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MASTER'S FINAL WORK
DISSERTATION

WHY DO PART-TIME ENTREPRENEURS TRANSITION TO FULL TIME ENTREPRENEURSHIP?

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SUPERVISION

PROFESSOR ANA ISABEL ORTEGA VENÂNCIO

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ABSTRACT

Part-time entrepreneurship is often considered to be the first step to full-time entrepreneurship. This study investigates the reasons and characteristics that lead part-time entrepreneurs to transitions into full-time entrepreneurship. To sustain this research, we ran through a matched employer-employee Portuguese database.

Part-time entrepreneurs who transition to full-time are predominantly men individuals with ages between 50 to 65 years. The transition into full-time entrepreneurship is more likely to occur for high educated individuals with no previous industry experience. Additionally individual with a lower tenure and higher hours worked are more likely to move into full-time entrepreneurship.

In regard to the ventures' characteristics, we find that, the larger ventures' size at its foundation, the higher is the likelihood of transition into full-time entrepreneurship.

RESUMO

Empreendedorismo a tempo parcial é frequentemente considerado como sendo o primeiro passo para ingressar no empreendedorismo a tempo integral. Este estudo tem como objetivo investigar quais os determinantes que sustentam a transição mencionada. Para a realização deste estudo recorremos a uma base de dados portuguesa, Quadros de Pessoal

Os empreendedores portugueses que transitam a sua actividade empresarial em tempo parcial para tempo integral são predominantemente homens com idades entre os 50 e 60 anos. A transição para uma actividade em tempo integral é mais passivel de ocorrer em indivíduos com maior educação e sem experiencia prévia na indústria.

Em relação às características das empresas, podemos afirmar que quanto maior o tamanho da empresa no momento da sua fundação, maior será também, a probabilidade de a mesma empresa transitar de uma actividade parcial para uma actividade em tempo integral.

Classificação do JEL: L26; M13

Palavras-chave: Part-time empreendedores; Start-ups; Característcas dos fundadores.

ACKNOWLEDGMENTS

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LIST OF ABREVIATIONS

CAE Rev2 – Portuguese Classification of Economic Activities - Revision 2

GEM – Global Entrepreneurship Monitor

NUTS II – Second Level of Statistic Territorial Units

OECD – Organization for Economic Co-Operation for Development

QP – Quadros de Pessoal

R.A. - Autonomus Region

1. INTRODUCTION

Becoming a successful entrepreneur depends on many contingencies and is influenced by innumerable aspects, Michael Dell (Dell), Steve Wozniak (Apple), Pierre Omidyar (eBay) and Henry Ford (Ford) are some examples of very successful businessmen who first started their entrepreneurial activity as part-time entrepreneurs (Ford, 2010, Ryan, 2002).

We start by defining part-time entrepreneurship and point advantages and desavantages for part-time entrepreneurship. There are two mutually exclusive ways to become an entrepreneur, the first is to prove the business concept while keeping a day job, and the second is to pursue an opportunity on a full-time basis. Associated with entrepreneurship, we have the figure of the entrepreneur, an individual who perceives an opportunity, and creates an organization to pursue it (Bygrave and Hofer, 1991). There are several desfinitions for part-time entrepreneurship. Petrova (2005) defines part-time entrepreneurs[1] as individuals who work in a regular wage job and at the same time own a business. Essentially, an individual is a part-time entrepreneurs if entrepreneurship is not his main occupation.

Individuals usually engage in part-time entrepreneurship if they are women earning a lower salary in a primary job and are married with children (Kimmel & Conway., 2001; Renna, 2006). Part-time entrepreneurship can be

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[1] Wennberg, Folta & Delmar (2010) introduce a similar concept, hybrid entrepreneurs. Hybrids entrepreneurs are individuals with a primary wage job - that do not need to be in a full time basis, and a secondary job in self-employment. The time spent in the primary job is not specified for part-time entrepreneurs.

blended with other occupations, both paid and non-paid, and it is likely to increase as employment patterns change towards patchwork careers as the desire for self-fulfilment increases (Burke, FitzRoy & Nolan, 2008).

Part-time entrepreneurship is usually a first step towards full-time entrepreneurship, because it mitigates risks and reduces the need for financial resources (Wennberg, Folta & Delmar, 2007, 2010). Additionally, the income from part-time wage work, reduces the pressure on the venture to become lucrative immediately. Also, it allows entrepreneurs to gain knowledge about the market, the product and the customers before committing to full-time entrepreneurship (Wennberg, et al., 2007; Petrova, 2011). Part-time entrepreneurship allows entrepreneurs to minimize the uncertainty and the opportunity costs associated with starting the venture. Part-time entrepreneurs retain the wage job while testing the viability of their self-employment choice (Wennberg, et al., 2007, 2010). Starting an entrepreneurial career as part-timers allows them to refine and adjust their entrepreneurial skills and business model before committing to full-time entrepreneurship.

A large number of entrepreneurs operate on part-time basis. Depending on the country, this type of entrepreneurs accounts from 10% to 60% of the total number of entrepreneurs (Bosma, Jones, Autio & Levies, 2008; Levesque & Minniti, 2006). The relative importance of part-time entrepreneurship is explained not only by the development of telecommunications and internet

technologies but also by the flexibility of work career and employment paths (Hill., Miller, Weiner & Colihan, 1998).

Despite its increasing importance, part-time entrepreneurship has received few attention in the literature. Petrova (2011) states that most of the seminar studies on entrepreneurship do not deal with part-time entrepreneurs. In this study, we analyze the factors that lead part-time entrepreneurs to become full-time entrepreneurs. For each part-time entrepreneur we gather information on demographic and educational characteristics – gender, age, founder experience and level of education, as well as on start-up size. Our research questions are: What are the demographic and educational characteristics of part-time entrepreneurs who decide to transition to full-time entrepreneurship? And, does the initial size of the venture affect the decision to move from part-time to full-time entrepreneurship?.

In order to answer this questions, we use a unique dataset that includes information about the founders and their ventures from 1986 to 2009. This database makes it possible to track part-time entrepreneurs' careers and match them with their ventures. Our results suggest that part-time entrepreneurs who transition to full-time are predominantly men individuals with ages from 50 to 65 years. Regarding education, we find that higher educated individuals are more likely to move to the full-time entrepreneurship. On the other hand, experience in the same industry and region have a negative impact on that decision. In terms of venture' size, the

larger its initial size, the higher twill be the likelihood of moving to full-time entrepreneurship.

This study contributes to the literature on part-time entrepreneurship and it has implications for policy makers and practitioners. Knowing what characteristics affects the decision to move from part-time to full-time is an important requisite towards the creation of a coherent set of measures aiming to induce and support the entrepreneurial activity while simultaneously assuring an efficient allocation of public resources, funding programs and policies.

The remaining sections of this study are organized as follows: next we will present an overview of the literature on part-time entrepreneurship and simultaneously define the main hypothesis; subsequently, in section 3, we describe the dataset, descriptive statistics and its construction; in section 4 we describe the empirical methodology and results; finally, in section 5, we will present our conclusions.

2. LITERATURE REVIEW AND HYPOTHESIS

In this section, we provide an overview of the literature on part-time entrepreneurs and their transition intentions whilst developing several hypothesis that support a better understanding of this phenomenon.

The definitions of part-time entrepreneurs are similar and are based on the type of primary occupation[2], the number of weekly hours worked and the amount or percentage of income generated. Table 1 presents the main definitions used by previous studies.

Apart from its economic relevance, part-time entrepreneurship also affects society in several ways. Part-time entrepreneurship is often chosen by individuals for lifestyle and nonmonetary reasons, which helps to increase the overall well-being in society, since entrepreneurs are usually happier (Folta et al., 2010). Additionally, part-time entrepreneurship also benefits the larger society by operating on small market niches which might not be served otherwise (Markantoni et al., 2013).

An individual decides to become a part-time entrepreneur for two main reasons: to undertake a business on a small scale or to ensure that the business is viable whilst retaining a paid employment. Reynold, Bygrave & Autio, (2003) suggest that the majority of entrepreneurs that engage in creating a new venture embrace, simultaneously, an outside job. An individual will choose to engage in entrepreneurship if he believes that the

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[2] Part-time entrepreneurship can be combined with almost any career and part-time individuals can have different main occupations such as a wage-job, staying-home job, studying or enjoying retirement (Parker, 2009).

expected return – psychological and economic return, added with a premium for the uncertainty, will exceed the value of other viable alternatives, usually paid employment (Amit, et al., 1995). However, as the economic information about the future is unknown, the exact value of the return is not known in advance and the value of the opportunity can only be determined on the market (Wennberg, et al., 2007). Despite empirical findings from Petrova (2005) stating that part-time entrepreneurs do not appear to be constrained, individuals decide to establish part-time ventures as they require less capital to test the feasibility of their entrepreneurial opportunities. After spending a certain amount of time as a part-time entrepreneurs, individuals decide if they move to full-time entrepreneurship, keep the paid job and the part-time venture or return to the outside paid job (Petrova, 2011). Individuals who engage in part-time entrepreneurial activity are, in most cases, risk averse as they are not certain about their entrepreneurial talent, and use the factor of being part-timers to gain feedback, learn about the business potential and carve their own fit on the entrepreneurial activity (Petrova, 2011). Risk can thus be understood as the lack of knowledge about individual's ability.

Part-time entrepreneurship is associated with several positive and negative aspects that may not be applied to all part-time entrepreneurs (Folta et al., 2010, Koster et al., 2014). In terms of positive effects, part-time entrepreneurship is generally more flexible than full-time entrepreneurship and wage employment (Thorgren et al., 2014); it allows individuals to gain autonomy and self-realization (Koster et al., 2014); it enables entrepreneurs

to continue gaining steady income and social security through their wage job, it generates additional income which can help individuals to overcome economic hardships (Folta et al., 2010) and it helps individuals to learn and improve their entrepreneurial skills (Wennberg et al., 2006). Nevertheless, part-time entrepreneurship has also associated with negative aspects (Lockwook et al., 2006): individuals have to split their attentions over several occupations and roles, resulting in stressful situations. Usually it has a detrimental impact on wage job's performance and it creates psychological stress on the venture performance.

Folta (2010) classifies part-time entrepreneurs into three groups: (1) part-time entrepreneurs who start their ventures to improve their income; (2) part-time entrepreneurs who start their venture for personal fulfilment to earn nonmonetary benefits; (3) part-time entrepreneurs who start their ventures as a first step towards full-time entrepreneurship activity.

Ultimately the goal of most part-time entrepreneurs is to become full-time entrepreneurs. Previous literature presents several evidences of this fact, for example Guariglua & Kim (2006), using the Russian Longitudinal Monitoring Survey, report that workers who moonlighted[3] as self-employed represent 26.5 percent of the entrants to full-time entrepreneurial activity. Also, Wennberg, et al., (2007) find that part-time entrepreneurs are 28.8 times more likely to transition to a full-time entrepreneurial activity than other

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[3] Moonlighter is as individual who has dual jobs, usually operates a start up outside of the hours of a full time job.

employees; Wenneberg, et al·, (2010) also identify that the transition from part-time to full-time entrepreneurship is over 12 times higher for hybrids than for those in wage work, pointing out that hybrids with positive hybrid intensity[4] become full-time entrepreneurs at higher rates than those with negative levels. Full-time entrepreneurs who started as part-time entrepreneurs are expressively more successful when compared to full-time entrepreneurs without previous part-time experience (Raffiee & Feng, 2014). A lot of attention has been given recently towards the reasons for becoming an entrepreneur, such as innovation, independence and financial success (Carter, Gertner, Shaver & Gatewwod, 2003). Nevertheless, entrepreneurs who are simultaneously employed and self-employed may have different reasons for being entrepreneurs. The desire for independence is an important motivational factor that can support the transition into full-time entrepreneurial activity; Block & Landgraf, (2013) find that part-time entrepreneurs with a higher independence factor, report higher transaction intentions into full-time than other part-time entrepreneurs.

Global Entrepreneurship Monitor – GEM highlights that only a minority of individuals who transition to full-time entrepreneurship continue to hold multiple jobs (Bosma et al., 2008). When the transition occurs and the individuals still hold multiple jobs, the independence factor was not achieved.

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[4] Hybrid intensity is defined as the percentage of self-employment income divided by salary income.

Thorgren, Nordstrom & Wincent (2014), studying the importance of passion, conclude that the capacity to work with something that one is passionate about is the highest motive for combining wage work with a side business, and that this important factor is more expressive among individuals who are older. Furthermore, the same auhtors also show that passion is the strongest motive for hybrid entrepreneurship (34 percent) followed by the need for earning money (16 percent). Palich & Bagby (1995) and Douglas (2006), argue that the transition from part-time to full-time entrepreneurship may occur due to the fact that entrepreneurs perceive less "risk perception". They point out that individuals underestimate risk as they are more likely to remember success and tend to forget (or never learn about) failures.

Levesque & Minniti (2006), find that the entrepreneurs of the majority America's fastest-growing firms retain their wage job for four months on average after starting up their new ventures.

The first years of a venture are considered, in several studies, to be very important to define its success. Jovanovic (1982) states that younger firms have less knowledge on the market and are unsure about their performance prior to entry. When compared with established organizations, new firms are less able to deal with environmental challenges, not only because they have less experience, but also, because they learn from noising signals provided by the market. These combined facts can lead to a higher likelihood of exit of younger firms (Santearelli & Vivarelli, 2007). The sooner the venture adapts to the market conditions and learns how to manage its resources and

capabilities in an efficient way, the faster it will be able to compete with older organizations, and consequently, the larger the survival rate. Furthermore, authors such as Mata & Portugal (1994), and Hyytinen & Rouvinen (2008) conclude that the larger the size of the start-up, the higher the survival will be.

When part-timers decide to move to full-time entrepreneurship, their business, does not have the financial structure usually needed to undertake several workers. Kaufmann (1999) states that start-ups are mostly small firms with usually one employee, the owner, or a business with up to four employees. Start-up size is one of the factors that positively influence the performance and survival of new firms (Sonmez, 2013; Mata & Portugal 1994). Entrepreneurs with higher experience and knowledge are likely to start (or achieve) larger firms as they are more confident and hold a higher *know how* on the market industry to overcome most of the financial constrains (Barkman, 1994 and Mata, 1996). Thus, it is expected that part-time ventures that start larger, will be less constrained and will survive longer. Also, we expect that they will be more likely to transition into the full-time entrepreneurial activity.

Hypothesis 1: Part-time entrepreneurs are more likely to transition to full-time entrepreneurship when, at the foundation, the ventures' initial size is larger.

In terms of gender, Evans & Leighton (1989) and Minniti & Naudé (2010) suggest that male individuals, when compared to female, are more likely to move to entrepreneurship. When involved in the entrepreneurial activity, Parker (2009) shows that self-employed women are more likely to be and remain as part-time entrepreneurs.

Women generally operate in entrepreneurship at a smaller scale and on a part-time basis because it offers them higher flexibility to embrace their at-home and work commitments (Biehl, Gurley-Calvez & Hill, 2013; Wellington, 2006).

Carter & Jones-Evans (2006), when analysing the psychological traits, suggest that men are more prepared and have the required confidence, skills and network to manage their ventures, whilst women are generally more risk averse. Consequently, women will adopt lower risk investment plans, and conduct careful strategies regarding the amount of capital invested (Parker, 2009). Additionally, female individuals are predominantly engaged in sectors that offer fewer possibilities for growing and developing a successful career. Usually, female entrepreneurs establish ventures in the services sector (Vejsiu 2011). Therefore, is expected that, the likelihood of men embracing full-time entrepreneurship is higher in relation to women, because men have the psychological and social traits more favourable to take that decision.

Hypothesis 2: Male part-time entrepreneurs are more likely to become full-time entrepreneurs in relation to female part-time entrepreneurs.

The relationship between age and entrepreneurship is not clear. While some studies argue that older individuals are more likely to enroll in the self-employment activity (Dawson, Henley & Latreille, 2009), others suggest that the likelihood of entering in self-employment activity is higher for younger individuals (House, Ikiara & McCormick., 1993). However, some studies suggests an inverse U shape relationship between age and full-time entrepreneurship. As individuals get older, the probability of becoming an entrepreneur increases until reaching a certain threshold which the effect of age is inverted and decreases (Blanchflower, 2000).

Several reasons can be appointed to justify this fact. First, older people have on average a greater amount of key resources, such as general and specific human capital (Calvo & Wellisz, 1980), and financial capital (Van Praag & Van Ophem, 1995), something often unavailable for younger individuals (Parker, 2009). Furthermore, entrepreneurship can be seen as an alternative to avoid mandatory retirement (Kerr & Armstrong-Stassen, 2011). On the other hand, age negatively influences the decision to move to entrepreneurship because older individuals have lower physical and mental availability for stress situations, less time to recover the initial investment and higher aversion to risk (Hintermainer & Steinberger, 2005). Thus, we expect that the transition from part-time to full-time increases with the founder age up until a certain threshold.

Hypothesis 3: *There is an inverted U-shape relationship between age and the likelihood of part-time entrepreneurs to transition to full-time.*

Entrepreneur's background influences the success of new ventures (Agarwal, Echambadi, Franco & Sarkar, 2004). Entrepreneurs with higher human capital learn faster about market conditions, identify and exploit its opportunities, and therefore, increase the probability of success (Dahl & Reichstein, 2007). According to human capital theory, this can be distinguished in general and specific forms. General human capital includes educational levels and is useful for diverse jobs and industries. Specific human capital includes specific work experience and is considered an advantage on a specific job, resulting in less jog opportunities in the labour market (Becker 1962, 1975).

Education is connected to more productive workers and is considered the main factor for driving firm performance and competitiveness (Prais, 1995 and Becker, 1962). Individuals with higher educational levels have better job opportunities (Brown, Farrel & Harris, 2011) and are, on average, more capable of identify self-employment opportunities. Additionally, formal education also allows them to further develop and learn new abilities and organizational skills to better explore those opportunities (Grant, 1996). Jovanovic (1982) argue that entrepreneurial skills are acquired over time from previous entrepreneurial experiences (Minniti & Bygrave, 2001).

Authors such as Blanchflower, (2004) and Dawson, Henley & Letreille, (2013) find that more educated individuals are better inclined to take advantage of an opportunity emerging in the market. Consequently, it is expected that

higher levels of education will provide part-time entrepreneurs with a higher ability to solve problems and thus transition to full-time entrepreneurship.

Hypothesis 4: *High educated part-time entrepreneurs are more likely to become full-time entrepreneurs.*

As well as education, experience is also a main factor for performance (Barney, 1991). Individuals learn from previous experiences (Jovanovic, 1982) and contributes for firm success (Rostadt, 1988). Entrepreneurs with the managing know-how are more prepared to search and find opportunities and raise capital (Colombo, Delmastro & Grilli, 2004), Shane (2003) states that experience comprises all tools needed to run a business - namely negotiation, planning, decision making, problem solving and communication skills.

Previous experience in the same industry allows entrepreneurs to have specialized market and technological knowledge and contacts with customers and suppliers that facilitate the acquisition and management of human and technological resources (Helfat & Lieberman 2002). When a new venture is established in the same industry the entrepreneur has the work experience, his experience becomes an advantage and the survival rate increases (Baptista, et al., 2013).

The time spent away from the industry, even if not immediately before the venture's creation (Stam, Audrestsch & Meijaard, 2008) may accelerate the depreciation of industry specific human capital (Batista, Karaoz & Mendonça, 2013) nevertheless this experience is essential to improve venture's success

and performance (Bosma, Van Praag, Thurik & De Wit, 2004). Thus, we expect that the larger individuals' industry experience, the higher the likelihood to transit to full-time entrepreneurship.

Hypothesis 5: *Part-time entrepreneurs with industry experience are more likely to become full-time entrepreneurs.*

3. DATA AND DESCRIPTIVE STATISTICS

Our study draws on a matched employer-employee dataset (QP – "Quadros de Pessoal").

QP is a mandatory survey submitted to the Portuguese Ministry of Employment and Social Security on an annual basis. This dataset includes information at a firm level and at an individual level. The data is available from 1986 to 2009 covering the entire Portuguese private sector. At the firm level, this dataset includes the following information: year of creation, industry, ownership structure, geographic location and number of establishments. At an individual level, it includes information on gender, age, occupation, education, nationality and salary.

From QP, we select all start-ups established between 1993[5] and 2009 by part-time entrepreneurs. We define part-time entrepreneurs as individuals who hold simultaneously a wage job and an entrepreneurial venture. Full time entrepreneurs are those who pursue an opportunity by creating an organisation, which is managed in a full-time basis. We proceed by excluding start-ups in which we could not identify at least one owner. Furthermore, our sample is restricted to founders between 18 and 65 years of age to exclude other motivations associated with entrepreneurship.

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[5]   The period is related to the entry into force of Treaty of Maastricht, allowing the establishment of the so-called three-pillar structure in EU policy - implementation of a single currency, economic and monetary union in Europe - and the creation of goals as the free movement of products, persons, services and capital.

Next, we analyse the career history of the part-time entrepreneurs over the next four years. For example, a part-time entrepreneur who establish her venture in 1993 is followed until 1997. After 4 years, we observe if the part-time entrepreneur remain as part-time, transition to full-time or leave entrepreneurship to become a paid employee or unemployed.

Table 2 defines the variables used in this study and Table 3 describes our sample.

On this study, we define as parent firm, the firm where the individual work as paid employee in the year that she starts a venture.

Our sample includes 2,135 part-time entrepreneurs. Out of those, 34 becomes full-time entrepreneurs, 1,147 remained as part-time entrepreneurs, 855 became paid employees and 99 became unemployed.

Our database is mostly represented by male individuals (67.54%), with an average age of 33 years and with high education (33.72%). In terms of experience, our sample is majority composed by individuals with experience in the same region (46.79%) and with previous industry experience (21.96%) that work in larger firms (356 employees). They set up small firms on the services sector (74.66%) in Lisboa & VLT region (37.70%) employing on average 3 employees.

After 4 years, some individuals keep the venture as part-timers, these are mostly male individuals (70.00%) with an average age of 33 years and with high education (37.05%). The majority of these individuals hold county experience (50.00%) and industry experience (23.97%) that work as paid

employees in larger firms (305 employees). Their venture is majority stablished in the services sector (73.75%) in Lisboa & VLT region (36.09%) employing on average 4 employees.

Individuals who perform the transition to full-time entrepreneurship are male individual (64.70%) with on average 43 years and previous experience in the same region (20.58%) and industry (17.64%). These individuals work almost 5 years in larger parent firms (432 employees). Their ventures are mostly in the services sector (61.76%) established in Lisboa & VLT (44.12%) with 4 to 5 employees.

After 4 years, individuals can transit to full-time wage job or become unemployed, in these cases, at the foundation of their venture, they are mostly men (64.67%) with 33 year and high educated (30.08%). They have previous county experience (43.92%) and work on larger firms (414 employees) for 3 years. These individuals that end up leaving their entrepreneurial activity, were mostly established in Lisboa & VLT (39.41%) in the services sector (76.21%) and had, at the foundation, on average 3 employees.

4. EMPIRICAL METHODOLOGY AND RESULTS

In order to evaluate the characteristics of individuals' transition from part-time to full-time entrepreneurship, we estimate a multinomial logit using the following equation:

$$T_{fs} = \delta_Y + \theta_i + \lambda_c + \beta X_f' + \alpha V_s' + \varepsilon_{fs} \qquad (1)$$

Where γ denotes the entry year, i the sector[6,] c the region[7,] f the ventures' founder and s the start-up.

Our dependent variable T_{fs}, is a dummy variable coded as one if an individual transitions from part-time to full-time entrepreneurship, and zero otherwise. Several dependent variables are constructed to test our hypotheses on the transition into full-time entrepreneurship.

Vector X' includes the demographic and educational characteristics' that represents features such as gender, age, education, entrepreneur experience, tenure and hours worked in the parent firm. Gender is a dummy variable

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[6] Industry is divided into 4 sections according to CAE rev 2.1 of DL197/2003 from 27-08-2003: Agriculture and Fishing; Industry, Services and Construction. We use the 4 digits CAE to divide between sections. Agriculture and Fishing includes divisions from 0111 to 0502; Industry includes divisions from 1010 to 3720; Construction includes divisions from 4511 to 4550, and Services includes divisions from 4011 to 4100 and 5010 to 9305.

[7] According to NUTS II division, Portugal is divided in seven regions – five in the continent and the remaining in the autonomous regions of Azores and Madeira. Norte includes: Minho-Lima, Cávado, Ave, Grande Porto, Tâmega, Entre Douro e Vouga, Douro e Alto Trás-os-Montes. Centro includes: Baixo Vouga, Baixo Mondego, Pinhal Litoral, Pinhal Interior Norte, Dão-Lafões, Pinhal Interior Sul, Serra da Estrela, Beira Interior Norte, Beira Interior Sul, Cova da Beira, Oeste e Médio Tejo. Lisboa &VLT includes: Grande Lisboa e Península de Setúbal. Alentejo includes: Alentejo Litoral, Alto Alentejo, Alentejo Central, Baixo Alentejo e Lezíria do Tejo. Algarve includes Algarve, R.A. Açores includes R.A Açores and R.A. Madeira includes R.A. Madeira. In our analyses, we use Lisboa & VDT, Norte and all toher regions are defined as Others.

coded as one if the entrepreneur is male and zero if it is female. Age is defined in four categories: *Ages 20 to 29* are coded one for individuals with ages between 20 and 29 and zero otherwise; *Ages 30 to 39* are coded one for individuals with ages between 30 and 39 and zero otherwise; *Ages 40 to 49* are coded one for individuals with ages between 40 and 49 and zero otherwise; *Ages 50 to 65* are coded one for individuals with ages between 50 and 65 and zero otherwise. Education is defined in four categories: *Higher education*, is a dummy variable coded one for individuals with bachelors, masters or doctoral degrees. The variable Experience comprises: *Industry experience*, a dummy variable is coded as one for individuals who previous worked in the same 4 digit industry; *Regional experience* is a dummy variable coded as one for individuals who worked in the same county; and *Entrepreneurial experience* is a dummy variable coded one for individuals who previous establish a venture. *Ln* (*Tenure)* is the logarithm of the number of years that the individual worked as paid employee in the parent firm and *Ln* (*Hours Worked),* is equal to the logarithm of the hours worked on parent firm.

In concern to the venture characteristics, vector V' represents the venture initial size.

We include entry dummies for region (λ_c), industry (θ_i) and year (δ_Y) fixed effects. For region fixed effects we defined variables according to NUTS II classification equalling one for the respective territorial unit. To control for industry fixed effects we define dummy variables according to the industry classification CAE review 2.1, equalling one for the respective industry code.

To control for macroeconomic changes, we use a dummy variable defined with sixteen categorical variables, form 1993 to 2009, equalling one for the respective reference year.

Table 3 presents the marginal effects regarding the transition from part-time to full-time entrepreneurship using the Logit model. In appendix A and B we include the same specification using Pobit and Linear probability models.

In terms of venture's size as an explanatory variable of transition, results of all models suggest a positive and statistical significant relation between the initial ventures size and the transition from part-time into full-time entrepreneurship, thus supporting our Hypothesis 1 that part-time entrepreneurs are more likely to transition to full-time entrepreneurship when, at foundation, the venture is larger.

Considering gender as a variable for the transition into full-time entrepreneurial activity, all models provide a positive relation, but not statistically significant coefficient, between gender and transition to full-time entrepreneurship. Thus, supporting what was expected from our Hypothesis 2, male part-timers are more likely to become full-time entrepreneurs.

Analysing age and its influence in the transition into full-time entrepreneurship the results show a positive impact between the transition and entrepreneurs with ages between 30 and 39, whereas as entrepreneurs reach ages form 40 to 49 the impact is negative. The biggest positive impact towards transition occurs when entrepreneurs reach older ages – from 50 to 65. Therefore, our results do not support our expectations of Hypothesis 3 that

there is an inverted U-shape relationship between age and the likelihood of part-time entrepreneurs to transition to full-time.

In terms of education, there is positive relationship between high educated part-time entrepreneurs and the transition process. However the coefficient is not statistically significant our Hypothesis 4 that high educated part-time individuals are more likely to become full-time entrepreneurs is supported. Other types of education: Medium education, Low education and Very Low education were omitted as they presented non statistical significance.

Taking the relationship between experience and the transition into full-time entrepreneurship, results presents a negative impact in this process bot for industry and county experience. Entrepreneurial experience is omitted as it perfectly predicts failure in the transition. Therefore, against what was expected we reject Hypothesis 5 that more experienced individuals are more likely to transit into full-time entrepreneurship.

In sum, empirical evidence shows that male and high educated individuals are more likely to transition to full-time entrepreneurship. Nonetheless, those coefficients are not statistical significant. The initial size of the start-up also influence positively the transition into full-time entrepreneurship with statistically significant coefficients.

Additionally, results also demonstrate that although with a non-statistical significance, the individuals working hours on the parent' firm has a positive relationship with the transition into full-time entrepreneurship. In terms of

tenure, results find a negative relationship between individuals with higher tenure and the transition into full-time entrepreneurship.

Using same regression (1) we also use a multinomial logit model as the dependent variable can assume more than two possible discrete outcomes. We analyse same variables to describe the transition into: (0) part-time; (1) full-time; (2) others as unemployment and paid employee.

Using multinomial logit model the initial size of the venture has a positive relationship in the transition into the full-time entrepreneurship and negative impact on the transition to other outcomes such paid employee or unemployment. In terms of age results show a positive relationship, with statistical significant coefficients, in the transition into full-time for ages from 50 to 65. Additionally, the results present a negative relationship between all ages and the transition into paid employment or unemployment. High educated individuals present a positive relationship with the transition into full-time entrepreneurship and a negative impact with the transition to other types of outcomes.

Similarly to previous conclusions, the relationship between experienced individuals and the transition into full-time entrepreneurship and other outcomes is negative.

Additionally, results also demonstrate that although with a non-statistical significance, the individuals working hours on the parent' firm has a positive relationship with both the transition into full-time entrepreneurship and

other outcomes. In terms of tenure, results find a negative relationship between individuals with higher tenure and the transition into full-time entrepreneurship and other outcomes.

5. CONCLUSION

This study evaluates the transition process of part-time entrepreneurs to the full-time entrepreneurship. Using a Portuguese matched employer – employee database, QP, we analyze the founders' demographic characteristics and venture characteristics that affect the transition process.

In order to reach our conclusions, we conducted several model analysis in order to understand the significance and impact of our variables while controlling for year, industry and county effects.

We find that part-time entrepreneurs who transition to full-time are predominantly men individuals with ages between 50 to 65 years. In terms of education, we find that more educated individuals are more likely to transit into full-time entrepreneurship. However, contrarily to our expectations we find that industry and region experience have both a negative impact in the transition process. Tenue has a negative impact in the transition while the hours worked in the parent firm has a positive impact.

The main characteristics that affects the transition process is start-ups initial size as the larger the initial size of the venture, the higher will be the likelihood of the transition to full-time entrepreneurship.

Our study suffer from several limitations, as the results obtained are restricted to the extension of the dataset until 2009, and a very strictly definition of part-time entrepreneurs being individuals with a wage job and part-time entrepreneurial activity was used.

Furthermore, our sample of part-timer individuals who transition to full-time is very small. Next, to obtain accurate results, studies should analyse the effect in a wider sample with more extended data until recent years. Additionally further studies can define part-time entrepreneurs' as individuals who has several jobs and simultaneously a part-time venture or is unemployed and decide to start a part-time venture.

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7. TABLES

Table 1- Definition of Part-time Entrepreneurs

Label	Definitions	Author	Key aspect
Hybrid Entrepreneur	An individual that has its own business and works in a wage-job.	Folta et all (2010)	Main Occupation
	An individual who works in a wage job some part of the time and in his own business the rest of the time.	Petrova (2010) (2011)	Main Occupation
Part-time Entrepreneur	An individual who mainly has a non-entrepreneurial profession and spends 35 hours/ week maximum working on his own business, which generates a maximum of 50% of his total income.	Immit (2013)	Main Occupation; Hours worked; Income
	An individual who earns less than 50% of total income from his own business.	Wennberg et al. (2007)	Income

Why do part-time entrepreneurs transition to full-time entrepreneurship?

Table 2- Variables Description

Variables	Description
Dependent Variable	
Transition	Dummy variable equal to 1 if the entrepreneur transition from part-time, to full-time entrepreneurship.
Independent Variables	
Gender (Male)	Dummy variable equal to 1 for women and 0 for men.
Founder's Age:	
Age 20 -29	Is coded one for individuals with age between 20 and 29;
Age 30-39	Is coded one for individuals with age between 30 and 39;
Age 40-49	Is coded one for individuals with age between 40 and 49;
Age 50-65	Is coded one for individuals with age between 50 and 56.
Founder's Experience:	
Industry Experience	Is coded one for individuals with experience in the industry (4 digit) and zero otherwise;
County Experience	Is coded one for individuals with experience in the same region and zero otherwise;
Entrepreneurial Experience	Is coded one for individuals with experience in the entrepreneurial activity and zero otherwise;
Higher Education	Higher education is a dummy variable equal to 1 for founders with bachelors, masters or doctoral degrees;
Hours Worked	Is the number of hours that the part-time entrepreneur worked as paid employee in the parent firm in the year she starts a venture.

Why do part-time entrepreneurs transition to full-time entrepreneurship?

Tenure	Is the number of years working in parent firm.
Venture' Size	Size is initial number of employees in the start-up.

Table 3 - Descriptive Statistics

| | | | | After 4 years | | | | | | | | |
| | Full Sample | | | Part-time | | | Full-time | | | Others | | |
	N	Mean	Std	N	Mean	Std	N	Mean	Std	N	Mean	Std
Panel A - Ventures Characteristics												
Activity												
Industry	2135	0,082	0,275	1147	0,096	0,095	34	0,294	0,462	954	0,059	0,235
Services	2135	0,747	0,435	1147	0,738	0,440	34	0,618	0,493	954	0,762	0,426
Construction	2135	0,171	0,377	1147	0,167	0,373	34	0,088	0,288	954	0,179	0,384
Region												
Lisboa & VLT	2135	0,377	0,485	1147	0,361	0,480	34	0,441	0,504	954	0,394	0,489
Norte	2135	0,309	0,462	1147	0,323	0,468	34	0,294	0,462	954	0,294	0,456
Others	2135	0,314	0,464	1147	0,316	0,465	34	0,265	0,448	954	0,312	0,464
Size	*2135*	*3,378*	*4,490*	*1147*	*3,722*	*4,705*	*34*	*4,676*	*5,470*	*954*	*2,919*	*4,132*
Survival	2135	0,436	0,496	1147	0,793	0,406	34	0,618	0,493	954	0,000	0,000
Panel B - Founders Characteristics												
Gender (male)	2135	0,675	0,468	1147	0,700	0,458	34	0,647	0,485	954	0,647	0,478
Age	2135	33,634	8,970	1147	33,906	8,742	34	43,118	14,047	954	32,970	8,816
High Education	2135	0,337	0,473	1147	0,371	0,483	34	0,235	0,431	954	0,301	0,459
Experience												
Industry Exp	2135	0,220	0,414	1147	0,240	0,427	34	0,176	0,387	954	0,197	0,398
Region Exp	2135	0,468	0,499	1147	0,500	0,500	34	0,206	0,410	954	0,439	0,497
Entrep. Exp	2135	0,033	0,178	1147	0,038	0,192	34	0,000	0,000	954	0,027	0,163
Tenure	2135	3,466	4,596	1147	3,722	4,623	34	4,853	6,444	954	3,108	4,460
Hours Worked	2107	122,075	65,688	1119	120,083	66,868	34	130,824	71,389	954	124,099	64,048
Transition				1147			34			954		
Panel C - Parent Firm Characteristics												
Size	2135	356,318	1528	1147	305,671	1373,434	34	432,029	1945,728	954	414,301	1679,744

Why do part-time entrepreneurs transition to full-time entrepreneurship?

Table 4 - Transition to Full-time Entrepreneurship using Logit Model

VARIABLES	(1)
Gender	0.119
	(0.483)
Age 30 – 39	0.136
	(0.576)
Age 40 – 49	-0.221
	(0.842)
Age 50 – 65	2.133***
	(0.611)
High Education	0.270
	(0.473)
Industry Experience	-0.766
	(0.655)
County Experience	-1.102*
	(0.517)
Ln (Tenure)	-0.121
	(0.261)
Ln (Hours Worked)	0.176
	(0.535)
Venture' initial size	0.538**
	(0.0261)
Observations	1,380

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: This table presents for equation (1) using Logit model with marginal effects. The dependent variable is a dummy variable coded as 1 if individual transitions from part-time to full-time and 0 otherwise. Independent variables are defined in Table 2. Standard errors are clustered at the start-up in parentheses. This model includes county, industry and year fixed effects that are not reported.

Table 5 - Transition to Full-time Entrepreneurship using Multinomial Model

VARIABLES	Full-time	Others
Gender	0.01775	-0.236**
	(0.485)	(0.111)
Age 30 – 39	0.0374	-0.248**
	(0.5764)	(0.121)
Age 40 – 49	-0.291	-0.134
	(0.858)	(0.170)
Age 50 – 65	2.024***	-0.226
	(0.624)	(0.237)
High Education	0.10138	-0.383***
	(0.465)	(0.118)
Industry Experience	-0.874	-0.272**
	(0.659)	(0.139)
County Experience	-1.182**	-0.136
	(0.520)	(0.114)
Ln (Tenure)	-0.2456	-0.285***
	(0.271)	(0.0623)
Ln (Hours Worked)	0.201	0.0506
	(0.533)	(0.0831)
Venture' initial size	0.394	-0.341***
	(0.264)	(0.0839)
Observations	1,380	1,380

*** p<0.01, ** p<0.05, * p<0.1

Note: This table presents for equation (1) using Multinomial Logit. The dependent variable is coded as 0 if individual keeps his part-time venture, 1 if the individual transitions form part-time to full-time entrepreneurship and 2 if the individual transitions form part-time to paid employee or unemployment. Independent variables are defined in Table 2. Standard errors are clustered at the start-up in parentheses. This model includes county, industry and year fixed effects that are not reported.

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8. APPENDIX

Appendix A - Transition to Full-time Entrepreneurship using Probit Model

VARIABLES	(1)
Gender	0.089
	(0.047)
Age 30 – 39	0.105
	(0.48)
Age 40 – 49	-0.033
	(0.11)
Age 50 – 65	4.06**
	(0.089)
High Education	0.096
	(0.55)
Industry Experience	-0.326
	(1.14)
County Experience	-0.477*
	(2.42)
Ln (Tenure)	-0.065
	(0.60)
Ln (Hours Worked)	0.062
	(0.33)
Venture' initial size	0.223*
	(1.97)
Observations	1,380

*** p<0.01, ** p<0.05, * p<0.1

Note: This table presents for equation (1) using Probit model with marginal effects. The dependent variable is a dummy variable coded as 1 if individual transitions from part-time to full-time and 0 otherwise. Independent variables are defined in Table 2. Standard errors are clustered at the start-up in parentheses. This model includes county, industry and year fixed effects that are not reported.

Appendix B - Transition to Full-time Entrepreneurship using Linear Probability Model

VARIABLES	(1)
Gender	0.004
	(0.08)
Age 30 – 39	0.002
	(0.036)
Age 40 – 49	-0.0001
	(0.001)
Age 50 – 65	0.068**
	(2.70)
High Education	0.003
	(0.56)
Industry Experience	-0.007
	(1.31)
County Experience	-0.012*
	(2.29)
Ln (Tenure)	-0.003
	(0.71)
Ln (Hours Worked)	0.004
	(0.99)
Venture' initial size	0.005
	(1.08)
Observations	1,380

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Note: This table presents for equation (1) using Linear Probability model with marginal effects. The dependent variable is a dummy variable coded as 1 if individual transitions from part-time to full-time and 0 otherwise. Independent variables are defined in Table 2. Standard errors are clustered at the start-up in parentheses. This model includes county, industry and year fixed effects that are not reported.