present study resorts to a form of the classic discrete choice model, as reviewed by Parker (2004). In these models, occupational choice is determined by the expected utility from each different occupation. Given the type of response variable, the logit model is found to be a suitable empirical strategy for the phenomenon at hand (e.g., Levie, 2006).

In our estimations, we break down the analysis for native business owners (estimation I) and immigrant business owners (estimation III) into two subgroups: one focusing exclusively on native individuals who have just started a new firm in 2003 (estimation II) and, in the same way, other for immigrant individuals who started a firm in 2003 (estimation IV). We believe it is important to focus on start-ups so that we can have a better understanding not only on the determinants of being an immigrant entrepreneur, but also on the drivers for immigrants to be involved in the process of starting-up a new business. This will also shed some light on the role played by immigrants' human capital on starting a new business.

## RESULTS

We estimate the probability to be a business owner in 2003, using separate regressions for immigrants and natives. In addition, for each group of individuals we distinguish between those that started their own firm in 2003, and those whose firm is not new in the market. Overall, our results show the probability of being a business owner for natives and for immigrants has a similar pattern and it is determined by the same group of factors.

Having a university degree is positively related with the probability of being in business ownership, and it is also verified for natives and for immigrants. In fact, more educated workers tend to be better informed, implying that they are more efficient in assessing self-employment opportunities; furthermore, education increases productivity and reduces the variance of self-employment earnings (Rees and Shah, 1986)<sup>4</sup>. Therefore, this finding supports our hypothesis claiming that highly educated immigrants are more likely to be business owners than less educated immigrants.

We find that, further than education, for a number of other variables, results are significant and exhibit the same (positive or negative) effect throughout all estimations and groups of individuals (immigrants and natives). For example, male individuals are more likely to be business owners and this result holds both for native and immigrant individuals and the effect is independent on the type of engagement in business ownership (whether it is a start-up or not). In fact, it is a stylized fact that female entrepreneurs are under-represented in all developed countries and have a lower likelihood of being and becoming entrepreneurs than males (Verheul, 2005; Kim, 2007).

Another variable with significance level and same effect across all estimations is firm size; which is always significant and negative in explaining individuals' participation in entrepreneurship.

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<sup>3</sup> We use and base our analysis on the OECD classification, which breaks down NACE codes into different letters matching each section (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:393:0001:0039:EN:PDF>)

<sup>4</sup> There is, nevertheless, a different line of reasoning claiming that a high level of education deters entry into self employment (De Wit and Van Winden, 1989).

Age appears as positively related to the probability of being a business owner, for estimations on both immigrants and natives. However, it is not significant for immigrants who have just started a new firm. The literature presents mixed evidence on the relationship between age and entrepreneurship. Some authors find that the decision to move to self-employment is positively correlated with age (Kim, 2007; Zissimopoulos and Karoly, 2007). Some empirical works suggest that the probability of becoming self-employed is independent of age until a certain point (Evans and Leighton, 1989; Evans and Jovanovic, 1989) and then it increases at a diminishing rate. Other authors claim youngsters have higher participation rates in firm creation than the older people (Reynolds et al., 2004).

Variables capturing previous work experience show that more years in non-employment increase the likelihood of individual being business owners. This result is in agreement with Georgarakos and Tatsiramos (2007), who find that immigrants tend to switch to self-employment from situations of unemployment or inactivity. However, we observe the same effect in native individuals, which could mean that this is a characteristic of the Portuguese economy, and not specifically related to the nationality of individuals. On the other hand, experience in paid-employment has a negative effect on the likelihood of being a business owner, effect observed both for native and immigrant individuals, with the exception of the starter immigrant, for which this variable is non-significant. Previous experience as business owner affects positively the probability of being a business owner, both for natives and immigrants. The number of firms where individuals have worked has a positive effect on being a business owner for natives and immigrants. To our knowledge, this variable is not directly explored in previous studies, nevertheless, this finding may suggest that experience across a variety of firms endows individuals with a varied and generalist experience, which may be useful in entrepreneurship. For example, Lazear (2002) points out that the possession of a diversity of experiences and skills – i.e. in marketing, human resources management, technology, finance – is important for someone aiming to establishing and/or run a firm. However, our estimations show that experience in various firms is negative for native starters and non-significant for immigrant starters.

The variable accounting for foreign capital in the firm has different results for native and immigrant individuals. It has a negative effect on the probability of an individual being a business owner, if this individual is a native, and a positive effect if the individual is an immigrant. This suggests that immigrant entrepreneurs use their own financial resources, or financial support coming from partners on their countries of origin. On the other hand, natives are less likely to incorporate foreign capitals in their businesses.

## CONCLUSION

In the present study, we provide estimates from a logistic regression on the determinants of being an entrepreneur among various immigrant groups and native-born individuals. Results show that immigrants have higher participation rates in entrepreneurship rather than native individuals and human capital has a significant and positive impact on both immigrant and native entrepreneurship whether for start-ups or already existent firms.

The entrepreneur's human capital and venture's start-up characteristics are expected to shed new light on the differences between participation rates of immigrants and natives in entrepreneurship. This line of research brings important implications for scholars, practitioners and policy makers. By using very rich and validated data, this research contributes; in general, to the scarce empirical evidence on immigrant entrepreneurship in Europe, particularly using longitudinal matched employer-employee data. Practitioners should be aware of the important role played by their human capital and how it can translate into better occupational prospects in the labor market, specifically in entrepreneurship. Policy makers might be interested in a further understanding of the observed differences between native and minority groups in the population, so that the design of public policies may foster entrepreneurship as an inclusive socioeconomic phenomenon.

As this paper is a preliminary approach to the topic of immigrant entrepreneurship it encompasses several limitations which will be tackled in further research work. First, we estimate models using only one cohort (2003). In future analysis it is important that our study covers a broader range of years analyzed separately from each other and also a cohort aggregating two or more years. In addition, future work should include a set of independent variables accounting for previous experience in the same sector, years of education, and previous top management

experience and academic backgrounds of entrepreneurs should be considered in further estimations, as well as controls for macroeconomic cycles (e.g., GDP, unemployment rate).

We have focused primarily on intergroup comparisons (same nationality, different occupation). Specific attention should be put into intragroup comparisons (different nationality, same occupation); for example, it is important to include marginal effects in our estimations and more robust econometric methods to perform in depth comparisons between immigrant and native entrepreneurs.

Particular attention should also be put into the dynamics of entrepreneurship; specifically, in what regards the probability of immigrants transition to entrepreneurship (i.e., from non-employment or from paid-employment), more than the mere probability of immigrant participation in entrepreneurship.

Duration models should be employed in order to access immigrant entrepreneurs' business survival (as a proxy for entrepreneurial performance) when compared to native entrepreneurs.

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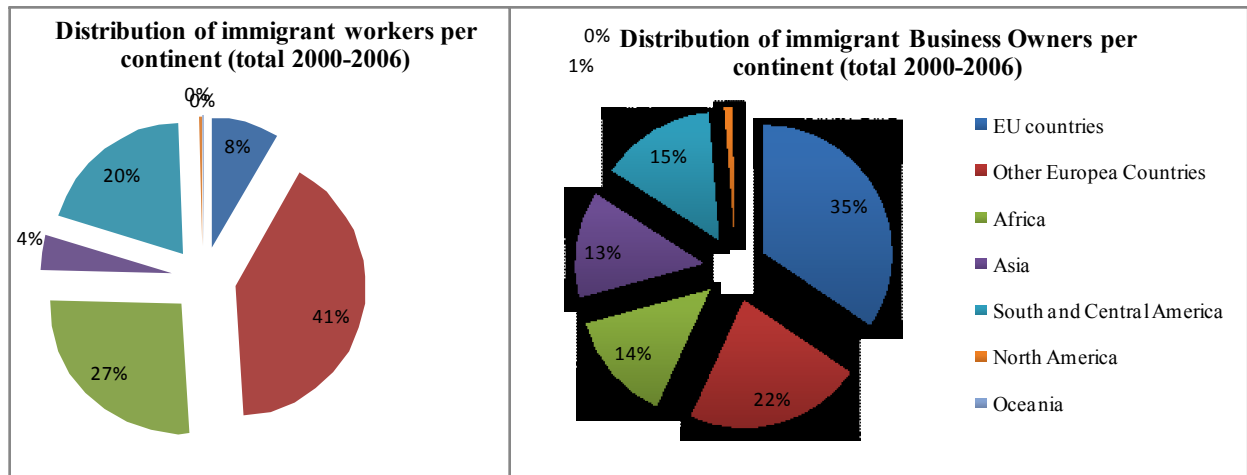
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**Figure 1- Distribution of immigrant workers and business owners across continents**



**Table 1 - Descriptive statistics for Immigrant individuals**

| Variables                          | Immigrant Business owners |       |          |       | Immigrant Paid-employees |        |          |        |
|------------------------------------|---------------------------|-------|----------|-------|--------------------------|--------|----------|--------|
|                                    | All                       |       | Start-up |       | All                      |        | Start-up |        |
| Gender                             | 1.29                      | 0.45  | 1.24     | 0.43  | 1.31                     | 0.46   | 1.37     | 0.48   |
| Age                                | 42.29                     | 10.69 | 37.72    | 9.51  | 34.78                    | 9.29   | 33.99    | 9.15   |
| University degree                  | 0.16                      | 0.36  | 0.17     | 0.37  | 0.05                     | 0.21   | 0.04     | 0.19   |
| Years in non-employment            | 0.41                      | 1.56  | 0.90     | 2.51  | 0.18                     | 1.04   | 0.33     | 1.37   |
| Years as a paid-employee           | 1.46                      | 3.03  | 1.20     | 2.71  | 2.66                     | 3.37   | 2.12     | 2.39   |
| Years as a business owner          | 3.49                      | 3.89  | 1.53     | 1.80  | 0.04                     | 0.57   | 0.03     | 0.37   |
| Experience in firms (no. of firms) | 1.49                      | 0.82  | 1.73     | 0.97  | 1.35                     | 0.71   | 1.63     | 0.87   |
| Foreign Initial Investment (%)     | 4.84                      | 20.83 | 3.60     | 17.99 | 7.42                     | 25.32  | 4.97     | 21.43  |
| Firm size (no. of workers)         | 9.20                      | 21.86 | 4.38     | 6.55  | 335.26                   | 984.71 | 126.76   | 445.70 |
| N=                                 | 2645                      |       | 221      |       | 101422                   |        | 2511     |        |

**Table 2 – Descriptive statistics for Native individuals**

| Variables                          | Native Business owners |       |          |       | Native Paid-employees |        |          |        |
|------------------------------------|------------------------|-------|----------|-------|-----------------------|--------|----------|--------|
|                                    | All                    |       | Start-up |       | All                   |        | Start-up |        |
| Gender                             | 1.30                   | 0.46  | 1.30     | 0.46  | 1.47                  | 0.50   | 1.44     | 1.44   |
| Age                                | 43.99                  | 11.33 | 37.96    | 10.55 | 35.26                 | 11.19  | 36.91    | 36.94  |
| University degree                  | 0.08                   | 0.28  | 0.11     | 0.31  | 0.06                  | 0.24   | 0.07     | 0.07   |
| Years in non-employment            | 0.53                   | 1.91  | 1.95     | 3.54  | 0.92                  | 2.28   | 0.40     | 0.39   |
| Years as a paid-employee           | 3.56                   | 5.40  | 3.81     | 5.23  | 7.18                  | 7.23   | 8.77     | 8.80   |
| Years as a business owner          | 5.23                   | 5.42  | 1.75     | 2.36  | 0.11                  | 0.91   | 0.12     | 0.12   |
| Experience in firms (no. of firms) | 1.80                   | 1.00  | 2.25     | 1.21  | 2.46                  | 1.26   | 1.93     | 1.92   |
| Foreign Initial Investment (%)     | 0.18                   | 3.82  | 0.11     | 2.80  | 4.13                  | 19.60  | 9.77     | 9.87   |
| Firm size (no. of workers)         | 8.18                   | 34.98 | 3.69     | 6.32  | 318.72                | 728.70 | 724.78   | 732.08 |
| N=                                 | 171447                 |       | 7129     |       | 2014217               |        | 35570    |        |

**Table 3 – Logit estimations on the probability of being a business owner**

| VARIABLES   | Natives              |                      | Immigrants           |                      |
|---|----------------------|----------------------|----------------------|----------------------|
|   | I                    | II                   | III                  | IV                   |
|   | All                  | Starters             | All                  | Starters             |
| Female ( <i>dummy</i> )                                       | -0.347***<br>[0.008] | -0.561***<br>[0.037] | -0.264***<br>[0.066] | -0.633**<br>[0.264]  |
| Age   | 0.026***<br>[0.000]  | 0.008***<br>[0.002]  | 0.035***<br>[0.003]  | -0.003<br>[0.012]    |
| Tertiary Education ( <i>dummy</i> )                           | 0.762***<br>[0.014]  | 0.752***<br>[0.058]  | 0.920***<br>[0.087]  | 1.313***<br>[0.258]  |
| Years in non-employment                                       | 0.053***<br>[0.002]  | 0.071***<br>[0.005]  | 0.082***<br>[0.020]  | 0.06<br>[0.099]      |
| Years as a paid-employee                                      | -0.115***<br>[0.001] | -0.030***<br>[0.005] | -0.587***<br>[0.071] | -0.294<br>[0.382]    |
| Years as a business owner                                     | 0.669***<br>[0.005]  | 1.469***<br>[0.125]  | 1.023***<br>[0.068]  | 4.101***<br>[1.004]  |
| Experience in different firms (no. firms)                     | 0.130***<br>[0.004]  | -0.150***<br>[0.019] | 0.904***<br>[0.096]  | 0.272<br>[0.660]     |
| Foreign Initial Investment (as a % of all initial investment) | -0.020***<br>[0.001] | -0.036***<br>[0.013] | 0.005***<br>[0.002]  | -0.006<br>[0.005]    |
| Firm size (No. of workers in the firm)                        | -0.064***<br>[0.002] | -0.161***<br>[0.015] | -0.058***<br>[0.006] | -0.190***<br>[0.043] |
| Constant  | -2.818***<br>[0.031] | -0.683***<br>[0.138] | -4.943***<br>[0.223] | -2.716***<br>[0.714] |
| Observations  | 2175505              | 42637                | 103845               | 2725                 |
| Pseudo R2   | 2185664              | 42699                | 104067               | 2732                 |
| Wald chi2(22)   | 56084.15             | 1958.6               | 1726.53              | 155.74               |
| Log pseudolikelihood  | -273065              | -10953.3             | -5903.79             | -250.85              |

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1% ; Standard errors in brackets. Coefficients reported.

**Notes:** In order to control for Sector, we include seventeen dummy variables in our estimations, which are omitted in this table. Controls for Sector are based on the following OECD classification: A) Agriculture, hunting and forestry; B) Fishing; C) Mining and quarrying; D) Manufacturing; E) Electricity, gas and water supply; F) Construction; G) Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods; H) Hotels and restaurants; I) Transport, storage and communication; J) Financial intermediation; K) Real estate, renting and business activities; L) Public administration and defense; compulsory social security; M) Education; N) Health and social work; O) Other community, social & personal service activities; P) Private households with employed; Q) Extra - territorial organizations and bodies.