Characteristics of the Social entrepreneur: a neoclassical perspective

Author: Samira N. Zebeda, 358001

Supervisor: Dr. B. Hoogendoorn

Master: Entrepreneurship and Strategy Economics

Erasmus University Rotterdam

Erasmus School of Economics

Rotterdam, August 16th 2012

Abstract

Over the last decades, the concept of social entrepreneurship has been praised for its attractiveness due to its ability to provide entrepreneurial solutions to social issues. Still, research into social entrepreneurship is in a state of infancy. A lot of research into this concept is centered on the formulation of a plausible definition. Parker (2008) has taken his research a step further, by creating a theory on the concept. This theory is called the neoclassical life-cycle theory and makes assumptions on the type of people who have a higher probability to be social entrepreneurs. The theory also describes at which stage in life individuals are more probable to be social entrepreneurs.

This thesis tests the neoclassical life-cycle theory. In so doing, the age distribution of social entrepreneurs is firstly tested, followed by the relationship between social entrepreneurs in different age groups and patient consuming behavior. The final subject of interest is the relationship between social entrepreneurs in different age groups and their satisfaction with household income. The data which is used is obtained from the Flash Eurobarometer survey on Entrepreneurship (No. 283) which contains information of more than 26,000 individuals of 36 countries.

After binary logistic regression, the results for the age distribution of social entrepreneurs appear to be insignificant. Another finding is that younger social entrepreneurs show more patient consuming behavior and are more satisfied with their household income compared to older social entrepreneurs.

Table of content

1.1 Introduction

"Entrepreneurship has become the engine of economic and social development throughout the world" (Audretch, 2003). This idea has been embraced by policy makers of contemporary economies, including those in Europe. Over the last decades European member states have directed policy towards improvement and stimulation of entrepreneurial activity, in order to stimulate the growth of the economy. According to the European Commission (2003), policy measures should seek to boost the European Union's levels of entrepreneurship, by adopting the most appropriate approach for producing more entrepreneurs and for getting more firms to grow. Entrepreneurial activity is considered beneficial to society as it generates relatively high levels of employment creation, productivity growth and produces and commercializes high-quality innovations (Praag van & Versloot, 2007).

Classical writers, including Knight, Kirzner and Shumpeter, have investigated and made statements about the role which is played by entrepreneurs in the economy. The perceptions of these writers regarding the function of the entrepreneur show some differences. In the view of Knight (1921), entrepreneurs carry the full burden of risk while combining supply and demand. On the other hand, Kirzner (1973) explains entrepreneurs as individuals who operate in familiar markets, giving them a competitive advantage in their alertness to profitable opportunities. Shumpeter (1934) explains entrepreneurs as innovators and creative destructors who introduce new inventions which make current technologies obsolete, driving them out of the market.

Although the relationship between entrepreneurship and economic growth has been often researched, there seems to be no generally accepted definition of entrepreneurship. Audretch, Grilo and Thurik (2007) found that the reason for this is due to the fact that entrepreneurship is an interdisciplinary subject spanning a broad range of fields, including management, psychology, sociology, finance, economics, political science and geography. This reflects a phenomenon which crosses the boundaries of multiple units of observation and analysis. Most definitions are formulated based on the activities of the entrepreneur. According to Sternberg and Wennekers (2005), the definition of entrepreneurship has two notions. Based on the

occupational notion, entrepreneurship refers to owning and managing a business on one's own account and risk. On the contrary, the behavioral notion refers to entrepreneurship as "entrepreneurial behavior" in the sense of seizing an economic opportunity.

It is generally assumed that entrepreneurship is chosen in order to increase one's personal wealth. However, Mair and Martí (2006) found that although profit might be the central motivation of entrepreneurship, it does not preclude other motivations. These researchers explain that all forms of entrepreneurship create social value, either directly (by projecting corporate vision and mission to solving social issues) or indirectly (by job creation and innovation).

The form of entrepreneurship which is concerned with the direct, primary and intentional creation of social value is also known as social entrepreneurship. The concept of social entrepreneurship has been around for many years. According to Dorado, (2006) hospitals and educational institutions can be considered as ancient forms of social entrepreneurship, as they bridge services and profit goals. In the field of entrepreneurial research, social entrepreneurship has gained growing interest, as it is being noticed by Business Schools from which some have even operationalized research centers devoted to this topic (Dorado, 2006). Still, research into social entrepreneurship appears to be in a state of infancy (Dorado, 2006). Additionally, there seems to be ambiguity between scholars concerning the meaning of social entrepreneurship. It is observed that a great deal of research on social entrepreneurship leans towards the definition of the concept. However, there is at the current moment no generally accepted definition of social entrepreneurship. Social entrepreneurship remains an emerging, but ill-defined concept (Weerawardena and Sullivan Mort, 2006).

Worthy to mention is the way in which concepts concerning social entrepreneurs are addressed. Some studies have used the terms social entrepreneurs and social enterprise interchangeably, but these terms represent the individual level and firm level of social entrepreneurship respectively. Defourny (2009) gives a clear explanation by stating that social entrepreneurship is the process through which social entrepreneurs create social enterprises. The following papers provide a clear view of this distinction. Thompson and Doherty (2006)

provide an overview of the characteristics of a social enterprise (the firm level). Some of these are: they have to have a social purpose and assets and wealth are used to community benefits. On the other end, Emerson & Twerksy (1996) explain social entrepreneurs (individual level) as business people who apply their skills and knowledge to start up a business with the intention of achieving social goals, and being commercially feasible at the same time. This explanation resembles a bridge between commercial enterprises and social effects. Some examples include: non-profit organizations which create commercial holdings that are used in order to generate employees or income to meet their social goals; for-profit organizations who donate a portion of their profit to social projects. Research by Dees (1998) explains social entrepreneurs as innovators of solutions to social problem solving. In so doing, they center their attention on social problems and develop innovative initiatives, build new social arrangements, and mobilize resources in response to those problems rather than market criteria (Alvord, Brown & Letts 2004).

Like commercial entrepreneurship, social entrepreneurship is perceived as beneficial to society. This may be a reason why governments have contributed to the development and funding of social enterprises. Governments perceive the contribution of social entrepreneurship as a practice which has the ability to create social value more effectively than the state could do on its own (Nicholls, 2006). Reinventing government initiatives have transformed the relationship between the government and social enterprises (Weerawardena and Sullivan Mort 2006), making government funding better accessible to these enterprises. Social enterprises rely for a large portion on funding, which is one of the challenges of this practice. This can be best explained through the following illustration. Commercial enterprises seem to be in an advantageous position in attracting resources due to their charm of receiving potential returns, making them interesting for investors and venture capitalists. They also have the ability to employ people, based on potential returns. On the contrary, social enterprises are believed to have more difficulty in the attraction of resources as they usually lack this charm of receiving potential returns (Dorado, 2006). Therefore, their funding sources are required to be mainly interested in the creation of social value. Social enterprises may also be unable to pay salaries comparable to the market rate. This may lead to an increased dependence on volunteers, who are mainly interested in creating social value as opposed to economic value. This in itself is very challenging. Some revenue sources of social

enterprises include client fee for services, government grants, donations and sponsorships (Weerawardena and Sullivan Mort 2006). Research has found that only a few social enterprises get the opportunity to be financially independent instead of relying on funds from the government and goodwill (Amin, Cameron & Hudson 2002).

1.2 Problem statement

At the individual level, social entrepreneurship shows both similarities and differences compared to commercial entrepreneurship. An important difference is that commercial entrepreneurship encompasses the identification, evaluation and exploitation of opportunities, resulting into personal- or shareholder value (Shane & Venkataraman, 2000). On the contrary, social entrepreneurship includes an extra dimension, namely a social dimension. This implies that the identification, evaluation and exploitation of opportunities are aimed to result into social value (Austin, Stevenson, & Wei-Skillern 2006). Apart from this difference, it is expected that there are additional differences between these entrepreneurial groups, including a difference in the age distribution of social and commercial entrepreneurs. This is an important subject of this research and is extensively explained and researched in subsequent sections.

Bosma and Levi (2010) show in their report that individuals in younger age groups are more likely to be engaged in social entrepreneurship compared to commercial entrepreneurship. They also found that the age distribution of commercial entrepreneurship follows an inverted U-shape. This implies that the probability of engagement in commercial entrepreneurship increases until a certain age, and decreases thereafter. This inverted U-shape is confirmed by Braaksma, Gibcus & Kok de (2012).Concerning the age distribution of social entrepreneurs, Levie and Hart (2011) found that social entrepreneurs are more likely to be younger (between 18-24 years) and slightly more likely to be in their middle age (35-44), compared to commercial entrepreneurs.

Because social entrepreneurship is a relatively new field in the entrepreneurship literature, solid theoretical and conceptual constructs are in the process of development or have yet to be

developed. Parker (2008) has made such an attempt by developing the neoclassical life-cycle theory which assumes that the types of people who become social entrepreneurs are either young idealists (type B personalities) or older individuals who are wealthy and were previously engaged in paid employment or commercial entrepreneurship (type A personalities). Thus, this theory suggests a U-shape for the age distribution of social entrepreneurship.

The current research aims to test the neoclassical life-cycle theory of Parker (2008). To my knowledge, the neoclassical life-cycle theory has not yet been tested by other researchers, which adds to the novelty of this research. In addition, some other factors which may be associated with social entrepreneurs are considered as control variables. The aim of this research can thus be summarized by the following research question: *are the indicators as proposed by the neoclassical life-cycle theory indeed associated with the probability of being a social entrepreneur?*

1.3 Relevance

Testing the neoclassical life-cycle theory may be relevant from a scientific point of view, as it will either result in a justifying or falsifying outcome. In case of justification, the results will add to the reliability of the theory. However, falsification may lead to the development of other theories or more extensive empirical research. The results may also appear to be relevant to society, as they provide empirical insights into the topics of interest. Individuals can therefore take these results into consideration and be more aware of the characteristics of social and commercial entrepreneurship. Additionally, the results might seem relevant for policy makers. If Parker's theory is found to be true, policy can be directed toward stimulation of social entrepreneurial initiative of younger and older individuals. However, it might be necessary to take different approaches to serve and stimulate these different age groups.

To answer the research question, data of the Flash Eurobarometer survey on Entrepreneurship (No. 283) is used, which includes more than 26,000 individuals of 36 countries. Hypothesis are formulated and tested by means of binary logistic regression models. The main results

provide insignificant results for the age distribution of social entrepreneurs. Also found was that younger social entrepreneurs are both more patient consumers and more satisfied with their household income, compared to their older counterparts.

The remainder of this thesis is structured as follows: First the concepts of commercial and social entrepreneurship are explained. Then some determinants of social and commercial entrepreneurship are described. Thirdly, this thesis looks into the neoclassical life-cycle theory, which also describes the characteristics of social entrepreneurs. This is followed by the formulation of the hypotheses. The following part includes the empirical research, which describe the data and methodology. Afterwards the hypotheses are tested through binary logistic regression and the results are explained. The thesis is finalized with a discussion and conclusion.

2. Literature Review

This chapter explores the existing literature which relates to the factors which are associated with entrepreneurship. It first looks into the different characteristics of traditional entrepreneurship, followed by a review of social entrepreneurship. Lastly, the determinants of social and commercial entrepreneurship are explored.

2.1 Traditional Entrepreneurship

The theory about the concept of entrepreneurship has gone through a considerable evolution as a result of the growing interest of academics. Thus, the entrepreneur is turned into a concept which involves a distinctive group of people who are engaged in varying forms of entrepreneurship. Shane and Venkataraman (2000) emphasize on the lack of consensus between scholars regarding a generally accepted definition of the concept. In earlier decades, definition of entrepreneurship was built around the personality and background of the entrepreneur (McClelland, 1961; Kets de Vries, 1977). The eighties were marked by definitions based on the entrepreneurial process and entrepreneurial behavior (Gartner, 1985; Gartner, 1988). In later years, different researchers have attempted to define entrepreneurship from different disciplines including finance, sociology, geography and more (Audretch et al., 2007).

However, the definitions formulated by economists Joseph Shumpeter and Israel Kirzner have been the ground principles of the later definition construction processes, as they established a crucial theory of the concept of entrepreneurship and its practitioners. These principles include: opportunity recognition, creation, innovation and equilibration. With this notion, Frank (2008) states that entrepreneurship is a function or a process which involves these principles. He continues by saying that entrepreneurship is personified in individuals who carry out such acts, regardless of economic sector. To get a better understanding of the principles of entrepreneurship, one should look into the work of its writers. To quote Kirzner (1997): “entrepreneurial discovery represents the alert becoming aware of what has been overlooked. The essence of entrepreneurship consists of seeing through the fog created by the

uncertainty of the future." In other words, entrepreneurs should be alert to recognize opportunities. Baron (2006) proposes that a high state of alertness may result in 'passive search' of the entrepreneur, which indicates a state in which the entrepreneur is receptive to business opportunities without being engaged in a formal systematic search for them. Alertness is likely to result in creation and innovation. Shumpeter (1950) explains that entrepreneurship includes creative operations that have a positive influence on the economic system, or operations which reform or revolutionize the production process. This last point can be termed innovation. He also explains that innovation leads to creative destruction, where new inventions make the previous obsolete, driving the economy away from equilibrium. However, Kirzner (1973) disagrees with Shumpeter. He explains that as the economic system remains in a permanent state of disequilibrium, it is the role of the entrepreneur to transfer discovered opportunities from this state of disequilibrium to a state of equilibration.

Having reviewed the characteristics of entrepreneurial behavior through the lens of Shumpeter and Kirzner, it should be noticed that they are applicable to all sectors in the economy. According to Gartner (1988), entrepreneurship leads to new business creation. However, it is not limited to this. It may also result into different forms of entrepreneurship, of which social entrepreneurship is one of. This concept is explained in the next paragraph.

2.2 Social entrepreneurship

According to Dees (2007), the emergence of the concept of social entrepreneurship started in the 1980's due to the work of Bill Drayton at a foundation called Ashoka (funding social innovators around the world) and Ed Skloot at New Ventures (helping non-profits explore new sources of income). In an earlier research, Dees (1998) stated that the time is certainly right for entrepreneurial approaches to social problems. As such, social entrepreneurship has gained increased attention from scholars, especially in the field of entrepreneurship (Certo& Miller 2008). Additionally, social entrepreneurship has also caught the attention of the business press, individual and corporate entrepreneurs and policy makers (Short, Moss & Lumpkin 2009).

Despite the growing popularity of social entrepreneurship, there remains ambiguity between academics regarding its exact definition. This indicates that social entrepreneurship means different things to different people (Dees 1998). Mair & Martí (2006) have identified three groups of research who attach a different value to the concept. The first group of research explains social entrepreneurship in terms of not-for-profit initiatives in search of alternative funding strategies, or management streams, to create social value. A second group explains it as the socially responsible practice of commercial businesses engaged in cross-sector partnerships. This includes entrepreneurs who have used business skills to create businesses that address social needs while being commercially viable at the same time (Emerson & Twerksy, 1996).The final group of research perceives it as a means to alleviate social problems and catalyze social transformation. It would be difficult to make a choice between these groups of research regarding which one is correct, due to the absence of a generally accepted definition of social entrepreneurship. What researchers do agree on is that social entrepreneurship is a sub-discipline of traditional entrepreneurship aimed at the creation of social value.

The current research adopts a definition of social entrepreneurship that is congruent with the fundamental principles of traditional entrepreneurship. Thus, social entrepreneurs should be alert to recognize opportunities, which may lead to creation and innovation. However, these principles should result in social value creation, implying that the social nature of their vision and mission is central. Dees (1998) explains the mission-related impact becomes the central criterion, not the creation of wealth which is seen as a means to an end for social entrepreneurs. Therefore, the following definition of social entrepreneurship is applicable to current research: *a process involving the innovative use and combination of resources to pursue opportunities to catalyze social change and/or address social needs* (Mair & Martí 2006).

2.3 Determinants

This section looks into several factors which are associated with the likelihood of being or becoming a social or commercial entrepreneur. First, the perceptions on risk attitude and entrepreneurial motives are reviewed. Secondly, the level of entrepreneurial engagement is described, followed by some demographics (education, gender, age).

Risk preference

A generally excepted judgment is that entrepreneurs have higher levels of risk taking behavior compared to non-entrepreneurs. This view is also supported by academic literature, including a study by Palmer (1971) who found that the entrepreneurial function involves risk-measurement and risk-taking behavior which differentiates entrepreneurs from non-entrepreneurs. Another research by Goffee and Scase (1987) described entrepreneurs as: 'heroes; they are risk-takers and innovators who reject the security of employment in large organizations to create wealth and accumulate capital. Indeed, economic recovery is largely dependent upon their ambitions and efforts'.

Given that entrepreneurs in general have higher levels of risk-taking behavior than non-entrepreneurs, Weerawardena and Sullivan Mort (2006) found evidence suggesting that the risk-taking behavior of social entrepreneurs differs substantially from that of commercial entrepreneurs. More specifically, social entrepreneurs' risk-taking behavior is highly inhibited by their primary objective of building a sustainable organization. As such, social entrepreneurs have a high orientation towards effective risk management in order to sustain the organization (Weerawardena and Sullivan Mort, 2006).

Entrepreneurial Motivation

It is expected that an entrepreneur's initial motivation of starting a business will affect the ambitions and performance of new ventures. A study by Reynolds et al., (2001) found that there are different motivations for individuals to become an entrepreneur, including opportunity and necessity motivation. Opportunity deals with the ability of an entrepreneur to

detect and seize a business opportunity, while necessity involves people who are forced into entrepreneurship, sometimes due to the lack of other occupational options. Bosma and Levie (2010) stated that necessity entrepreneurship is more common in less developed countries. Additionally, they mention that an increase in economic development decreases the level of necessity entrepreneurship gradually and increases the level of opportunity entrepreneurship. However, Sternberg and Wennekers (2005) provide evidence that an increase in economic development of a country results in a decline in the rate of opportunity entrepreneurship, but from a certain rate of economic development onwards, the rate of opportunity entrepreneurship tends to increase again. This means that the relation between economic development and opportunity entrepreneurship follows a U-shaped pattern.

Regarding social entrepreneurship, Hoogendoorn and Hartog (2010) found an inverted U-shape pattern for the relationship between economic development and the level of social entrepreneurship motivated by opportunity. This means that an increase in economic development increases the level of opportunity social entrepreneurship but from a certain rate of economic development onwards, it tends to decrease again.

Entrepreneurial engagement

The level of entrepreneurial engagement can simply be explained as the entrepreneurial phase at which business is at the moment of interest. Braaksma et al. (2012) provide an overview of four different phases of entrepreneurial engagement: pre-starters, starters, young businesses and established businesses. There are other studies who have applied a somewhat different classification if the entrepreneurial phases. One such is Hoogendoorn et al. (2011) who identified five phases: taking steps, young business, established business, failed and sell-off. Other studies dealing with the phases of entrepreneurial engagement make a classification which is to some extend similar to previous examples. Making the connection with social and commercial entrepreneurship, research has shown that social entrepreneurs are mainly represented in the earliest phases (taking steps) of entrepreneurial engagement, whereas commercial entrepreneurs are more likely to operate established businesses (Hoogendoorn et al., 2011; Bosma and Levie, 2009).

Years of education

The amount of research involving the association between formal education and social entrepreneurship is limited. However, a study by Hoogendoorn et al. (2011), found that social entrepreneurs are more likely to be highly educated compared to their commercial counterparts. The same was stated by Lounsbury and Strang (2009) who found that regardless of privileged or unprivileged circumstances, social entrepreneurs are highly educated. They continue by explaining that these educational backgrounds are fundamental to the activities of social entrepreneurs.

Sluis van der, Praag van and Vijverberg (2004) conducted a research on the effects of education on commercial entrepreneurship. Their findings show that the returns to education are higher for entrepreneurs than for employees in the US. As a reason they stated that entrepreneurs have more freedom to optimize their use of education compared to non-entrepreneurs. The role of formal education on entrepreneurial entry has also been researched by Davidsson and Honig (2003), who investigated the role of social and human capital on nascent entrepreneurship by comparing entrepreneurs and employees engaged in nascent activities. One of the findings of this study was that human capital, represented by two levels of formal education and experience, increases the probability of becoming a nascent entrepreneur.

Gender

Research by Parker (2009) shows that men are more likely to be involved in commercial entrepreneurship compared to women. These results are confirmed by an analysis of GEM data by Levie et al (2006) who found that commercial entrepreneurs are twice as likely to be male compared to female. These researchers suggest that the reason for this is due to the under representation of women in the workforce at the exact age at which start-up rates are highest, namely in de thirties where interest and experience are at an optimal level. It is found that this age (30's) is also the peak at which couples in the UK start having children, which usually affects women more than men.

Levie et al. (2006) also found that the rates of participation in social entrepreneurship are the similar for males and females. Bosma and Levie (2010) find somewhat differing results. They show that social enterprises are more likely to be started by males. However the gender gap is smaller for social entrepreneurship compared to commercial entrepreneurship. It can therefore be said that females are more likely to become social entrepreneurs as opposed to commercial entrepreneurs. Levie and Hart (2010) found empirical evidence which shows that early stage social entrepreneurs are more likely to be female than male.

Age

A study by Parker (2009) on commercial entrepreneurship identifies age as one of the main variables which determines human capital. His findings show that often due to data limitations, age is commonly used as a proxy for individuals' experience. However, he also emphasizes that age and experience are not synonymous. He continues by explaining that age might only be limitedly appropriate to capture individuals' experience. The reason for this is the lack of accounting for more complex situations like breaks from the labor force, which might be particularly noticeable in the examination of entrepreneurship.

Digging deeper into the role of age, it is noticed that several empirical studies pointed out its distinct role with respect to commercial entrepreneurship. There seems to be wide agreement between researchers that individuals belonging to the middle age category (35-44 years) are most likely to be or become commercial entrepreneurs (Cowling, 2000; Williams, 2004). This indicates that the relationship between age and being or becoming a commercial entrepreneur is widely found to follow an inverted u-shape. Put differently, individuals are more likely to engage in commercial entrepreneurship when they are between 35 and 44 of age, after which this probability declines (Bates, 1995; Levesque & Minitti, 2006; Bergman & Sternberg, 2007). The study by Parker (2009) highlights various arguments for this inverted u-shaped pattern. For instance, young individuals may be less likely to be or become commercial entrepreneurs due to their lack of required start-up capital and know-how to run a business. Additionally, he provides some reasons why older people may be less likely to be entrepreneurs, including that starting a business is risky and may require sunk costs. Such a commitment may be less attractive for older people, because compared to younger people,

they face a shorter time-horizon over which to amortize costs and profit from their investments.

Concerning the role of age with respect to social entrepreneurship, empirical research is limited. A case study by Johnson (2003) investigates a small sample of young Canadian social entrepreneurs. The findings show that younger individuals (35 years of age and under) are more likely to be involved into social entrepreneurship. As a reason she explains that young people are found to be more responsive to social entrepreneurship, whereas older people seem to feel uncomfortable with organizational models that pursue a market-based approach while focusing on social needs.

Research by Harding and Cowling (2006) as well as Leahy and Villeneuve-Smith (2009) conduct analysis on a more aggregate level, based on UK surveys on social entrepreneurship. Contrary to Johnson (2003), they examine all age groups. However, their findings also prove that young people are more likely to be social entrepreneurs compared to all other age groups. Bosma and Levie (2010), who conduct large-scale research based on data from the GEM Adult Population Survey, find similar results, including that in innovation driven economies, young people in the age groups 18-24 years and 25-34 years are most likely to be social entrepreneurs.

On the contrary, recent research by Hoogendoorn et al. (2011) finds that not only young individuals are likely to be social entrepreneurs, but also older individuals. They, conducted binary logistic regression based on Eurobarometer data for 35 countries and found a u-shaped relation between age distribution and social entrepreneurship. A theory for this pattern is provided by Parker (2008), namely the neoclassical life-cycle theory, which is explained in great detail in the following chapter.

3. Neoclassical life-cycle theory

Despite all that is recently known about social entrepreneurship, there are still gaps in the literature which have yet to be addressed. One such gap was discovered by Parker (2008), who found that the literature lacked at describing which people become social entrepreneurs, why they chose this instead of commercial entrepreneurship and if there is a higher likelihood for people to become social entrepreneurs at a certain stage in life. He therefore designed the neoclassical life-cycle theory which he believes has the ability to explain some of the questions that have not yet been answered by existing literature. In developing the theory, Parker decided to analyze the behavior of social entrepreneurs based on rational neoclassical occupational choice approach. In other words, Parker aims to build his theory of why people choose entrepreneurship over paid employment based on the neoclassical economics paradigm.

The core of the neoclassical paradigm is characterized by the study of the allocation of scarce resources, optimization, rationality, focus on marginal tradeoffs and relative prices, methodological individualism, the use of calculus and a general equilibrium conception of the economy (Colander, 2000). In more common language, the characteristics can be described as greed, rationality and equilibrium. People are self-interested, trying to increase their own utility and rationally choose those things that involve the lowest costs and provide the highest utility (Colander, 2000). However, contemporary neoclassical (micro) economics is basically about building models and theories that are tested or that can at least be tested in theory (Bianchi & Henrekson, 2005). Returning back to Parker, it can be concluded that taking the neoclassical approach, he aims to proof that individuals choose entrepreneurship over paid employment only if they obtain a higher expected utility from entrepreneurship. The remainder of this section explores the theory thoroughly and aims to make a plausible assumption based on it.

Parker describes an individual (x) who has the financial means and ability and is considering becoming a social entrepreneur. He can make two choices in each period: 1. How to divide one unit of time (t) between work and leisure (1-h), 2. Which fraction of the time spend on

work ($0<\alpha<1$) should be devoted to social entrepreneurship (*se*) and which on commercial entrepreneurship and paid employment (*pe*). It is expected that *x* can gain utility at each *t* from three sources: consuming goods *c* (*t*), leisure *lh* (*t*) and participation in *se.* It is believed that satisfaction from participating in *se* can be obtained in two ways. Participants can gain satisfaction from the work itself ψ (αh), or from the benefits that *se* yields to others. The expression αh represents the work input into a social entrepreneurial venture. Thus, the utility function of person *x* is represented as follows

Equation1: $U(t)= U\{c(t), 1-h(t),\psi[\alpha(t)\ h(t)]\}$.

3.1 Characteristics of social entrepreneurs

The previous section portrays an individual (*x*) *who* is thinking about social entrepreneurship and has to make a choice. To solve this decision problem, a pair of relations is developed from which the first represents the marginal utility that *x* receives from one extra unit of consumption:

Equation 2: $\partial U/\partial c\ \alpha\ e^{(\rho\ -r)t}$.

The input is represented by α and $e^{(\rho\ -r)t}$ represents the discount factor, where ρ is the rate at which future utilities are discounted, *t* is the amount of periods that an individual stays economically active and *r* is the interest rate.

The second relation represents the marginal utility that *x* receives from devoting an extra unit of time into social entrepreneurship:

Equation 3: $\partial U/\partial \alpha = w(1-\gamma).\partial U/\partial c$.

The financial return available from working in social entrepreneurship is represented by $w(1-\gamma)$. In order to give a clear description of these equations, a distinction is made between two types of personalities who are believed to characterize social entrepreneurs. Firstly, type A

personalities, who are relatively patient and discount utility less than interest rate ($\rho<r$). These people attach greater value to future delight as opposed to present delight. Secondly, type B personalities who are believed to be relatively impatient and discount utility more than interest rate ($\rho>r$). Type B's attach greater value to enjoyment in the present as opposed to the future. It can therefore be noticed that type A's and type B's are each other's extremes.

Substituting the two personalities in equation2, it is found that with decreasing marginal utilities, the consumption streams of type A's steadily increase with age, as they attach greater value to future delight. Put differently, as type A personalities get older, their consumption streams increase given decreasing marginal utility. For type B's the exact opposite holds; as type B personalities get older, their consumption streams decrease given decreasing marginal utilities.

Concerning equation 3, it is found that type A's have rates of participation in social entrepreneurship that increase with age, while for type B's the exact opposite applies. This same trend applies to leisure, meaning that leisure time increases with age for type A's and the opposite for type B's.

4. Hypotheses Formulation

In this chapter, several hypotheses are formulated based on the aforementioned theory. These hypotheses are tested in subsequent chapters.

Age and social entrepreneurship

After analyzing the neoclassical life-cycle theory, it is clear that this theory assumes that two types of people are engaged in social entrepreneurship. Type A individuals are particularly wealthy and engage in social entrepreneurship at a later stage in life, while type B individuals are young idealists. The distinction between type A individuals and type B individuals lays in the choices they make at a certain stage in life. With the following hypothesis, this relationship is tested:

Hypothesis 1*: The relationship between social entrepreneurship and age follows a U-shaped pattern: younger and older individuals have a higher probability to be social entrepreneurs.*

Patient consumer behavior

While being young, type A's choose to work hard in paid employment and commercial entrepreneurship (*pe*) and save money as opposed to spending it on consumption and leisure. It can therefore be stated that type A individuals attach greater value for future delight, meaning that they are more patient consumers. On the contrary, type B individuals do not save but spend money on consumption and leisure. Type B individuals attach greater value to present delight. To test these assumptions, the following hypothesis is tested:

Hypothesis 2*: Social entrepreneurs in the lower age category are more likely to show less patient consumer behavior compared to those in the higher age category.*

Household income

Parker explains that type A individuals stay rich during their life, which allows them to spend more on consumption, leisure and engagement in social entrepreneurship when they are older. This wealth during their life indicates that type A's experience high levels of satisfaction concerning their income. However, type B's are engaged in higher spending behavior during their life. As resources become scarce, they have to cut back on consumption, leisure and time spend in social entrepreneurship. This indicates that at a certain point in life they become less satisfied with their income. The following hypothesis tests this relation:

Hypothesis3*: Social entrepreneurs in the lower age category are less likely to be satisfied with their household income compared to those in the higher age category.*

5. Empirical Research

5.1 Data

Having reviewed the theory, this section provides an explanation of the data to be used for the analysis of the characteristics of social entrepreneurs. The data is obtained from the Flash Eurobarometer Survey on Entrepreneurship (No. 283) which was executed by the European Commission. This survey was conducted in December 2009 and January 2010 by means of telephone and door-to-door interviews. The questions of the interview are about the motivations, choices, experiences and obstacles associated with self-employment. The dataset covers 36 countries, including 27 EU Member States, 5 other European countries (Croatia, Iceland, Norway, Switzerland and Turkey), the US, and 3 Asian countries (China, Japan and South Korea). The total amount of participants is 26,168 and they were all randomly selected. Each national sample is representative of the total population aged15 years and older, except for the Chinese sample which was only representative of urban populations. The national samples consist of about 500 or 1,000 observations.

The survey has enabled insight into important demographics, including age and shows how patient each respondent is in their consuming behavior. Also shown is how each participant perceives their household income. Additionally, it provides insight into each participant's level of engagement in entrepreneurship. Participants who answered positively to the question: *Have you ever started a business or are you taking steps to start one,* were asked to choose their level of engagement into entrepreneurship. All these aspects are important for this research as they have the ability to provide empirical analysis as an end to test the hypotheses. The exact questions of the Flash Eurobarometer survey on Entrepreneurship (No. 283) that are used for this thesis can be found in the appendix.

In order to test the three hypotheses, binary logistic regressions are performed. The following section gives an extensive explanation of the dependent, independent and control variables. The methodology and results are described in the chapters to follow.

5.2 Dependent variables

5.2.1 Social and commercial entrepreneurship

The Flash Eurobarometer Survey on Entrepreneurship (No. 283) has a feature which is important for this research, namely the ability to make a distinction between social entrepreneurs and the reference group (being commercial entrepreneurs).To test the relationship between age distribution and social entrepreneurship, the dependent variable "social entrepreneur" is constructed in the following way. Firstly, the following question is used: "Have you ever started a business or are you taking steps to start one?" Responses included yes, no and DN/NA. Also included is the question: "How would you describe your situation". Answers contained: it never came to my mind to start up a business; you are thinking about starting up a business; you thought of it or you had already taken steps to start a business but gave up, DK/NA. The distributions for the answers to these questions are presented in table 1 and 2 respectively.

Table 1: distribution of the answers to question Q8: Have you ever started a business or are you taking steps to start one?

Answer	Frequency	Percentage
Yes	6613	25.27
No	19353	73.96
DK/NA	202	0.77
Total	26168	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

Table 2: distribution of answers to question Q9: "How would you describe your situation (starting a business)?"

Answer	Frequency	Percentage
Never came to my mind	12776	66.02
Thinking about it	2446	12.64
thought of it/ taken steps but quit	3414	17.64
DK/NA	717	3.70
Total	19353	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

Respondents who answered "yes" in question Q8 or "You thought of it or you had already taken steps to start a business but gave up" in question Q9, were asked to state the importance of addressing an unmet social or ecological need when deciding to start their business. The possible answers that could be given included "very important", "rather important", "rather not important" and "not important at all", DK/NA. This last answer category was recoded into missing values and thus automatically excluded. Therefore, the total amount of respondents equals 9028. Table 3 provides an overview of these answers.

Table 3: distribution of answers to question Q11f: "Addressing an unmet social or ecological need"

Answer	Frequency	Percentage
Very important	2441	27.04
Rather important	3494	38.70
Rather Not important	1958	21.69
Not important at all	1135	12.57
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

This research only considers the people who have answered "very important" as social entrepreneurs. Therefore, the variable is recoded by appointing value 1 to this group of 2441

individuals. The other individuals answering "rather important" "rather not important" and "not important at all" are labeled commercial entrepreneurs. They take value 0 and include 6587 individuals. This variable is used as the dependent variable to test the first hypothesis. Table 4 represents the distribution of the recoded variable.

Table 4: distribution of recoded dependent variable "Social entrepreneur"

	Frequency	**Percentage**
Commercial entrepreneurs (value 0)	6587	72.96
Social entrepreneurs (value 1)	2441	27.04
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

5.2.2 Patient consumer behavior

In order to test the second hypothesis, the variable "Patience" is considered as a dependent variable. This variable reviews how patient the respondents are in their spending behavior. In order to test this, the following question is used: Please imagine that you suddenly inherited X Euro. What would you do with the money? Respondent could choose between various answers from which start a business and save the money are recoded into value 1 as they are associated with providing future delight, meaning that the respondents are patient enough to invest the money in order to get future returns, and thus spend it in the future. The other responses, buy a house, spend it on things I always wanted and work less / stop working take value 0. People who responded with DK/NA were recoded into missing values and thus automatically excluded by the analysis. Table 5 provides an overview of the distribution of the recoded variables.

Table 5: distribution of recoded variable "Patience"

	Frequency	Percentage
Impatience (value 0)	3938	43.62
Patience (value 1)	4672	51.75
dk/na	418	4.63
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

5.2.3 Household income

In order to test the final hypothesis, the financial status of each household is considered as a dependent variable. This is measured with the question to describe the feelings about the household income these days. Answers included "Live comfortably on the present income," "Get by on the present income", "Find it difficult to manage on the present income", "Find it very hard to manage on the present income". These answers are coded value 1, 2, 3 and 4 respectively. The distributions are provided in table 6.

Table 6: distribution of answers to Question D9: "Which of the following phrases describe best your feelings about your household's income these days?"

Answer	Frequency	Percentage
live comfortably on present income	2103	23.29
get by on present income	4171	46.20
find it difficult to manage present income	1837	20.35
find it very hard to manage present income	886	9.81
dk/na	31	0.34
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

Due to its categorical nature, this variable is recoded as a binary variable named "bin_income". The responses "Get by on the present income" and "Live comfortably on the

present income," are recoded as value 1, while "Find it very hard to manage on the present income" and "Find it difficult to manage on the present income" are recoded into value 0. For the construction of this variable, the value DK/NA was also excluded. Table 7 shows the distribution of this recoded variable.

Table 7: distribution of recoded variable "Binary_Income"

Answer	Frequency	Percentage
Find it difficult/ very hard to get by on present income (value 0)	6274	69.50
Live comfortable or get by on present income (value 1)	2723	30.16
dk/na	31	0.34
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

5.3 Independent variables

5.3.1 Age

To test the first hypothesis, age is considered as an independent variable. Research by Levesque and Minití (2006) found an inverted U-shape for the relationship between age and commercial entrepreneurship, while the neoclassical life-cycle theory of Parker (2008) suggests a U-shaped pattern for the relationship between age distribution and social entrepreneurship. The U-shape is an indication of non-linearity. Therefore, a quadratic term of age is also included as an independent variable. The quadratic term is constructed by calculating the quadrate of each respondent's age. Respondents were asked to report their exact age, which can take any value starting from 15, making it a continuous variable.

5.3.2 Social entrepreneurs and age group

To test the second and third hypotheses, the variable "age group" functions as an independent variable. The age of the respondents was categorized into four groups. Refusals are excluded from the analysis. Table 8 provides an overview of the four age categories.

Table 8: distribution of different age groups.

Answer	Frequency	Percentage
15-24	577	6.39
25-39	1920	21.27
40-54	3067	33.97
55+	3418	37.86
dk/na	46	0.51
Total	9028	100

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

5.4 Control variables

Gender

As a determinant of entrepreneurship, gender is included as a control variable. Research has shown that men are more likely to be engaged in commercial entrepreneurship compared to women (Levie et al., 2006). However, men are less likely to engage into social entrepreneurship compared to women (Hoogendoorn et al., 2011). Also found is that females are more likely to become social entrepreneurs instead of commercial entrepreneurs (Bosma and Levie, 2010). To test this, a binary variable is created to control for this gender effect. Value 1 is given to the male participants and value 0 to the females.

Engagement

As this variable is taught to be of significance in the outcome of the analyses, engagement is considered as a control variable. Research has shown that social entrepreneurs are more likely to be in a very early stage of entrepreneurial engagement (taking steps) as opposed to later stages (Hoogendoorn et al., 2011; Busman and Levie, 2009). Participants who answered positively to the question: *Have you ever started a business or are you taking steps to start one*, were asked to choose their level of engagement into entrepreneurship. Their choice was between: You are currently taking steps to start a new business ("taking steps", valeu1); You have started or taken over a business in the last three years which is still active today ("young business", value2); You started or took over a business more than three years ago and it's still active ("established business", value3); Once started a business, but currently you are no longer an entrepreneur since business has failed ("failed business", value 4); Once started a business, but currently you are no longer an entrepreneur since the business was sold, transferred or closed ("sold business", value 5).

Education

Empirical works have found that higher educated individuals are more likely to become social entrepreneurs (Hoogendoorn et al., 2011; Lounsbury and Strang, 2009). This variable is measured with the question: "age when finished full-time education". Answers are grouped into three categories for convenience: smaller or equal to 15, between 16 and 20, 20 years or more, which can be considered as low, medium and high levels of education respectively. Respondents who answered still in education were recoded into missing values and thus excluded in by the analyses.

Motive

This control variable looks into the motive behind the decision to start a business. This research only considers the opportunity and necessity motive. Bosma and Levie (2010) have found that necessity entrepreneurship is more common in less developed economies. Research

by Hoogendoorn and Hartog (2010) found that an increase in economic development increases the level of opportunity social entrepreneurship but from a certain rate of economic development onwards, it tends to decrease again (inverted U-shape). To control for this effect, the variable motive was constructed as a dummy through the question: All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity? Value 1 is assigned to opportunity and 0 to necessity.

Urban vs. rural

Also considered is the type of area the respondents live in. Research by Hoogendoorn et. al., (2011) found evidence which indicates that individuals who live in a metropolitan or urban areas have a lower likelihood of being engaged in social entrepreneurship compared to individuals living in rural areas. To control for this effect the variable area was constructed as a dummy through the question: Type of location? Answers including metropolitan or urban area take value 1 and rural area takes value 0.

Income

Also controlled for is the respondents' perception of household income as it is expected that this might affect the results of the tests for hypotheses 1 and 2. Research shows that a positive relation between income and engagement into social entrepreneurship, meaning that people with a high income are more likely to be involved in social entrepreneurship (Bosma and Levie, 2010). However, other research has found evidence which indicates that individuals who were the least comfortable with their household income were the most likely to be social entrepreneurs (Hoogendoorn et. al., 2011). The construction of this variable was done through the question: *Which of the following phrases describes best your feelings about your household income these days.* Answers included "Live comfortably on the present income," "Get by on the present income", "Find it difficult to manage on the present income", "Find it very hard to manage on the present income". These answers are coded value 1, 2, 3 and 4 respectively, and the distribution of the answers is presented in table 6.

Self-employed parents

The self-employment status of the parents is also controlled for. The reason for this is because research has shown that self-employed parents are associated with a doubled chance of entrepreneurial engagement of their child (Dunn and Holtz-Eakin 2000). Therefore, this research explores whether the occupational status of the parents is also important for engagement in social entrepreneurship. The variable takes value 1 if at least one of the parents is self-employed and value 0 otherwise.

Country

The final variable for which the analyses control is country-specific influences. Research shows that the level of commercial and social entrepreneurship varies between countries (Hoogendoorn et al., 2011). A number of country dummies are therefore included in the analyses, with the Netherlands as the reference group. This indicates that the coefficients of these countries will be interpreted as the effect of being in the corresponding country rather than in the Netherlands.

5.5 Methodology

To test the three hypotheses, this thesis first explores whether the relationship between social entrepreneurship and age follows a U-shaped pattern. Afterwards, it explores whether younger social entrepreneurs show less patient consumption patterns compared to their older counterparts. Finally, it explores whether younger social entrepreneurs are less satisfied with their household income compared to older social entrepreneurs. All these investigations are executed through models which explain the relationship between the dependent and independent variables, while additionally controlling for several variables. Given that all the dependent variables are binary, the proper regression to be used is the binary logistic regression. This regression model has the ability to predict the probability of occurrence.

Performing a binary logistic regression is subject to a number of criteria. Firstly, the sample size should be large enough. Research by Hosmer and Lemeshow (2000) suggest that a sample size should not be smaller than 400. Secondly, standard errors should be independent. This is usually not the case when respondents are selected non-randomly and interviewed multiple times. Thirdly, there should be an absence of multicollinearity, as it can lead to biased estimators.

Applying these criteria to this thesis, it can be noticed that the sample size in all the models is large enough. Also, the second criterion is met, since respondents of the Flash Eurobarometer Survey on Entrepreneurship (No. 283) were randomly selected and interviewed once. Regarding the third criterion, table 16 in the appendix shows that none of the variables are highly correlated with each other. Therefore, no multicollinearity is detected.

In order to provide results, three separate binary logistic regression models are presented. These models contain the average marginal effects with their heteroskedastic-robust standard errors, given that these effects have the ability to make the interpretation of the results easier. The average marginal effects measure the average increase or decrease in the predicted probability of being in the active group of the dependent variable as a consequence of a one unit increase in a certain variable. However, one should be aware that average marginal effects suggest causality between variables. Therefore, the interpretation of the results of this thesis has to be done carefully as the goal of the analysis is to find relationships between variables as opposed to causal effects. These relations may cause endogeneity problems, including reverse causality.

5.6 Results

In this section, the results of testing the three hypotheses are presented in three binary logistic regression models. The models control for different determinants of social and commercial entrepreneurship, including gender, area, self-employed parents, level of entrepreneurial engagement, entrepreneurial motivation, education and country. The first binary model investigates the relationship between social entrepreneurship and age. The second binary

model investigates the relationship between social entrepreneurs in four different age groups and patient consuming behavior. The final binary model investigates the relationship between social entrepreneurs in four different age groups and their satisfaction with their household income.

5.6.1 Results of Social entrepreneurship and age

The results of the relationship between social entrepreneurship and age are presented in the binary logistic regression model of table 9. Displayed are the average marginal effects, including their corresponding heteroscedastic-robust standard errors which are depicted between brackets. The marginal effects are measured relative to the predicted probability.

The average predicted probability for being a social entrepreneur equals 0.26 in Model1. The first model provides results for a linear relationship between age and social entrepreneurship. The results show that age has no significant effect on the predicted probability of being a social entrepreneur.

Model 2 also has an average predicted probability of 0.26. This model adds a square term of age, in order to test for a non-linear relation between age and social entrepreneurship. However, the coefficients of the linear and scared term are both insignificant.

These results lead to the conclusion that no evidence is found for a U-shaped relation between age distribution and social entrepreneurship, thus hypothesis 1 is not supported.

Different determinants of social and commercial entrepreneurship have functioned as control variables. Model 1 shows that averagely, being male decreases the predicted probability of being a social entrepreneur by 4.61 percentage points as opposed to being female. In other words, females are 4.61 percentage points more likely to engage in social entrepreneurship compared to males. In model 2, the probability of females increases slightly compared to model 1. It can be seen that the females are 4.66 percentage points more probable to be social entrepreneurs compared to males. These results are significant a level of 1%.

The results of low education levels are statistically insignificant, so no conclusions can be drawn. But having a medium level of education averagely decreases the predicted probability of being a social entrepreneur by 2.29 percentage points in model 1 and 2.33 percentage points in model 2. These results are relative to having a high education level and significant at 1%. In more common language: social entrepreneurs are more likely to have high educated levels instead of medium education levels.

Regarding self-employed parents, neither having a self-employed father nor having a self-employed mother significantly affect the predicted probability of social entrepreneurship.

Taking the engagement levels into account, it is evident that all four levels have a negative sign in relation to the reference category, "taking steps". More specifically, the results of model 1 show significant evidence of 1% that on average, the predicted probability of being a social entrepreneur decreases by 6.42 percentage points when operating a young business as opposed to "taking steps". Operating an established business, having failed, or sold business, all averagely decrease the predicted probability of social entrepreneurship by 7.82, 9.48 and 5.86 percentage points respectively. Compared to model 2, the results differ only slightly. It can be seen that on average, operating a young business decreases the predicted probability of social entrepreneurship by 6.27 percentage points, operating an established business by 7.54 percentage points, having failed by 9.32 percentage points, and sold business by 5.94 percentage points. These results are also significant at 1% and relative to the reference category. This indicates that social entrepreneurs have a higher probability to be represented in the first engagement category, namely "taking steps" compared to all other engagement categories.

The results for the area where the respondents live are significant at 5% in both models. Model 1 shows that on average, living in an urban or metropolitan area decreases the predicted probability of social entrepreneurship by 2.86 percentage points, as opposed to living in a rural area. In Model 2 the predicted probability averagely decreases by 2.88 percentage points relative to living in a rural area. These results proof that social

entrepreneurs are more likely to live in rural areas as opposed to urban and metropolitan areas.

Regarding the country dummies, it can be seen in table 13of the appendix that compared to the Netherlands, Belgians are 9.97 percentage points more likely to be social entrepreneurs while Czechs and Germans are respectively 7.16 and 9.23 percentage points less likely. People living in Greece, Ireland and Cyprus are respectively 29.8, 14.43 and 14.85 percentage points more likely to be social entrepreneurs, relative to the Netherlands. Other countries with a decreased probability of social entrepreneurship relative to the Netherlands are: Finland (14.54) and Norway (8.35). Final other countries with an increased probability include: Romania (11.27), Iceland (36.29), Turkey (08.96), Japan (30.26) and South Korea (7.55).

Table 9: Hypothesis1; Binary logistic regression of social entrepreneurship (1=social entrepreneur, 0= commercial entrepreneur). Displayed are average marginal effects and robust standard errors.

	Model 1	Model 2
Predicted Probability	0.2610	0.2611
Age/10	0.0076 (0.0048)	0.0184 (0.0222)
Age/10^2		0.0026 (0.0021)
Control Variables		
Gender	-0.0461*** (0.0122)	-0.0466*** (0.0122)
Education levels		
-15	-0.0206 (0.0207)	-0.0228 (0.0207)
16-20	-0.0229* (0.0134)	-0.0233* (0.0135)
20+(*reference*)		
Father_selfemp	0.0022 (0.0146)	0.0008 (0.0146)
Mother_selfemp	0.0169 (0.0187)	0.0170 (0.0187)
Engagementlevels		
Taking steps *(Reference)*		
Young business	-0.0642*** (0.0235)	-0.0627*** (0.0236)
Established business	-0.0782*** (0.0203)	-0.0754*** (0.0205)
Failed	-0.0948*** (0.0231)	-0.0932*** (0.0232)
Sell off	-0.0586*** (0.0215)	-0.0594*** (0.0214)
Household income		

Live comfortably (*reference*)		
Get by	-0.0057 (0.0158)	-0.0054 (0.0158)
Find it difficult	0.0118 (0.0191)	0.0130 (0.191)
Find it very hard	0.0295 (0.0243)	0.0312 (0.0244)
Area	-0.0286** (0.0137)	-0.0288** (0.0137)
Observations	5131	5621
Pseudo R2	0.0621	0.0623

*Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010. *** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%*
Pseudo R^2 refers to McFadden's R^2
Note: Dependent variable: Answering the question "addressing an unmet social or ecological need". The dependent takes the value of 1 if very important is answered; it takes the value of 0 if rather (not) important not important at all is answered.

5.6.2 Results of Patient consuming behavior

The results of the relationship between social entrepreneurs in different age categories and their patience regarding spending, is presented in the binary logistic regression model of table 10. Displayed are the average marginal effects, including their corresponding heteroscedastic-robust standard errors, which are depicted between brackets.

The average predicted probability for patient social entrepreneurs in model A equals 0.55. Four different age groups are specified, from which the group with age between 15 and 24 functions as the reference group. It is noticed that the other three age groups all have a negative sign and are all statistically significant an 1%, relative to the reference group. The results indicate that on average, the predicted probability of patient consuming behavior decreases by 15.98 percentage points when being in the second age category (25-39) as opposed to the first. Also, the predicted probability of patience averagely decreases by 19.27 percentage points when being in the third age category (40-54) as opposed to the reference category. On average being in the final age group (55+) decreases the predicted probability of patience by 19.23 percentage points, relative to the reference group. So, social entrepreneurs who belong to the youngest age category (15-24) are more patient than social entrepreneur in older age groups.

Model B, with an average predicted probability of 0.56, additionally accounts for control variables. This leads to insignificant results of the second (25-39) and fourth (55+) age group, relative to the reference category. Regarding the third age category (40-54), it is found that this category averagely decreases the predicted probability of patient consuming behavior by 13.41 percentage points relative to the reference category (significance at 10%). In other words, social entrepreneurs in who are between 40 and 54 of age are less patient consumers compared to those who are between 15 and 24 of age.

The second hypothesis, which states that young social entrepreneurs are less patient than older social entrepreneur, is thus not supported as opposing outcomes are found.

Looking at the control variables in model B, it can be seen that at a 1% significance level, being male averagely increases patient consuming behavior by 7.23 percentage points as opposed to being female. In more common language, male social entrepreneurs are more patient consumers compared to female social entrepreneurs. The effects for education and area are statistically insignificant.

The effect of household income is only significant for the fourth category "find it very hard". This category averagely decreases the predicted probability of patient consuming behavior by 9.68 percentage points, relative to the reference group "live comfortably". This means that social entrepreneurs who find it very hard to manage present household income, are less patient consumers compared to social entrepreneurs who live comfortably on present household income.

Regarding the engagement levels, it is evident that all four levels have a negative sign in relation to the reference category "taking steps" and are statistically significant at 1%, apart from "failed" which is significant at 5 %. The results indicate that on average, the predicted probability of having patient consuming behavior decreases by 16.50 percentage points when operating a young business as opposed to "taking steps". On average operating an established business decreases this probability by 14.06 percentage points; having failed decreases it by 12.56 percentage points and having sold the business decreases the probability by 15.05

percentage points, relative to the reference category. It can thus be concluded that social entrepreneurs in the reference category ("taking steps") have the most patient consumption behavior compared to social entrepreneurs in the other engagement categories.

Model B of also includes country dummies which are presented in table 14 in the appendix. The results show that social entrepreneurs living in Malta, Croatia, Iceland and South Korea increase the predicted probability of patient consuming behavior, respectively by 28.22, 22.23, 20.84 and 16.43 percentage points relative to social entrepreneurs in the Netherlands. It can be seen that the social entrepreneurs in countries that have a decreased probability of patient consuming behavior relative to the Netherlands include: Denmark (25.85), Ireland (25.36), Slovakia (24.11), Norway (33.34) and Turkey (23.58).

Table 10: Hypothesis 2; Binary logistic regression of Patience (1=patient consuming behavior, 0= impatient consuming behavior). Displayed are average marginal effects and robust standard errors.

	Model A	Model B
Predicted Probability	0.5543	0.5601
Age group		
15-24 (*reference*)		
25-39	-0.1598*** (0.0396)	-0.1233 (0.0797)
40-54	-0.1927*** (0.0382)	-0.1341* (0.0798)
55+	-0.1923*** (0.0375)	-0.1317 (0.0810)
Control Variables		
gender		0.0723*** (0.0265)
Education levels		
-15 (*reference*)		
16-20		-0.0185 (0.0422)
20+		0.0163 (0.0431)
Household income		
Live comfortably (*reference*)		
Get by		-0.0230 (0.0350)
Find it difficult		-0.0392 (0.0410)
Find it very hard		-0.0968**(0.0488)
Engagementlevels		
Taking steps(*Reference*)		
Young business		-0.1650*** (0.0483)

Established business		-0.1406*** (0.0401)
Failed		-0.1256** (0.0488)
Sell off		-0.1505*** (0.0411)
Area		-0.0027 (0.0299)
Observations	2328	1312
Pseudo R2	0.0079	0.0739

*Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010. *** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%*
Pseudo R^2 refers to McFadden's R^2
Note: Dependent variable: Answering the question "Please imagine, that you suddenly inherited X Euro. What would you do with the money?" The dependent takes the value of 1 if start a business/ save the money is answered; it takes the value of 0 if buy a house/ spend it/ work less is answered.

5.6.3 Results of household income

The relationship between social entrepreneurs in different age categories and their perception of their household income is depicted in the binary logistic regression models of table 11. Displayed are the average marginal effects, including their corresponding heteroscedastic-robust standard errors which are shown between brackets.

Looking at Model I, it can be seen that the average predicted probability of getting by or living comfortably on present income (referred to as income satisfaction hereafter) equals 0.65. Furthermore, it is shown that the three age categories have a negative sign relative to the reference age category (15-24). The second category (25-39) averagely decreases the predicted probability of satisfaction with income by 7.01 percentage points as opposed to the reference group (10% significance). On average, the third age category (40-54) decreases the predicted probability of satisfaction with income by 9.34 percentage points, compared with the first age category (5% significance). The final age category averagely decreases the probability of satisfaction with income by 12.66 percentage points relative to the reference group (1% significance). It can thus be concluded that the youngest social entrepreneurs (15-24) are the most satisfied with their income compared to older social entrepreneurs.

In model II, control variables are included, leaving only the result of the final age group (55+) significant at 10%. This model shows an average predicted probability for satisfaction with income of 0.67. The results show that on average, social entrepreneurs in the last age group

(55+) are 12.41 percentage points less likely to be satisfied with their household income compared to social entrepreneurs in the reference group (15-24). So, young social entrepreneurs are more satisfied with their household income compared to older social entrepreneurs

Based on these results, it can be concluded that the third hypothesis, which indicates that young social entrepreneurs are less likely to be satisfied with their household income compared to older social entrepreneurs, is not supported given that opposing results are found.

Regarding the effects of the control variables in model II, the variables gender and area show insignificant results.

The effects for education show that on average, social entrepreneurs with medium education levels (16-20), increase the predicted probability of income satisfaction by 7.94 percentage points relative to the reference category (-15) at a significance level of 10%. High education levels averagely increase this probability by 20.73 percentage points (1% significance). This indicates that social entrepreneurs with low education levels are the least satisfied with their household income compared to social entrepreneurs with medium and high education levels.

Also considered are the engagement levels, from which “taking steps” functions as the reference category. The effects of failed and sold business are insignificant. On average, at a 1% significance level, operating a young business increases the predicted probability of income satisfaction by 14.31 percentage points, as opposed to the reference group. Operating an established business averagely increases the predicted probability of income satisfaction by 11.33 percentage points as opposed to the reference group. This indicates that social entrepreneurs who are operating a young or established business are more satisfied with their household income, as opposed to those who are taking steps.

Also shown is that on average, being an opportunity entrepreneur increases the predicted probability of income satisfaction by 10.85 percentage points as opposed to necessity

entrepreneurs. So, social entrepreneurs driven by opportunity are more satisfied with their household income compared to those driven by necessity.

The results regarding the country dummies of model II are presented in table 15 0f the appendix. It is evident that relative to the Netherlands, social entrepreneurs living in Greece and Poland decrease the probability of income satisfaction by 20.53 and 18.51 percentage points respectively. The countries which increase this probability include: Denmark (23.74), Spain (16.29), Luxemburg (25.06), Sweden (21.02), Norway (27.24) and South Korea (18.00).

Table 11; Hypothesis 3: Binary logistic regression of Household income (1=get by or live comfortably on present income, 0= find it very hard or difficult to manage present income). Displayed are average marginal effects and robust standard errors.

	Model I	Model II
Predicted Probability	0.6523	0.6762
Age group		
15-24 (*reference*)		
25-39	-0.0701* (0.0382)	-0.0656 (0.0668)
40-54	-0.0934** (0.0370)	-0.1059 (0.0661)
55+	-0.1266*** (0.0363)	-0.1241* (0.0678)
gender		-0.0072 (0.0259)
Education levels		
-15 (*reference*)		
16-20		0.0794* (0.0437)
20+		0.2073*** (0.0439)
Engagementlevels		
Taking steps(*Reference*)		
Young business		0.1431*** (0.0486)
Established business		0.1131*** (0.0414)
Failed		-0.0493 (0.0514)
Sell off		0.0269 (0.0428)
Area		0.0394 (0.0298)
Motivation		0.1085*** (0.0284)
Observations	2415	1179

Pseudo R2	0.0042	0.1259

*Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010. *** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%*
Pseudo R^2 refers to McFadden's R^2
Note: Dependent variable: Answering the question "Which of the following phrases describe best your feelings about your household's income these days" The dependent takes the value of 1 if live comfortably/ get by on present income is answered; it takes the value of 0 find it very hard/ find it difficult to manage present income is answered.

6. Conclusion and Discussion

6.1 Discussion

The field of social entrepreneurship is gaining more and more popularity among scholars, policy makers and corporate entrepreneurs. The reason for this popularity is largely due to its ability to provide entrepreneurial solutions to social problems. Therefore, as a new field, different researchers have tried to answer different aspects of social entrepreneurship which have not yet been addressed or which or subject to great ambiguity. Such an attempt was made by Parker (2008), who tried to describe some characteristics of social entrepreneurs based on a neoclassical life-cycle theory.

This thesis has tested the neoclassical life-cycle theory. First, it was investigated whether both young and old individuals have a higher probability to engage in social entrepreneurship. Secondly, it was researched whether younger or older social entrepreneurs showed more patient consuming behavior. Finally, the research explored whether younger social entrepreneurs were less satisfied with their household income, compared to older social entrepreneurs. The empirical results are summarized in table 12.

Table 12: Summery of empirical results

Dependent Variable:	***Empirical Result***	***Hypothesis supported***
-Social entrepreneur		
The relationship between social entrepreneurship and age follows a U-shaped pattern: younger and older individuals have a higher probability to be social entrepreneurs.	0	H1 Not Supported

- Patience		
Social entrepreneurs in the lower age category are more likely to show less patient consumer behavior compared to those in the higher age category.	0	H2 Not supported
- House hold Income		
Social entrepreneurs in the lower age category are less likely to be satisfied with their household income compared to those in the higher age category	0	H3 Not Supported

Age distribution of Social entrepreneurs

As can be seen in table 9, no evidence was found for the U-shaped relation between age and social entrepreneurship, which was suggested by the neoclassical life-cycle theory by Parker (2008). Also, no significant evidence was found regarding the linear relation which was other researchers have proven in their works (Harding and Cowling, 2006; Bosma and Levie 2010) Therefore, the first hypothesis is not supported. The reason for this may be due to the relatively low number of observations. As shown in table 3, the maximum number of observations to test the first hypothesis equals 9028. However, some of the control variables which were included in the regression have decreased this amount. To give an example: Including the control variable engagement decreases the maximum amount of observations to 6140. The individuals, who responded to the question which was used to construct this variable, only included respondents who confirmed to be entrepreneurs or have stated to have given up starting a business. All this and the occurrence of missing values have dropped the amount of observations to 5131.

Also interesting are the outcomes of the control variables. The results for gender confirmed the results of the study by Levie and Hart (2010), by showing that males are less likely to engage in social entrepreneurship compared to females. Also confirmed are the results from the study by Hoogendoorn et al., (2011), stated that social entrepreneurs are more likely to be in the infancy or pre-startup phase of entrepreneurial engagement. Regarding education, the results are similar to earlier studies (Hoogendoorn et al., 2011; Lounsbury and Strang, 2009) who have found that social entrepreneurs are more likely to be highly educated. Finally, it was confirmed that social entrepreneurs are more likely to live in rural areas as opposed to urban or metropolitan areas (Hoogendoorn et al., 2011).

Patient consuming behavior

Table 10 shows the results for the relationship between patience and social entrepreneurs in different age categories. It was expected that young social entrepreneurs would show less patient consuming behavior compared to older social entrepreneurs, but no evidence was found for these assumption. Therefore, the second hypothesis is also not supported. However, the results do deliver surprising outcomes, by providing evidence for the exact opposite of the suggestion made in hypothesis 2. More specifically, evidence was found that young social entrepreneurs show more patient consuming behavior than older social entrepreneurs. A study by Parker (2009) provides possible reasons why older people may be less likely to engage in entrepreneurship. One such a reason is that older people have a decreased time horizon over which sunk costs can be amortized and profits can be gained from earlier made investments. This may also be the reason why older social entrepreneurs show less patient consuming behavior compared to younger social entrepreneurs, but is beyond the scope of this research. However, if older social entrepreneurs are indeed more hesitant to make investments which may provide future delight, it can then be stated that this group attaches greater value to present delight.

Regarding the results of the control variables, an interesting finding is that social entrepreneurs who find it very hard to manage present household income, are less patient consumers compared to social entrepreneurs who live comfortably on present household

income. The expected reason for this finding is that social entrepreneurs, who find it very hard to manage their present income, would not have extra money to invest in order to gain future profits. However, the exact reason in beyond the scope of this research.

Satisfaction with income

The final concern was for the relationship between income satisfaction and social entrepreneurs in different age groups. The hypothesis stated that young social entrepreneurs are less satisfied with their household income compared to older social entrepreneurs. The results in table 11 do not support this hypothesis. However, just as in the previous case, evidence is found for opposing results. This indicates that older social entrepreneurs are less satisfied with their household income compared to younger social entrepreneurs. When analyzing the representation of each age group, it is noticed that the group between 15 and 24 only consists of 180 of the 2441 social entrepreneurs, which indicates a clear under representation of this group. A study by Hoogendoorn et al., (2011) shows that individuals who perceive their household income as less comfortable are more likely to be social entrepreneurs. Still, the small group of 180 young social entrepreneurs is found to be more satisfied with their current household income. The reason for this is beyond the scope of this research but may have some association with the possibility that the social entrepreneurs in this age group (15-24) are expected to have viewer fixed costs (no children and mortgage).

Looking at the results of the control variables, an interesting result is that social entrepreneurs with low education levels are the least satisfied with their household income compared to social entrepreneurs with medium and high education levels. This is in line with the general assumption that a high education level increases the possibility of earning a high income.

Country effects

Models 2, B and II have controlled for country specific effects. A striking result is that individuals living in Japan and Greece are respectively 30.26 and 29.80 percentage points more likely to be social entrepreneurs compared to individuals living in the Netherlands.

However, the reasons behind the outcomes of these effects are beyond the scope of this research.

6.2 Limitations

Like most studies, this research also has some limitations. One such is the definition of the term social entrepreneurship, which has a wide range of definitions. As such the results of this thesis may differ as a definition is used for the term social entrepreneurship, which differs from the one adopted by this thesis. This may be the case because social entrepreneurship was only measured in a single way.

A second limitation is the inability to test the leisure variable in the neoclassical life-cycle theory, given that leisure is one way in which a person can increase his utility. The Flash Eurobarometer Survey on Entrepreneurship (No. 283) does not contain information on this aspect, leaving it to be unexamined by this thesis.

Another limitation is the way in which the control variable education was measured. The question asked was: "age when finished full-time education". This is not a precise measure of the education level of the individual. For example, if a teenage girl dropped out of high school due to pregnancy and returns at age 20 to finish high school at age 21; she would be perceived by the data to have a high education level (20+), which in fact is not the case.

Also considered a limitation is the possibility that the results are affected by problems with endogeneity, including reverse causality. The reason for this is that this research provides associations between variables as opposed to causal effects.

A major limitation of this research is the low explanatory power of the binary logistic models. It can be observed that the R^2 in all the models is very low. The highest R^2 is presented in model II and equals 12.59%, which means that only 12.59% of the model variance is explained. The reason for this may be due to a large number of missing values.

6.3 Conclusion

This thesis has made an attempt to test the neoclassical life-cycle theory, which was developed by Parker (2008). In so doing, it is the first study to have tested the associations suggested by this theory. The aim of this thesis is summarized in the research question: *are the indicators as proposed by the neoclassical life-cycle theory indeed associated with the probability of being a social entrepreneur?*

The factors associated with the neoclassical life-cycle theory are age distribution, patient consuming behavior, leisure time and income. No significant evidence is found for the statements about the age distribution of social entrepreneurs. Concerning satisfaction with income and patient consuming behavior, opposing results are found. Leisure time was not accounted for due to the absence of a measure for this variable.

As such, the answer to the research question is as follows: the indicator for the age distribution is not associated with being a social entrepreneur. The indicators for patient consuming behavior and satisfaction with income are associated with being a social entrepreneur, but in an opposing way compared to the one suggested by the neoclassical life-cycle theory.

As an implication, this thesis proposes that future research, testing the neoclassical life-cycle theory, should attempt to use a dataset which enables the inclusion of the leisure aspect. Also, more diverse measures of social entrepreneurship could be considered in order to fit a wider range of definitions of the concept of social entrepreneurship. Future attempts should decrease or eliminate endogeneity problems and explore the age distribution of social entrepreneurs more extensively as no significant results were found by this research. This may be necessary to give policy makers a better indication, based on empirical results, of the age groups in which people are more likely to engage in social entrepreneurship. In this way, policy directed towards the stimulation of social entrepreneurial initiative can be made in an effective and efficient way.

References

Alvord, S.H., Brown, L.D., Letts, C.W. (2004). Social entrepreneurship and societal transformation: and explanatory study. Journal of applied behavioral science 40: 260.

Amin, A., Cameron, A., and Hudson, R. (2002). Placing the social economy. London, UK: Routledge.

Audretsch, D.B. (2003), Entrepreneurship: A Survey of the Literature, Enterprise Papers No. 14, Brussels: European Commission.

Audretsch, D. B., Grilo, I., and Thurik, A. R. (2007). Explaining entrepreneurship and the role of policy; a framework. The handbook of research on entrepreneurship policy (pp. 1-17). Cheltenham UK and Northhampton MA US: Edward Elgar Publishing Limited.

Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? Entrepreneurship Theory and Practice, 30(1), 1—22.

Baron, R.A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs 'connect the dots' to identify new business opportunities. Academy of management perspectives 104.

Bates, T. (1995). Self-employment entry across industry groups. Journal of Business Venturing, 10(2), 143-156.

Bergmann, H., & Sternberg, R. (2007). The changing face of entrepreneurship in Germany. Small Business Economics, 28(2), 205-221.

Bianchi, M., and Henrekson, M. (2005). Is neoclassical economics still entrepreneurless? SSE/EFI Working Paper Series in Economics and Finance No. 584. Kyklos, forthcoming.

Bosma, N., and Levie, J. (2010). Global Entrepreneurship Monitor - 2009 Executive Report. Wellesley, MA/London: Babson College London Business School.

Braaksma, R., Gibcus, P., and Kok de J. (2012). Vergrijzing en Ondernemerschap.

Certo, T.S., & Miller, T. (2008). Social entrepreneurship: key issues and concepts. Business Horizons 51, 267-271.

Colander, David (2000), "The Death of Neoclassical Economics." Journal of the History of Economic Thought 22(2), 127–143.

Cowling M. 2000. Are entrepreneurs different across countries? Applied Economics Letters, 7(12), 785-789.

Davidsson, P., Honig, B (2003) The role of social and human capital among nascent entrepreneurs. Journal of Business Venturing 18(3):pp. 301-331.

Dees, J. G. (1998). Enterprising nonprofits: What do you do when traditional sources of funding fall short? Harvard Business Review, pp. 55-67.

Dorado, S. (2006). Social entrepreneurial ventures: Different values so different process of creation, no? Journal of Developmental Entrepreneurship, 11(4), 319-343.

Dunn, T. A., & Holtz-Eakin, D. (2000). Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links. *Journal of Labor Economics*, 18(2), 282–305.

Emerson, J., and Twerksy, F. (1996). New social entrepreneurs: The success, challenge and lessons of non-profit enterprise creation. San Francisco: Roberts Foundation, Homeless Economic Development Fund.

European Commission (2003), Green Paper Entrepreneurship in Europe, Brussels: European Commission.

Frank, P. M. (2008). A model of nonprofit and socially motivated entrepreneurial behavior. In G. E. Shockley, P. M. Frank and R. R. Stough (Eds.), Non-market entrepreneurship: Interdisciplinary approaches (pp. 192-205). Cheltenham, UK: Edward Elgar Publishing.

Gartner, W.B. (1985). A Conceptual Framework for Describing the Phenomenon of New Venture Creation. Academy of Management Revieuw 10(4), 696-706.

Gartner, W.B. (1988). Who is the entrepreneur? Is the wrong question. American Journal of Small Business 12, 11-32.

Goffee, R. and Scase, R. (1987). Entrepreneurship in Europe. The social processes (eds.), Croom Helm, London.

Harding, R., & Cowling, M. (2006). Social Entrepreneurship Monitor. London: London Business School.

Hoogendoorn, B., and Hartog, C. M. (2010). Prevalence and determinants of social entrepreneurship at the macro-level. Research Report H201022, Zoetermeer, The Netherlands: EIM.

Hoogendoorn, B., Van der Zwan, P., Thurik, A.R. (2011). Social entrepreneurship and performance: The role of perceived barriers and risk. Erasmus Research Institute of Management.

Johnson, S. (2003). Young social entrepreneurs in Canada. New Academy Review, 2(4).

Kets de Vries, M.F.R., (1977). The entrepreneurial personality: A person at the crossroads. Journal of Management Studies 14(1), 34-57.

Kirzner, I.M. (1973). Competition and entrepreneurship. Chicago, IL: The university of Chicago Press.

Knight, F. (1921). Risk, uncertainty and profit. New York: Augustus Kelley.

Leahy, G., & Villeneuve-Smith, F. (2009). State of social enterprise survey. London: Social Enterprise Coalition.

Levesque, M., Minniti, M., (2006). The Effect of Aging on Entrepreneurial Behavior. Journal of Business Venturing 21 (2), 177–194

Levie,J., Hart, M. (2010). Business and social entrepreneurship in the UK: gender, context and commitment. *International journal of gender and entrepreneurship*. 11 (3), 200-217.

Levie, J., Harding, R., Brooksbank, D., Hart, M., Jones-Evans, D. and O'Reilly, M. (2006). Measuring social entrepreneurship: lessons from three years of experimentation by the UK GEM team, paper presented at the Babson-Kauffman Entrepreneurship Research Conference, Madrid, June.

Lounsbury,M., Strang, D. (2009). Social Entrepreneurship: Success Stories and Logic Construction. In Globalization, Philanthropy and Civil society: Projecting philanthropic logistics abroad.

Mair, J., and Martí, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. Journal of World Business, 41(1), 36-44.

McCleland, D. (1951).´The Achieving Society´. Van Nostrand: Princeton NJ.

Nicholls, A. (2006). Social entrepreneurship: New models of sustainable social change. USA: Oxford University Press.

Palmer, M. (1971). The application of psychological testing to entrepreneurial potential. California Management Review, 13, 32-38.

Parker, S. C. (2008). Social entrepreneurship: A neoclassical theory. In G. E. Shockley, P. M. Frank and R. R. Stough (Eds.), Non-market entrepreneurship: Interdisciplinary approaches (pp. 206-216). Cheltenham, UK: Edward Elgar Publishing.

Parker S. (2009). Economics of Entrepreneurship, Cambridge University Press, Cambridge, UK.

Praag, C. M. v., & Versloot, P. H. (2007). What is the value of entrepreneurship? A review of recent research. Small Business Economics, 29(4), 351-382.

Reynolds, P. D., S. Michael Camp, W. D. Bygrave, E. Autio, and M. Hay, 2001, Global Entrepreneurship Monitor Global 2001 Executive Report, Kansas City: Kaufman Center

Schumpeter, J. (1934) . Capitalism, socialism, and democracy. New York: Harper & Row.

Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. Journal of Management, 25(1), 217—226.

Short, J.C., Moss, T.W., Lumpkin, G.T. (2009). Research in Social entrepreneurship: past contributions and future opportunities. Strategic entrepreneurship journal, 3, 161-194.

Sluis van der, J., Praag van, C.M. Vijverberg, W.(2004), Entrepreneurship selection and performance: a meta-analysis of the impact of education in less developed countries, Manuscript, University of Amsterdam.

Sternberg, R., and Wennekers, S. (2005). Determinants and effects of new business creation using Global Entrepreneurship Monitor data. Small Business Economics, 24(3), 193-203.

Thompson, J., Doherty, B. (2006). The diverse world of social enterprise: A collection of social enterprise stories. International Journal of Social Economics, 33(5), 361 – 375.

Weerawardena, J., and Sullivan Mort, G. (2006). Investigating social entrepreneurship: A multidimensional model. Journal of World Business, 41(1), 21-35.

Williams, D. R. (2004). Youth self-employment: Its nature and consequences. Small Business Economics, 23(4), 323-336.

Appendix

Question used of the Flash Eurobarometer Survey on Entrepreneurship (No. 283)

D1. Sex

- male 1
- female 2

D2. Exact Age:

- exact age .....[_][_]
- refusal/no answer 00

D3. Age when finished full time education: **[EXACT AGE IN 2 DIGITS]**

- exact age .....[_][_]
- refusal/no answer 00
- never been in full time education 01
- still in fulltime education 99

D5. Region = "European Administrative Regional Unit" (N.U.T.S. 1) [2 DIGITS]

D6. Type of Locality?

- metropolitan zone.....1
- other town/urban centre.....2
- rural zone 3

D7. Could you tell me the occupation of your father? Is he or was he self-employed, white-collar employee in private sector, blue-collar employee in private sector, civil servant or without a professional activity?

[READ OUT – ONLY ONE ANSWER]

- self-employed 1
- white-collar employee in private sector 2
- blue-collar employee in private sector.....3
- civil servant.....4
- without a professional activity.....5
- other.....6
- (DK/NA) 7

D8. Could you tell me the occupation of your mother? Is she or was she self-employed, white-collar employee in private sector, blue-collar employee in private sector, civil servant or without a professional activity?

[READ OUT – ONLY ONE ANSWER]

- self-employed 1
- white-collar employee in private sector 2
- blue-collar employee in private sector.....3
- civil servant.....4
- without a professional activity.....5
- other 6
- (DK/NA) 7

D9. Which of the following phrases describe best your feelings about your household's income these days:

[READ 1 - 4 – ONLY ONE ANSWER]

- Live comfortably on the present income1
- Get by on the present income 2
- Find it difficult to manage on the present income 3
- Find it very hard to manage on the present income 4
- DK 5
- Refusal to answer.....6

D10. Do you strongly agree, agree, disagree or strongly disagree with the following statements?

[READ OUT – ROTATE – ONE ANSWER ONLY FOR EACH ITEM]

- strongly agree 1
- agree.....2
- disagree 3
- strongly disagree.....4
- [DK/NA] 9

a) In general, I am willing to take risks 1 2 3 4 9

Q8. Have you ever started a business or are you taking steps to start one?

[READ OUT – ONE ANSWER ONLY]

- yes 1
- no.....2
- [DK/NA].....9

Q10. How would you describe your situation:

- You are currently taking steps to start a new business 1
- You have started or taken over a business in the last three years which is still active today 2
- You started or took over a business more than three years ago and it's still active 3
- Once started a business, but currently you are no longer an entrepreneur since business has failed 4
- Once started a business, but currently you are no longer an entrepreneur since business was sold, transferred or closed 5
- [DK/NA] 9

[TO THOSE WHO ANSWERED Q8 = 1 OR Q9 = 3, i.e. people who are taking steps to start, are running a business, had one in the past or had taken steps to start but gave up]

Q11. For each of the following elements, please tell me if it was very important, rather important, rather not important or not important at all for making you take steps to start a new business or take over one.

[READ OUT – ROTATE – ONE ANSWER PER LINE]

- Very important.....1
- Rather important 2
- Rather not important 3
- Not important at all.....4
- [DK/NA] 9

f) Addressing an unmet social or ecological need 1 2 3 4 9

Q12. All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity?

[READ OUT – ONE ANSWER ONLY]

- You started it because you came across an opportunity.....1
- You started it because it was a necessity.....2
- [Both – SPONTANEOUS].....3
- [DK/NA] 9

Q16. Please imagine, that you suddenly inherited X Euro. What would you do with the money?

[READ OUT – ROTATE – ONE ANSWER ONLY]

- Start a business (alone or with a partner).....1
- Buy a house (or repay my mortgage)….....2
- Save the money (saving account, shares etc.) 3
- Spend it on things I always wanted to buy (voyages, car, luxury items).....4
- Work less / stop working 5
- [DK/NA] 9

Table 13: Marginal effects of country dummies of Model 2, relative to the Netherlands

Belgium	0.0997*	Lithuania	0.0324	Bulgaria	0.0081
Czech Republic	-0.0716*	Luxemburg	-0.0455	Romania	0.1127*
Denmark	-0.0564	Hungary	-0.0083	Croatia	0.09316
Germany	-0.0933**	Malta	0.1612	Iceland	0.3629***
Estonia	0.0462	Austria	0.0357	Norway	-0.0835**
Greece	0.2980***	Poland	-0.0054	Switzerland	-0.0115
Spain	0.0567	Portugal	0.0218	Turkey	0.0896*
France	0.0140	Slovenia	0.0280	United States	0.0470
Ireland	0.1443**	Slovakia	0.0375	China	0.0671
Italy	0.0384	Finland	-0.1454***	Japan	0.3026 ***
Cyprus	0.1485***	Sweden	-0.0385	South Korea	0.0755*
Latvia	0.0881	United Kingdom	0.0459		

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010.
**** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%.*

Table 14: Marginal effects of country dummies of Model B, relative to the Netherlands

Belgium	-0.0733	Lithuania	0.0852	Bulgaria	-0.0738
Czech Republic	0.0524	Luxemburg	0.0129	Romania	0.0213
Denmark	-0.2585*	Hungary	0.0117	Croatia	0.2223**
Germany	-0.0343	Malta	0.2822*	Iceland	0.2084**
Estonia	0.0384	Austria	-0.0561	Norway	-0.3334**
Greece	0.0026	Poland	0.0506	Switzerland	-0.0570
Spain	-0.0427	Portugal	0.0531	Turkey	-0.2358**
France	-0.1268	Slovenia	0. 0183	United States	0.0473
Ireland	-0.2546**	Slovakia	-0.2411*	China	0.0836
Italy	-0.0719	Finland	-0.2735	Japan	-0.0996
Cyprus	-0.0736	Sweden	-0.1361	South Korea	0.1643*
Latvia	0.1593	United Kingdom	-0.0216		

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010.
**** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%.*

Table 15: Marginal effects of country dummies of Model II, relative to the Netherlands

Belgium	0.1433	Lithuania	-0.1087	Bulgaria	0.0115
Czech Republic	0.0938	Luxemburg	0.2506**	Romania	0.0421
Denmark	0.2374*	Hungary	-0.1316	Croatia	-0.1025
Germany	0.1316	Malta	0.0718	Iceland	-0.1267
Estonia	-0.0025	Austria	0.1758	Norway	0.2724**
Greece	-0.2053**	Poland	-0.1851*	Switzerland	0.1202
Spain	0.1629*	Portugal	0.0678	Turkey	-0.0469
France	0.0609	Slovenia	0.0564	United States	0.0037
Ireland	0.0277	Slovakia	0.0419	China	-0.0118
Italy	0.1430	Finland	0.0565	Japan	0.0516
Cyprus	-0.0941	Sweden	0.2102*	South Korea	0.1800**
Latvia	-0.0560	United Kingdom	0.0808		

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010.
**** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%.*

Table 16: Multicollinearity matrix for the independent and control variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. Age/10	1.000										
2. Age/10^2	0.9780***	1.000									
3. Gender	-0.0342***	-0.0291***	1.000								
4. Education	-0.1956***	-0.2081***	0.0714***	1.000							
5. Father self_emp	0.0293***	0.0372***	0.0157**	-0.0157**	1.000						
6. Mother self_emp	0.0052	0.0088	0.0106*	-0.0195***	0.4405***	1.000					
7. Engagement	0.4387***	0.4338***	-0.0401***	-0.1353***	0.0169	-0.0293**	1.000				
8. Motivation	-0.0857***	-0.0829***	0.0637***	0.0770***	-0.0337**	-0.0741***	-0.0035	1.000			
9. Area	-0.0456***	-0.0375***	-0.0120*	0.1440***	-0.0273***	-0.0329***	-0.0351***	0.0027	1.000		
10. Income	0.0614***	0.0482***	-0.0670***	-0.2495***	-0.0261***	-0.0003	0.0693***	-0.1914***	-0.0354***	1.000	

Source: Flash Eurobarometer Survey on Entrepreneurship (No. 283), December 2009 and January 2010

**** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%.*