



**Entrepreneurial Satisfaction among Senior  
Entrepreneurs: the moderating effect of industry  
experience and unemployment status**

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# 1. INTRODUCTION

Population ageing is currently one of the greatest societal challenges (UN, 2015; EC, 1999; Foster and Walker, 2015). The world's demographic change is generating research attention and policies designed to foster active ageing and older individuals' connection to the labor market are needed (Foster and Walker, 2015; Kulik, Ryan, Harper and George, 2004; Walker, 2008). There is a general conviction among policy-makers and academics that individuals should be able to play active roles in society until later in life through, for example, a new or extended career for those workers who desire or need to remain engaged in the labor market (Cahill, Giandrea, and Quinn, 2006; Curran and Blackburn, 2001). Although old age can be seen as an inevitable period of disengagement and withdrawal from roles and relationship (DeLiema, M., & Bengtson, 2017), various studies show that, in fact, many older individuals are willing to (and continue to) participate in the labor market through self-employment and entrepreneurship (Singh and DeNoble, 2003; Kautonen and Minniti, 2014; Kautonen, Kibler and Minniti, 2017). Senior entrepreneurship<sup>1</sup> allows for prolonging the value of human and social capital accumulated over older individuals' lifetime (Parker, 2009). Additionally, it contributes to individuals' quality of life (Kautonen et al., 2017), it helps mitigating the rise in public pensions' costs (Kautonen, 2008; Zhang, 2008), and has potential positive impact on economic growth (Zhang, 2008).

Much of the extant (and scarce) literature on senior entrepreneurship has covered a number of factors associated with business motivations, intentions and start-up at older ages<sup>2</sup>. However, apart from some exceptions – Ainsworth and Hardy (2008); D'Amours (2009); Gielnik, Zacher and Frese (2012); Hodges (2012); Kautonen, Down, and Minniti (2013), Kautonen et al. (2017); Parker and Rougier (2007); Singh (2009) – there is an evident

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<sup>1</sup> Hereafter we use the term SE(s) for *Senior Entrepreneur(s)*.

<sup>2</sup> See, for example, Biehl, Calvez and Hill, 2014; Harms, Luck, Kraus and Walsh, 2014; Kautonen and Minniti, 2014; Kautonen, Luoto, and Tornikoski, 2010; Minola, Criaco, and Obschonka 2016; Singh and DeNoble, 2003.

paucity of studies examining senior entrepreneurs' outcomes. Moreover, a number of these studies are essentially exploratory and/or descriptive and, to the best of our knowledge, so far, only few articles draw on a solid theoretical and/or empirical background to focus on senior entrepreneurs' outcomes. For example, Gielnik et al. (2012) draw on the Upper Echelons theory<sup>3</sup> to study firm performance (sales, profit, income and firm size) and both Parker and Rougier (2007) and Kautonen et al. (2017) use a life cycle framework and occupational choice theory<sup>4</sup> to focus on performance at the individual level - measured through the impact of SEs' earnings on the decision to retire (Parker and Rougier, 2007) and the impact of entering senior entrepreneurship on individual's income and wellbeing (Kautonen et al., 2017).

The analysis of SEs performance should take into account the fact that since time is scarcer for older individuals, they attach a lower value to future outcomes (Carstensen, 2006; Lévesque and Minniti, 2006). Additionally, with age, there is a change in what individuals value (Atchley, 1989; Baltes, 2001; Carstensen, 2006; Carstensen, Isaacowitz, and Charles, 1999), shifting some focus from the acquisition of additional levels of knowledge to more emotional-oriented goals (Carstensen, 2006; Carstensen et al., 1999). Within this context, one should expect a higher focus on non-monetary vis-à-vis monetary outcomes (Kerr, 2017; Logan, 2014; Say and Patrickson, 2012; Walker and Webster, 2007) among SEs<sup>5</sup>. On the other hand, if senior entrepreneurship is deemed a desired and favorable option by many individuals and a potential mechanism to promote active ageing (WHO, 2002), it is particularly important to understand the wellbeing or satisfaction (and its determinants) senior entrepreneurs derive from firm creation and development. Surprisingly, so far, among the extant literature only Kautonen et al. (2017) assess how both monetary and non-

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<sup>3</sup> Upper Echelons theory (Hambrick & Mason, 1984) poses the hypothesis that "*organizational outcomes – strategic choices and performance levels – are partially predicted by managerial background characteristics*".

<sup>4</sup> Other authors such as Lévesque and Minniti (2006) or Zissimopoulos and Karoly (2007), use an occupational choice theoretical framework to assess individuals' expected utility of switching from previous unemployment or paid-employment into self-employment (in line with, for example, Douglas & Shepherd, 2000; 2002 or Parker, 2009) at later ages, over 50 years old, but without evaluating SEs' performance.

<sup>5</sup> The need for an integrative analysis, including both monetary and non-monetary outcomes, is stressed by, for example, Ainsworth (2015).

monetary outcomes are associated with senior entrepreneurs' wellbeing. The authors (ibid.) use the concept of quality of life to proxy for wellbeing among 115 SEs (as compared with a counterfactual group of non-entrepreneurs), thus capturing non-monetary utility in a very broad sense.

The present work extends Kautonen et al. (2017) by focusing on business satisfaction, by designing a conceptual approach drawing on gerontology and psychology theories – which we find complementary to occupational choice models – and by finding new empirical evidence on a range of monetary and non-monetary aspects impacting on SEs' satisfaction achieved with the business. More than focusing only on firm creation or transitions, we conceptualize and empirically test satisfaction with the business. Therefore, we focus on 145 entrepreneurs in mature firms (with more than 5 years old) started by individuals aged 50 or more to analyze the effects of a range of variables upon business satisfaction (rather than overall quality of life, as approached by Kautonen et al., 2017).

First, we build on the concept of *procedural utility* (Frey, Benz and Stutzer, 2004) as it connects with the entrepreneurial process and the demand for higher satisfaction among older individuals. Procedural utility is defined as "the well-being people gain from living and acting under institutionalized processes as they contribute to a positive sense of self, addressing innate needs of autonomy, relatedness, and competence" (ibid.).

Second, while older individuals' longer life spans and careers allow for the accumulation of human capital (Parker, 2009) that can be important to firm start-up and development, as time elapses, SEs' human capital may be more likely to depreciate (Neuman and Weiss, 1995; Parker, 2013) and cause a negative impact on business performance (Parker, 2013). Therefore, we draw on continuity theory (Atchley, 1989) to account for these two opposite effects of SEs' human capital - accumulation and potential depreciation over time. Continuity theory asserts that individuals deal with changes occurring in their lives by being coherent and consistent with their past/prior history (ibid.). In our theoretical and empirical approach we operationalize this theory by adopting experience in the industry as a proxy for

"continuity" (which is in line with literature on spin-offs and specific human capital imprinting/inheritance<sup>6</sup>). Additionally, SEs who face unemployment are acknowledged as the ones experiencing more difficulty in returning to the labor market (OECD, 2011). As this break in a professional career may negatively impact human capital, we test how the number of months spent in unemployment prior to firm start-up (as a proxy for "discontinuity") links with SEs' satisfaction.

Based on our theoretical background, we develop hypotheses integrating these different theories. Drawing on socioemotional selectivity theory we suggest that SEs' higher satisfaction with the business is more strongly associated with entrepreneurs' positive perception of non-monetary, rather than monetary, aspects. Building on continuity theory we further propose that previous experience on the industry has a positive effect on SEs' satisfaction and, complementarily, months spent in unemployment immediately before starting the company have a negative effect on SEs' satisfaction.

In order to test our research hypotheses, we use primary data obtained through a unique questionnaire on business satisfaction among older individuals (using a 5-point Likert-type scale for "business satisfaction" as the dependent variable, in line Block and Koellinger, 2009}. The survey – specifically designed and implemented for the present study – was sent, in 2015, to a population of entrepreneurs (in Portugal} who have launched their company by the age of 50 or over in 2004-2009. Study of senior entrepreneurship in the Portuguese context holds particular academic and policy relevance as the country has one of the most aged populations worldwide (UNFPA, 2013).

Overall the present paper brings a contribution by (i) merging different conceptual approaches, namely occupational choice and human capital models with socioemotional selectivity and continuity theories; (ii) extending the current – and scarce – knowledge on SEs' subjective level of performance (i.e., business satisfaction); (iii) empirically testing

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<sup>6</sup> See, for example Colombo and Grilli (2005); Chatterji (2009) and Dencker et al (2009) on founders' industry experience and performance.

individuals' entrepreneurship-related outcomes through a unique questionnaire; (iv) confirming, through our econometric analysis, the hypotheses that: although business satisfaction is positively associated with both monetary and non-monetary aspects the latter shows a stronger effect; individuals' experience within the same industry is positively associated with business satisfaction; and finally, unemployment spells (higher than 12 months) prior to business start-up may provoke a high depreciation of human capital and negatively impact business satisfaction and, finally, (v) stimulating a number of policy and practitioner questions.

We believe these findings provide new elements on senior business satisfaction that can enable academics and policy-makers to better understand the relationship between firm creation/development by older individuals and the social and economic benefits associated with this specific type of entrepreneurship.

The article proceeds as follows. Section 2 discusses the theoretical background on senior entrepreneurship and business satisfaction, setting the basis for a set of research hypotheses. Section 3 discusses the data source, the constructing process and describes the data set. Section 4 reports the results, followed by a discussion of the findings and implications for theory and practice in Section 5. Finally, Section 6 concludes the article.

## **2. THEORETICAL BACKGROUND AND HYPOTHESES**

A limited number of studies (Alstete, 2008; Block and Koellinger, 2009; Bradley and Roberts, 2004; Carree and Verheul, 2010; Cooper and Artz, 1995; Kautonen and Palmroos, 2010) have analyzed business satisfaction. Although the main focus of these studies is not senior entrepreneurship, the entrepreneur's age is used as a control variable. With regard of the influence of age on business satisfaction, the literature presents mixed evidence. While, for example, Bradley and Roberts (2004) and Block and Koellinger (2009) find a negative effect, Carree and Verheul (2011) find a non-significant effect. Additionally, Cooper and Artz (1995) do not find support for their hypotheses that SEs have lower expectations on business

success nor that lower expectations are associated with higher levels of satisfaction.

It is worth to notice that except for Block and Koellinger (2009) and Cooper and Artz (1995), most of these articles are exploratory and not theory-driven. As discussed in the introductory section of the present article, there is ongoing theoretical and empirical debate in the literature about the monetary and non-monetary outcomes expected and generated by entrepreneurs. While Block and Koellinger (2009) draw on "procedural utility" to analyze business satisfaction, Cooper and Artz (1995) focus on business satisfaction by means of the "goal-achievement gap"<sup>7</sup> and "expectation-reality gap"<sup>8</sup> theories. Block and Koellinger (2009) argue that the higher nascent entrepreneurs' their achievement in terms of independency and creativity the more they will be satisfied with the business. This emphasizes the importance of procedural utility – for these entrepreneurs "*the 'way' seems to be the 'goal'*" (Ibid., p. 194). Nevertheless, for the authors (Ibid.), monetary gains revealed to be the most important in explaining business satisfaction. Cooper and Artz (1995) find a positive relationship between entrepreneurs' initial high expectations and satisfaction; moreover, the authors conclude that satisfaction is higher for individuals with noneconomic (rather than economic) goals.

The overall idea SEs value non-monetary aspects (such as, for example, self-realization (Kerr, 2017; Logan, 2012; Say and Patrickson, 2012), improve work-life balance (Kerr, 2017; Walker and Webster, 2007)) vis-à-vis monetary have been gaining relevance in the literature on Senior Entrepreneurship that analyzed motivations to startup.

Kautonen et al. (2017) use and adapt occupational choice models<sup>9</sup>, to investigate SEs' outcomes namely wellbeing, operationalized through entrepreneurs' overall quality of life. Kautonen et al., (2017) claim non-monetary utility (Douglas and Shepherd, 2000, 2002) and

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<sup>7</sup> This theory refers to the discrepancy between the initial goals defined for an activity and the actual outcomes obtained from that.

<sup>8</sup> This theory refers to the discrepancy between the initial expectations for an activity and the actual outcomes obtained from that. As Cooper and Artz (1994: 442) note, with expectations "there is no reference to desirability or preference for specific outcomes, as is implied when examining goals".

<sup>9</sup> A number of authors have been applying traditional occupational choice approaches – originating from labor economics – to study senior entrepreneurs' intentions and motivations (Kautonen et al., 2011; Kautonen et al., 2014; Minola et al., 2016).

career stage (Lévesque and Minniti, 2006; Parker, 2009} should be simultaneously considered when looking at senior entrepreneurs' outcomes. Although a straightforward parallel can be established between this new approach to occupational choice (integrating non-monetary utility and career stage} and other established theories originating from economics (*human capital theory*), psychology (*socioemotional selectivity theory*) and gerontology (*continuity theory*), no previous steps were taken in order to integrate and reconceptualize these theoretical frameworks.

Procedural utility is defined as "*the well-being people gain from living and acting under institutionalized processes as they contribute to a positive sense of self, addressing innate needs of autonomy, relatedness, and competence*" (Frey et al., 2004}. Therefore, the concept of procedural utility supports the idea that entrepreneurship can be viewed as a mechanism connected with ageing well and, therefore, with a set of activities, processes and outcomes (not necessarily monetary or based on quantitative metrics} that are relevant for older individuals. Procedural utility refers to monetary and non-monetary outcomes obtained in the present, through the process (in opposition to exclusively future outcomes}. This approach is appropriate to study senior entrepreneurship outcomes and can be complemented with the socioemotional selectivity theory. Socioemotional selectivity theory poses that due to their particular stage of life, in general, older individuals tend to shift from knowledge acquisition to emotional-oriented goals (Carstensen et al., 1999}. Moreover, given that older individuals perceive less time of life and less future opportunities (Carstensen et al., 1999; Carstensen, 2006} they attach a lower value to upcoming benefits, when compared to present ones (Carstensen, 2006; Kautonen and Minniti, 2017; Lévesque and Minniti, 2006}. Therefore, under these circumstances SEs are expected to decrease their focus on financial and/or growth-oriented goals both in the present and in the long-run.

There is a present need for a deeper conceptualization and empirical evaluation of both monetary and non-monetary outcomes for SEs, as put forward by Ainsworth (2015} and Blackburn and Kovalainen (2009} and as validated empirically by Gielnik et al. (2012} and



Kautonen et al., 2017}. New empirical results and theories (such as *socio-emotional selectivity theory*) can complement and extend occupational choice frameworks, providing a stronger rationale for SEs' drive for non-monetary and process-related expectations and outcomes (Frey et al., 2004}. Summarizing, building on the previous discussion and propositions available on the literature on can assert SEs: (i) perceive a lower amount of time left in life and less opportunities available; (ii) value emotional-oriented goals more than knowledge acquisition and, (iii) extract more satisfaction from the entrepreneurial process and from non-monetary factors rather than other (quantitative and/or financial} types of outcomes. Therefore, we formulate the following hypothesis:

**Hypothesis 1.** *Senior entrepreneurs derive higher satisfaction from perceived non-monetary (rather than monetary) entrepreneurship-related outcomes.*

An important argument that has been discussed in the literature is the fact older individuals' longer life spans and careers allow for the accumulation of different types of resources – particularly human capital (Agarwal, Echambadi, Franco and Sarkar, 2004) – which can be important to engage into entrepreneurship (Amaral et al., 2011; Davidsson and Honig, 2003) and foster business performance (Baptista et al., 2014; Bates, 1990; Gimeno et al., 1997; Parker, 2009; Unger et al., 2011}.

Both general and specific entrepreneurship-related human capital (Bosma, Van Praag, Thurik and De Wit, 2004}, namely on industry experience (specific to entrepreneurship} and overall experience/activity in the labor market (general to entrepreneurship} can be used to assess business satisfaction among SEs.

There is a solid body of literature (on spin-offs} stressing that previous knowledge acquired at a parent company positively affects the performance of new spawns (Shane and Stuart, 2002; Dencker et al., 2009, Chatterji, 2009; Andersson, Baltzopoulos and Lööf, 2011}. Industry experience is associated with more accurate and less biased entrepreneur expectations (Cassar, 2014} and ventures established by entrepreneurs that previously

worked in the same industry perform better than ventures established by individuals entering entrepreneurship out of a different industry; this latter finding is consistent across different performance measures, such as: firm survival (Franco and Filson, 2006; Klepper, 2007}, firm size (Colombo and Grilli, 2005; Colombo, Delmastro and Grilli, 2004} and market valuation (Chatterji, 2009}.

With regard of individuals' self-assessment of the business, only two studies – Carree and Verheul, 2012 and Block and Koellinger, 2009 – examine the influence of industry experience on business satisfaction; notwithstanding, no particular focus is given to age. First, Carree and Verheul (2012} find that job similarity significantly increases satisfaction with income. Second, for Block and Koellinger (2009}, experience in a specific industry also has a positive influence on satisfaction. However, to the best of our knowledge, no study so far focuses on how SEs' industry experience impact subjective performance, as measured through business satisfaction (instead of firm level variables, such as turnover and employment generation}.

We find continuity theory to be particularly suited to address this gap in the literature. Continuity theory, developed by Atchley (1989} within the scope of activity theory (DeLiema and Bengtson, 2017}<sup>10</sup>, suggests that older individuals able to keep the same lifestyle are more satisfied with their lives. Continuity theory asserts that individuals deal with changes occurring in their lives by being coherent and consistent with their past, their prior history (Atchley, 1989}. This theory poses that "in making adaptive choices, middle-aged and older adults attempt to preserve and maintain existing internal and external structures and that they prefer to accomplish this objective by using continuity" (ibid.}. More specifically, Atchley (1989} suggests older individuals may keep developing similar tasks within already known environments because they value the possibility of remaining in a "comforting routine" and having "a familiar sense of direction" (ibid.}. Continuity theory offers a useful framework for

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<sup>10</sup> According with activity theory, older individuals tend to continue the roles and activities they have developed during their lives and, the more active individuals are, the higher their satisfaction with life.

understanding senior entrepreneurship outcomes. Continuity in similar routines or experiences allows individuals for "exercising mastery and the value of experience and practice in preventing and minimizing the deleterious effects of physical and psychological aging (ibid.)", which may also associate with higher self-efficacy<sup>11</sup> and, therefore higher satisfaction (Bradley and Roberts, 2004<sup>12</sup>).

In fact, previous empirical research on senior entrepreneurship also shows that older individuals are more likely to start firms in a business sector in which they have knowledge/skills (D'Amours, 2009; De Bruin and Firkin, 2001) and contacts (De Bruin and Firkin, 2001). Say and Patrickson (2012) argue that industry experience and market knowledge allow entrepreneurs to identify unexploited or new opportunities. A recent study by Hennekam (2015) concludes that 65% entrepreneurs perceive themselves as successful by focusing on professional networks built up during their careers on a specific industry.

Accordingly, SEs who start a company in the same industry in which they have worked before are expected to be endowed with the skills needed to develop daily tasks and routines with more efficiency and efficacy, as well as to maintain their contacts' network (social capital) in that industry and possess greater knowledge about that specific market. These factors are important to foster SEs' sense of usefulness, confidence and, consequently, their overall satisfaction. This line of reasoning leads to the following hypothesis:

**Hypothesis 2.** *Senior entrepreneurs with experience in the same industry (vis-à-vis different or no previous experience), derive higher business satisfaction.*

If human capital and different types of experience are deemed important for firm creation and development, it is also central to discuss the fact that, as time elapses, human capital may depreciate (Neuman and Weiss, 1995; Parker, 2013). For example, Parker (2013) discusses how research in labor economics has found that interrupted careers translate into

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<sup>11</sup> Self-efficacy refers to the individual's belief of his or her capacity of performing an activity (Bandura, 1997).

<sup>12</sup> According with Bradley and Roberts (2004), individuals reporting higher levels of self-efficacy are, in general, more satisfied with their jobs.

depreciation of human capital stocks and how it might apply specifically to entrepreneurs, causing a negative impact on business creation or performance. While knowledge and skills acquired in one venture are valuable assets, they may gradually become less applicable as circumstances change (Argote, Beckman and Epple, 1990; Parker, 2013; Rerup, 2005). One type of interruption that has been found to be important for entrepreneurs and firms' performance is the one caused by unemployment spells or time away from paid-employment or business ownership (Baptista et al., 2014).

Except for Block and Koellinger (2009), not much research examines the influence of unemployment on business satisfaction, probably due to the relatively recent academic interest on the relationship between wellbeing and entrepreneurship (Amoros et al., 2013). Block and Koellinger (2009) find that individuals spending, on average, more than 12 months unemployed before starting the business exhibit a lower satisfaction compared to those who have not experienced unemployment.

In fact, older individuals, when compared to their younger counterparts, tend to spend longer periods in unemployment (OECD, 2011). This stresses the importance of analyzing unemployment and its impact on business satisfaction (even if, according with Kautonen et al., 2017 or Parker, 2013, only a small number of SEs start companies out of unemployment).

As this depreciation of human capital is more likely to happen with older individuals (who have lived longer and have potentially accumulated more human capital), we draw on continuity theory (Atchley, 1989) to account for SEs' human capital persistence — or, conversely, its depreciation — over time and its impact on performance (as measured specifically through business satisfaction).

In line with the continuity theory, individuals gain satisfaction at middle and older ages through internal (personal experiences, skills) and external (social pressure, sense of belonging) types of continuity (Atchley, 1989)<sup>13</sup>. Unemployment may negatively influence

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<sup>13</sup> Atchley (1989) proposes the existence of two key dimensions – internal and external continuity. Internal continuity is what individuals identify as his/her personal experiences, affects, preferences, and skills.

internal and external types of continuity. First, on an internal perspective, we know that spells of unemployment and/or time spent away from the labor market may lead to a depreciation of individuals' human capital (Neuman and Weiss, 1995; Parker, 2013} and cause a loss of accumulated knowledge. Moreover, unemployment may also lead to a state of poor mental health (Bradley and Roberts, 2004; Frاسquilho et al., 2015}. Second, from an external perspective, unemployment may cause individuals to stop interacting with their familiar professional actors and networks. Therefore, we expect that individuals' spells in unemployment before engaging into a business are associated with lower entrepreneurial satisfaction; which leads to the following hypothesis:

**Hypothesis 3.** *Senior entrepreneurs who have been unemployed (vis-à-vis employed) before starting their current business derive lower business satisfaction.*

## 3. DATA AND METHODS

### 3.1. Sample and data collection

We develop our empirical analysis using data from a unique questionnaire – specifically designed and implemented for the present study – which was sent, in 2015, to a population of entrepreneurs (in Portugal} who have started or acquired their company in 2004-2009 at the minimum age of 50. The questionnaire included both open and closed questions in order to combine flexibility with comparability. Questions were organized into two major dimensions: individual (demographics, human capital, motivations and satisfaction} and firm-level variables (firm characteristics and performance}. In order to guarantee face validity, a pilot test was performed beforehand among a number of selected senior entrepreneurs, university professors and entrepreneurship academics, to ensure that both the structure and

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Preserving internal continuity among older individuals connects with the capacity to apply their own formal and informal knowledge accumulated during life or to feel a sense of ego integrity, life consistency and achievement (Ibid.}. External continuity is seen as "remembered structure of physical and social environments, role relationships, and activities" (Ibid.}. With external continuity individuals face social pressure in order to be consistent with past roles and it continue individuals perceived themselves as included into a specific group.

questions were suitable and unambiguous.

Firms' contacts originated from official longitudinal micro-data, which was made available by the Office for Strategy and Studies (*Gabinete de Estudos e Estratégia – GEE*) at the Portuguese Ministry of Economy.

The questionnaire was sent through post mail and e-mail (according with the type of address available for each company) and followed up by phone (whenever the contact was available) between January and April 2015 to all private incorporated firms that were founded between 2004 and 2009 in Portugal with at least one business owner/founder aged 50 or over and with at least one paid-employee<sup>14</sup>. Throughout the data gathering and cleansing process one had to deal with the fact that around half of the official postal and e-mail addresses were not correct and in 199 questionnaires the original founders were not part of the company anymore. In the end, we were left with a reachable population of 1.671 senior entrepreneurs, out of which we obtained 181 valid questionnaires, accounting for a response rate of 10.83%<sup>15</sup>. This group comprises both individuals who are starting a firm for the first time in their lives (novice entrepreneurs) and individuals who have had other entrepreneurial experiences before (serial entrepreneurs) or who may even still be running other companies in parallel (portfolio entrepreneurs).

## **3.2. Measures**

### **3.2.1. Dependent variable – Business Satisfaction**

We use a single-item to measure the degree of business satisfaction through the following question: "Overall, how do you rate your current satisfaction with the business?". Categories range from 1 (very dissatisfied) to 5 (very satisfied); the higher the value, the higher the

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<sup>14</sup> According with the Portuguese Office for Strategy and Studies, out of total 9.933 firms founded between 2004 and 2009 by individuals aged 50 or over, only 3.400 firms were active by the end of 2013.

<sup>15</sup> Although the response rate is not high, we have used the largest and most validated source of information on companies and firm owners in the country (which accounts for the population and not a sample); we have employed robust survey methods and followed-up around 500 individuals/companies personally, by telephone. Hence, within this context, we believe this is the only/best reliable set of data on SEs (including metrics on entrepreneurial satisfaction and monetary/non-monetary aspects) in Portugal.

satisfaction level. A similar approach is developed by Block and Koellinger (2009) and by other studies focusing on job satisfaction in general (i.e., Benz and Frey, 2008; Blanchflower and Oswald, 1999).

### **3.2.2. Independent variables**

#### **3.2.2.1. Human capital**

In order to assess senior entrepreneurs' human capital, individuals were questioned about their educational level and experience in paid-employment – *general human capital* – and also about their entrepreneurship, management and industry experience –*specific human capital* (in line with Bosma et al., 2004 and Parker, 2009).

#### **3.2.2.2. Entrepreneurial motivations**

Following Reynolds, Hay, Bygrave, Camp, and Autio (2001) we classify motivations into three dimensions: (i) identification of a business opportunity, (ii) necessity/ lack of better employment options ("necessity") or (iii) the two previous options simultaneously.

#### **3.2.2.3. Monetary and non-monetary outcomes**

Given that the present research draws on the procedural utility concept (Benz and Frey, 2008 and Frey et al., 2004), business satisfaction is analyzed both considering monetary and non-monetary outcomes extracted from the business. Thus, in order to measure these two dimensions, we disentangle different outcomes according with Block and Koellinger (2009) approach. As previously mentioned, a 5 point-Likert scale is adopted (see footnote 13). We create two indices by averaging the respective item scores. The monetary outcomes index contains three items ("*I have achieved a high level of income*", "*How would you rate the income obtained from your company vis-à-vis your living costs?*" and "*In relation to your previous job, your current income is:*"). The non-monetary satisfaction index includes five items ("*I have achieved a high level of creativity*", "*I have achieved a high level of independence*", "*I have achieved a high level of flexibility in working hours*", "*I have achieved*

*a high level of safety/comfort", "I have achieved a high social recognition"*).

In our non-monetary index we include a variable accounting for individuals' perception about the level of social recognition they gauge with entrepreneurship. Although social recognition and its relationship with satisfaction is not addressed by Block and Koellinger (2009) or any other study, we considered this is an important outcome for entrepreneurs in general (Parker and Van Praag, 2009; Fauchart and Gruber, 2011) and, probably more relevant, for SEs, who aim to feel useful and valued in society. Moreover, social recognition connects with global judgments of satisfaction with individuals' life as entrepreneurs, which is an important component of the business satisfaction construct (Shir, 2015).

The internal consistency of *monetary* and *non-monetary outcomes* constructs are tested with the Cronbach's alpha. While for the particular case of the monetary index, Cronbach's alpha is 0.7215, the value for the non-monetary index is 0.7365. Results (expressed as a number between 0 and 1) are above the recommended threshold of 0.7 (Nunnally, 1978). Hence, we are convinced that the two indexes under analysis measure the same concept exhibiting internal consistency and assessing the domain of interest.

### **3.3. Control variables**

In order to account for the fact business satisfaction may depend on other individual and firm level specific variables we control for gender, initial investment and firm profits. Gender is operationalized as a dummy variable with the value one (1) assigned to male respondents and zero otherwise. We control for gender due to the fact that Cooper and Artz (1995) found that female entrepreneurs have, *ceteris paribus*, a higher business satisfaction compared to male. On the other hand, Carree and Verheul (2012) found that, compared to male, female to be more satisfied with their income but exhibit a lower satisfaction regarding the psychological burden of the business and the leisure time achieved.

We use initial investment to control for size differences across firms in our sample. Initial investment is a categorical variable with four intervals assuming values (1) < 5.000€;



(2) 5.000€ to 10.000€; (3) 10.001€ to 25.000€ or (4) > 25.000€ in the last year.

Carree and Verheul (2012) conclude that performance has a positive and significant effect on individuals' satisfaction with the income obtained through the business and a negative one related to the psychological burden of the business and the availability of leisure time. To account for possible effect of this variable we control for firm performance, measuring through a categorical variable accounting for whether the firm reached: (1) profits, (2) losses or (3) neither profits nor losses in the last year.

### **3.4. Data description**

As shown on Table 1, SEs are mainly male (81%) and individuals' decision to start or acquire a company later in life happens at the average age of 56 (with a standard deviation of 9%).

With regard of human capital, in our sample around 32% entrepreneurs possess higher education and 24% have completed only the first cycle of education. Complementary to formal education, 77% of respondents hold previous experience in managerial and/or board positions. SEs were involved in management activities for an average period of 21 years (descriptive statistics show, however, high variation, with a standard deviation of 50%). Around 49% individuals, report they have previously started up a company (serial entrepreneurs) during their professional career. SEs have also built up a strong track record of prior professional experiences, especially within the same industry than their actual firm – while two thirds of SEs report previous work experience in their current company's industry, one third had never worked in the same field (67%).

**Table 1**

## Descriptive statistics

	Mean	Std. Dev.	Min	Max
Overall Business Satisfaction	3.82	1.01	1	5
Monetary Satisfaction (index)	2.48	0.83	1	4.7
Non-monetary Satisfaction (index)	3.11	0.86	1	5
High Income achieved	2.27	1.09	1	5
Relative Income (Cost of Living)	2.65	0.85	1	5
Current vis-à-vis Previous Income	2.51	1.14	1	5
High Creativity achieved	3.21	1.22	1	5
High Independence achieved	3.15	1.30	1	5
High Working Flexibility achieved	3.36	1.34	1	5
High Safety/Comfort achieved	2.75	1.19	1	5
High Social Recognition achieved	3.08	1.14	1	5
Gender	0.81	0.39	0	1
Education	5.21	2.34	1	10
Industry Experience	0.67	0.47	0	1
Management Experience	0.77	0.43	0	1
Entrepreneurial Experience	0.49	0.50	0	1
Opportunity-driven Entrepreneurship	0.63	0.49	0	1
Necessity-driven Entrepreneurship	0.29	0.46	0	1
Opportunity & Necessity-driven Entrepreneurship	0.08	0.28	0	1
Unemployment (1-6 months)	0.10	0.30	0	1
Unemployment (7-12 months)	0.05	0.22	0	1
Unemployment (>12 months)	0.08	0.27	0	1
Initial investment	2.71	1.09	1	4

**Notes:** Out of our initial responses ( $N=181$ ), the final number of responses valid for the set of all variables statistically described here and tested in our econometric models is of  $N=145$  for all variables except Creativity ( $N=144$ ), Independence ( $N=142$ ) and Working Flexibility ( $N=143$ ).

Data on entrepreneurial motivations show that, while for 63% of respondents' business opportunities triggered the founding of the company, 29% of respondents claim that "they did not have better working options". With regard of the ratio of opportunity to necessity among senior entrepreneurs, our sample seems to be quite representative of the population – Schott et al. (2017)}, based on representative country-level data from the Global Entrepreneurship Monitor (GEM) 2017 show a 1.5 ratio (60% opportunity and 40% necessity} within the group of European Culture Countries, which resembles the 1.99 ratio found in our sample for Portugal.

Data on the key outcomes obtained through entrepreneurship (Table 2) show that only 14% of respondents partially or totally agree that their income was high and around 60%<sup>16</sup> of SEs completely or somewhat disagree that firm start-up/acquisition resulted in high earnings.

Around 37% of SEs refer to the earnings obtained as either insufficient or very insufficient in terms of meeting their costs of living (with 50% declaring sufficient earnings, 11% good and less than 1% very good}. Regardless of these motivations and results on financial outcomes, there is an overall reasonable level of entrepreneurial satisfaction (an average of 3.6 on a scale of 5), which indicates that satisfaction may relate with other (non-pecuniary} factors. Additional qualitative information obtained through open questions reveal that for entrepreneurs reporting dissatisfaction, bureaucratic difficulties and market conditions hold particular relevance (e.g. fiscal pressures; lack of transparency in the attribution of subsidies, excess of bureaucracy and the lack of state support, economic recession, were some of the comments by respondents}. This is in line with Amoros, Bosma and Kelley (2013} who, drawing on international data from the Global Entrepreneurship Monitor, report the lack of government policies supporting entrepreneurship (taxes and bureaucracy} and low market dynamics as the key variables explaining individuals' low willingness to engage into entrepreneurship. Although this qualitative information is not directly used in our empirical analysis, it provides us with a better understanding of of SEs' perception of the satisfaction (and dissatisfaction} construct.

With regard of the non-monetary components of business satisfaction, participants' claim to have achieved, through entrepreneurship, a high level of creativity (48%) and independence (45%). Only 28% state they have achieved a high level of safety.

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<sup>16</sup> A 5 point-Likert scale was used (as explained in Table 2 notes). Hereafter, within the present section, our description of key outcomes aggregates levels (4) and (5) as compared with the remaining levels for each variable.

**Table 2**

Senior entrepreneurs' perceptions on monetary and non-monetary outcomes

		(1)	(2)	(3)	(4)	(5)	N Total	Mean	Std. Dev.
<i>Monetary outcomes</i>									
Income achieved <sup>(a)</sup>	N	46	38	39	20	2	145	2.27	1.09
	%	31.72	26.21	26.9	13.79	1.38			
Relative Income (Cost of Living) <sup>(b)</sup>	N	16	38	73	17	1	145	2.65	0.85
	%	11.03	26.21	50.34	11.72	0.69			
Current vis-à-vis Previous Income <sup>(c)</sup>	N	32	39	53	10	11	145	2.51	1.14
	%	22.07	26.9	36.55	6.9	7.59			
<i>Non-Monetary outcomes</i>									
Creativity achieved <sup>(a)</sup>	N	19	20	35	52	18	144	3.21	1.22
	%	13.19	13.89	24.31	36.11	12.5			
Independence achieved <sup>(a)</sup>	N	22	21	34	43	22	142	3.15	1.30
	%	15.49	14.79	23.94	30.28	15.49			
Working Flexibility achieved <sup>(a)</sup>	N	21	16	29	45	32	143	3.36	1.34
	%	14.69	11.19	20.28	31.47	22.38			
Safety/Comfort achieved <sup>(a)</sup>	N	29	28	47	32	9	145	2.75	1.19
	%	20	19.31	32.41	22.07	6.21			
Social Recognition achieved <sup>(a)</sup>	N	19	21	46	48	11	145	3.08	1.14
	%	13.1	14.48	31.72	33.1	7.59			
<i>Monetary and/or Non-Monetary outcomes</i>									
Overall Satisfaction <sup>(d)</sup>	N	7	8	23	73	34	145	3.82	1.01
	%	4.83	5.52	15.86	50.34	23.45			

Notes:

- (a) "With the establishment of your company you have achieved high..." – (1) Disagree completely, (2) Disagree somewhat, (3), Neither agree nor disagree, (4) Agree somewhat, (5) Agree completely.
- (b) "How would you rate the income obtained from your company vis-à-vis your living costs?" – (1) Very insufficient, (2) Insufficient, (3) Sufficient, (4) Good, (5) Very good
- (c) "Relatively to your previous job, your current income is" – (1) Over 50% less, (2) Up to 50% less, (3) Similar, (4) Up to 50% more (5) Over 50% more
- (d) "Overall how do you rate your current satisfaction with entrepreneurship?" – (1) Very dissatisfied, (2) Dissatisfied, (3) Neither satisfied nor dissatisfied, (4) Satisfied, (5) Very satisfied.

Table 3 shows the correlation matrix. The relationship between relative income (cost of living) ( $r=.45$ ,  $p<.1$ ), current vis-à-vis previous income ( $r=.39$ ,  $p<.1$ ), creativity ( $r=.43$ ,  $p<.1$ ), independence ( $r=.41$ ,  $p<.1$ ), working flexibility ( $r=.17$ ,  $p<.1$ ), safety/comfort ( $r=.27$ ,  $p<.1$ ), social recognition ( $r=.28$ ,  $p<.1$ ) and overall entrepreneurial satisfaction was positive and significant. Among human capital traits, entrepreneurial satisfaction was also positively related to education ( $r=.17$ ,  $p<.1$ ), industry experience ( $r=.18$ ,  $p<.1$ ), entrepreneurial

experience ( $r=.09, p<.1$ ).

Opportunity-driven entrepreneurship also correlates positively with satisfaction ( $r=.16, p<.1$ ). Whereas Unemployment (>12 months) is negatively related to opportunity-driven Entrepreneurship, it is positively related to Necessity-driven Entrepreneurship. The control variable gender correlated significantly with entrepreneurial satisfaction ( $r=.07, p<.1$ ), indicating that male business owners reported higher levels of entrepreneurial satisfaction. Gender also correlates significantly with non-monetary satisfaction index ( $r=.02, p<.1$ ), indicating that male business owners are more often satisfied with the non-monetary aspects of the business. Initial investment, the other control variable, correlates significantly with entrepreneurial experience ( $r=.24, p<.1$ ) and business net income correlates with social recognition ( $r=.13, p<.1$ ).

**Table 3**

## Correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 Overall Entrepreneurial Satisfaction																								
2 Monetary Satisfaction (index)	0.50																							
3 Non-monetary Satisfaction (index)	0.45	0.54																						
4 Income achieved	0.38	0.81	0.60																					
5 Relative Income (Cost of Living)	0.45*	0.80	0.43	0.53																				
6 Current vis-à-vis Previous Income	0.39*	0.8*	0.28	0.41	0.49																			
7 Creativity achieved	0.43*	0.54*	0.69*	0.51	0.42	0.38																		
8 Independence achieved	0.41*	0.47*	0.84*	0.54*	0.40	0.21	0.53																	
9 Working Flexibility achieved	0.17*	0.13*	0.67*	0.28*	0.06*	-0.02	0.25	0.57																
10 Safety/Comfort achieved	0.27*	0.4*	0.67*	0.42*	0.32*	0.22*	0.28	0.39	0.36															
11 Social Recognition achieved	0.28*	0.35*	0.6*	0.36*	0.31*	0.19*	0.35*	0.41	0.09	0.30														
12 Gender	0.07*	0.08	0.02*	0.04*	0.07	0.07	0.02*	0.09*	0.05	-0.01	-0.11													
13 Education	0.17*	0.09*	0.24*	0.23*	0.09*	-0.09*	0.22*	0.26*	0.15*	0.04	0.13	-0.03												
14 Industry Experience	0.18*	0.13*	0.06*	0.05*	0.19*	0.08*	0.05*	0.12*	0.02	0.04*	0.01	0.12	-0.11											
15 Management Experience	0.14	0.17	0.15	0.15	0.13	0.13	0.24	0.12	0.06	0.04	0.05	0.24	0.22	0.03										
16 Entrepreneurial Experience	0.09*	0.11	0.06*	0.13*	0.13	0.02	0.06*	0.07*	-0.04	0.10	0.01	0.15	-0.01	0.16	0.35									
17 Opportunity-driven Entrepreneurship	0.16*	0.25	0.07	0.23	0.17*	0.21	0.13	0.02	-0.07	0.16	0.01	0.03	0.17	-0.21	0.28	0.18								
18 Necessity-driven Entrepreneurship	-0.13	-0.25*	-0.13	-0.24	-0.20	-0.17	-0.21*	-0.06	0.03	-0.20	-0.02	-0.05*	-0.19*	0.19	-0.29	-0.20	-0.83							
19 Opportunity & Necessity Entrepreneurship	-0.07	-0.03	0.09	-0.01	0.04	-0.09	0.11	0.07	0.07	0.04	0.00	0.02	0.01	0.05	-0.01*	0.01	-0.39	-0.19						
20 Unemployment (1-6 months)	0.15	0.00*	0.01	0.01*	0.00*	0.00*	-0.06	0.00	0.05	0.03*	0.02	-0.08	0.05*	0.08*	-0.15*	-0.18*	-0.13	0.15	-0.01					
21 Unemployment (7-12 months)	0.01	-0.1*	0.14	-0.06*	-0.06*	-0.13*	-0.01*	0.12	0.09	0.1*	0.18	-0.14	0.1*	0.02*	-0.03*	-0.03*	-0.09*	0.07	0.05	-0.07				
22 Unemployment (>12 months)	-0.23	-0.07	-0.03	-0.07	-0.03	-0.06	-0.01	0.01	0.02	-0.12	0.00	-0.06	0.02	-0.08	-0.03	-0.18	-0.21*	0.16*	0.10	-0.09	-0.06			
23 Initial investment	0.04	-0.11	-0.02	-0.05	-0.11	-0.12	0.04	0.00	-0.04	-0.07	-0.02	-0.05	0.14	-0.20	0.18	0.24*	0.16	-0.18	0.01	-0.06	0.18	-0.02		
24 Business Net Income	0.48	0.52	0.25	0.41	0.47	0.38	0.27	0.26	0.05	0.18	0.13*	0.09	-0.01	0.08	0.10	0.05	0.03	0.02	-0.08	0.14	-0.15	-0.07	-0.15	

\*p &lt; .05

### **3.5. Analytical technique**

In order to empirically test the stated hypotheses and examine the influence of the various control variables on Business Satisfaction, we specify an ordered logit regression. This econometric approach is suited to the type of dependent variable we are dealing with (Hamilton, 2003) – Business Satisfaction is measured through a categorical variable with 5 levels ordered from 1-Very dissatisfied to 5-Very satisfied. Hierarchical linear regression analysis is well established in the entrepreneurship literature in general (Wiklund and Shepherd, 2005; Ucbasaran et al., 2009; Hsu, et al., 2016) and also for the particular case of senior entrepreneurship (Block and Koellinger, 2009). We perform our post-hoc analyses by estimating marginal effects of covariates upon the dependent variable. The marginal effects for categorical variables shows how  $P(Y=1)$  changes as the categorical variable changes from 0 to 1, after controlling for the other variables in the model. With a dichotomous independent variable, the marginal effect is the difference in the adjusted predictions for the two groups. Given the type of covariates used in our models, we opted for using marginal effects at variables' representative values than variables at their mean values. In order to test the effect of independent variables on business satisfaction (Table 4). We developed two differently specified ordered logistic regressions in which the dependent variable (Business Satisfaction) and the independent and control variables described in Section 3.2 were included. All models were statistically significant and yielded pseudo-R<sup>2</sup> values around 0.26. The difference between Models I and II is that constituents of satisfaction are firstly analyzed in a disaggregated in Model I way and then aggregated into two indexes in Model II. Models III and IV report marginal effects for all variables analyzed bases on estimations performed in Models I and II.

## **4. RESULTS**

### **4.1. Multivariate analysis of business satisfaction**

**Table 4**

Business Satisfaction (*Overall how do you rate your current satisfaction with the business?*) Coefficients and Marginal effects specifications after Ordered Logit regressions.

Variables	Model I	Model II	Model III	Model IV
<i>Business Satisfaction:</i>				
Monetary Outcomes (index)		0.686** [0.300]		0.086** [0.036]
Non-monetary Outcomes (index)		0.867*** [0.239]		0.108*** [0.029]
High Income achieved	-0.030 [0.267]		-0.004 [0.032]	
Relative Income (Cost of Living)	0.301 [0.290]		0.036 [0.035]	
Current vis-à-vis Previous Income	0.254 [0.188]		0.031 [0.023]	
High Creativity achieved	0.449*** [0.170]		0.054*** [0.019]	
High Independence achieved	0.366* [0.204]		0.044* [0.025]	
High Working Flexibility achieved	0.036 [0.168]		0.004 [0.020]	
High Safety/Comfort achieved	-0.000 [0.178]		-0.000 [0.021]	
High Social Recognition achieved	0.128 [0.193]		0.015 [0.023]	
<i>Individual Traits:</i>				
Gender	0.119 [0.503]	0.193 [0.505]	0.014 [0.060]	0.024 [0.063]
<i>Entrepreneur Human Capital:</i>				
Education	0.077 [0.087]	0.090 [0.082]	0.009 [0.010]	0.011 [0.010]
Industry Experience	1.020** [0.443]	0.870** [0.408]	0.122** [0.052]	0.109** [0.049]
Management Experience	-0.290 [0.448]	-0.146 [0.446]	-0.035 [0.054]	-0.018 [0.056]
Entrepreneurial Experience	-0.033 [0.402]	-0.154 [0.398]	-0.004 [0.048]	-0.019 [0.049]
Opportunity-driven Entrepreneurship	1.156** [0.588]	0.638 [0.636]	0.139** [0.071]	0.080 [0.079]
Necessity-driven Entrepreneurship	0.598 [0.608]	0.223 [0.667]	0.072 [0.073]	0.028 [0.083]
Unemployment (1-6 months)	1.096* [0.650]	0.818 [0.599]	0.132* [0.078]	0.102 [0.075]
Unemployment (7-12 months)	0.397 [1.228]	0.154 [1.367]	0.048 [0.148]	0.019 [0.171]
Unemployment (>12 months)	-1.818*** [0.488]	-1.804*** [0.446]	-0.218*** [0.058]	-0.225*** [0.055]
<i>Firm Characteristics</i>				
Initial investment	0.404** [0.161]	0.433*** [0.159]	0.048** [0.020]	0.054*** [0.021]
Business Net Income	1.023*** [0.310]	1.045*** [0.305]	0.123*** [0.037]	0.131*** [0.037]
Observations	141	145	141	145
Pseudo R <sup>2</sup>		0.260		



**Table 4**

(Continued)

Variables	Model I	Model II	Model III	Model IV
Constant cut1	4.949*** [1.325]	4.748*** [1.225]		
Constant cut2	6.138*** [1.361]	5.890*** [1.253]		
Constant cut3	8.121*** [1.471]	7.789*** [1.346]		
Constant cut4	11.906*** [1.702]	11.446*** [1.593]		
Observations	141	145		
Pseudo R <sup>2</sup>	0.277	0.260		

Notes: \* p<0.1; \*\* p<0.05; \*\*\* p<0.01. Standard errors with Huber-White standard errors are presented in brackets. Results in Models I and II indicate variables' coefficients after ordinal logit regression. Results in Models III and IV indicate variables' marginal effects (Average Adjusted Predictions) after ordinal logit regression. For continuous variables, the marginal effects are approximated with the variable magnitudes held at their mean value. For dichotomous variables the marginal effects are approximated as the change in the probability resulting after the variables' value changes from 0 to 1. On an all other things being equal basis, for each independent/control variable, coefficients represent, the percentage of senior entrepreneurs who are very satisfied with the business, as compared with those who are less satisfied. Average Adjusted Predictions for each group sum to 1, i.e. all the subjects fall into one of the five Satisfaction categories. Entrepreneurial Satisfaction: variables Total Income; Creativity; Independence; Working Flexibility; Safety/Comfort; Social Recognition use the same 5-point Likert scale: 1- Disagree completely; 2- Disagree somewhat; 3-Neither agree nor disagree; 4-Agree somewhat; 5-Agree completely. Relative Income (Cost of Living) uses the following 5-point Likert scale: Very insufficient=1, Insufficient=2, Sufficient=3, Good=4, Very good=5. Current vis-à-vis Previous Income uses the following 5-point Likert scale: (-100% to -50%)=1, (0 to -50%)=2, (Similar)=3, (0% to 50%)=4, (>50%)=5. Individual Traits: Founder's Gender (1=male, 0=female). Monetary Satisfaction Index = Average (Total Income + Relative Income (Cost of Living) + Current vis-à-vis Previous Income). Non-monetary Satisfaction Index= Average (Creativity + Independence + Working Flexibility + Safety/Comfort + Social Recognition). Entrepreneur Human Capital: Management Experience (Yes=1, No=0); Industry Experience (Yes=1, No=0); Education (None=1, Primary, 1st cycle=2, Basic, 2nd cycle=3, Basic, 3rd cycle=4, High school=5, Post-high school course work=6, Bachelor, 3 years =7, Undergraduate, 4 years=8, Masters=9, Doctorate=10); Entrepreneurial Experience (Yes=1, No=0); Opportunity-driven Entrepreneurship (Yes=1, No=0); Opportunity-driven Entrepreneurship (Yes=1, No=0); Opportunity & Necessity-driven Entrepreneurship (Yes=1, No=0) is the omitted category; Spells in Unemployment (number of months) with Short Run (1-6), Medium Run (7-12) and Long Run (>12). Firm's Net Income (Losses=1, Neither profits nor losses=2, Profits=3).

Our Hypothesis 1 predicts that SEs derive higher satisfaction from non-monetary than monetary entrepreneurship-related outcomes. Model I in Table 4 shows that, although Business Net Income ( $\beta=1.023$ ,  $p<0.01$ ) is positively associated with the satisfaction, surprisingly, entrepreneurs' perceptions on any of the monetary outcomes, such as High Income, Relative Income (Cost of Living) and Current vis-à-vis Previous Income, *per se*, are not statistically significant in explaining senior entrepreneurs overall business satisfaction. 0.686,  $p<0.05$ . With regard of SEs' non-monetary

perceptions of performance, Model I stresses Creativity ( $\beta=0.449$ ,  $p<0.01$ ) and Independence ( $\beta=0.366$ ,  $p<0.01$ ) as important non-monetary variables explaining overall business satisfaction. Senior entrepreneurs who engage into a new or acquired firm compelled exclusively by a market opportunity rather than necessity, are likely to experience more satisfaction with the business ( $\beta=1.156$ ,  $p<0.05$ ). Initial investment ( $\beta=0.404$ ,  $p<0.05$ ) is also positively associated with the outcome under analysis. Finally, Industry Experience ( $\beta=1.020$ ,  $p<0.05$ ) and Unemployment are significantly associated with satisfaction. While a shorter spell – up to 6 months – in unemployment may have a positive influence on business satisfaction ( $\beta 1.096$ ,  $p<0.1$ ), having spent more than 12 months unemployed immediately before starting the business is negatively and significantly related with satisfaction ( $\beta -1.818$ ,  $p<0.01$ ). These results allow us to focus on Industry Experience and Unemployment with more detail in order to test our Hypotheses 2 and 3, respectively.

In Model II we aggregate several explanatory variables into two indices (as described in the measures section of this article). Results show that both Monetary and Non-monetary Outcomes indexes (with Cronbach's alpha  $> 0.7$ ) are positive and significant proxies ( $\beta=0.686$ ,  $p<0.05$  and  $\beta=0.867$ ,  $p<0.01$ , respectively) to analyze senior entrepreneurs' overall satisfaction with their business. As expected, in accordance with the literature and with the theoretical background and hypotheses discussed in Chapter 2, Industry Experience ( $\beta=0.870$ ,  $p<0.05$ ) and Unemployment ( $\beta=-1.804$ ,  $p<0.01$ ) also play a relevant role in explaining entrepreneurial satisfaction. Apart from these four variables (and except for the Initial investment and Business Net Income that are also significant and positive) no other variable in our model show a significance level inferior to 0.1.

Models III and IV in Table 4 follow the same structure than the previous models and report the marginal effects after our ordinal logit regressions (obtained in Models I and II). In ordinal logit/probit models the outcome (dependent) variable has several categories with a meaningful order. As discussed before, in the present analysis, the variable Satisfaction has five categories: (1) Very dissatisfied, (2) Dissatisfied, (3) Neither satisfied nor dissatisfied, (4) Satisfied, (5) Very satisfied.

We start by estimating models for all five categories of response. Results from our ordered logit regressions with marginal effects show that the probability individuals are Very satisfied with entrepreneurship (Outcome #5) is 24% ( $p < 0.001$ ), given that the rest of the variables are at their current values.

The figures for the remaining outcomes show a probability of around 50% ( $p < 0.001$ ) for "Satisfied" (#4); 16% ( $p < 0.001$ ) for "Neither satisfied nor dissatisfied" (#3); 5% ( $p < 0.001$ ) for "Dissatisfied" (#2) and 4% ( $p < 0.001$ ) for "Very dissatisfied (#1)". It is interesting to note that, *ceteris paribus*, the majority of SEs in our sample seem to experience a high level of satisfaction (74%).

As Satisfaction is a categorical variable ranging from 1 to 5, in Models III and IV we opt for focusing on predictions from the model which are set to a fixed outcome, namely: #5 Very satisfied<sup>17</sup>.

Model III shows that the average marginal effect of Opportunity-driven Entrepreneurship, short spells in Unemployment (up to 6 months) and Business Net Income are relevant variables in our results, showing, *ceteris paribus*, an approximate 12 to 14pp increase in the proportion of SEs with higher entrepreneurial satisfaction.

With regard of our variables of interest, while entrepreneurs' perceptions on Monetary-related outcomes (Hypothesis 1) show no statistical significance, Non-monetary outcomes such as Creativity ( $p < 0.01$ ) and Independence ( $p < 0.01$ ) have a marginal contribution of around 5.4 and 4.4 pp, respectively, to overall satisfaction, which is aligned with our Hypothesis 1. Industry Experience ( $p < 0.05$ ) has a positive marginal effect of around 12pp on overall satisfaction, which supports our Hypothesis 2. Finally, according with our results in Model III, while having spent up to 6 months unemployed before engaging into a business at 50 years or over as a positive marginal contribution of 13pp to satisfaction ( $p < 0.1$ ), a spell of more than 12 months unemployed before becoming a SE decreases around 21pp the level of the satisfaction of the SE ( $p < 0.001$ ). In fact, short periods in unemployment may be part of individuals planning and readjustment before starting/acquiring a

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<sup>17</sup> Ordered logit regression results for all variables considering outcomes 1 to 4 are available upon request.

business and may constitute an important basis for a more sustainable business. Hence, these results support our Hypothesis 3 but only if we consider long-term, structural unemployment.

In Model IV we include the Outcomes indexes with the goal of analyzing Monetary and Non-monetary constituents of satisfaction in an aggregate way. Business Net Income is among the most relevant variables ( $r=0.12$ ,  $p<0.001$ ) in Model IV. Business Net Income is, in fact, a traditional and objective performance indicator; however, its impact on satisfaction can be perceived differently by different individuals. In our models we use Business Net Income as a control variable because although generating profits may have a high impact on SEs' overall business satisfaction, we wish to assess and disentangle entrepreneurs' perceptions about the constituents of satisfaction (both monetary and non-monetary outcomes). The average marginal effect of the Non-monetary and Monetary Outcomes indexes is of 10.8 percentage points and 8.6 percentage points (pp) respectively. That is, everything else equal, we would expect a 10.8 pp increase in the proportion of SEs who have a high overall business satisfaction through non-monetary outcomes, as compared with entrepreneurs who value more Monetary outcomes. The same reasoning applies to the Monetary Satisfaction index ( $r=8.6\text{pp}$ ,  $p<0.001$ ). Therefore, we bring additional evidence to Model 3 and confirm our Hypothesis 1 that *Senior entrepreneurs derive higher satisfaction from perceived non-monetary rather than monetary entrepreneurship-related outcomes.*

Results show that Industry Experience is one of the variables with a major contribution to a very high positive perception of business satisfaction among SEs (around 12%,  $p<0.05$ ); hence, we confirm our Hypothesis 2 that *Senior entrepreneurs with experience in the same industry (vis-à-vis different or no previous experience), derive higher business satisfaction.* By including the indexes in Model IV, short-term unemployment has lost significance and there is a much clear result showing that long periods (12 or more months) away from the labor market prior firm start-up/acquisition causes a scarring effect on entrepreneurs' outcomes, namely on business satisfaction. Given that in Model IV unemployment decreases around 22pp the level of the satisfaction of the SEs ( $p<0.001$ ), we confirm our Hypothesis 3 that *Senior entrepreneurs who have been unemployed (vis-à-vis employed) before*

*starting their current business derive lower entrepreneurial satisfaction.* However, Hypothesis 3 is only partially supported because when occurring for shorter periods (<12 months}, unemployment is non-significant (or, as seen in Model III, may have a small positive effect on entrepreneurial satisfaction}).

It is worth to mention that (with the exception of short-term unemployment) all the signals and significance levels remain stable across Models (I – IV). Figures A and B, in Annex I, complement Models III and IV, respectively by showing, in a more intuitive way, the magnitude of the effects of each covariate in the outcome.

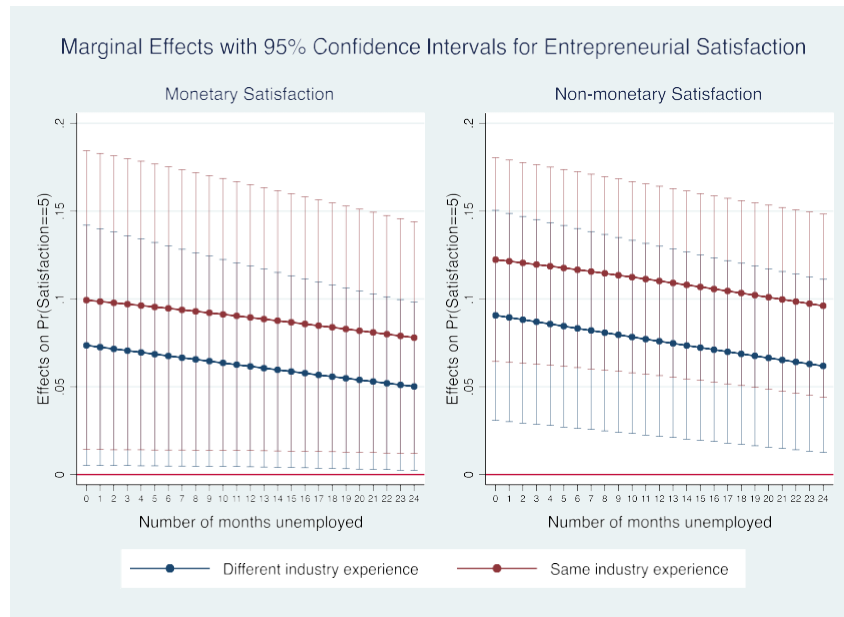
## **4.2. Post estimation and Robustness checks**

To confirm whether or results vary across different variable interactions we conducted additional regressions and plots of predicted probabilities<sup>18</sup>.

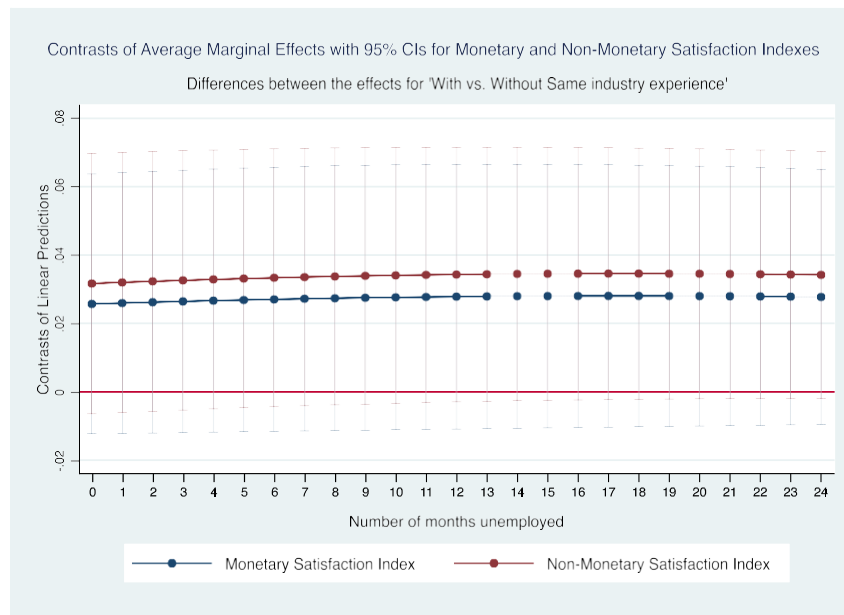
In order to understand how or key interest variables (Outcomes Indexes, Industry experience and Unemployment interact, we estimate a new regression, similar to the one depicted in Model IV at Table 4, but now including the variable Unemployment measured in months (the overall structure of results obtained in Model IV is not affected by this procedure). Fig. 1a. shows different patterns for the effects of Industry experience across Outcome Indexes and over time experienced in unemployment. The higher the duration of unemployment spell prior to firm start-up/acquisition, the lower SEs' business satisfaction, particularly among SEs who value more Monetary rather than Non- monetary outcomes. Fig. 1b. shows a slight growth in contrasts of linear predictions over time spent in unemployment. The more time individuals are unemployed, the higher the difference between having industry experience or not, meaning that specific human capital may mitigate the scarring effect of unemployment for SEs.

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<sup>18</sup> First, we use the STATA "margins" command to calculate the predicted probabilities, using the values of the variables for each observation and then average those predicted values. For discrete covariates (the majority) in our data set, we computed the effect of a discrete change of the explanatory variable (discrete change effects). Then, we use "margins" and a combination of procedures (similar to "contrast") to calculate difference-in-differences estimates for each level under analysis among the interacted variables.



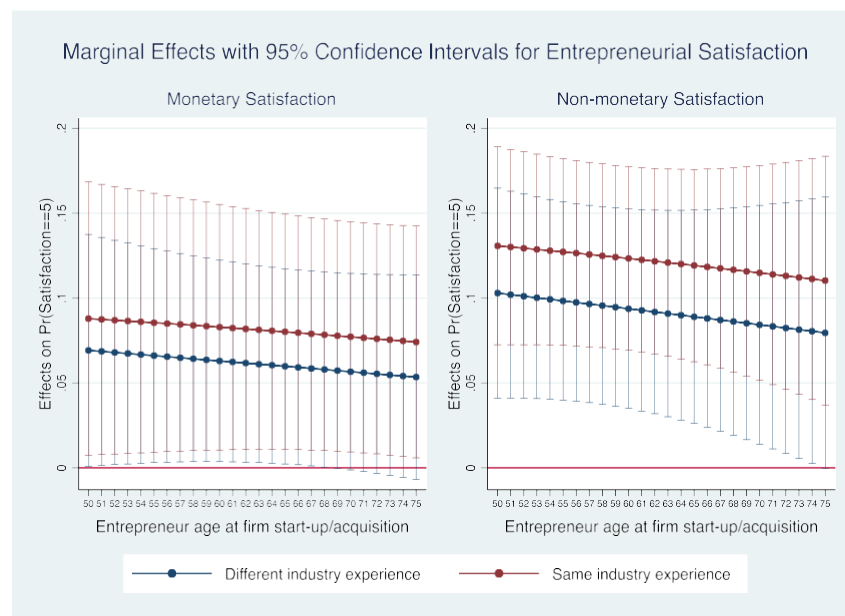
**Fig. 1a.** Marginal effects with 95% CIs for business satisfaction. Interaction between Monetary / Non-Monetary Outcome indexes, Industry Experience and Unemployment spells



**Fig. 1b.** Contrasts of Average Marginal Effects with 95% CIs for Monetary and Non-Monetary Outcome Indexes (differences between SEs with vs. without same Industry Experience at different Unemployment spells)

Although we are studying different profiles of SEs aged 50-75 years, it is interesting to account for the variation of our results across specific ages over the 50-75 interval. Hence, we start by

estimating a new regression, similar to the one depicted in Model IV at Table 4, but including a new variable: Entrepreneur's Age at the Start-up/acquisition stage. SEs' average age is 55.04 years ( $\sigma=4.24$ ). The inclusion of entrepreneurs' age in our estimation does not affect the overall structure of results obtained in Model IV. Fig. 2a shows the predicted probabilities of the full three-way interaction between Industry experience, the Monetary and Non-Monetary Satisfaction indexes and Age. In Fig. 2a one can observe that the pattern of the effect of the Industry experience appears to be somewhat different for respondents who value Monetary vs. Non-Monetary Outcomes differently.

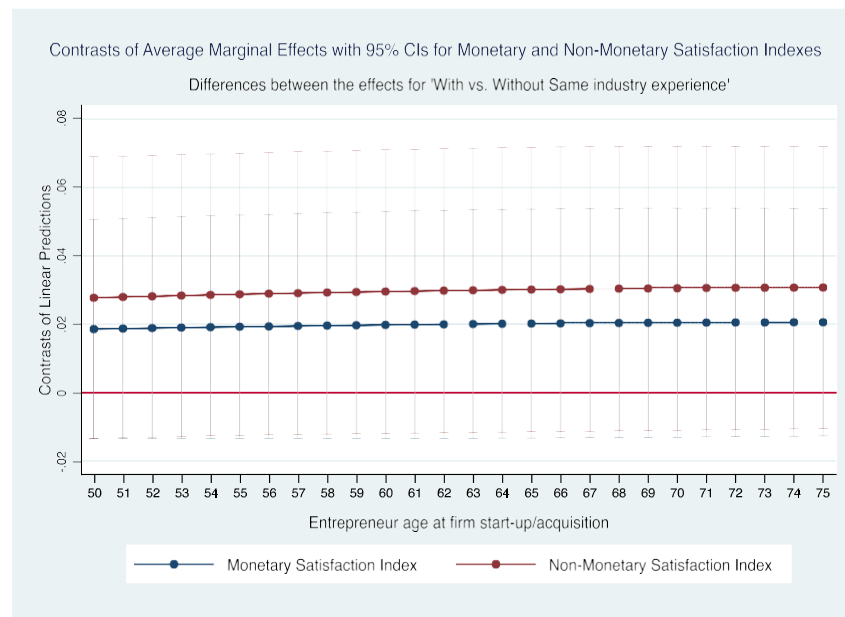


**Fig. 2a.** Marginal effects with 95% CIs for business satisfaction. Interaction between Monetary / Non-Monetary Outcome indexes, Industry Experience and Age

Possessing specific human capital, namely Industry experience, causes a higher impact on overall satisfaction and, particularly on its non-monetary components. Additionally, one can observe that individuals aged over 50 will derive a lower entrepreneurial satisfaction for each additional year of age they take to start/acquire a firm.

Fig. 2b depicts contrasts of average marginal effects with 95% CIs for Monetary and Non-Monetary Outcomes Indexes, comparing differences between 'With vs. Without Same industry

experience'. In Fig. 2b, a difference-in-differences estimate is displayed for each age level (between 50 and 65 years). We see that the difference in effects between SEs' Industry and No-Industry experience is positive, and face a very small and steady growth during all the timeframe under analysis both for Monetary and Non-Monetary Outcomes Indexes.

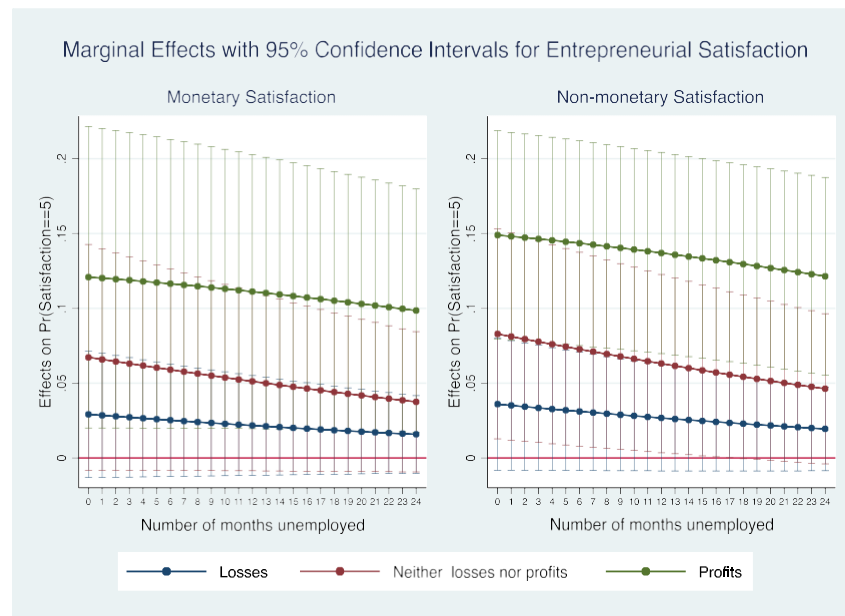


**Fig. 2b.** Contrasts of Average Marginal Effects with 95% CIs for Monetary and Non-Monetary Outcome Indexes (differences between SEs with vs. without same Industry Experience' at different Age)

Given that Business Net Income is an important control variable (with a highly significant and positive relationship with our dependent variable), we believe it is interesting to analyze its interactions with other variables. Hence, out of the same regression used for Fig. 2a. and Fig. 2b. (Including the variable Unemployment measured in months) we focus now on the interaction between Outcomes Indexes, Unemployment and Business Net Income. Fig. 3a. shows the prevalence of profits over break even (neither losses or profits) over losses in terms of the effect on the probability of Very high Satisfaction (outcome=5). One can observe that, for example, marginal effects range from a minimum of 0.029 (losses), 0.067 (break-even) and 0.12 (profit) for an entrepreneur who values Monetary outcomes (rather Non-monetary) and did not have experienced unemployment prior to

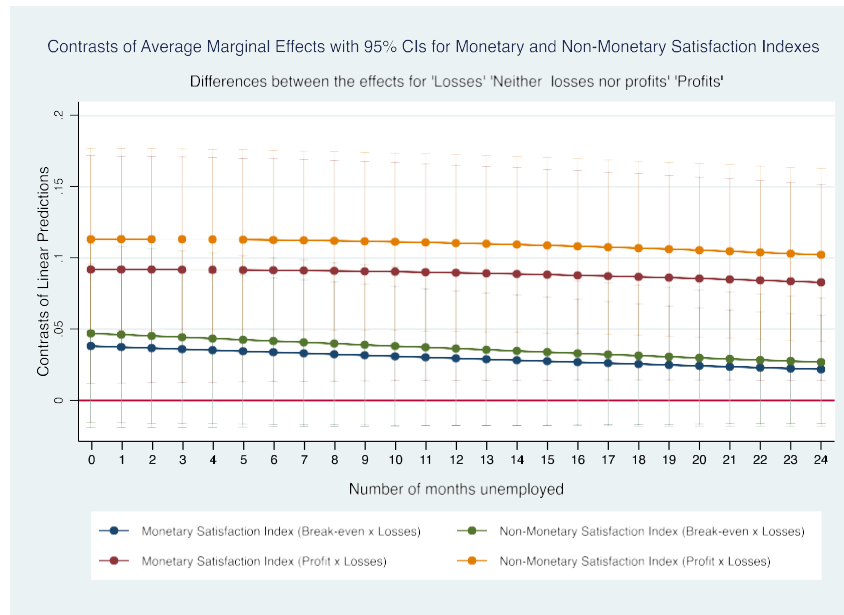


firm start-up/acquisition, to a maximum of 0.016 (losses), 0.038 (break-even) and 0.099 (profit) for the same individual if he/she experienced 24 months in unemployment. This stresses the negative and scarring impact of long-term unemployment upon business satisfaction.

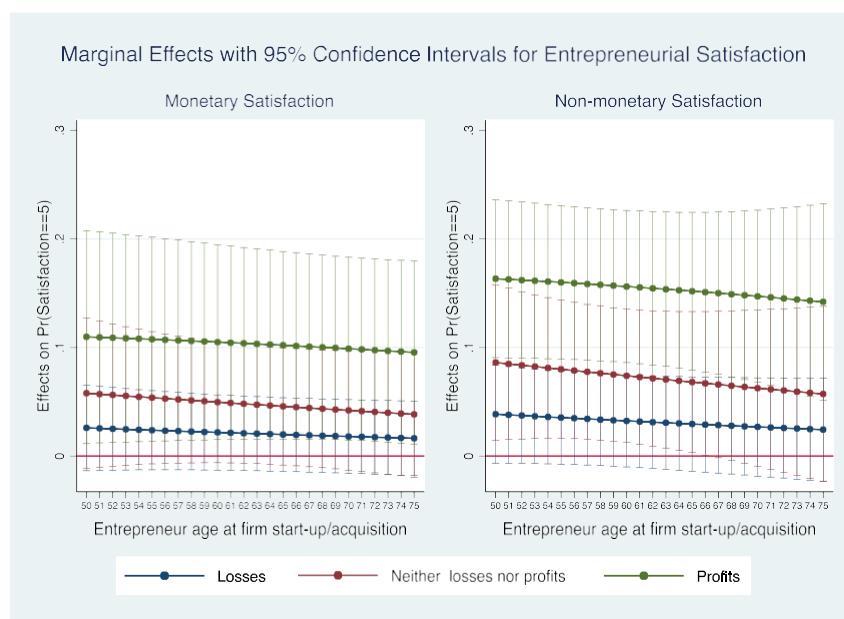


**Fig. 3a.** Marginal effects with 95% CIs for business satisfaction. Interaction between Monetary / Non-Monetary Outcome indexes, Business Net Income levels and Unemployment spells

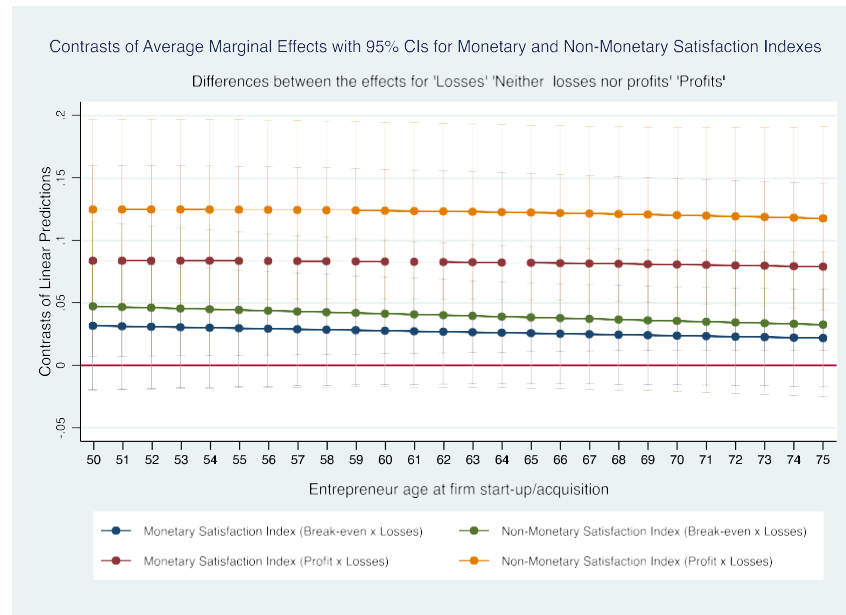
Fig. 3b. shows contrasts of average marginal effects for differences-in-differences in the Business Net Income levels across each unemployment interval. Overall, there is a markedly decline in the difference between the income levels on the impact on business satisfaction (both for Monetary and Non- monetary factors); meaning that the longer the time spent unemployed, the lower satisfaction individuals will derive from entrepreneurship, regardless of their Business Net Income level. Fig. 4a and Fig. 4a (using the same regression than Fig. 1a and Fig 1b) depict a similar phenomenon for entrepreneurs' age at the moment of start-up/acquisition than the one described in Fig. 3a and Fig. 3b.



**Fig. 3b.** Contrasts of Average Marginal Effects with 95% CIs for Monetary and Non-Monetary Outcome Indexes (Differences between Business Net Income levels at different Unemployment spells)



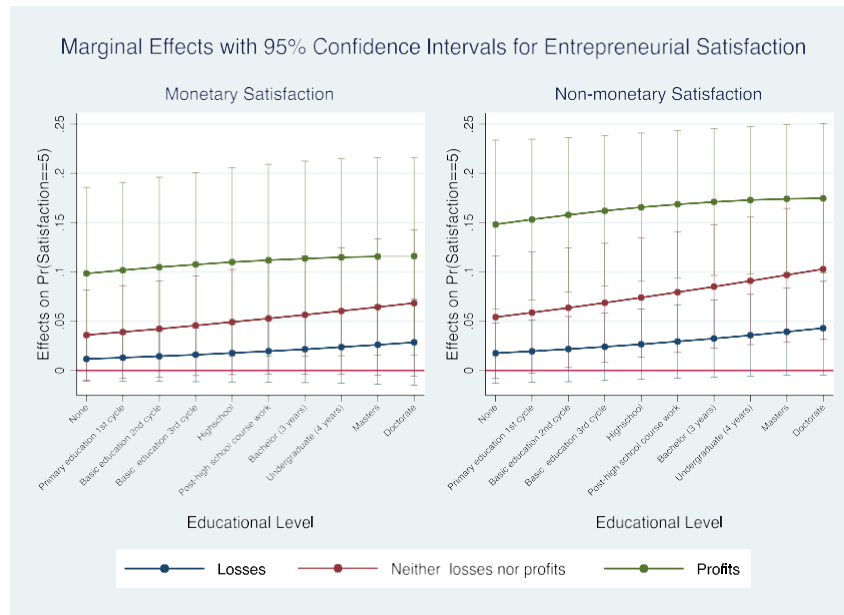
**Fig. 4a.** Marginal effects with 95% CIs for business satisfaction. Interaction between Monetary / Non-Monetary Outcome indexes, Business Net Income levels and Age



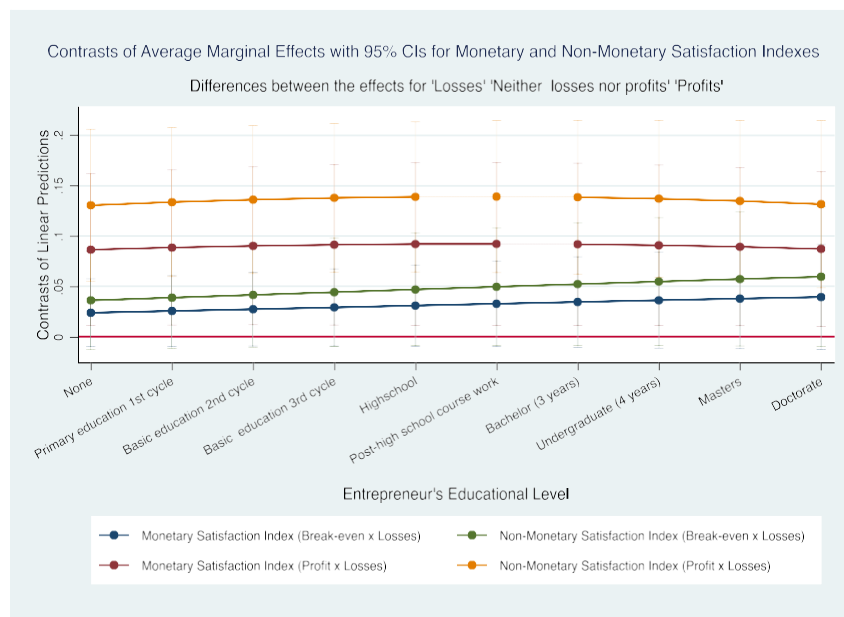
**Fig. 4b.** Contrasts of Average Marginal Effects with 95% CIs for Monetary and Non-Monetary Outcome Indexes (Differences between Business Net Income levels at different Age)

Finally, in Fig. 5a, we assess how Education interacted with Business Net Income and Monetary/Non-monetary outcomes impact on overall business satisfaction. In general, the more educated the SE is, the higher his/her Business Net Income and higher satisfaction he/she will derive from entrepreneurship. For example, being a SE with a doctoral degree experiencing neither losses nor profit will have the same impact (10pp) on overall business satisfaction than being a SE with no education experiencing profit.

Fig. 5b. shows that while contrasts between break even and losses are always positive and growing with education (the more educated, the less losses) the difference in effects between profits and losses are also positive but with an inflexion point after high school.



**Fig. 5a.** Marginal effects with 95% CIs for business satisfaction. Interaction between, Monetary / Non-Monetary Outcome indexes, Business Net Income levels and Education levels



**Fig. 5b.** Contrasts of Average Marginal Effects with 95% CIs for Monetary and Non-Monetary Outcome Indexes (Differences between Business Net Income levels at different Education levels)

All the equations and plots representing the relationships between Industry Experience, Unemployment, Net Income, Age and Education show a clear prevalence of entrepreneurs' positive perception of non-monetary outcomes rather monetary as a key contribution for overall business

satisfaction, which fully aligns and reinforces our Hypothesis 1. Hypotheses 2 and 3 are also robust to these post-hoc analyses and to the idea that continuity and discontinuity of certain activities and forms of human capital impact SEs' business satisfaction. Hence, we reconfirm the moderating effects as a robust result.

Additionally, as a robustness check, we also estimated regressions similar to the ones in Table 4 and the ones used for computing Figures 1– 5 but, instead of the ordered logit, we used ordered probit, OLS and logistic distribution models.<sup>19</sup> We assess the sensitivity of our results by analyzing dichotomous versions of our dependent variable (following, for example, Hessels et al., 2017); specifically, by distinguishing high levels of business satisfaction (value 1; original variable between 3 and 5) and low levels of business satisfaction (value 0; original variable between 1 and 2). A similar approach was also applied to Monetary/Non-monetary index covariates.

We included the main variables one by one (and with different combinations) instead of all at once to see their individual effect without the other variables. We find that the results are qualitatively similar, as well as the significance levels. When the main effects are analyzed separately, the regressions provided analogous and consistent results to the ordered logit (Table 4). All these robustness tests provide further support for our final model and results.

## **5. DISCUSSION**

This article provides a comprehensive investigation to business satisfaction among SEs. We propose and empirically test an alternative and complementary approach to standard occupational choice models based on expected utility theories of firm performance and also to traditional conceptualizations of firm performance as income, sales, or size growth. First, we build on the procedural utility concept (Frey et al., 2004) and socioemotional selectivity theory (Carstensen et al., 1999) to shed light on the subjective dimension of entrepreneurial performance (i.e. business satisfaction). We assess business satisfaction based on a mix of perceptions on the monetary and

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<sup>19</sup> For parsimony we only report the ordered logit estimates in the article; however, results for ordered probit, OLS and logistic regressions are available upon request.

non-monetary outcomes (using quantitative and qualitative indicators) achieved with the business.

Our first hypothesis is therefore, focused on the constituents of business satisfaction, suggesting that (H1) *Senior entrepreneurs derive higher satisfaction from perceived non-monetary rather than monetary entrepreneurship-related outcomes.*

Second, we use continuity theory (Atchley, 1989) to account for individuals' work history and its impact on business satisfaction. Drawing on the literature, we focus specifically on industry experience and unemployment as proxies for "continuity". Moreover, a hitherto little-considered aspect of human capital in the entrepreneurship domain, namely its discontinuity or depreciation and how that affects future business satisfaction among senior individuals was examined. Hence, our second hypothesis is concerned with the relationship between business satisfaction and continuity of specific human capital, namely industry experience. (H2) proposes that *Senior entrepreneurs with experience in the same industry (vis-à-vis different or no previous experience), derive higher business satisfaction.* Finally, our third hypothesis investigates to what extent discontinuity of individuals' participation in the labor market (measured through unemployment spells prior to entrepreneurship) impact on business satisfaction. (H3) suggests that *Senior entrepreneurs who have been unemployed (vis-à-vis employed) before starting their current business derive lower business satisfaction.*

By providing empirical evidence supporting our hypotheses, as empirically represented by the likelihood that senior entrepreneurs perceive satisfaction both through non-monetary and monetary factors and that satisfaction is mediated by industry experience and unemployment spells, this study has implications for theory and practice.

## **5.1. Interpretation of the results and theoretical implications**

Our results show that SEs are, in general, satisfied with their firm. The majority of SEs in our sample (74%) seem to experience a high level of satisfaction. Although the impact of age on satisfaction is not the focus of the present study, it is worth to mention that we find evidence that within the SEs' group (50-80 years old) age associates negatively with higher levels of satisfaction

(see, for example Fig.3), which supports findings from Bradley and Roberts (2004) and Block and Koellinger (2009).

Our empirical analysis supports the prediction that SEs derive slightly more satisfaction from non-monetary aspects compared to monetary ones (H1). Although Block and Koellinger (2009) concluded that monetary aspects do exhibit higher importance compared to non-monetary ones., our finding goes in the opposite direction and is in line with Alstete (2008) and Kautonen et al., (2017). The focus on non-monetary outcomes in explaining business satisfaction is theoretically supported – although SEs acknowledge the importance of financial resources to their lives they are aware that time remaining to generate high earnings again is lower compared to the time spent accumulating financial resources (Lévesque and Minniti, 2006). We also find that achieving a high level of creativity and independence is positively related to business satisfaction. This finding is aligned with Alstete (2008) who stress the role played by the entrepreneurs' level of independence and freedom of being their own boss on satisfaction. Continuity theory (Atchley, 1989) supports the idea of creativity as a characteristic that represents an outcome of a continuous effort (Atchley, 1989).

Furthermore, as predicted in our (H2), we found SEs' experience in the same industry to associate with higher overall satisfaction (in line with Alstete, 2008). Results indicate that individuals gauge higher satisfaction by continuing working in the same sector, but with higher independence, in their own business rather than in paid-employment.

Finally, our empirical analysis reveals that longer spells (more than 12 months) in unemployment before starting the firm, decrease business satisfaction (H3). This finding supports the assertion that the way the entrepreneur starts the firm influences his/her satisfaction (aligned with Block and Koellinger, 2009), with visible scarring effects throughout the business life cycle and observable in our data after, at least, five years of entrepreneurial activity. The fact shorter periods of unemployment are non-significant in explaining business satisfaction may configure cases where voluntary unemployment or frictional involuntary unemployment (rather than cyclical or structural)

are seen as a transition period to plan and readjust to entrepreneurship. This analysis is in line with Kautonen et al. (2017) emphasis on the need for future research on senior entrepreneurship - "It would be desirable if future studies of late-career entrepreneurship could also include factors such as the characteristics of the individuals' jobs before the switch, or the industry in which the subjects started their firms and the type of firm activity they engaged in".

Based on the present and previous findings, we propose that the continuity theory allows for conceptualizing and testing establishing two different profiles of SEs and their relationship with satisfaction based on individual work history (namely, industry experience and unemployment spells). We believe that the way we conceptualize and operationalize the present analysis may contribute for future research on the micro-foundations of senior entrepreneurial action (Shepherd, 2015).

Overall, four main contributions emerge from our study. First, to the best of our knowledge, this is among the first empirical studies in the senior entrepreneurship domain to simultaneously examine the level of business satisfaction and a set of covariates (with focus on monetary / non-monetary factors) associated with the outcome. Second, we reconcile different theories in order to build a robust conceptual framework explaining business satisfaction among SEs. Drawing on the concept of procedural utility (Frey and Benz, 2008; Frey et al., 2004) and socioemotional selectivity theory (Carstensen, 2006; Carstensen et al., 1999) we show that the non-monetary, as compared to the monetary, index has a stronger effect in explaining overall satisfaction. Specifically, we find that among the several explanatory variables (creativity, independence, working flexibility, safety/comfort and social recognition) used to build the Non-monetary outcomes index, independence and creativity are the key factors associated with business satisfaction and, important factors in driving individuals through the entrepreneurial process at a later age in life (Atchley, 1989).

Third, we contribute to the theoretical discussion of procedural utility concept (Benz and Frey, 2008) in the scholarly domain of entrepreneurship. Previous entrepreneurship research suggests that procedural utility's concept might be useful to examine entrepreneurial business (Block and



Koellinger, 2009). The concept of procedural utility proposes that the benefits extracted during the entrepreneurial process are important and encompass monetary and non-monetary aspects associated with developing a firm (Benz and Frey, 2008; Frey et al., 2004), this is an extension of the traditional concept of utility maximization that traditionally focuses only on the monetary outcomes of an activity. However, with exception of Kautonen et al 2017, no subjective assessment of entrepreneurial performance have been undertaken with the segment of older individuals, who probably value present benefits more.

Fourth, we suggest that the entrepreneurship literature might benefit from taking into account propositions from the continuity theory that stress the importance of older individuals being coherent and consistent with their past, their prior life history and, thus, influencing individuals' satisfaction (Atchley, 1989). According to previous literature, we know that industry experience is associated with higher entry in senior entrepreneurship but there is no evidence for its relationship with satisfaction. This study tackles this shortcoming – by operationalizing the concept of "continuity" through industry experience and unemployment, we find that industry experience has a positive relationship with business satisfaction, and spending more than 12 months unemployed immediately before firm creation is negatively associated with business satisfaction, which is fully consistent with our conceptual framework.

Theory of continuity was developed in the twentieth century, in which the classical model of a career was developed, this model postulates the existence of three stages in an individuals' career – full-time training, full-time job, and full-time retirement (Gratton and Scott, 2017). Presently, careers encompass multi-stages (ibid.), individuals no longer work in an exclusive job for their whole life and are expected and likely to have more shifts during their working lives from wage and salary jobs, to entrepreneurship, periods of training, among other options. We suggest that this novel career model may influence continuity theory (and therefore, the way we conceptualize the drivers for individuals' satisfaction).

Our fifth contribution is in testing our hypotheses utilizing a survey database of 145 new-venture founders or acquirers aged 50 years old or over, covering a wide array of subjective metrics (entrepreneurs' perceptions) on satisfaction—to the best of our knowledge, one of few such endeavors in the literature—in Portugal, one of the countries with the largest and growing ageing population in the world (UNFPA 2013) and one of the countries where the population works until very late in life (DG-EMPL/UNECE, 2012). Constructing a unique set of data in a context where active ageing is a major concern and necessity-based entrepreneurship still play an important role (older individuals might more often be pushed into entrepreneurship because no other occupational alternatives are available) makes this an important case study and a valuable research opportunity.

## **5.2. Practical implications**

Understanding if SEs perceive satisfaction both through non-monetary and monetary outcomes and that satisfaction is mediated by industry experience and unemployment spells is important for practitioners and policy makers.

Older individuals constitute a segment of the global population that is increasing at a significantly high annual rate (around 3.26%), making it the fastest growing population group on the planet (UN, 2015). An increasingly elderly workforce, together with longer lives and occupational careers, is requiring careful and increased attention by policymakers and academics. For example, Alstete (2008) states that individuals writing books on entrepreneurship should be aware of practical implications, strengths and weaknesses related to the creation and development of a firm at an older age. The specific focus of this article is on work history, which is a very relevant factor influencing entrepreneurial activity and, thus, important to inform policy-makers (Lafuente and Salas, 1989).

By investigating performance through business satisfaction indicators, this study fosters a number of wider policy and practitioner questions, such as: Should entrepreneurship be stimulated and supported through programs tailored to older individuals? To what extent should those programs be oriented toward monetary and/or non-monetary dimensions and objectives? If older entrepreneurs are encouraged to undertake entrepreneurship can it be seen as a path toward well-

being, business satisfaction, active aging (social outcomes) or/and toward firm performance (economic outcomes)? What is the opportunity cost for individuals willing to start/acquire businesses at older ages of not engaging in entrepreneurship?

From a policy perspective – and building on our finding that monetary and non-monetary outcomes are both important but the latter is associated with higher business satisfaction, – it is important that mechanisms supporting older entrepreneurs account for: (i) the definition of realistic expectations for the business<sup>20</sup>, (ii) awareness generation regarding the right tangible and intangible resources required for the business without compromising SEs' future life; (iii) entrepreneurial dynamics during early stages of firms' life cycle because older individuals may not have time to recover from their (financial and psychological) losses if the firm fails and individuals face a discontinuity in their occupation., (iv) the need for tailored training programs, mentoring or other type of initiatives that contribute to improve firm performance (our variable controlling for business net income has a positive impact on SEs' satisfaction).

A potential policy measure is the constitution of a "network of buddies" that could be able to give voluntarily moral support for prospective and current entrepreneurs. Although the importance of this network has been highlighted in the work of Davidsson and Honig (2003) for entrepreneurs in general, we believe that the drive of SEs for non-monetary outcomes unveils vast potential for this type of programs rather than, for example, direct financial support.

Our results show that being unemployed for long periods at an older age yields a negative effect on business satisfaction. Hence, special attention by policy-makers can be given the fact latent or nascent older individuals went through unemployment. As longer unemployment spells associate with lower mental health, programs should be designed firstly to improve individuals' health and increase self-efficacy, and then, support the start and development of firms.

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<sup>20</sup> By analyzing the replies for the open question: Overall how satisfied are you with your firm?, individuals acknowledge the importance of accomplishing their goals in order to feel satisfied with the firm.

### 5.3. Limitations and implications for future research

While this study sheds new light on senior entrepreneurship and business satisfaction, this research comes with some limitations.

First, we focus on older individuals who developed their firms for, at least, five years. Although focusing on mature businesses brings the possibility and advantage of assessing individuals' entrepreneurial process, according to Amoros et al. (2013), entrepreneurs in more mature firms tend to exhibit higher level of "subjective well-being than early-stage entrepreneurs" (p. 64) because the latter are probably dealing with more uncertain conditions and pressures to develop the firm. Consequently, it is important future studies to analyze business satisfaction at different stages of firm cycle, eventually through the use of rich longitudinal matched employer-employee sets of data. Furthermore, future research should also focus not only on satisfaction but also combine it with different types of business assessment and, particularly provide a closer examination to the factors, costs and impacts associated with business failure among SEs (Shepherd, 2015).

Second, given the sample size, generalization of our results towards another representative population of SEs should be done cautiously. It would be, therefore, desirable that future studies could be developed based on larger samples. Future research based on larger samples (and, as mentioned before, longitudinal matched employer-employee data) could test if SEs' monetary and non-monetary orientation profiles associate with different business satisfaction and well-being levels (Shir, 2015).

Third, the analysis focuses on the Portuguese context. As previously discussed, we believe Portugal is an important case study for research on senior entrepreneurship. However, it is noteworthy to mention that the country went through an economic crisis, which started in late 2008/early 2009, and the respondents to our survey engaged in entrepreneurship in 2004-2009 – prior to the economic and financial crisis and recession. While the crisis may severely influence firm performance and individual's business satisfaction and, therefore, constitute a limitation to our

analysis, it can also be an opportunity for further research (i.e., the economic crisis can be studied as used as an exogenous shock to SEs' types and thresholds of performance).

Fourth, findings may be subject to self-reporting biases. Individuals may not objectively recognize either their true motivations or their satisfaction. Future research should gather qualitative and quantitative data on SEs to mitigate this potential problem.

## **6. CONCLUSIONS**

Older individuals constitute a segment of the global population that is increasing at a significantly high annual rate, making it the fastest growing population group on the planet. An increasingly elderly workforce, together with longer lives and occupational careers, is requiring careful and increased attention by policymakers and academics. Although a growing body of entrepreneurship research has been focusing on older individuals, senior entrepreneurship is still a recent and significantly unexplored topic in the field. Within the extant research on senior entrepreneurship almost no studies investigate entrepreneurs' outcomes. We attempt to fill this gap by proposing that (complementarily to occupational choice theories) socioemotional selectivity and continuity theories are suited and offer rich conceptual background to explain the factors influencing individuals' satisfaction with the business. Results from our empirical analysis provide evidence that SEs extract higher satisfaction from non-monetary outcomes, such as independence, creativity, compared to the, notwithstanding important, monetary outcomes. In addition, our study concludes that SEs endowed with specific industry experience (continuity) are likely to gauge higher business satisfaction than those with a different or none experience in the same industry. Additionally, SEs who spend more than 12 months unemployed before starting/acquiring their firm are likely to experience a decrease in business satisfaction. This evidence suggests opens new research avenues for the topic of senior entrepreneurship and stresses the fact that policies aimed at promoting firm creation/development by older individuals and seeking to stimulate active ageing through senior entrepreneurship should be cautious and take into account individuals' work history.

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# ANNEX

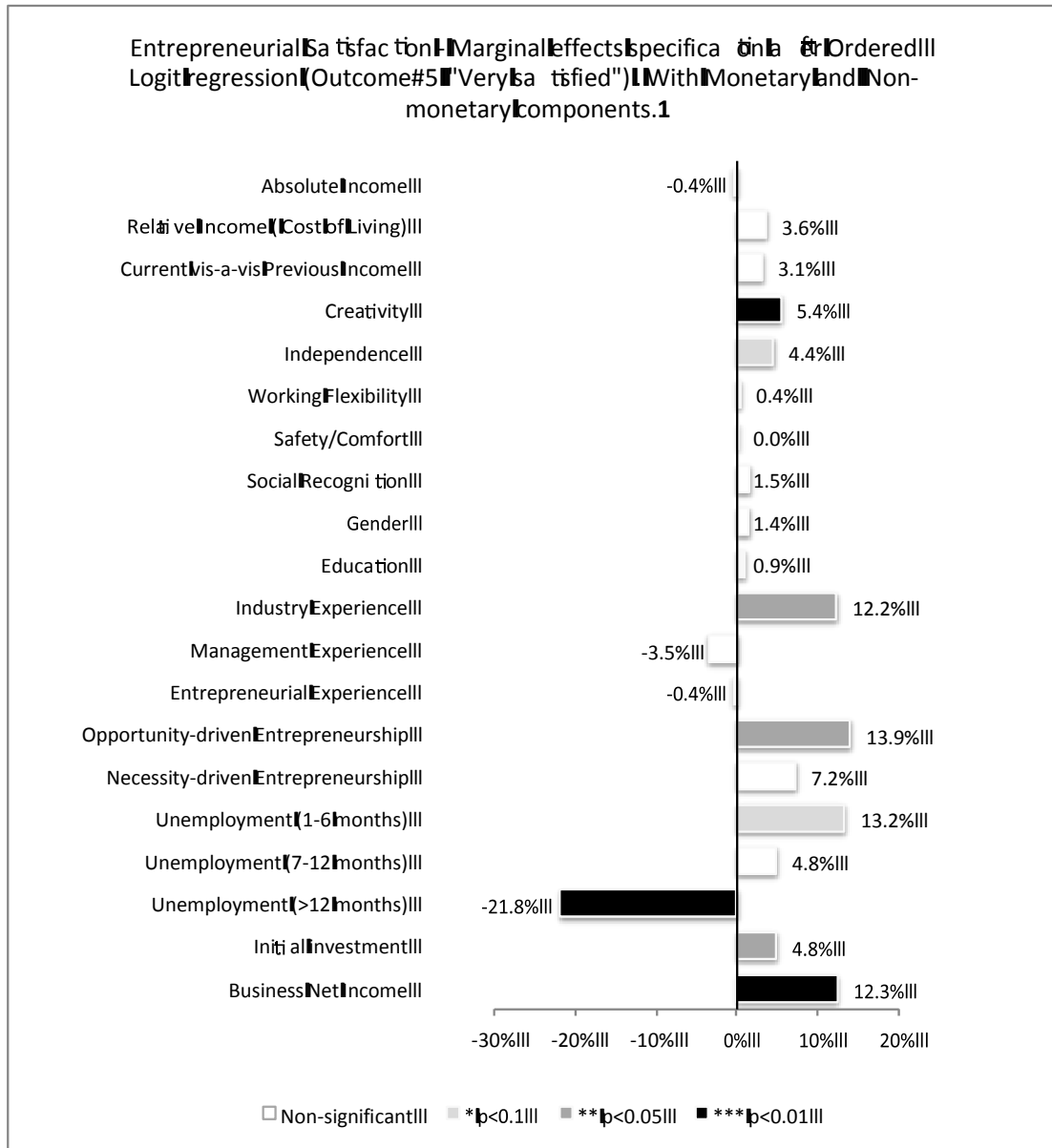
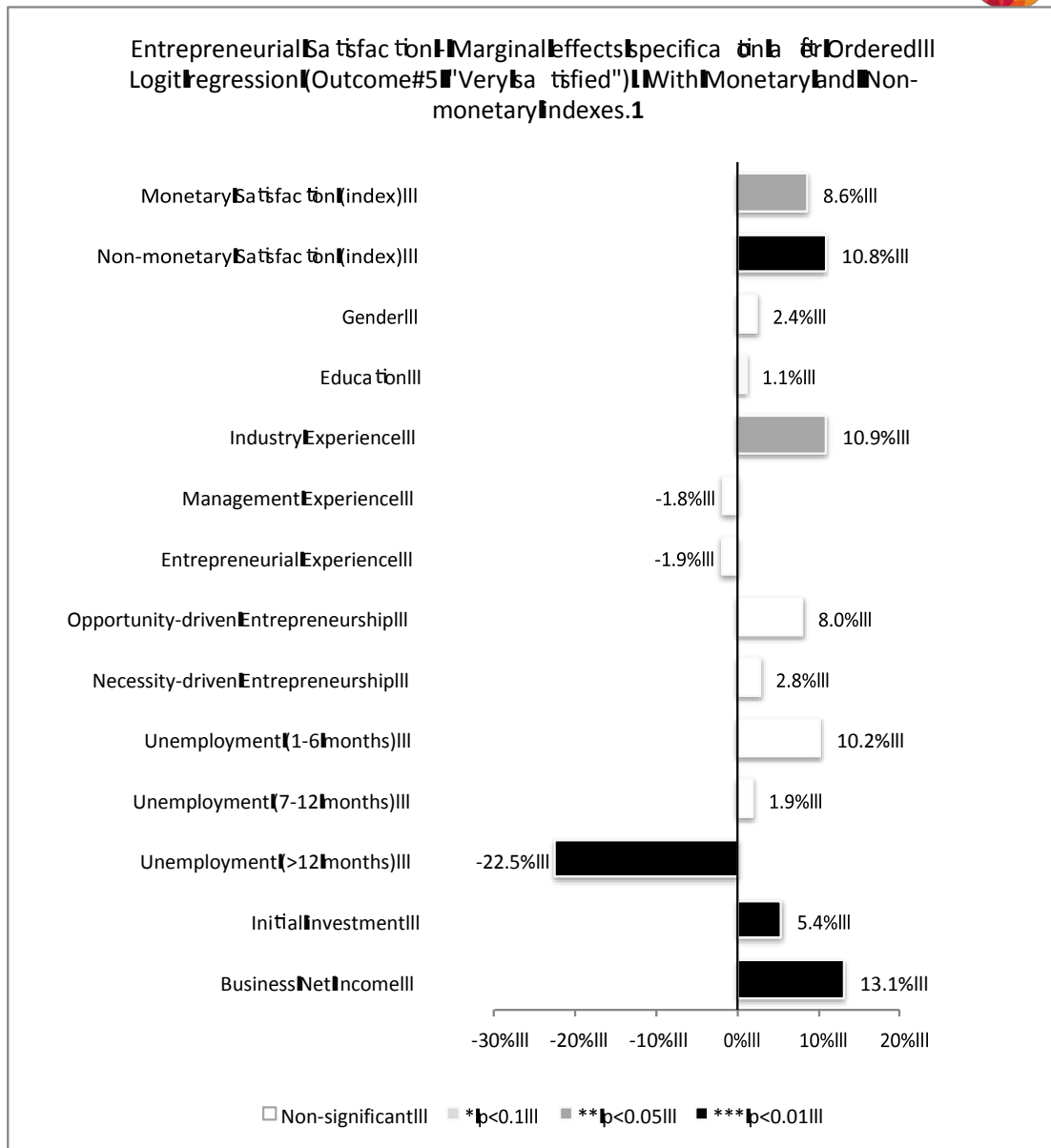


Fig. A. Marginal effects with 95% confidence intervals for business satisfaction (following estimations reported in Model III, Table 4)



**Fig. B.** Marginal effects with 95% confidence intervals for business satisfaction (following estimations reported in Model IV, Table 4)