Analysis of the factors influencing the formation of entrepreneurial intention among senior individuals

Tatiana Shalunova

Dissertation written under the supervision of prof. Cláudia Costa

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Abstract

This study evaluates the influence of motivational factors among individuals over 50 years old on the formation of their entrepreneurial intention. A thorough analysis of the differences between male and female senior entrepreneurs and opportunity- and necessity-driven motive is important for a full understanding of older entrepreneurs. We analyzed data from the Global Entrepreneurship Monitor between 2009 and 2013 across EU countries. In light with the Theory of Planned Behavior the findings show that perceived behavior control factors have significant and positive effect on entrepreneurial intention, while subjective norms have no significant effect on senior entrepreneurs. The perception of behavioral control factors differs among the female and male as well as opportunity- and necessity-driven senior entrepreneurs. This suggests that policymakers and business advisory agencies should offer programs that incentivize senior entrepreneurs to seize business opportunities by overcoming the fear of failure and developing a belief in their own entrepreneurial capabilities.

Keywords: senior entrepreneurship, entrepreneurial motivation, theory of planned behaviour, global entrepreneurship monitor

A presente dissertação avalia a influência que os fatores motivacionais entre indivíduos com mais de 50 anos de idade têm para o surgimento das suas intenções de empreendedorismo. Uma investigação minuciosa no que concerne às diferenças não só entre homens e mulheres empreendedoras seniores mas também entre motivos de necessidade e oportunidade é imperativa para uma melhor compreensão destes empreendedores. Analisámos dados da Global Entrepreneurship Monitor no que toca ao período entre 2009 e 2013 referente aos países da EU. Em consonância com a Teoria do Comportamento Planeado, as inferências demonstram que os fatores de controle comportamentais observados são dotados de significância positiva para explicar as referidas intenções de empreendedorismo. No entanto, as normas subjetivas não têm efeito significativo nos empreendedores seniores. A perceção dos referidos fatores difere não só entre homens e mulheres mas também entre empreendedores por motivos de necessidade e oportunidade. Isto sugere que os decisores políticos e as agências de consultoria empresarial devem oferecer programas que incentivem empreendedores seniores a perseguir oportunidades de negócio superando o medo de ser malsucedido e desenvolvendo a convicção nas suas próprias capacidades empreendedoras.

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Chapter 1. Introduction

1.1 Entrepreneurship & the aging population

By 2030 approximately 37 percent of the population in European Union will be over 55 years old (Halabinsky, Potter, and Kautonen, 2012). This demographic shift will have profound social and economic implications: the retirement age will likely have to be raised, because the available younger population that can support the retired part will decrease in relative size. The reduction of available labor force might increase the demand for the female labor force and jeopardize the work-life balance of working population. Together these factors might hinder fertility levels and further accelerate the population aging (Martinez-Fernandezet al., 2012).

To counteract the negative economic effects of an aging population governments can increase the rate of entrepreneurship among individuals over 50 years old. Previous research in the field of senior entrepreneurship showed that, firstly, self-employed individuals tend to retire later than the employed ones, which saves money in public pensions and increases human capital deployment in terms of time (Engelhardt, 2012). Secondly, seniors tend to be more satisfied with their work and life as entrepreneurs than as routine employees (Kautonen, Kibler, and Minniti, 2017). However, there is no academic consensus on whether promoting self-employment among the individuals over 50 years old has positive (Kautonen, Down, and South, 2008) or negative (Lewis and E. Walker, 2011) influence on society, in terms of quality of life for seniors and pressure on the welfare system, which makes the research in a fairly new field of senior entrepreneurship very important.

Senior (third-age, older, gray) entrepreneurs are individuals over 50 years old who are planning to start a business or recently started a business (Kautonen, Down, and South, 2008) Interestingly, research shows that such entrepreneurs differ from younger cohorts in their entrepreneurial perceptions and motivations. (Levesque and Minniti, 2006). It means that the frameworks for entrepreneurship might need to be revised to accommodate such differences, when the goal is to understand the formation of the entrepreneurial intentions among seniors. Moreover, promotional and support programs might have to be adapted to the specific characteristics of the older entrepreneurs.

Several European countries already created governmental programs to support senior entrepreneurs (Halabinsky, Potter, and Kautonen, 2012). For example, programs as ”Best agers”, ”Grundtvig” and ”Fe:male scheme” are operating in multiple European countries, while ”Biiugi” works only in Germany and ”PRIME” in UK. However, the rate of entrepreneurial intention and early-stage entrepreneurial activity (TEA) among seniors in European countries is still below 5 percent, the lowest rates in the world. (GEM 2015/2016 Global Report 2016) Therefore, we argue that for more effective promotion of senior entrepreneurship it is crucial to investigate the social and individual factors that influence the formation of entrepreneurial intention opportunity- and necessity-driven male and female senior entrepreneurs.

1.2 Academic and Managerial Relevance of Research

Governments use the promotion of late-career entrepreneurship as one of the policies to counteract the negative economic effects of an aging population. Previous research in the field of senior entrepreneurship showed that self-employed individuals tend to retire later than the employed ones, which saves money in public pensions and increases human capital deployment in terms of time (Engelhardt, 2012). Moreover, late-career switch to the entrepreneurship is positively associated with an increased quality of life measured by the satisfaction of pleasure, self-realization, control and autonomy (Kautonen, Kibler, and Minniti, 2017). Therefore, promotion of the senior entrepreneurship is an important initiative that could change the existing economic models of aging demographics; policy makers and business advisory agencies should pay close attention to the development of these promotional and support programs.

Previous studies showed the importance of the entrepreneurial intentions in the process of formation of entrepreneurial behavior (Lee and Wong, 2004) and the need for understanding of the attitudes and beliefs that have an influence on them (Segal, Borgia, and Schoenfeld, 2005). In order to make the support and promotional programs more effective, policy makers need to understand the factors that influence entrepreneurial intentions among seniors.

Analysis in this thesis will follow this research path and contribute to the senior entrepreneurship field of study.

To fully understand entrepreneurial motives of older entrepreneurs we will draw on the Theory of Planned Behavior (TPB) (Ajzen, 1991) and analyze how perceived behavioral control and subjective norms influence the entrepreneurial intention. Previous studies showed that the entrepreneurial intentions can be influenced by the perceived social pressure (Kautonen, Van Gelderen, and Tornikoski, 2013; Harms et al., 2014) and by beliefs about the personal abilities (Kautonen, Hatak, et al., 2015; Kautonen and Palmroos, 2010), however, it is not clear how these factors influence the formation of entrepreneurial intentions among seniors. Analysis of the Global Entrepreneurship Monitor (GEM) data collected over 5 years (2009-2013) in EU-28 countries will help us to shed the light on this question.

The reasons why seniors engaged in entrepreneurial activity can be divided into push and pull factors. Under push factors, older citizens can be pushed to start the business by age discrimination at work, insufficient pension payments or income, lack of opportunities for development at work. (Harms et al., 2014; Kautonen, Down, and South, 2008) This line of thought is aligned with the definition of necessity driven entrepreneurship. (Sautet, 2013) On the other hand, seniors can be motivated (pulled) to get self-employed in order to achieve a better work-life balance, and to use the experience and financial resources they accumulated so they can satisfy their psychological needs of autonomy, control, pleasure and self-realization (Kautonen, Kibler, and Minniti, 2017). Such motivations echo the research on opportunity-driven entrepreneurship (Sautet, 2013). As motivational factors differ for opportunity and necessity-driven entrepreneurs, understanding their influence on the formation of the entrepreneurial intention can assist policy makers in designing the correct governmental programs in European countries. In fact, the policy-makers and advisory agencies are more likely to be interested in stimulating seniors to get engaged in opportunity entrepreneurship rather than necessity entrepreneurship.

Motivation factors may also explain gender differences in entrepreneurial attempts. Surprisingly, senior females are less likely than senior males to start a business (Hart, Anyadike-Danes, and Blackburn, 2004; GEM, 2016). We have to make an important distinction between the motivational factors for female and male senior entrepreneurs because genders have different levels of assertiveness and confidence in the ability to start a

business, access to capital and assets, as well as expected role models (Kautonen, Down, and South, 2008). The data on these differences in motivational factors can help determine whether the promotional and support programs should be different for female and male senior entrepreneurs.

1.3 Research Questions

In order to understand how to develop more opportunity-driven senior entrepreneurs in the European Union, we need to investigate how the motivational factors influence the formation of entrepreneurial intention among opportunity and necessity-driven male and female senior entrepreneurs.

The following research questions will help us to find the answers to the problem stated above:

1. Which conceptual frameworks and models can explain the relationship between the motivational factors and the entrepreneurial intentions of seniors?
2. Which motivational factors influence the formation of entrepreneurial intention among seniors according to the existing research?
3. How do the previous factors differ for older and younger entrepreneurs according to the existing research?
4. How do these factors influence the intentions of opportunity-driven and the necessity-driven senior entrepreneurs?
5. How the influence of the previous factors differs for female and male senior entrepreneurs?

1.4 Thesis Structure

This thesis is organized in the following way: after the introduction and presentation of the research problem, we move on to the analysis of the existing literature on senior entrepreneurship and entrepreneurial intentions, hypotheses formed on the basis of the gained knowledge will be described in this chapter as well. Then in chapter three we will then explain the data collection procedures and methodology that will be used for testing the hypotheses. The results of the analysis will be described in chapter four. Chapter five will

provide our answers to the research questions and implications of the results for policy makers and business advisory agencies, recommendations for further research and limitations of the study will be described there as well.

Chapter 2. Literature Review

2.1 Conceptual frameworks and models explaining the formation of entrepreneurial intention

Since the 1980s a considerable part of literature has been devoted to the topic of entrepreneurial intentions (Kibler, 2013). Initially, entrepreneurial research was focused on finding the characteristics that distinguished entrepreneurs from the general population. Eventually researchers recognized the limitations of static, content-oriented models and developed process-oriented cognitive models that are focused on the attitudes and beliefs of the individuals and their influence on the entrepreneurial intentions and behaviors (Segal, Borgia, and Schoenfeld, 2005). Nowadays the intention to start a business is seen as the first step in the process of firm formation (Lee and Wong, 2004) and that is why researchers focus their attention on the antecedents of the entrepreneurial intention and the process of their formation (Kibler, 2013).

Arguably the most widely accepted tool for predicting intentions and behavior across a wide variety of human behaviors, including entrepreneurial behaviour is the Theory of Planned Behavior proposed by Ajzen (Ajzen, 1991; Kolvereid, 1996; Tkachev and Kolvereid, 1999; Van Gelderen et al., 2008). In the TPB intentions are defined as motivations that influence behaviour of an individual. Intentions are influenced by three antecedents: personal attitude to the behaviour (PA), which evaluates the attractiveness of the behaviour for an individual; subjective norms (SN), which measures the perceived social acceptance of the behaviour; and perceived behavioural control (PBC), which is defined as perceived ability to perform the behaviour. Theory of planned behaviour was used in different articles to evaluate the importance of the motivational factors that influence the intentions of senior entrepreneurs (Harms et al., 2014; Kautonen, Van Gelderen, and Tornikoski, 2013; Walker, Jeger, and Kopecki, 2013).

Such concept domains of the theory of TPB as subjective norms, perceived behavioral control and intention can be linked to elements of the conceptual framework of Global Entrepreneurship Monitor (GEM). For instance, intentions are similar to the Entrepreneurial

Activity used in the GEM conceptual framework. Subjective norms can be linked to the Social Values towards Entrepreneurship, which include the perception of entrepreneurship as a good career choice, media attention to entrepreneurship and social status of entrepreneurs. And we can also draw a parallel between perceived behavioral control and individual psychological factors that refer to the one's ability to see the opportunities, believe in capabilities and be ready to take the risks despite the fear of failure (GEM 2015/2016 Global Report 2016). Moreover, it is necessary to mention that according to the TPB not all three antecedents have to be present for the intentions to exist (Ajzen, 1991), therefore, we can investigate the influence of some of them.

2.2 Motivational factors for senior entrepreneurs

Seniors can be motivated to become entrepreneurs by push and pull factors (Amit and Muller,1995, Kautonen, Down, and South, 2008, Gilad and Levine, 1986). The push and pull approach (PPA) defines "push" factors as negative factors that force individuals into self-employment and "pull" factors as positive factors such as profitable business opportunities and the desire for independence. (Shapero and Sokol, 1982; Feeser and Dugan, 1989; Amit and Muller,1995) Push factors for seniors usually include insufficient income and pension payments, long-term unemployment, lack of satisfaction with the current job and increasing job discrimination. Pull factors include the desire to have more personal freedom, chance to take an advantage of a business opportunity, possibility of higher income, chance to develop the abilities and satisfy fundamental psychological needs in control, autonomy, self-realization and pleasure (Kautonen, Down, and South, 2008; Kautonen, Kibler, and Minniti, 2017). Push and pull factors mainly affect the individual's attitude towards certain behavior and personal motivation (Harms et al., 2014).

A senior can be motivated to become an entrepreneur, but without the belief that he or she has enough skills to start a business, it is unlikely to happen. The influence of perceived capabilities was acknowledged by different researchers. Shapero and Sokol (1982) included perceived feasibility as one of the motivational factors and described it as a perceptual measure of personal capability to create a venture. Later Segal, Borgia, and Schoenfeld (2005) stated that the question whether an individual has necessary capabilities for starting a

business is one of the questions predicting an individual's intentions to become an entrepreneur. Experience was pointed as a key factor that gives senior entrepreneurs the confidence that they can engage in entrepreneurship (Harms et al., 2014).

Not only perceptions of individual ability are important to drive the creation of a new business, but how the entrepreneurs perceive opportunities in the surrounding environment can determine the entrepreneurial rate of countries. Ability to see business opportunities was identified by Shane, Locke,and Collins (2003) as the first step into entrepreneurial activity. Sarasvathy, Simon, and Lave (1998) showed that compared to bank experts firm founders tend to see more opportunities than risks when provided with the same information. Other studies showed that the combination of the ability to take the risks and high self-efficacy allows entrepreneurs to see opportunities where the others see risks (Segal, Borgia, and Schoenfeld, 2005). We can see that the ability to see the business opportunities was proposed by several authors as a factor influencing the formation of entrepreneurial intention.

Moreover, the propensity to take the risks is seen as a trait of entrepreneurs. The role of risk was considered in different economics-based models (Campbell, 1992; Van Praag and Cramer, 2001, Levesque, Shepherd, and Douglas, 2002). Douglas and Shepherd (2000) stated that the higher an individual's tolerance to risk, the greater the incentive to be self-employed. The variation of individuals' perceptions of risk and opportunity influence entrepreneurial decisions (Shane and Venkataraman, 2000).

The perception of individual's capabilities, business opportunities and propensity to take risks relate to the perceived behavioral control, which is an antecedent of the entrepreneurial intention. The analysis of the previous studies allows us to suppose that perceived behavioral control and entrepreneurial intentions are positively associated, therefore we suggest the following:

H1: Perceived behavioral control has positive influence on a senior individual to start entrepreneurial activity.

If individual's perceptions of their ability to start a business are determinant to pursue a new venture, then individual's perceptions of the appropriateness of the entrepreneurial behavior in a given society can hinder or foster an individual to start its own business. For instance, Bird's (1988) study shows that entrepreneurial intentions are influenced by personal

perceptions of supportiveness of a given society, the business environment and individual's abilities. According to Cooke and Sheeran (2004) environmental conditions influence the beliefs of individuals regarding entrepreneurship and moderate the process of formation of entrepreneurial intentions. Harms and colleagues (2014) conducted the in-depth interviews with seniors and showed that the loss of high status can be inhibiting the willingness of seniors to switch to self-employment and the examples of other entrepreneurs in the community are inspiring, meaning that the willingness of seniors to become entrepreneurs is affected by the response of the society to such behavior. Moreover, Kautonen, Hatak, et al. (2015) and Wainwright et al. (2011) pointed out that senior entrepreneurs can be seen as negative deviants by the members of their reference groups. Supportiveness of the society and the appropriateness of the entrepreneurial behavior relate to the subjective norms. As we can see seniors tend to have negative perceptions regarding the entrepreneurial environment, therefore, it is possible to make the following hypothesis.

H2: Subjective norms have negative influence on a senior individual to start entrepreneurial activity.

2.3 Differences between older and younger entrepreneurs

The academic community defines senior (third-age, older, gray) entrepreneurs as individuals over 50 years old who are planning to start a business or recently started a business (Curran and Blackburn, 2001; Hart, Anyadike-Danes, and Blackburn, 2004; Kautonen, Down, and South, 2008). Thus it is reasonable to accept that entrepreneurs who are younger than 50 years old are called prime-age or younger entrepreneurs. It is necessary to investigate the differences between older and younger entrepreneurs pointed out by the previous researchers. First of all, seniors are less willing to get engaged in entrepreneurship than their younger counterparts (Praag and Ophem, 1995; Blanchower, Oswald, and Stutzer, 2001; Curran and Blackburn, 2001; Singh and DeNoble, 2003). Levesque and Minniti (2006) showed that the rate of entrepreneurship among the adult population resembles an inverse U-curve, with a peak between the ages of 35 to 40 years, then sharply declining with each additional year. In fact, Hart, Anyadike-Danes, and Blackburn (2004) analysed GEM data in UK in 2003 and showed that the third-age individuals were twice less likely to be engaged in the entrepreneurial activity than their prime-age counterparts. The argument is that because

seniors perceive their time as a more scarce resource than younger people, it makes them more risk-averse to the idea of starting a business (Levesque and Minniti, 2006).

Secondly, senior entrepreneurs differ from the younger counterparts in terms of their work and life experience. Several authors pointed out that senior entrepreneurs have higher levels of managerial and industry experience and superior personal social networks that might help them to be more successful in starting business than the younger entrepreneurs (Singh and DeNoble, 2003; Weber and Schaper, 2004; Kautonen, Down, and South, 2008). Even though work experience seems to be an enabling factor for the senior entrepreneurs, it also can be preventing seniors with certain backgrounds from becoming entrepreneurs, because they cannot perceive themselves as entrepreneurs after working for years in one specialization (Kautonen, Luoto, and Tornikoski, 2010).

Thirdly, age itself plays a more important role for the senior entrepreneurs than for younger entrepreneurs. The age discrimination in the society imposes more barriers for potential senior entrepreneurs (Weber and Schaper, 2004). Moreover, Kautonen, Hatak and colleagues (2015) analyzed the relationship between 'age-based self-image' and senior entrepreneurship and showed that people who have a positive age-based self-image are more likely to become entrepreneurs.

Moreover, gray entrepreneurs are more likely to have stronger financial position than younger entrepreneurs (Weber and Schaper, 2004; Kautonen, Down, and South, 2008). However, previous articles showed that the strong financial position can be both enabling and constraining factor for the seniors. For instance, the funds accumulated by seniors can be useful for starting a business (Singh and DeNoble, 2003; Kautonen, Luoto, and Tornikoski, 2010). On the other hand, as soon as the employees usually reach their peak income level by the age of 45-54 they have financial disincentives to switch to entrepreneurship which is associated with lower income level (Kautonen, Hatak, et al., 2015). Hence, seniors might perceive starting a business as a potential threat to their income and status.

Another important differentiating aspect is that seniors are more likely to switch to self-employment in order to achieve greater independence and realize themselves (Kautonen, Down, and South, 2008; McKay, 2001; Weber and Schaper, 2004). Kautonen, Kibler, and Minniti (2017) showed in the study of senior entrepreneurs that the switch to self-

employment is positively associated with the higher level of satisfaction of the fundamental psychological needs of autonomy, control, self-actualization and pleasure and negatively associated with the income.

These findings show us that older entrepreneurs perceive time, capabilities, opportunities and the environment in a specific way. Therefore, we can suppose that perceived behavioral control factors and subjective norms are seen differently by younger and older entrepreneurs and propose the following hypotheses:

H3: Perceived behavioral control factors are associated with the age category of entrepreneurs.

H4: Subjective norms are associated with the age category of entrepreneurs.

2.4 Differences between opportunity and necessity-driven senior entrepreneurs

It is important to clarify that opportunity-driven entrepreneurship arises when entrepreneurs discover and exploit an opportunity and necessity-driven entrepreneurship refers to the situations where individuals start a business because they have no other alternative to make a living (Sautet, 2013). Opportunity-driven entrepreneurship has positive and significant effect on the economic development, while the necessity entrepreneurship has no effect (Acs, 2006). Therefore, policy makers are more interested in increasing the level of opportunity entrepreneurship in a country, which makes it important to understand what are the differences between opportunity and necessity entrepreneurs in terms of their motivation. Firstly, opportunity-driven entrepreneurs are usually motivated by pull factors while necessity entrepreneurs are more likely to be driven by push factors (Kautonen and Palmroos, 2010). Secondly, the motivation of opportunity entrepreneurs depends more on the external factors such as family and governmental support compared to the one of necessity entrepreneurs (Bhola et al., 2006). Moreover, necessity entrepreneurs are more likely to be less satisfied with their choice of entrepreneurship than opportunity entrepreneurs, however, it can be mitigated when the necessity entrepreneurs generate satisfactory and regular income (Kautonen and Palmroos, 2010). Lastly, the opportunity and necessity entrepreneurs perceive differently the attractiveness of business opportunities and determinants of success (Block

and Wagner, 2010). Taking into account these findings, we can suppose individual's perceptions of the capabilities, opportunities and support of the environment are positively associated with the likelihood of an entrepreneur to be driven by an opportunity, rather than necessity. Therefore, we can propose the following hypotheses.

H5: Perceived behavioral control has positive influence on the likelihood of a senior entrepreneur to be opportunity-driven.

H6: Subjective norms have positive influence on the likelihood of a senior entrepreneur to be opportunity-driven.

2.5 Differences between female and male senior entrepreneurs

Older entrepreneurship has different impact for men or women. Senior females are less likely than senior males to start a business (Hart, Anyadike-Danes, and Blackburn, 2004; GEM, 2016). Moreover, senior females are more likely to be pushed into entrepreneurship by necessity when compared to senior males (GEM, 2016). This can be explained by the differences in the attitudes, beliefs and motivational factors that make both women and men choose entrepreneurship even in developed societies. Extant research points out that women perceive entrepreneurship as a less feasible option than men (Langowitz and Minniti, 2007), which can be explained by the findings that females have lower perceived self-efficacy in managing the entrepreneurial tasks (Shaver, Gatewood, and Gartner, 2001; Wilson, Marlino, and Kickul, 2004). For instance, female senior entrepreneurs are more likely than male ones to express concerns about their lack of business knowledge, experience and skills (Walker and Webster, 2007) and report that they need more financial and accounting aid (Jones and Tullous, 2002). Those perceptions might be partly formed by the social beliefs that masculine traits and characteristics are more valuable in business than feminine ones (Marlow and Patton, 2005). These results show us that senior females are likely to perceive their own abilities and business opportunities in a different way than senior males, therefore, we can test the following hypothesis:

H7: Perceived behavioral control factors are associated with the gender category of senior entrepreneurs.

Generally, the previous studies show that public's perceptions of the appropriateness of

career aspirations play an important role for women because they are conditioned by societal norms and roles (Welter et al., 2007). Prior studies hypothesize that those perceptions inhibit the willingness of senior women to start a business (Kautonen, Down, and South, 2008; McKay, 2001). Overall, these findings show us that senior females are less likely to have the beliefs that entrepreneurship is an appropriate occupation for women. That is why we should find out whether the subjective norms play different role for senior females and males by testing the following hypothesis:

H8: Subjective norms are associated with the gender category of senior entrepreneurs.

Chapter 3. Methodology and Data

To answer the research questions and get a better understanding of the motivational factors for the senior entrepreneurs, we conducted an analysis of the data collected by Global Entrepreneurship Monitor (GEM), which is a worldwide study of entrepreneurship that collects information about the entrepreneurial behaviour and attitudes of individuals in different countries since 1999. It is used by large international organizations such as the United Nations, World Bank and the Organization for Economic Co-operation and Development (OECD), which is why we can consider it reliable enough to be used for this thesis.

Our first step was to combine the datasets from the years 2009-2013. 2013 is currently the last year with the publicly available information from GEM. Similar studies were taking a five year span to control for the year effects, which is why we took the Adult Population Survey global individual level datasets from 2009 to 2013. Next, we filtered out the information about only the EU-28 countries in a separate dataset, and created dummy variables for all the countries and the years 2009-2013, to control for the country and year effects during the analysis. We also created a dummy variable called "Age Groups" to separate the individuals over 50 years old from the younger ones. We then filtered out the data for younger individuals in the final version of the dataset to be used for this thesis.

3.1 Data Description

3.1.1 Full Dataset

The full dataset consists of 400,895 observations. The observations are not equally distributed among the five surveyed years and 28 surveyed countries, which can be explained by the inefficiencies of the GEM data collection process. Women are slightly overrepresented in the data, making up 52.1 percent of the respondents versus 47.9 percent males. 62.3% of all respondents are below 50 years old, which makes 37.7% over 50 years old.

In this dataset 53.7% of respondents are part-time or full-time employed, 14.1% are retired or disabled, 9.2% is self-employed, the remaining percentage are students, homemakers or respondents not working. Income is evenly distributed, 24,5% of the sample belong to the lowest 33%tile, 23,9% the middle 33%tile and 26,5% make up for the highest 33%tile. The majority of the respondents (34.6%) has a secondary education degree, 33.3% have a post-secondary degree, 19.3% of respondents claimed to have some secondary degree.

Only 5.8% of the respondents are involved in early-stage entrepreneurial activity (TEA), out of which 4.5% are opportunity-driven entrepreneurs and 1.2% are necessity-driven. The TEA rate is higher for the full sample than for the senior-only sample. The majority of entrepreneurs (45.7%) stated that the desire for greater independence was the key driver for them, 33.2% of the respondents admitted that they are interested in increasing personal income, 12.7% want to simply maintain the existing level of income.

3.1.2 Senior Dataset

The senior dataset consists of 151,198 observations, which are also not equally distributed among the years and the countries. Distribution of the sexes is comparable to the full dataset, women making up 53.6 percent of the respondents against 46.4 percent men.

The senior dataset shows lower employment. 40.7% is part-time or full-time employed, 34.2% are retired or disabled, 9.2% are self-employed, the rest are students, homemakers and not working. As with the full sample, income distribution is almost equal, 20,0% of the sample present the lowest 33% tile, 24,3% make up the middle 33%tile and 30,1% belong to the highest 33%tile. 31.1 percent of the senior respondents has a secondary education degree, 28.9% has a post-secondary degree, 19.3% of respondents claimed to have some secondary degree.

Only 3.3% of the respondents are involved in early-stage entrepreneurial activity (TEA), out of which 2.5% are opportunity-driven entrepreneurs and 0.8% are necessity-driven. It shows us that the seniors are almost twice less likely to be engaged in entrepreneurship than individuals from the full dataset, which goes in line with the previous findings (Hart, Anyadike-Danes, and Blackburn, 2004).

The majority of senior entrepreneurs (39.9%) stated that the desire for greater independence

was the key driver for them and 30.7% of the respondents admitted that they are interested in increasing personal income. This data concurs with the findings from the previous research by (Kautonen, Kibler, and Minniti, 2017).

3.2 Variables

Currently, the intention to start a business is seen as the first step in the process of firm formation (Lee and Wong, 2004) and that is why the researchers focus their attention on the antecedents of the entrepreneurial intention and the process of their formation (Kibler, 2013; Segal, Borgia, and Schoenfeld, 2005). Following this research path we chose as dependent variables the engagement in Total early-stage entrepreneurial activity (coded as TEAyy), and engagement in Opportunity early-stage entrepreneurial activity (TEAOPP).

In order to explain entrepreneurial activity, we will use one's ability to see good business opportunities around oneself, the importance of this factor was described by several authors Sarasvathy, Simon, and Lave, 1998; Shane, Locke,and Collins, 2003; Segal, Borgia, and Schoenfeld, 2005). We coded this variable as OPPORT.

Secondly, it is important to investigate how influential is the belief that an individual has enough skills, experiences and knowledge to start a business. The influence of perceived capabilities was acknowledged by different researchers (Shapero and Sokol, 1982; Segal, Borgia, and Schoenfeld, 2005). That is why it is important to include the perceived capabilities factor in our analysis as the independent variable SUSKILL.

One more important factors that influences the entrepreneurial intention along with the perceived opportunities and capabilities is the propensity to take the risks. The role of risk was considered in different economics-based models (Campbell, 1992; Van Praag and Cramer, 2001; Levesque, Shepherd, and Douglas, 2002) and acknowledged as an important factor influencing the formation of the entrepreneurial intentions (Douglas and Shepherd, 2000; Shane and Venkataraman, 2000). Therefore, it is necessary to include in our analysis the ability to take risk and pursue business opportunities while overcoming the fear of failure as independent variable FEARFAIL.

The factors that were mentioned previously are referring to the individual's perceptions of his or her own abilities to see good opportunities and start a business. According to the GEM conceptual framework they belong to the individual psychological attributes, which can be linked to the perceived behavioral control, one of the concept domains of the Theory of Planned Behavior (TPB) (Ajzen, 1991).

However, we have to take into consideration not only these beliefs but also individual's perceptions of the environment. Numerous authors acknowledged that the regional environment (Kibler, 2013), supportiveness of a given society (Bird, 1988) and environmental conditions influence the beliefs of individuals regarding entrepreneurship and moderate the process of formation of entrepreneurial intentions (Cooke and Sheeran, 2004). Therefore, it is necessary to evaluate how the social attitude towards entrepreneurship influences individuals' perceptions of the attractiveness of this career choice.

We modelled this variable by including in the analysis the factors that belong to social values towards entrepreneurship in GEM conceptual framework. Particularly, we will include the perceived attractiveness of the entrepreneurship as a career choice coded as NBGOODC, perceived social status of the entrepreneurs coded as NBSTATUS and perceived media attention to entrepreneurs coded as NBMEDIA. We will link social values towards entrepreneurship to the subjective norms, another concept domain of TPB. Even though subjective norms are usually evaluated as a measure of social support for the behavior by family, friends and significant others, while the social values towards entrepreneurship focus on the individual's perception of the common attitude towards entrepreneurship in the society, still both of them show the influence of the external opinion regarding the entrepreneurship on the individual's perceptions. Therefore, we can use the factors from the GEM survey to estimate the influence of the subjective norms on the entrepreneurial intentions among seniors.

Table 3.1 shows our variables used in the SPSS analysis. Dependent variables are marked as DV, independent variables as IV.

Type	Name	Item	Values
DV	TEAyy	Involved in Total early-stage Entrepreneurial	1 = Yes

		Activity	0 = No
DV	TEAOPP	Involved in Opportunity early-stage Entrepreneurial Activity	1 = Yes 0 = No
IV	OPPORT	In the next six months, will there be good opportunities for starting a business in the area where you live?	1 = Yes 0 = No
IV	SUSKILL	Do you have the knowledge, skill and experience required to start a new business?	1 = Yes 0 = No
IV	FEARFAIL	Would fear of failure prevent you from starting a business?	1 = Yes 0 = No
IV	NBGOODC	In my country, most people consider starting a new business a desirable career choice	1 = Yes 0 = No
IV	NBSTATUS	In my country, those successful at starting a new business have a high level of status and respect	1 = Yes 0 = No
IV	NBMEDIA	In my country, you will often see stories in the public media about successful new businesses	1 = Yes 0 = No
IV	GENDER	What is your gender?	0 = Female 1 = Male
IV	AGE	What is your age?	0 = Below 50 years old 1 = Above 50 years old

Table 3.1: Variables in the model

3.2 Methodology

In order to test first and second hypotheses where we argue that perceived behavioral control has positive influence and subjective norms have negative influence on the entrepreneurial intention of seniors we follow a two-step analysis. Firstly, we run the chi-square tests for entrepreneurs and non-entrepreneurs within the senior dataset to understand which factors are associated with the engagement in TEA for seniors. Secondly, we run a binomial logistic regression to understand which factors significantly increase the likelihood of an individual to get engaged in TEA. This test is the most appropriate because the dependent variable is

dichotomous, the independent variables are categorical and have mutually exclusive and exhaustive categories. Because the formation of entrepreneurial intention is influenced not only by the factors that we want to investigate, but also by the external environment and personal experiences (Kautonen, Luoto, and Tornikoski, 2010) we add as control factors country, year, level of education, level of income and current occupation. Control factors will be coded as dummy variables and added to the model. Further we will follow the same steps in order to test H5 and H6 where we stated that perceived behavioral control and subjective norms have positive influence on the likelihood of an entrepreneur to be opportunity-driven.

As soon as factors that belong to the perceived behavioral control and subjective norms are dichotomous categorical variables, we will use the chi-square test H3 and H4 and find out whether the differences in responses are significant and associated with age group. In order to test H7 and H8 where we stated that perceived behavioral control and subjective norms are associated with the gender category we will follow the same procedure as with the third and fourth hypotheses.

Chapter 4. Analysis and Results

4.1 Factors influencing the formation of entrepreneurial intention among seniors

H1: Perceived behavioral control has positive influence on the a senior individual to start entrepreneurial activity.

H2: Subjective norms have negative influence on a senior individual to start entrepreneurial activity.

Starting by conducting a chi-square analysis and comparing the entrepreneurs and non-entrepreneurs in the sample of seniors. The results show that the differences in the factors contributing to the perceived behavioral control are significant ($\chi 2 < 0.001$) and associated with the involvement in TEA. Nevertheless, not all factors contributing to the subjective norms follow the same pattern. The summary of the results is presented in the table below.

Factor	Involved in TEA	Not involved in TEA	Pearson Chi-square value	Asymptotic significance 2-sided
OPPORT	42.9%	23.1%	897.795	0.000
SUSKILL	86.8%	40.1%	4244.732	0.000
FEARFAIL	73.0%	57.8%	449.837	0.000
NBGOODC	53.2%	58.7%	50.650	0.000
NBSTATUS	61.9%	66.2%	35.014	0.000
NBMEDIA	50.3%	50.3%	0.001	0.972

Figure 4.1.1: Results of chi-square analysis for TEA

Our results show that seniors who are involved in early-stage entrepreneurship are more likely to see business opportunities (42.9%) then the ones who are not involved (23.1%). Senior entrepreneurs are also more likely to believe that they have necessary skills, knowledge and experience to start a business (86.8%) compared to the non-entrepreneurs

(40.1%). Reasonably enough, senior entrepreneurs are less likely to be stopped by the fear of failure, 73.0% of entrepreneurs are ready to take the risks while only 57.8% of non-entrepreneurs can do the same.

Further chi-square analysis of the factors contributing to the subjective norms showed that seniors not involved in TEA are significantly more likely to believe that the entrepreneurship is a good career choice and that entrepreneurs have high level of status and respect in the society. For example, 58.7% of non-entrepreneurs believe that entrepreneurship to be a desirable career choice, while only 53.2% of entrepreneurs believe in the same, ($\chi2 < 0.001$). And 66.2% of non-entrepreneurs see it as a respectable occupation, while only 61.9% of entrepreneurs are convinced in it, ($\chi2 < 0.001$). Both involved and not involved in TEA seniors agree that they often see stories about successful entrepreneurs on the media, the difference in the proportions is not significant ($\chi2 = 0.972$). These findings show us that subjective norms might be not influencing the odds of a senior individual becoming an entrepreneur.

In order to verify whether perceived behavioral control and subjective norms have positive or negative influence on the odds of a senior individual becoming an entrepreneur we will run the binomial logistic regression for the sample of individuals above than 50 years old.

The overall success rate of the model is 95.5%, however, the sensitivity of the prediction is very low, only 1.8%. The specificity of the model is 99.9%, meaning that the model predicts correctly the answers of non-entrepreneurs, rather than that of the entrepreneurs. This can be explained by the fact that the percentage of the early-stage entrepreneurs in the sample is very low, so the model is better at predicting the cases of non-entrepreneurs than entrepreneurs. The Nagelkerke R-square is 26.1%, which means that factors in the model explain 26.1% of the variation of the dependent variable, however, it is a pseudo R-square measure and we should not rely on this result completely. Moreover, it is necessary to acknowledge that the motivation for the entrepreneurship is complex, so we can suppose that the factors that are used in the model do not fully explain the motivations of the entrepreneurs, which might cause endogeneity problem. However, our goal is to understand the character of the relationship between the dependent and independent variables, so we can use this model keeping in mind that the coefficients might be biased.

The interpretation of the results of the regression shows that factors evaluating the perceived behavioral control OPPORT, SUSKILL, FEARFAIL are significant ($p<0.05$). Two factors that belong to the subjective norms are significant as well, NBSTATUS ($p=0.006$) and NBMEDIA ($p=0.021$). The factors are dichotomous and have answers ”Yes” and ”No”. As we can see from the categorical variables codings table the reference group for those factors is ”Yes” , meaning that we are going to evaluate the difference between the ”Yes” and ”No” answer. The short summary of the results is presented in the table below, full tables with the results can be found in Appendices.

Hypothesis	Variable	B	Sig.	Exp(B)
H1	OPPORT	-0.621	0.000	0.538
H1	SUSKILL	-1.404	0.000	0.246
H1	FEARFAIL	0.277	0.000	1.319
H2	NBSTATUS	0.111	0.006	1.117
H2	NBMEDIA	0.091	0.021	1.095

Figure 4.1.2: Results of binomial logistic regression for TEA

Belief that an individual has the necessary skills, knowledge and experience for starting a business has the most influence on the probability of becoming an entrepreneur. The odds of engaging in TEA is 75.4% lower ((0.246−1)*100%) for a senior individual who does not think that he or she has necessary skills for starting a business compared to one who does, holding other independent variables constant.

The odds of engaging in TEA is 46.2% lower ((0.538−1)*100%) for an senior individual who does not see good opportunities for starting a business compared to one who does, holding other independent variables constant. And predictably, the odds of engaging in TEA is 31.9% higher ((1.319-1)*100%) for an individual who would not be stopped by the fear of failure compared to one who would be, holding other independent variables constant. The results of the analysis show us that the factors contributing to the perceived behavioral control have significant ($p<0.05$) positive influence on the probability of engaging in TEA, therefore, we accept H1.

The analysis of the factors contributing to the subjective norms showed interesting results. The odds of engaging in TEA is 11.7% higher ((1.117-1)*100%) for a senior individual who doesn't think that successful entrepreneurs have high status and reputation compared to one who believes in it, holding other independent variables constant. And the odds of engaging in TEA is 9.5% higher ((1.095-1)*100%) for a senior individual who doesn't see the stories in the media about successful entrepreneurs compared to one who sees them, holding other independent variables constant. The third factor (NBGOODC) is not significant according to the results of this analysis. As we can see the senior individuals that perceive entrepreneurship as a good career choice and respectable occupation are actually not engaged in the entrepreneurial activity, therefore, we may conclude that subjective norms have no influence on the probability of a senior individual becoming an entrepreneur and we should reject H2. This finding goes in line with the results of the previous research, Krueger, Reilly, and Carsrud (2000) showed that the subjective norms variable was not significant in the regression that generally supported Ajzen's theory of planned behavior with adjusted R2 of 0.350 for the overall model.

The control variables were the gender, education, occupation, income, country and year. They are significant and influential. The odds of engaging in TEA is 1.2 times higher for males than for females, which corresponds with the results of the previous studies (Hart, Anyadike-Danes, and Blackburn, 2004).

4.2 Differences in perceptions of younger and older entrepreneurs

H3: Perceived behavioral control factors are associated with the age category of entrepreneurs.

H4: Subjective norms are associated with the age category of entrepreneurs.

We conducted a chi-square analysis to investigate how the senior and younger early-stage entrepreneurs are different from each other in terms of their beliefs regarding the motivational factors. The results are presented in the table below.

Factor	Below 50 years old	Over 50 years old	Pearson Chi-square value	Asymptotic significance 2-sided
OPPORT	44.6%	40.5%	37.499	0.000
SUSKILL	85.6%	86.2%	8.231	0.041
FEARFAIL	70.0%	72.3%	53.109	0.000
NBGOODC	55.1%	51.6%	24.877	0.000
NBSTATUS	61.7%	59.6%	29.150	0.000
NBMEDIA	48.5%	49.0%	6.921	0.074

Figure 4.2: Results of chi-square analysis for age category

Surprisingly, senior entrepreneurs are likely to be slightly more confident than younger entrepreneurs, 86.2% of seniors believe that they have necessary skills, knowledge and experience to start a business, only 85.6% of younger entrepreneurs believe in the same ($\chi 2 < 0.05$). Gray entrepreneurs are also less likely to be stopped by the fear of failure, compared to their younger counterparts: 72.3% of third-age and 70.0% of prime-age entrepreneurs claimed that they will not be stopped by the fear of failure ($\chi 2 < 0.001$). However, senior entrepreneurs are less likely to see business opportunities, only 40.5% of gray entrepreneurs compared to 44,6% of younger entrepreneurs admitted to do so. Overall, it is clear that the perceived behavioral control factors are significant ($\chi 2 < 0.05$) and associated with the age group, therefore, we accept H3.

Similar percentages of younger and senior entrepreneurs agreed that they often see the stories about successful entrepreneurs in media. However, older entrepreneurs see less support from society compared to younger entrepreneurs, only 51.6% of senior entrepreneurs agreed that the entrepreneurship is a desirable career choice and 59.6% believe that entrepreneurs have high status and respect in the society. Meanwhile, 55.1% of younger entrepreneurs believe that entrepreneurship is a desirable career choice and 61.7% think that entrepreneurs have high status in the society. Overall, only two factors that contribute to subjective norms are significant ($\chi 2 < 0.05$), therefore, we can only partly accept H4.

4.3 Differences in perceptions of opportunity and necessity senior entrepreneurs

H5: Perceived behavioral control has positive influence on the likelihood of a senior entrepreneur to be opportunity-driven.
H6: Subjective norms have positive influence on the likelihood of a senior entrepreneur to be opportunity-driven.

The chi-square analysis that compared opportunity- and necessity-driven entrepreneurs shows that the differences in the factors contributing to the perceived behavioral control are significant ($\chi 2 < 0.001$) and associated with the type of motivation, while not all factors contributing to the subjective norms follow the same pattern. The summary of the results is presented in the table below.

Factor	Necessity-driven entrepreneur	Opportunity-driven entrepreneur	Pearson Chi-square value	Asymptotic significance 2-sided
OPPORT	30.9%	48.2%	112.625	0.000
SUSKILL	82.5%	88.6%	33.692	0.000
FEARFAIL	65.8%	76.1%	56.516	0.000
NBGOODC	52.0%	53.8%	1.153	0.283
NBSTATUS	59.6%	63.0%	4.616	0.032
NBMEDIA	49.0%	50.9%	1.305	0.253

Figure 4.3.1: Results of chi-square analysis TEAOPP

As we can see there are significant ($\chi 2 < 0.001$) differences that are associated with motivation when it comes to the factors contributing to the perceived behavioral control. Opportunity-driven senior entrepreneurs are more likely to see business opportunities compared to necessity-driven entrepreneurs (48.2% versus 30.9%). Opportunity-driven entrepreneurs are slightly more confident in their skills than necessity-driven entrepreneurs (88.6% versus 82.5%) and they are also less likely to be stopped but the fear of failure

compared to the necessity entrepreneurs, 76.1% of opportunity entrepreneurs are ready to take the risks while only 65.8% of necessity entrepreneurs are ready to do so. These findings suggest supporting the direction of H5, however, we need to run the binomial logistic regression to give a certain answer.

Representatives from both groups are likely to agree that the entrepreneurship is a desirable career choice and that they often see the stories about successful entrepreneurs in the media, the differences in the perceptions are not significant ($\chi 2 > 0.05$). However, opportunity-driven entrepreneurs are more likely to believe that the entrepreneurs have high level of respect in the society (60.7% versus 56.2%). These results indicate the rejection of H6, but we need to run a binomial logistic regression to give a certain answer.

To test hypotheses H5 and H6 we ran a binomial logistic regression in the sample of senior early-stage entrepreneurs and evaluated which factors influence the probability of an individual to be driven by opportunity. The overall success rate of the model is 70.7%, the sensitivity of the prediction is 93.9%, while the specificity of the model is 17.7%, meaning that the model predicts more precise the cases of entrepreneurs driven by opportunity than the cases driven by necessity. The Nagelkerke R-square is 12.4%, -2 log likelihood is 3746.233, which means that the model does not have the best fit, but it can be used for the purposes of our analysis. Factors OPPORT, FEARFAIL and NBGOODC are significant. As we can see from the categorical variables codings table the reference group for those factors is ”Yes”. The short summary of the results is presented in the table below, full tables with the results can be found in Appendices.

Hypothesis	Variable	B	Sig.	Exp(B)
H5	OPPORT	-0.579	0.000	0.560
H5	FEARFAIL	0.396	0.000	1.485
H6	NBGOODC	-0.246	0.002	0.782

Figure 4.3.2: Results of binomial logistic regression for opportunity-driven EA

The results of the analysis show that the ability to take risks is the most influential factor. The odds of engaging in opportunity-driven EA is 48.5% higher ((1.485-1)*100%) for an individual who would not be stopped by the fear of failure compared to one who would be

stopped, holding other independent variables constant. It is comparable in importance to the ability to see business opportunities. The odds of engaging in opportunity-driven TEA is 44.0% lower ((0.560-1)*100%) for an individual who does not see any good opportunities for business compared to one who does see good opportunities, holding other independent variables constant. The results show that two perceived behavioral control factors out of three have significant ($p<0.05$) and positive influence on the probability of a senior entrepreneur to be driven by an opportunity, rather than necessity, therefore, we can partly accept H5.

As we can see, only one subjective norms factor has significant positive influence on the probability of a senior entrepreneur to be driven by opportunity. The odds of engaging in opportunity-driven TEA is 21.8% lower ((0.782-1)*100%) for an individual who doesn't see entrepreneurship as a good career choice compared to one who does, holding other independent variables constant. This finding is predictable, because necessity-driven entrepreneurs are usually pushed to start the business, therefore, they are likely not to perceive it as a good career choice. As soon as only one factor out of three is significant, we may conclude that subjective norms have no influence on the probability of a senior individual get engaged in opportunity-driven entrepreneurial activity and we should reject H6.

Surprisingly, the finding revealed that gender was a non-significant factor ($p>0.05$), even though previous research (GEM , 2016) and analysis in this thesis showed that women are more likely than men to be driven by necessity.

4.4 Differences in perceptions of male and female senior entrepreneurs

H7: Perceived behavioral control factors are associated with the gender category of senior entrepreneurs.

H8: Subjective norms are associated with the gender category of senior entrepreneurs.

We conducted chi-square analysis to understand whether the perceived behavioral control and subjective norms are associated with the gender. The results are presented in the table below.

Factor	Male	Female	Pearson Chi-square value	Asymptotic significance 2-sided
OPPORT	43.9%	41.0%	3.436	0.064
SUSKILL	89.2%	82.3%	46.015	0.000
FEARFAIL	74.7%	69.9%	13.272	0.000
NBGOODC	54.1%	51.5%	2.687	0.101
NBSTATUS	61.4%	63.0%	1.127	0.288
NBMEDIA	49.3%	52.1%	3.010	0.083

Figure 4.4: Results of chi-square analysis of gender

The results show that male entrepreneurs are significantly ($\chi 2 < 0.001$) more likely to believe that they have enough skills, experience and knowledge for starting a business, compared to the female senior entrepreneurs. Male entrepreneurs are also less likely to be stopped by the fear of failure than female counterparts, (74.7% versus 69.9%). However, the difference in the proportions of the female and male entrepreneurs who are able to see good business opportunities is not significant ($\chi 2 = 0.064$).Therefore, we can only partly accept the H7. As we can see the male senior entrepreneurs are more likely to see entrepreneurship as a good career choice compared to the female counterparts, while the female entrepreneurs are more likely to perceive it as a respectable occupation and see the stories about successful entrepreneurs in the media. However, the differences in the perceptions are not significant ($\chi 2 > 0.05$), therefore, we should reject the H8 and acknowledge that the differences in the perceptions of subjective norms are not associated with the gender.

Chapter 5. Discussion

The goal of this study was to understand the motivation of senior entrepreneurs. To do so this work analyzes how perceived behavioral control and subjective norms influence the formation of entrepreneurial intention among senior individuals. In order to understand further the issue we used the 2009-2013 GEM dataset that contains detailed information on the female and male entrepreneurs that are driven by opportunity or necessity in European countries. Answers to these questions are important because the pressure on the welfare systems is increasing due to the aging of the population. The promotion of entrepreneurship among seniors is seen as one of the policies to counteract the negative effects of this demographic shift. However, the rate of engagement in total early-stage entrepreneurial activity in EU region is only 3.3%, the lowest rate in the world. Overall our results suggest that perceived behavioral control factors have significant positive influence on the formation of the entrepreneurial intention among seniors, while subjective norms have no significant effect on the probability of a senior individual becoming an entrepreneur.

5.1 Main Findings

Analysis of the motivational factors that influence the formation of entrepreneurial intention among seniors provided us with interesting results. The chi-square analysis showed that there is a significant difference ($\chi 2 < 0.001$) in the perceptions of behavioral control and subjective norms between seniors who are involved in TEA and the ones who are not. Analysis of the perceived behavioral control factors showed that senior entrepreneurs are more likely to have confidence that they have the right skills to start the business, ability to see business opportunities and willingness to take the risks despite the fear of failure. Surprisingly, the seniors who are not involved in TEA are more likely to believe that the entrepreneurs have a high status and respect in society and that entrepreneurship is a desirable career choice than actual senior entrepreneurs.

The results of the binomial logistic regression support the findings from the chi-square analysis and show that perceived behavioral factors namely the belief in the personal capabilities, ability to see the opportunities and willingness to overcome the fear of failure

significantly ($p<0.001$) and positively influence the probability of a senior individual engaging in TEA.

The analysis of the factors contributing to the subjective norms showed that non-entrepreneurs are more likely to believe that entrepreneurship is a desirable and respectable occupation than actual senior entrepreneurs, which implies that subjective norms have no effect on the entrepreneurial intention among seniors. This finding is in line with the results of the previous research. Krueger, Reilly, and Carsrud (2000) showed that the subjective norms variable was not significant in the regression analysis that generally supported Ajzen's theory of planned behavior with adjusted R2 of 0.350 for the overall model.

Differences between older and younger entrepreneurs

Our analysis showed that senior entrepreneurs are more likely to believe that they have necessary skills and knowledge for starting a business and are less likely to be stopped by the fear of failure compared to younger entrepreneurs. This finding support the results of the previous research (Singh and DeNoble, 2003; Weber and Schaper, 2004; Kautonen, Down, and South, 2008). However, younger entrepreneurs are more likely to perceive opportunities towards a new business formation. These differences in the perceived behavioral control factors are significant ($\chi2 < 0.05$) and associated with the age group. One can suppose that the bottleneck for the seniors who would like to start a business would be the lack of ability to perceive good business opportunities.

The chi-square analysis of the subjective norms factors showed that senior entrepreneurs are significantly ($\chi2 < 0.001$) less likely to perceive entrepreneurship as a desirable career choice and respectable occupation compared to the younger entrepreneurs. This finding goes in line with the results of the previous researchers (Kautonen, Hatak, et al., 2015; Wainwright et al., 2011).The differences regarding the perceptions of the media attention to the entrepreneurs are not significant ($\chi2 = 0.074$).

Differences between opportunity-driven and necessity-driven senior entrepreneurs

The chi-square analysis showed that there are significant ($\chi2 < 0.001$) differences that are associated with motivation when it comes to the factors contributing to the perceived behavioral control. Opportunity-driven senior entrepreneurs are more likely to see business opportunities, more likely to believe in their skills and less likely to be stopped but the fear of

failure compared to the necessity-driven entrepreneurs. The chi-square analysis of the subjective norms factors showed that opportunity-driven entrepreneurs are more likely to believe that the entrepreneurs have high level of respect in the society ($\chi2<0.05$). So this analysis confirms that the dichotomy between necessity and opportunity-driven business is still relevant for the field of senior entrepreneurship.

The results of binomial logistic regression show us that the ability to take the risks despite the fear of failure and see the business opportunities have significant ($p<0.05$) positive influence on the probability of a senior individual becoming an opportunity-driven entrepreneur. Surprisingly, the gender turned out to be non-significant factor ($p>0.05$), even though previous research (GEM, 2016) showed that women are more likely than men to be driven by necessity.

Differences between female and male senior entrepreneurs

The results of the binomial logistic regression show that the odds of engaging in TEA is 1.2 times higher for males than for females, which corresponds with the results of the previous studies (Hart, Anyadike-Danes, and Blackburn, 2004).

The results of the chi-square analysis of the perceived behavioral control factors showed that the difference in the proportions of the female and male entrepreneurs who are able to see good business opportunities is not significant ($\chi2 = 0.064$). However, male entrepreneurs are significantly ($\chi2 < 0.0001$) more likely to believe that they have enough skills, experience and knowledge for starting a business and significantly ($\chi2 < 0.0001$) less likely to be stopped by the fear of failure than female counterparts. This finding supports the results of the previous research in the field of female entrepreneurship ((Shaver, Gatewood, and Gartner, 2001; Wilson, Marlino, and Kickul, 2004; Walker and Webster, 2007; Jones and Tullous, 2002). The differences in the perceptions of the subjective norm factors are not significant ($\chi2 > 0.05$).

5.2 Conclusion

This paper sought to study how the perceived behavioral control and subjective norms influence the formation of the entrepreneurial intention among the individuals above 50 years

old. Our analysis suggests that the perceived behavioral control factors have significant and positive influence on the entrepreneurial intention among seniors. However, the perception of these factors differs among the categories of entrepreneurs. For instance, senior entrepreneurs are less likely to see business opportunities compared to younger entrepreneurs, opportunity-driven entrepreneurs are more likely to see opportunities and have a willingness to overcome the fear of failure compared to necessity entrepreneurs, while the senior female entrepreneurs are less likely to believe that they have necessary skills for starting a business and ability to overcome the fear of failure compared to the male counterparts. Moreover, our analysis shows that subjective norms have no impact on the formation of the entrepreneurial intention. Individuals who are not engaged in TEA are more likely to perceive entrepreneurship as a desirable career and respectable occupation than actual senior entrepreneurs. Female and male entrepreneurs perceive the subjective norms in the same way, while the opportunity-driven entrepreneurs are more likely to perceive it as a good career choice compared to the necessity-driven entrepreneurs. Senior entrepreneurs in general are less likely than younger entrepreneurs to perceive entrepreneurship as a desirable and prestigious career choice.

5.3 Theoretical Implications

Our work contributes to academic work in the field of senior entrepreneurship in several ways. Firstly, we merged existing frameworks and models explaining the formation of entrepreneurial intention and devoted our analysis to the antecedents that influence the entrepreneurial intention among seniors. We linked perceived behavioral control and subjective norms described in Theory of planned behaviour (Ajzen, 1991) to the domains used in the GEM conceptual framework namely individual attributes and social values towards entrepreneurship. This approach allowed us to focus on the influence of the perceptions regarding the individual's capability to execute the behavior and appropriateness of this behavior in a given society, rather than on individual factors.

Secondly, we tested the concepts from the general entrepreneurial field such as opportunity and necessity-driven entrepreneurship are valid for the study of senior entrepreneurship and demonstrated the differences between the perceptions of opportunity and necessity-driven senior entrepreneurs.

Lastly, we analyzed data from the Global Entrepreneurship Monitor between 2009 and 2013 across EU countries. This allowed us to minimize the influence of the environmental effects and get an understanding of the common perceptions that are shared by the seniors in all European countries. While many studies in this field are devoted to the analysis of the motivational factors for senior entrepreneurs in specific countries (Kautonen, Luoto, and Tornikoski, 2010; Harms et al.,2014; Kautonen, Down, and South, 2008), our study provides a bigger picture of the senior entrepreneurship in European Union.

5.4 Managerial Implications

Our findings have several managerial implications for the policy makers and business advisory agencies. Firstly, the promotional and support programs should be focusing more on the educating the seniors how to build up the confidence in their skills, overcome the fear of failure and see the business opportunities. Secondly, the support programs should be complemented by communication campaigns where the message is that entrepreneurship is a good career choice and respectable occupation in order to make nascent and actual entrepreneurs feel more confident with their actual choices. This approach would also make the clients, investors and other stakeholders perceive entrepreneurship as an adequate and appropriate activity for seniors, which would contribute to the creation of a virtuous entrepreneurial cycle.

Comparison of the younger and older entrepreneurs provided us with the insight that programs that aim to support potential senior entrepreneurs should be mainly focused on educating the seniors how to identify good business opportunities. Analysis of the motivations of opportunity- and necessity-driven entrepreneurs showed that the programs that are targeting the necessity-driven senior entrepreneurs should mainly offer the practices that would help them to overcome the fear of failure. And the comparison of female and male senior entrepreneurs made it clear that support programs for female senior entrepreneurs should include the training programs that make females believe that they have enough skills, knowledge and experience for starting the business.

These findings imply that the business advisory agencies and policy makers that aim to promote the entrepreneurship among seniors should focus on perceived behavioral control factors and make seniors believe that they have enough skills, knowledge and experience for starting a business. Moreover, the support programs should educate potential senior entrepreneurs how to see good business opportunities and overcome the fear of failure. Promotion of entrepreneurship among seniors could help not only to motivate them, but also create a more friendly business environment, as soon as the clients, investors and other stakeholders would perceive entrepreneurship as an adequate and appropriate activity for seniors. Therefore, promotion of the senior entrepreneurship is an important initiative that could change the existing economic models of aging demographics and counteract the negative economic effects of an aging population.

5.5 Limitations

This research has several limitations that might undermine the validity of the results. First of all, the data from the GEM is self-reported, so it can be biased as the respondents might not understand their true motivations (Amit and Muller, 1995) or do not understand the questions in the survey in the right way.

Second, the entrepreneurial motivation is pretty complex and might be affected by different factors that are not included in the analysis causing the endogeneity problem. This means that the odds ratios might be biased and not very reliable.

Thirdly, we were analysing the cross-sectional quantitative data which prevents us from demonstrating the causation in the relationship between the antecedents and entrepreneurial intentions. As soon as the antecedents are the beliefs and attitudes of the respondents we cannot estimate whether they were formed before or after the decision to start a business. Moreover, we cannot estimate whether the entrepreneurial intentions actually led to the entrepreneurial behavior. Longitudinal studies are required for testing the causality between the entrepreneurial intentions, behaviors and their antecedents.

5.6 Future Research

Future research could focus on evaluating the relative influence of the perceived behavioral control and subjective norms on the entrepreneurial intentions of senior and younger entrepreneurs. Our analysis showed that there are significant differences in the perceptions, however, as our research was limited in time, we could not investigate whether these factors have relatively more influence in case of prime-age or third-age entrepreneurs. The same kind of research would be interesting to make for the female and male senior entrepreneurs.

Evaluating the influence of individual attitude towards entrepreneurship might present another potential avenue for future research. As soon as the access to the databases containing the information about seniors was limited, we could not estimate the influence of the third antecedent of the entrepreneurial intention. Moreover, future research could focus on finding more factors influencing the formation of entrepreneurial intention among seniors within the qualitative analysis. We believe that motivations of senior entrepreneurs are complex and sometimes unpredictable, so it is important to pay more attention to the psychological factors that are driving them.

Furthermore, our analysis showed that longitudinal studies might provide the researchers with more informative data that would register the changes in the motivations and perceptions. It could be particularly interesting to conduct such research in order to evaluate the effect of the promotional and support activities on the transition from seniors' entrepreneurial intention to behavior.

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Appendices

Appendix 1. Results of binomial logistic regression for the TEA.

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	72934	48.2
	Missing Cases	78264	51.8
	Total	151198	100.0
Unselected Cases		0	.0
Total		151198	100.0

a. If weight is in effect, see classification table for the total number of cases.

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
31	20713.172[a]	.080	.261

a. Estimation terminated at iteration number 8 because parameter estimates changed by less than .001.

Classification Table[a]

			Predicted		
			Involved in Total early-stage Entrepreneurial Activity		
	Observed		No	Yes	Percentage Correct
Step 31	Involved in Total early-stage Entrepreneurial Activity	No	69560	82	99.9
		Yes	3234	58	1.8
	Overall Percentage				95.5

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 31[a]	OPPORT(1)	-.621	.041	229.375	1	.000	.538	.496	.583
	SUSKILL(1)	-1.404	.056	621.835	1	.000	.246	.220	.274
	FEARFAIL(1)	.277	.043	40.715	1	.000	1.319	1.211	1.436
	NBSTATUS(1)	.111	.041	7.433	1	.006	1.117	1.032	1.209
	NBMEDIA(1)	.091	.040	5.309	1	.021	1.095	1.014	1.184
	Belgium(1)	.373	.136	7.459	1	.006	1.452	1.111	1.897
	Spain(1)	.803	.051	251.824	1	.000	2.232	2.022	2.465
	Hungary(1)	-.617	.102	36.663	1	.000	.540	.442	.659
	Romania(1)	-.366	.124	8.659	1	.003	.694	.544	.885
	Denmark(1)	.743	.325	5.220	1	.022	2.101	1.111	3.974
	Luxembourg(1)	-.643	.218	8.676	1	.003	.526	.343	.806
	Finland(1)	.311	.118	6.994	1	.008	1.365	1.084	1.719
	Croatia(1)	-.285	.108	6.963	1	.008	.752	.608	.929
	Slovenia(1)	.476	.135	12.370	1	.000	1.609	1.234	2.097
	Slovakia(1)	-.326	.131	6.240	1	.012	.722	.559	.932
	y2013(1)	.649	.058	125.412	1	.000	1.913	1.708	2.143
	y2012(1)	.495	.060	68.482	1	.000	1.641	1.459	1.845
	y2011(1)	.661	.063	109.889	1	.000	1.937	1.712	2.192
	y2010(1)	.804	.061	171.314	1	.000	2.235	1.981	2.521
	Working full or part time (1)	.182	.079	5.347	1	.021	1.199	1.028	1.399
	Retired or disabled(1)	1.502	.104	207.356	1	.000	4.489	3.659	5.507
	Homemaker(1)	.848	.158	28.648	1	.000	2.334	1.711	3.184
	Not working(1)	-.260	.100	6.796	1	.009	.771	.634	.937
	Self employed(1)	-1.333	.077	297.795	1	.000	.264	.227	.307
	Middle33%tile(1)	.131	.047	7.820	1	.005	1.140	1.040	1.249
	Secondary degree(1)	-.237	.057	17.396	1	.000	.789	.705	.882
	Post secondary degree (1)	-.402	.054	54.929	1	.000	.669	.602	.744
	Grad_exp(1)	-.541	.078	48.389	1	.000	.582	.500	.678
	A. What is your gender? (1)	.189	.042	20.235	1	.000	1.208	1.112	1.311
	Constant	-5.086	.670	57.615	1	.000	.006		

a. Variable(s) entered on step 31: NBMEDIA.

Appendix 2. Results of binomial logistic regression for the TEAOPP.

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	3292	65.6
	Missing Cases	1730	34.4
	Total	5022	100.0
Unselected Cases		0	.0
Total		5022	100.0

a. If weight is in effect, see classification table for the total number of cases.

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
14	3746.233[a]	.088	.124

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Classification Table[a]

Observed			Predicted: Involved in Opportunity early-stage Entrepreneurial Activity		Percentage Correct
			No	Yes	
Step 14	Involved in Opportunity early-stage Entrepreneurial Activity	No	178	826	17.7
		Yes	140	2148	93.9
	Overall Percentage				70.7

a. The cut value is .500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 14[a]	OPPORT(1)	-.579	.084	47.246	1	.000	.560	.475	.661
	FEARFAIL(1)	.396	.088	20.306	1	.000	1.485	1.251	1.765
	NBGOODC(1)	-.246	.081	9.160	1	.002	.782	.667	.917
	Hungary(1)	.534	.187	8.179	1	.004	1.706	1.183	2.461
	Romania(1)	.555	.238	5.453	1	.020	1.743	1.093	2.778
	Poland(1)	1.110	.255	18.945	1	.000	3.034	1.841	5.001
	Finland(1)	.582	.228	6.539	1	.011	1.790	1.146	2.796
	Croatia(1)	.904	.205	19.480	1	.000	2.469	1.653	3.689
	Slovakia(1)	.590	.246	5.733	1	.017	1.804	1.113	2.925
	Working full or part time (1)	-.281	.094	8.959	1	.003	.755	.628	.908
	Not working(1)	.712	.147	23.290	1	.000	2.037	1.526	2.720
	Highest33%tile(1)	-.428	.085	25.127	1	.000	.652	.552	.771
	Post secondary degree (1)	-.423	.087	23.419	1	.000	.655	.552	.778
	Grad_exp(1)	-.629	.150	17.688	1	.000	.533	.398	.715
	Constant	-2.501	.629	15.821	1	.000	.082		

a. Variable(s) entered on step 14: Romania.