



How perceived feasibility and desirability of entrepreneurship influence entrepreneurial intentions: A comparison between southern and northern European countries.

MASTER THESIS

AUTHOR: ZOI GIAGTZI

STUDENT NUMBER: 357781

PROGRAMME: ENTREPRENEURSHIP AND STRATEGY ECONOMICS

SUPERVISOR: DR. BRIGITTE HOOGENDOORN

CO READER: DR. POURYA DARNIHAMEDANI

ROTTERDAM, JUNE 2013

Abstract

There is a general agreement that cognitive factors such as attitudes and perceptions towards entrepreneurship play an important role in the involvement in entrepreneurial process. The purpose of this study is to analyze the influence of perceptions of feasibility and desirability towards entrepreneurship on entrepreneurial intentions and investigate whether differences exist between southern and northern European countries. Data is taken from ¹Flash Eurobarometer Survey (No 283), conducted on December 2009 and January 2010. A total of 22156 respondents in 32 countries consist our sample. Results suggest that the effect of perceived self-efficacy on self-employment intentions is higher for individuals residing in southern European countries. On the contrary, it was found that perceived desirability influences in a greater extent individuals' self-employment intentions' in northern European countries. The findings of this study should be taken into consideration by policy makers in southern European countries who have to increase perceptions of desirability. The paper contributes both to the cognitive theory literature and to the empirical literature which assesses the impact of perceptions at a country level.

¹Information about the Flash Eurobarometer Survey can be found at:
<http://www.gesis.org/en/eurobarometer/home/>

Table of Contents

1. Introduction	4
2. Literature Review	7
2.1 Cognitive approach and self-employment intentions	7
2.2 Cognitive models.....	8
2.2.1 Process models of entrepreneurial motivation	8
2.2.2 Entrepreneurial intention models	9
2.3 What influences perceptions of feasibility and desirability?.....	10
2.4 Self-efficacy and entrepreneurial intentions.....	11
2.5 Role models and entrepreneurial intentions	12
2.6 Prior exposure and entrepreneurial intentions.....	12
2.7 Perceived feasibility, desirability and intentions.....	13
2.8 The influence of environment	15
2.9 Socio-cultural perceptions.....	16
2.10 Perceptions about economic opportunities.....	18
3. Data and Methodology	22
3.1 Data:	22
3.2 Methodology:	26
4. Results	27
5. Conclusions & Discussion	32
6. Limitations	36
7. Policy recommendations	37
8. Future research	39
9. References	40
10. Appendix.....	49

1. Introduction

It is widely recognized that small and medium-sized enterprises (SMEs) and entrepreneurs play a significant role in all economies. In the modern economy, small and medium-sized enterprises (SME's) employ more than half of the labour force in the private sector (Acs and Audretsch, 1993). In the European Union, particularly, SMEs account for over 99 % of all enterprises. Many researchers argued that entrepreneurship is essential for the continued dynamism of the modern market economy and that the entrance of new businesses can foster competition and economic growth (van Praag and Versloot, 2007). Similarly, it becomes clear that entrepreneurs are the key drivers for economic development as they generate high-levels of economic growth by creating new jobs, shaping innovation, enhancing competition and increasing productivity (Acs et al., 2004).

Shane and Venkataraman (2000) characterized entrepreneurship as the process of discovery, creation, and profitable exploitation of markets for goods and services. Among the many roles-functions that have been assigned to entrepreneurs it is worth mentioning Kirzner's and Knight's view of the entrepreneur. Kirzner (1979) draws attention in the function of pursuing profit opportunities, while Knight links the entrepreneur with the factor of risk associated with uncertainty (Shane, 2000). Indeed, apart from creating new economic opportunities, entrepreneurs introduce their ideas in the market coping with uncertainty and other obstacles.

Thus, there is no need to wonder why over the past years, the interest in the determinants of entrepreneurship has been increased. There are many theories which predict individuals' entrepreneurial behavior and entrepreneurial intentions. However, the scope of this paper is examining entrepreneurial intentions in the light of perceptions and particularly perceptions of feasibility and desirability. After all, before any step that will bring individuals closer to any career choice, individuals first ask themselves "Is this career choice feasible and desirable to me?" Gatewood et al (1995) found that intentions are related with attitudes and more concretely with those concerning perceived feasibility and desirability. Thus it becomes more and more important to

examine these perceptions in detail and whether they are of influence on self-employment intentions.

According to Shapero's (1982) model of entrepreneurial event, entrepreneurial intentions depend on perceptions of feasibility, desirability and the propensity to act. Ajzen (1991) also studied the formation of intentions through perceptions. In his theory of planned behavior there are three elements that are required in order for an individual to adopt a certain behavior. These are the person's attitudes toward the behavior, the subjective norms and the perceived behavioral control. The impact of environmental factors such as availability of various resources and government regulations are also taken into account in this study, as they determine perceived feasibility of self-employment (Stephen, 2005). In the same perspective and given the fact that this research is applied at a country level, the image of entrepreneurs in society and the ease of starting a business are very likely to vary across different countries (Klapper and Love, 2010).

Several research questions are addressed in the present research. The main objective of this paper is to investigate whether there is an association between perceived feasibility, desirability of self-employment and the intentions to become self-employed. Although there are many empirical studies in the entrepreneurship literature testing the influence of perceptions of feasibility and desirability on self-employment intentions, few of them are extended out of geographical boundaries. The research will also give an answer in whether the influence of perceived feasibility and desirability on entrepreneurial intentions differs between southern and northern European countries. For this reason, both individual and environmental-level factors related with perceptions of feasibility and desirability will be reviewed and analyzed.

In order to test the hypotheses, the data used is taken from the Flash Eurobarometer Survey (No. 283), "Entrepreneurship in the EU and beyond", executed on behalf of the European Commission. The survey's fieldwork covers the data of December 2009 and January 2010 for 36 countries. It was conducted by telephone and door to door interviews with randomly selected respondents which were all aged above 15. Information is collected from 26,168 individuals in all 36 countries.

This research is complementary to past researches with respect to the role of perceptions in shaping self-employment intentions. The contribution of this paper is that there is a combination of the individual and aggregate level analysis as well as a cross-cultural comparison between southern and northern European countries. The results may appear to be relevant to society as they add to the understanding of the determinants of self-employment intentions and open up some interesting avenues regarding the supply of entrepreneurship in the coming years in terms of feasibility. Results reveal a positive association between perceptions of feasibility, desirability and self-employment intentions. Moreover, the effect of perceived feasibility and desirability on entrepreneurial intentions differs between southern and northern European countries.

The remainder of the paper is structured as follows. First the related literature is reviewed and hypotheses are formulated accordingly. A descriptive analysis of the data and the method is provided, followed by the results and a discussion of conclusions. Finally limitations and policy recommendations are presented.

2. Literature Review

This section explores past literature which relates self-employment intentions to the perceived feasibility and desirability of self-employment both on individual and aggregate level. It begins with a definition of self-employment and an explanation of the cognitive approach which is our main framework as it includes the concept of perceptions. In order to advance our knowledge, entrepreneurial intentions are explained through general motivation models and several predictors. The literature will be the guide to the formation of the hypotheses. The review is divided in two parts, individual and environmental factors, which are related to perceptions of feasibility and desirability and are of influence on self-employment intentions. The main construction of the review will follow Linan's (2011) discrimination of perceptions. The analysis will first include individual perceptions (self-efficacy, role models) as well as socio-cultural perceptions (social norms) and perceptions on economic opportunities (economic conditions), which consist the broader environment. The first two hypotheses are formed after the elaboration of the first part (individual factors) while hypotheses 3 and 4 are formed after the elaboration of the second part (environmental factors).

2.1 Self-employment intentions and cognitive approach

There is an increased interest in literature regarding entrepreneurial intentions and how they are derived. Literature defines entrepreneurial intentions as the commitment to start a new business (Krueger, 1993). By studying entrepreneurial intentions we have a more complete view in the process of entrepreneurship, since intentions are the antecedents of new organizations. It is well documented that entrepreneurship is a vital source for economic growth and innovation (Galloway and Brown, 2002; Shane and Venkataraman, 2000). Stevenson et al (1989) defined entrepreneurship as the pursuit of opportunities regardless of existing resources. The importance of the nature and role of the entrepreneur in society is addressed in the economic approaches of Cantillon and Schultz. According to Cantillon (1931), entrepreneurs are involved in arbitrage, which

means that they buy at a certain price to sell again at an uncertain price with the difference being their profit or loss. In Schultz's world (1975), the essence of entrepreneurship can be interpreted as the ability to deal with disequilibria.

Several studies have attempted to explain entrepreneurial intentions from a cognitive perspective. According to this perspective, everything we say or do is a result of mental processes such as motivation, attitudes and beliefs (Krueger, 2003). A lot of emphasis has been given on perceptions, as a key element of the entrepreneurial cognitive process. Potential entrepreneurs form their behavior and attitude through perceptions which capture the influence of the external environment (Linan, 2011). Linan (2011) divided perceptions into three groups, individual perceptions (self-efficacy, role models), perceptions on economic opportunities and socio-cultural perceptions (perceptions about the social legitimation of entrepreneurship).

2.2 Cognitive models

2.2.1 Process models of entrepreneurial motivation

Many researchers have investigated what motivates certain people to become self-employed using social-cognitive models. We find important to refer to the following models as they contain the concepts of perceived desirability and desirability either implicitly or explicitly. Baumol (1990) suggested that the payoffs of entrepreneurship which are determined by the reward structure of economy, allocate the type of entrepreneurial activity (productive, unproductive or destructive). Campbell (1992) draws a comparison between expected benefits of entrepreneurship and expected gains of wage employment. Vroom's (1964) expectancy theory explains that the individual's choice among alternative behaviors depends on the behavior which leads to the most desirable outcome. Expectancy is related to measures such as self-efficacy and perceived feasibility. The concept of self-efficacy will be analyzed extensively in the following paragraphs. Finally Praag and Cramer (2001) concluded that when expected rewards of entrepreneurship are higher than employment wages, then an individual

would become an entrepreneur. Expected rewards are also related to perceptions of feasibility as they are dependent on individuals' assessments of their ability and attitudes regarding risk (Segal et al, 2005). Thus both the model of Praag and Cramer and the expectancy theory find entrepreneurial activity to be associated with feasibility and desirability.

2.2.2 Entrepreneurial intention models

Krueger and Carsrud (2000) generated the Intentional Basic Model which is based on their argument that attitudes and behavior influence an intentional process, such as the set-up of a new business. Both Shapero's Entrepreneurial Event Model (1982) and Ajzen's Theory of Planned Behavior (1991) include the concept of perceived feasibility and desirability and will be discussed next. The Entrepreneurial Potential Model developed by Krueger and Brazeal (1994), is based on the models of Shapero (1982) and Ajzen (1991). The Entrepreneurial Attitude Orientation model (Robinson et al, 1991) attempts to predict the attitude of entrepreneur through four personal characteristics (achievement, self-esteem, personal control, innovation) and three kinds of reactions (affective, cognitive or conative). Bird's (1988) model of intentionality involves a state of mind that guides a person's actions toward the formation of entrepreneurial intentions. According to this, entrepreneurial intentions are the results of rational and intuitive way of thinking as well as a result of an interaction between social and personal (personality and beliefs) context. Finally, Davidsson's (1995) model suggests some economic-psychological factors as determinants of entrepreneurial intentions. According to this model, intentions can be influenced by general attitudes such as willingness to change, competitiveness, money orientation, achievement, autonomy and domain attitudes such as payoff, social contribution, know-how as well as the current situation.

As already mentioned, starting a new business is an intentional process that depends on attitudes and behavior. One of the most widely applied theories for predicting behavioral intention is Ajzen's (1991) theory of planned behavior. According

to this theory, a person's intention to perform a given behavior is dependent on the attitude towards the behavior, the subjective norm and the perceived behavioral control. Attitude towards the behavior refers to the attractiveness of a behavior, which in turn will lead to favourable or unfavourable evaluation of the attitude. Subjective norms refer to the perceived social pressure and approval to perform the behavior by important individuals, such as family, friends and other role models. Perceived behavioral control is the individual's perception of his/her personal capability, in other words, a precondition for the behavior to be feasible. Perceived behavioral control and perceptions of feasibility are compatible with Bandura's (1977) concept of perceived self-efficacy. Ajzen's theory clearly demonstrates the interaction of individual and social context into the prediction of behavioral intention. Kolvereid (1996b) indeed found that attitude toward the behavior, favourable social norms and entrepreneurial self-efficacy positively influence the intention to start a new business.

2.3 What influences perceptions of feasibility and desirability?

As this study explores the relationship between perceptions of feasibility, desirability and entrepreneurial intentions it would be of a great interest to see which factors influence an individual's perception of feasibility and desirability. Self-efficacy, which measures feasibility, can be influenced by obstacles, personal capacities/skills, confidence in their ability to perform entrepreneurial tasks, perceived availability of resources needed to create a business and the regulatory environment (Gasse and Tremblay, 2011). In a similar train of thought, Drnovsek and Erikson (2005) confirm that the individual's control is dependent on the availability of opportunities, resources, as well as prior experiences. Bandura (1977) identified the four main sources of self-efficacy beliefs: enactive mastery (prior experiences), vicarious experience (observing others' performances), social persuasions (making people believe they are capable to be successful) and physiological stimulation. On the other hand, desirability can be influenced by the normative environment (social norms) and cultural factors. If individuals perceive that people from their close environment agree or approve to

perform the behavior, this will lead to a more favourable attitude towards the behavior. These social pressures can act like a trigger or a barrier to the development of the entrepreneurial career because they establish which occupations are accepted and respected.

As part of the individual perceptions, in the next paragraphs we attempt to be more familiar with concepts such as self-efficacy, role models and prior entrepreneurial exposure in order to have a better view on how they influence our main research framework.

2.4 Self-efficacy and entrepreneurial intentions

Self-efficacy appears to play a central role in goal setting theory by affecting goal commitment and performance (Locke and Latham, 1990). According to Bandura (1982), self-efficacy is the belief that one can successfully execute the desired behavior required to produce an outcome. Entrepreneurial self-efficacy is regarded as a mediator of the relationship between individual perceptions and the development of entrepreneurial intent. Segal et al (2002) propose a model in which career goals are related to self-efficacy beliefs and outcome expectations. Results indicated that students with higher entrepreneurial self-efficacy and positive self-employment outcomes had higher intentions to become self-employed. Bandura (1977, 1986) also argues that self-efficacy is a strong predictor of entrepreneurial intentions since the probability of initiating an activity can be explained by the extent to which an individual believes in his/her capacity to carry out a specific behavior. This explains why self-efficacy is closely related to feasibility and can be used as a measure of it. Moreover, it is different than locus of control since self-efficacy refers to the individual's belief in his/her abilities to effectively perform a very specific task while locus of control characterizes individuals' general expectations (Bandura, 1977).

2.5 Role models and entrepreneurial intentions

People are influenced by role models in their circle of family and friends (Audet, 2004). Bandura's (1977) social learning theory underlies the importance of role models stating that individuals are more likely to adopt a behavior observed in family and close friends. The role model theory has been applied to entrepreneurship research and argues that individuals with a family background in entrepreneurship are more likely to become entrepreneurs (Arenius and Minniti, 2005). Linan (2011) also confirmed that individual perceptions, particularly self-efficacy and role models are the most important antecedents of entrepreneurial intentions. Approximately 35-70% of entrepreneurs had role models (Scherer et al, 1989). Role models inspire confidence, act as mentors and help individuals develop their entrepreneurial identity (Lavolette and Radu 2008). However, Zellweger et al (2011), found that individuals raised in business families, might perceive the entrepreneurial career as more feasible but not necessarily desirable. This can be largely attributed to the constraints and personal sacrifices that children experience being surrounded by their self-employed parents. Overall, it is proved that role models affect entrepreneurial intentions only if they affect attitudes such as perceived self-efficacy (Krueger 1993; Scherer et al. 1989). Hence, role models have an indirect influence on entrepreneurial intentions by influencing key attitudes and perceptions of feasibility.

2.6 Prior exposure and entrepreneurial intentions

Krueger (1993) tested the impact of prior exposure to entrepreneurship on perceptions of new venture feasibility and desirability and found that perceived feasibility was significantly associated with the breadth of prior entrepreneurship-related experience while perceived desirability was significantly associated with the positiveness of that prior experience. Therefore, he concluded that prior entrepreneurial exposure has an indirect influence on entrepreneurial intentions through attitudes toward entrepreneurship (perceived feasibility and desirability).

2.7 Perceived feasibility, desirability and entrepreneurial intentions

According to Shapero's (1982) model of entrepreneurial event, the decision to initiate a new venture is associated with three factors; perceived feasibility (perceived credibility), perceived desirability and the propensity to act. Shapero and Sokol (1982) defined perceived feasibility as the degree to which people think they are capable in initiating successfully a business. Perceived desirability can be interpreted into how attractive the idea of starting up a business is. Propensity to act appears as a personality characteristic and Shapero characterized it as the personal disposition to act on one's decisions. Krueger (1993) found perceived feasibility, perceived desirability and the propensity to act, explaining over half of the variance in self-employment intentions, with feasibility perceptions having the higher explanatory power over the variance. Several researchers have also tested the impact of perceived feasibility and desirability on self-employment intentions. Fitzsimmons and Douglas (2011) found entrepreneurial intentions to be positively related to both perceived feasibility and perceived desirability. Moreover, they explored the possible interaction effect between perceptions of feasibility and desirability in the formation of the individual's entrepreneurial intentions. Based on the regulatory focus theory, they found evidence of a negative interaction effect between an individual's perceived feasibility and perceived desirability in their intention to be self-employed. The theory addresses the importance of two focus orientations at different stages of the entrepreneurial process, the promotion focus and the preventative focus (Brockner et al, 2004). The promotion focus is more advantageous during the initial stage of the idea generation where individuals tend to come up with solutions to problems more easily. On the other hand, individuals are induced to adopt the preventative focus when screening a venture idea or forming entrepreneurial intentions. This happens because they pay attention to the risks that are associated with entrepreneurship and thus they act in a more cautious way. In addition, they discovered that entrepreneurial intentions don't require both perceptions of feasibility and desirability to be high. In other words, it might be the case that either perceived feasibility or perceived desirability is high. For this reason, they proposed two alternative categories of entrepreneurial types, namely accidental and inevitable, based on their combinations of perceived feasibility and perceived desirability. An entrepreneur with high perceived feasibility combined with low perceived desirability is

characterized as an accidental entrepreneur. This is the case of an individual who does not desire to become an entrepreneur but discovers an opportunity and thus has a high perception of feasibility regarding entrepreneurship. The opposite case is the inevitable entrepreneur who is characterized by a combination of low perceived feasibility and high perceived desirability. The inevitable entrepreneur has a strong desire and motivation to become an entrepreneur but this person may lack of self-efficacy which is essential in order to believe that he/she has the skills for a successful venture creation. Segal et al (2002) also tested the ability of tolerance for risk, perceived feasibility and perceived desirability to predict entrepreneurial intentions in a sample of business students. Results indicate that tolerance for risk, perceived feasibility and perceived desirability significantly predict entrepreneurial intentions. Furthermore, they also concluded that a stronger indication for the intention to become an entrepreneur results from a combination of the three variables (tolerance for risk, perceived feasibility and perceived desirability).

Consequently, Shapero's model and the above-mentioned studies agree that new ventures emerge as a result of choices made by individuals who decide whether the future outcomes are the most desirable and whether it is feasible to pursue these outcomes. To sum up, based on the aforementioned arguments, the following two hypotheses are formulated.

Hypothesis 1: Perceived feasibility of entrepreneurship is positively associated with entrepreneurial intentions.

Hypothesis 2: Perceived desirability of entrepreneurship is positively associated with entrepreneurial intentions.

2.8 The influence of environment

As this research aims to examine the influence of perceptions of feasibility and desirability on entrepreneurial intentions at the aggregate level too, it is worth mentioning some environmental factors that are related to these perceptions. The influence of environment on attitudes and perceptions is today beyond doubt. The analysis of the environmental factors will be also based on Linan's (2011) classification of perceptions into perceptions of economic opportunities and socio-cultural perceptions.

Much entrepreneurship research has recognized the importance of the environment and social context in the formation of self-employment intentions. Bandura (1986) argued that a person's behavior results from the interaction of the person and their environment. It is a well-known fact that entrepreneurs are confronted with high risk, increased uncertainty and other impediments. Potential entrepreneurs need to feel confident to perform necessary steps, thus, there must be situational and environmental factors that can foster entrepreneurial activity. Krueger and Brazeal (1994) argue that in order to have a supply of entrepreneurs we must first have an environment appropriate for potential entrepreneurs. A "nutrient-rich" environment, as Shapero (1981,1982) characterizes it, includes cultural support, credible information and tacit knowledge, credible role models as well as tangible resources. Specht (1993) identifies five categories of environmental munificence, economic, political, market, infrastructure and social. Pittaway and Cope (2007) as well as Luthje and Franke (2003) found that an individual's entrepreneurial intentions can be shaped by his or her perceptions of barriers to business start-up, cultural values and the environment in which he or she is located. Guerrero (2008) proposed that the personal capacities and the regulatory environment have a positive impact on the perceived feasibility. More specifically, administrative difficulties, banks' reluctance to finance new firms, the stigma associated with failure, risk aversion and attitudes of family and friends are some of the factors which influence perceptions of desirability and feasibility (Shinnar et al 2009).

One can assume that environmental conditions may vary across countries. Giacomini et al (2011) examined the differences among students from different countries in terms of perceived barriers for business start-up and entrepreneurial intentions.

Findings suggest there are significant differences between countries regarding the perceived barriers for self-employment. Some of the obstacles include lack of initial capital, administrative difficulties, lack of knowledge and experience, current economic situation, lack of support and fear of failure.

2.9 Socio-cultural perceptions

Entrepreneurial activity is deeply embedded in a cultural and social context (Reynolds, 1992). In prior studies, subjective norm was found to influence indirectly self-employment intentions (Krueger, 2000). An individual's close environment has the ability to shape their perceptions through encouragement and support. In GEM reports, nevertheless, cultural and social norms are emphasized as the major strength of entrepreneurial intentions and as the differentiating factor that increases entrepreneurial activity in different countries (Minniti and Bygrave, 2000). Indeed, Engle et al (2010) evaluated Ajzen's model of planned behavior in order to predict entrepreneurial intentions in twelve countries. The findings, as it was expected, demonstrated that the importance and the degree of the three antecedents of intentions vary across different countries. However, social norms proved to be a significant predictor of intentions in all countries. Cialdini and Trost (1998) also found that social norms have a great impact during uncertain conditions.

In this sense, Linan and Santos (2007) analyzed the influence of cognitive social capital on the formation of entrepreneurial intentions. Social capital is generated by human relationships, either formal or informal, as a result of individuals' interaction with others (Lin, 2003). Individuals can benefit from social capital due to easier access to information and decision-making (Grootaert and van Bastelaer, 2001). They divided social capital into two categories, bonding social capital, which emerges from close contact with relatives or friends and bridging social capital, which emerges from sporadic contacts with other people or organizations. It was found that a positive valuation of the entrepreneurial career in the close environment generates favorable perceptions of desirability. Moreover, if the idea to start a business is also approved in

the close environment, individuals will feel support and therefore more capable. As a result, perceptions of feasibility will also increase. On the other hand, bridging social capital will only lead to increasing perceptions of feasibility. This is due to the fact that individuals gain knowledge and support for the entrepreneurial activity through contacts with entrepreneurial networks. Thus the results clearly demonstrate an indirect influence of social capital on entrepreneurial intentions, through perceptions of desirability and feasibility.

Culture is defined as the set of ideas, values and norms common to a group of people. Many researchers argued that culture shapes peoples' beliefs and can influence entrepreneurship through social legitimation and through promoting positive attitudes towards firm creation (Wilken 1979; Etzioni 1987; Davidsson 1995; Linan and Santos 2007). This argument is also supported by empirical findings. Guerrero (2008) analyzed the influence of desirability and feasibility on student's intention to start a new business in different countries and found that the main impact comes from the favorable attitudes towards entrepreneurship and the high status of entrepreneurs. It has been suggested that a favorable attitude of the society towards entrepreneurship is a prerequisite in order to motivate people to start a new business and added that entrepreneurship may not prosper if most members of society view it with suspicion (Gnyawali and Fogel, 1994). In the same perspective, Gasse and Tremblay (2011) examined entrepreneurial intentions of students in different countries and results demonstrate that cultural environments of some countries affect entrepreneurial behavior by either favor it or discourage it. Societies that legitimize entrepreneurship provide a supportive environment, which reinforces entrepreneurial intentions (Davidsson and Wiklund, 1997; Etzioni, 1987). This can be achieved by institutional dimensions. An appropriate institutional framework is a necessary precondition in order to encourage and stimulate entrepreneurial intentions (Luiz, 2008). Institutions can be defined as "the rules of the game" and include property rights, contract enforcement and good governance (North, 1990). They have the power to determine the socio-political legitimacy which is critical for entrepreneurial organizations in order to survive (Manolova et al, 2008).

Hofstede (1980) pointed out four dimensions of national culture that influence entrepreneurial behavior; masculinity, power-distance, individualism and uncertainty avoidance. Jung et al (2001) examined how entrepreneurial self-efficacy influences

entrepreneurial intentions in a cross-cultural perspective, comparing United States and Korea. Findings show that in United States, entrepreneurship is highly evaluated due to the individualistic culture which is embedded and thus, there is higher self-efficacy which in turn promotes pursuing entrepreneurial dreams. In contrast, Koreans don't exhibit high self-efficacy due to the collectivistic orientation they have.

Thus, we conclude that different countries have differences in the influence of perceived feasibility and desirability on self-employment intentions, due to different socio-cultural values.

2.10 Perceptions about economic opportunities

As we have already mentioned, perceived opportunity and resource availability are key elements of perceived feasibility (Krueger, 2000). Consequently, individuals are more likely to engage in start-up activities when they are not concerned about resource constraints (Stevenson and Jarillo, 1990). Edelman and Yli-Renko (2010) studied the impact of environment and more precisely the impact of opportunity perceptions on start-up ventures. They have analyzed both objective and subjective notions of opportunity and resources through the "discovery" and "creation" view respectively. In the discovery view, opportunities are viewed as existing and the environment in general is taken as given. The traditional "discovery" view is associated with Kirzner's approach, in which nascent entrepreneurs discover these existing opportunities because of their high "alertness" to them. In the creation theory, unlike with the "discovery view", opportunities and availability of resources are identified through entrepreneurs' subjective perceptions. In other words, opportunities arise from entrepreneurs' actions. This study and other relevant studies confirm the "creation" view; entrepreneurs' actions are driven by subjective perceptions (Penrose, 1959). Krueger (2000) emphasizes the importance of cognitive process, arguing that it is necessary for individuals to perceive these economic opportunities as feasible and desirable.

Economic conditions are also related to start-up rates and they may vary between developed and less developed countries. Thurik et al (2002) suggested that a high rate in

creation of new firms is a result of a high level of economic development and a positive economic cycle which indicates high economic growth, low unemployment rate, low inflation and budget surplus. Furthermore, there is evidence that dynamic business creation occurs in countries that provide entrepreneurs with reduced red tape and a stable investment climate. However, Iakovleva et al (2011) tested entrepreneurial intentions in developing and developed countries and concluded that respondents from developing countries have stronger entrepreneurial intentions than those from developed countries. They also found that developing countries exhibited higher scores on Ajzen's antecedents of entrepreneurial intentions, including attitudes, subjective norms and perceived behavioral control than developed countries. Furthermore, Iakovleva (2007) found that turbulent environments and environments under conditions of high uncertainty in less developed countries, offer more opportunities for entrepreneurial activity than stable environments in developed countries. This argument is also consistent with the findings of the Global Entrepreneurship Monitor project, according to which, less developed countries with negative economic conditions have recorded higher entrepreneurial activity than most developed countries (Bosma and Levie, 2010). In the same line, despite the argument that entrepreneurship increases with increasing levels of GDP, (Fisman and Sarria-Allende, 2004), Griffiths et al (2009) found that GDP per capita was negatively associated with intentions which means that the higher the levels of GDP per capita, the lower the intentions. This finding can be explained by the fact that wealthier countries provide more career options and alternatives for individuals, therefore less entrepreneurial intentions would exist (Wennekers et al, 2005). Besides, Bosma et al (2008) argued that in highly developed countries individuals are motivated by economic opportunities, whereas in less developed countries individuals are motivated by economic necessity. Similarly, push and pull theory identify factors that either push or pull individuals to become entrepreneurs. Pull factors attract individuals into entrepreneurial activities and these are independence, self-fulfillment, wealth and other desirable outcomes. Push factors are negative external factors which force individuals to become entrepreneurs such as job dissatisfaction, low wages or difficulty finding a job (Gilad and Levine, 1986). This provides a good explanation to the fact that start up rates grew more intensively in less developed countries only when unemployment became a major problem (Carlsson, 1996). Kennedy et al (2003) examined situational factors and mainly the impact of

unemployment on individuals' intention to start a new business. Although there are many factors which contribute to self-employment intentions, the threat of unemployment appears to have the higher influence, leading to self-employment.

Thus, it becomes clear that self-employment intentions are higher in less developed countries than developed countries. Based on the various aforementioned studies and given the negative economic conditions including unemployment, that characterize southern countries, one can assume that highly developed countries correspond to northern European countries whereas less developed countries correspond to southern European countries. Such an assumption can be justified by the gap in the economic development level mainly between Mediterranean and Scandinavian countries (Serrano et al, 2009). In terms of GDP, indeed, southern countries score lower in the 2013 GDP rankings of the European commission comparing with northern countries such as Belgium, Germany, Switzerland, Ireland, France, Luxemburg, Netherlands and Austria as well as with Nordic countries such as Denmark, Finland, Sweden, Norway and Iceland

(<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tec00114>). Thus we conclude that southern countries have higher self-employment intentions than northern countries. Next we will see how southern and northern countries differ regarding the influence of perceptions of feasibility and desirability on self-employment intentions.

Griffiths et al (2009) investigated the role that several macro-level indices such as ease of doing business have on entrepreneurial intentions. Several transactional impediments such as obtain licenses, register property, enforce contracts, pay taxes, are used to measure ease of doing a business. Economies are ranked (from 1 to 178) on their ease of doing business index and a high ranking, closer to one, means that the environment is more appropriate to new businesses

(<http://www.doingbusiness.org/rankings>). Northern European countries such as Denmark, Norway, Finland, Sweden, Iceland and Ireland score in rankings from 1-15 while southern European countries such as Bulgaria, Turkey, Italy, Greece and Malta score in rankings from 66-100. Empirical findings from the study reveal that transactional impediments which measure ease of doing business are found to increase the feasibility of a business start-up and are considered to be positive determinants of entrepreneurial

intentions. In other words, the more difficult is to obtain licenses, register property and enforce contracts, the higher the intentions are. Serrano et al (2009) examined the possible differences of potential entrepreneurs of two European areas: the Southern countries (Spain, Greece, Italy and Portugal) and the Scandinavian countries (Finland, Sweden and Denmark). They found the effect of individual perceptions, specifically role models and perceived self-efficacy on intentions higher among the Mediterranean countries. On one hand, the high effect of role models can be interpreted by the fact that the effect of personally knowing an entrepreneur is high as well as the high value that family and friends has in the Mediterranean society. On the other hand, the high effect of perceived self-efficacy might be related to the level of economic development. It might be the case that the lower development level of southern European countries, creates the need for individuals to feel more confident in their own capacities to run a business.

Combining all the above-mentioned argument, it seems that southern European countries tend to have higher perceptions of feasibility and desirability and this has a stronger influence in entrepreneurial intentions compared to northern European countries. Hence, the following two hypotheses are derived.

Hypothesis 3: The influence of perceived feasibility on self-employment intentions is stronger for individuals residing in southern than in northern European countries.

Hypothesis 4: The influence of perceived desirability on self-employment intentions is stronger for individuals residing in southern than in northern European countries.

3. Data and Methodology

3.1 Data:

The data used in this research paper is taken from the Flash Eurobarometer Survey (No. 283)¹, executed on behalf of the European Commission. The survey's fieldwork covers the data of December 2009 and January 2010 for 36 countries, including the 27 EU Member States, two candidate countries (Croatia and Turkey), three EFTA countries (Iceland, Norway and Switzerland), the US and three Asian countries (Japan, China and South Korea). Flash Eurobarometer No.283 "Entrepreneurship in the EU and beyond" covers topics such as the development of entrepreneurship and what encourages people to become entrepreneurs. The respondents were asked demographic questions regarding gender, age, their attitudes toward entrepreneurship, entrepreneurial education, risk-taking, obstacles to entrepreneurship and business failures. It was conducted by telephone and door to door interviews. 26.168 randomly selected respondents aged above 15 were interviewed in all 36 countries. For the purpose of our analysis, we classify countries into two categories: southern and northern European countries. Based on the geographical definition, the southern countries consist of Greece, Italy, Spain, Portugal, Malta, Cyprus, Turkey and Bulgaria. The northern countries include France, Belgium, Netherlands, Germany, Austria, Luxemburg, Switzerland, Denmark, Ireland, Iceland, United Kingdom, Finland, Sweden, Norway, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Romania and Croatia. Precisely, 6057 individuals come from southern countries and 16099 individuals come from northern countries, while 58% of the respondents are males and 42% of the respondents are females.

A ²regression analysis will be applied in our empirical research, aiming to explain one dependent variable in terms of several independent variables.

¹Information about the Flash Eurobarometer Survey can be found at: <http://www.gesis.org/en/eurobarometer/home/>

²Multivariate analysis such that relevant factors can be controlled for.

Dependent Variable:

The dependent variable is the individual's entrepreneurial intentions and is a categorical variable. The respondents were given three options to answer the question: "How would you describe your situation?"

- It never came to your 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.

We construct the dependent variable into a dummy variable with 2 values. Value 0 stands for "never came to your mind" and value 1 for "thinking about it". Individuals who thought of it or have already taken steps to start a business but gave up are not included in the scope of this research, since this category of respondents reflects a confusing situation. The number of observations is 15222. 85% of the individuals who never came to their mind to start a business, come from southern European countries while 84% of the individuals who never thought of starting a business come from northern European countries. In addition, 15% of the individuals who are thinking about starting up a business come from southern European countries, whereas 16% of the individuals who intend to start a business come from northern European countries (see table 3).

Independent Variables:

We include 3 independent variables. The first independent variable is the perceived feasibility and we use two variables for measuring it. The first one, specific feasibility, is a categorical variable, and the respondents were given four options to answer the question "regardless of whether or not you would like to become self-employed, would it be feasible for you to be self-employed within the next 5 years?"

- very feasible.
- quite feasible.

¹Information about the Flash Eurobarometer Survey can be found at: <http://www.gesis.org/en/eurobarometer/home/>

²Multivariate analysis such that relevant factors can be controlled for.

- not very feasible.

- not feasible at all.

This variable is an ordered variable with 4 values. In order to have a categorical variable in which the higher the value, the higher the perception of feasibility of self-employment, we change the order of the variable backwards as it follows: value 1 stands for “not feasible at all”, value 2 for “not very feasible”, value 3 for “quite feasible” and value 4 for “very feasible”.

The second measure for feasibility is more generalized and will be named as generalized self-efficacy. Respondents had to answer if they were strongly disagreeing, disagreeing, agreeing or strongly agreeing with the following statement;

- “Generally, when facing difficult tasks, I am certain that I will accomplish them.”

Results from the statement are used to create a dummy for self-efficacy. The dummy takes the value 1 if the respondents are (strongly) agreeing with the statement and the value 0 otherwise.

The second independent variable is the perception of desirability which is also a categorical variable. The respondents were given three options to assess how favourable is being an entrepreneur.

- rather favourable.

- neutral.

- rather unfavourable.

This variable is an ordered categorical variable. Similarly, we keep the categorical nature of this variable; however, we change the order. Value 1 stands for “rather unfavourable”, value 2 for “neutral” and value 3 for “rather favourable”. Thus, the higher the value the higher the perceived desirability of self-employment.

¹Information about the Flash Eurobarometer Survey can be found at: <http://www.gesis.org/en/eurobarometer/home/>

²Multivariate analysis such that relevant factors can be controlled for.

The third independent variable is region. We create one region dummy which captures the differences between southern and northern European countries. It takes the value 1 for southern countries and value 0 for northern countries. The classification of southern and northern countries is made on a simplified way based on their geographical position.

Control Variables:

We control for the following effects; gender, age, occupation of father, occupation of mother, risk taking, locus of control. Demographic characteristics such as gender and age are common suspects in the entrepreneurship literature as determinants of self-employment (Reynolds, 1994) while personality characteristics such as need for achievement, risk-taking and locus of control differentiate entrepreneurs from non-entrepreneurs (McClelland, 1965). Furthermore, having self-employed parents can influence the intention to become an entrepreneur (Scherer et al, 1989). Gender is a dummy variable taking the value 1 for males and 0 for females. Age is a categorical variable. Respondents were given four options to answer how old they are. The four groups are 15-24, 25-39, 40-54 and 55+. Thus, the higher the value, the older they are. We create two dummies for the occupation of the father and mother, taking the value 1 if they are self-employed and the value 0 if they are not self-employed. As for risk taking and locus of control, respondents had to answer if they were strongly disagreeing, disagreeing, agreeing or strongly agreeing with the following two statements;

- “In general, I am willing to take risks”
- “My life is determined by my own actions, not by others or by chance”

Results from the first statement are used to create a dummy for risk taking. The dummy takes the value 1 if the respondents are (strongly) agreeing with the statement and the value 0 otherwise. Results from the second statement are used to create a dummy for internal locus of control which is coded by the same way.

¹Information about the Flash Eurobarometer Survey can be found at: <http://www.gesis.org/en/eurobarometer/home/>

²Multivariate analysis such that relevant factors can be controlled for.

3.2 Methodology:

In order to test the four hypotheses of this research we perform ³binary logit regressions.

These regressions are performed because we are interested in researching the possible associations of all the independent variables, with the probability of having self-employment intentions. We use four models to test our hypotheses. The first one includes only the control variables. The second one gives us insight into the associations between feasibility, self-efficacy and the probability of having self-employment intentions. The two measures of feasibility, specific feasibility and generalized self-efficacy will be estimated in the same model since they are not highly correlated (see table 2). In this way we can conclude whether having a higher perception of feasibility of self-employment is positively associated with the probability of having self-employment intentions (hypothesis 1). In the third model we add the perception of desirability as another independent variable. Thus, we can also conclude whether having a higher perceived desirability of self-employment is positively related to the probability of having self-employment intentions (hypothesis 2). In the fourth model, which is a combined model, we include all the independent variables plus three interaction terms. This model will help us confirm or reject hypotheses 3 and 4. In order to check whether region influences entrepreneurial intentions through perceived feasibility and perceived desirability, we estimate the interaction terms of feasibility, self-efficacy and desirability with region respectively. Each interaction term has been tested in separate models in order to see how coefficients and significance vary (robustness), but since they remain the same we include them in the same model.

³In logistic regression, information is provided about the sign of the impact and significance level. In order to obtain the average discrete changes in the probability the individual has self-employment intentions, average marginal effects have to be used.

4. Results

Table 1 presents descriptive statistics about the means, maximum, minimum and the standard deviation of our independent variables. It turns out that, of the total population, 16% on average, intend to start a new business while 84% have never thought about setting a new business. 27% of individuals come from southern European countries while 73% of individuals come from northern European countries in our sample. In addition, on average, 83% of the respondents feel certain they can accomplish difficult tasks whereas 17% of the respondents disagree with this statement. The mean of feasibility is 1.8 ranging from 1 to 4, while the mean of desirability is 2.4 ranging from 1 to 3.

Table 2 presents the Pearson correlations. Variables are not suffering from multicollinearity since correlations are below 0.60. As can be seen, feasibility, self-efficacy and desirability are positively and significantly correlated with self-employment intentions.

Next we proceed in an overview of the sample distribution by region (see table 3). Overall, results reveal that the proportion of individual perceptions across the two regions does not differ substantially. About 55% of individuals who think that becoming self-employed in the next five years is not feasible at all, come from southern European countries, whereas 52% of individuals who think that being self-employed in the next five years is not feasible at all, come from northern European countries. 19% of individuals who think that becoming self-employed in the next five years is not very feasible, reside in southern European countries, while 21% of individuals who think that becoming self-employed is not very feasible, reside in northern European countries. About 19% of individuals who perceive self-employment as a quite feasible career in the next five years, come from southern European countries as well as 19% of individuals who perceive self-employment as a quite feasible career in the next five years, come from northern European countries. Lastly, only 7% of individuals who perceive self-employment as a feasible career in the next five years reside in southern European countries and 8% of individuals who perceive self-employment as a feasible career in the next five years, reside in northern European countries.

Regarding perceptions of self-efficacy (general measure of feasibility) in the two regions, the percentage of individuals who don't feel certain that they can accomplish difficult tasks and come from southern European countries, amounts to 15%. The percentage of individuals who don't feel certain that they can accomplish difficult tasks and come from northern European countries amounts to 17%. On the other hand, 85% of individuals who feel certain that they can accomplish difficult tasks reside in southern European countries, while 83% of individuals who feel certain that they can accomplish difficult tasks reside in northern European countries.

Regarding perceptions of desirability across the two regions, about 12% of respondents who have an unfavourable opinion about entrepreneurs come from southern European countries, while 10% of respondents who have an unfavourable opinion about entrepreneurs come from northern European countries. Those who have a neutral opinion towards entrepreneurs and live in southern European countries amount to 35% whereas those who have a neutral opinion towards entrepreneurs and live in northern European countries amount to 39%. On the other hand, 52% of respondents who have a favourable opinion about entrepreneurs come from southern European countries, as well as 52% of respondents who have a favourable opinion about entrepreneurs come from northern European countries.

We continue by testing our four models. Table 4 estimates the probability of having self-employment intentions using average marginal effects. As can be seen, in model 1, all the coefficients of our control variables are statistically significant except from the coefficient of self-employed mother. Specifically, the coefficients of male, age, self-employed father and risk taking are highly significant at 1% significance level while locus of control coefficient is significant at 5% significance level. Male, self-employed father, risk taking and locus of control are positively associated with the probability of having self-employment intentions, while a negative association is found between age and the probability of having self-employment intentions. On average, being male increases the probability of having self-employment intentions by 5 percentage points than being a female. One additional unit in age category decreases the probability of having self-employment intentions by 8.5 percentage points. Having self-employed father increases the probability of thinking about starting up a business by 2 percentage points comparing to those who don't have self-employed father. Risk

propensity and locus of control increase the probability of thinking about starting up a business by almost 6 and 2 percentage points respectively comparing to being risk-averse and not having locus of control. Pseudo R^2 indicates that approximately 12% of variance in intentions is explained by model 1.

As can be observed in model 2, the coefficients of our independent variables, namely feasibility and region are both statistically significant at 1% significance level. However, the coefficient of self-efficacy (generalized measure of feasibility) is insignificant at any reasonable significant level. Furthermore, a positive association is found between feasibility and the probability of thinking about starting up a business, whereas region is negatively associated with the probability of thinking about starting a business. On average, having a high perception of feasibility of self-employment increases the probability of intending to start a business by almost 10 percentage points. Nevertheless, residing in southern European countries decrease the probability of thinking about starting a business by almost 3 percentage points compared to individuals residing in northern European countries. Thus, individuals residing in southern countries are less likely to think about starting up their business than individuals residing in northern European countries. Pseudo R^2 indicates that approximately 21% of variance in intentions is explained by model 2.

We proceed with model 3 and we see that both the coefficients of our independent variables, desirability and region, are statistically significant at 1% significance level. Moreover, a positive association is found between desirability and the probability of thinking about starting up a business, whereas region is negatively associated with the probability of having self-employment intentions. On average, having a high perception of desirability of self-employment, increases the probability of thinking about starting up a business by almost 3 percentage points. Furthermore, on average, residing in southern European countries decreases the probability of thinking about starting up a business by almost 4 percentage points comparing with individuals residing in northern European countries. Thus, individuals residing in southern countries are less likely to think about starting up their business than individuals residing in northern European countries. Pseudo R^2 indicates that approximately 12% of variance in intentions is explained by model 3.

As a result, based on models 2 and 3, hypotheses 1 and 2 are confirmed. Individuals who have high perceptions of feasibility and desirability of self-employment are more likely to form self-employment intentions.

Lastly, model 4, the combined model, includes all the independent variables plus the interaction terms. As can be seen, the interaction term of perceived feasibility and region is statistically insignificant at any reasonable significance level. We conclude that there is no significant association between the interaction term of specific feasibility and region on the probability of having self-employment intentions. This means, that the region is not of influence on the relationship between specific feasibility and self-employment intentions. However, we can still test whether the impact of feasibility differs between southern and northern European countries, by using self-efficacy as a measure of feasibility. The estimated coefficient of the interaction term of self-efficacy and region is statistically significant at 5% significance level. Furthermore, there is a positive association between the interaction term and the probability of thinking about starting up a business. It turns out that the influence of self-efficacy on self-employment intentions is stronger for individuals residing in southern than in northern European countries. On average, having self-efficacy beliefs and residing in southern European countries increase the probability of having self-employment intentions by 5 percentage points, comparing to individuals who have self-efficacy beliefs and reside in northern European countries as well as to individuals who don't have self-efficacy beliefs and reside in southern European countries. Finally, the interaction term of perceived desirability and region is significant at 5% significance level. However, there is a negative association between the interaction term of desirability and region on the probability of thinking about starting up a business. It turns out that the association of perceived desirability and self-employment intentions is less strong for individuals residing in southern than in northern European countries. On average, having high perceptions of desirability and residing in southern European countries decrease the probability of having self-employment intentions by almost 2 percentage points, comparing to individuals who have high perceptions of desirability and reside in northern European countries. Pseudo R^2 indicates that model 4 explains 21.5% of variance in intentions.

Based on model 4, hypothesis 3 is partially supported, since we have used two measures of feasibility. On the other hand, hypothesis 4 is rejected. The interaction term of perceived desirability and region proved to be negatively associated with the probability of forming self-employment intentions.

Our empirical analysis provided evidence to support hypotheses 1, 2. Perceived feasibility and desirability of self-employment are positively related to self-employment intentions. As for the influence of region in the association between feasibility and self-employment intentions, which is the content of hypothesis 3, two different conclusions have to be made. Based on the specific feasibility measure, the interaction term of specific feasibility and region proved to be not significant at all. In other words, the region is not of influence on the relationship between specific feasibility and self-employment intentions. On the other hand, based on the generalized measure of feasibility (self-efficacy), the interaction term of self-efficacy and region is significant and positively associated with the probability of having self-employment intentions. It turns out that the influence of self-efficacy on self-employment intentions is stronger for individuals residing in southern than in northern European countries. Overall, this leads us to the conclusion that hypothesis 3 is partially confirmed. However, hypothesis 4 is rejected. It turns out that the association of perceived desirability and self-employment intentions is less strong for individuals residing in southern than in northern European countries.

5. Conclusions & Discussion

The purpose of this paper was to investigate the impact of perceptions of feasibility and desirability on self-employment intentions. This topic is extended by comparing southern and northern European countries because there is an expectation that these two groups of countries, due to their cultural and development background, experience in a different extent the influence of perceived feasibility and desirability on self-employment intentions.

There is an ongoing discussion whether individuals from southern European countries can benefit from the bad economic situation and feel more attracted and more capable with the idea of starting a business. Traditional literature suggests that higher self-employment intentions in southern countries are a result of no other career choices, thus individuals are pulled into self-employment. As a matter of fact, Wennekers et al (2005) found that necessity entrepreneurship is more common in low-income countries. However, recent literature seems to confirm the initial argument, suggesting that opportunities arise in countries with turbulent environments which obviously increase perceptions of feasibility. Secondly, according to Iakovleva et al (2011), social norms regarding the self-employment career are higher in southern countries, resulting in favourable perceptions of desirability.

The most important findings can be summarized as follows. Results reveal that the influence of self-efficacy on self-employment intentions differs between southern and northern European countries. Based on table 3, we can say that we expected this, because comparing to perceived feasibility, self-efficacy differs slightly more between the two regions. In addition, the association between self-efficacy and self-employment intentions is stronger for individuals residing in southern than in northern European countries. This is consistent to our expectations as well as with Serrano (2009) who found the influence of perceived self-efficacy on self-employment intentions higher among Mediterranean countries. Indeed, specifically in Greece, there is a boost in new enterprises during the crisis period. This mainly results from a combination of not many alternative career choices and the government's support in the start-up capital by providing subsidies which of course influence positively perceptions of feasibility of self-employment. Thus, it is true that more and more young individuals identify

opportunities and feel confident they can succeed based on their own efforts. Although new ventures are in the majority small business such as shops with traditional products, cafes and taverns, still the emergence of new entrepreneurs is happening. In order not to be prone in big risks and stuck in the initial expenses, they usually occupy few persons and try to think of innovative ideas so that they can continue earning profits in the long-term period.

Moreover, Xavier et al (2013) in the GEM Global Report also provided similar findings regarding opportunity and capability perceptions in southern and northern countries. Despite the low opportunity perceptions that southern countries (Greece, Italy, Portugal, Spain and Hungary) exhibit comparing with Nordic countries (Denmark, Estonia, Finland, Norway and Sweden), yet southern countries show above average beliefs about capabilities comparing with Nordic countries. The same report also stressed not only the decline of opportunity perceptions in southern countries but also the fact that the present levels of perceived opportunities are lower than those in 2008. This declining tension can be explained by the austerity measures that southern countries are confronted with, due to the continued financial crisis.

Furthermore, the results of our study reveal that the influence of desirability on self-employment intentions differs between southern and northern European countries. Based on table 3, we can say that we expected this, since perceived desirability tends to differ more (comparing to perceived feasibility) between the two regions. In particular, the impact of desirability on self-employment intentions is stronger for individuals residing in northern than in southern European countries. This is contrary to our expectations and not consistent with prior studies that have shed some light on this topic. Iakovleva et al (2011), found the influence of social norms, which reinforce perceptions of desirability, higher among the Mediterranean countries. Based on intuitive reasoning, we assume that the low perceptions of desirability might stem from the low status of entrepreneurs in a traditional non-entrepreneurial society and the fact that given the negative economic situation that plagues southern countries, entrepreneurship might not be considered a reliable career due to the risk it entails. As a result, the negative social norms act adversely and stand as a barrier to the formation of individuals' self-employment intentions. On the other hand, we assume that the benefits of entrepreneurship are more widespread in northern European countries. Thus, these

are reflected to individuals' normative beliefs and consequently to the approval of the decision to become an entrepreneur, resulting in social legitimation.

Lastly, as expected, our results confirm a significant and positive association between perceived feasibility and desirability of self-employment and the probability of thinking about starting a business. Thus, it seems that having a positive perception of feasibility and desirability is a precondition in order to express entrepreneurial intentions. Both conclusions are in line with prior literature which argues that self-employment intentions are a function of perceptions of feasibility and desirability. This is also suggested by Shapero (1982) and his model of entrepreneurial event, in which perceptions of feasibility and desirability are crucial elements in the formation of self-employment intentions.

With respect to the research questions, the answer to the main research question is clear. Perceived feasibility and desirability of self-employment indeed influence self-employment intentions. Therefore it becomes clear that perceptions and more specifically perceptions of feasibility and desirability are crucial factors in shaping entrepreneurial intentions. There is also clear evidence that there are significant differences between southern and northern countries regarding the influence of perceived feasibility and desirability on entrepreneurial intentions. Precisely, our research showed that those residing in southern European countries experience a stronger influence of perceived self-efficacy on self-employment intentions, while the influence of perceived desirability on self-employment intentions is stronger for individuals residing in northern European countries.

This paper's contribution is that it focuses on the cognitive perspective and exclusively on perceptions of feasibility and desirability as predictors of self-employment intentions. It is noteworthy that in our research the emphasis is given on the start-up rates and not in the entrepreneurial activity in general. From an empirical perspective, the present research provides a double contribution. Firstly, it measures feasibility with two constructs (specific feasibility and self-efficacy) and secondly investigates the influence of perceived feasibility and desirability in a sample of European countries. Many entrepreneurial intention models using desirability and feasibility as key elements have been tested empirically by other researchers. However,

to our knowledge, few studies have investigated thoroughly the impact of perceptions of feasibility and desirability on self-employment intentions in a multiple country context. Guerrero et al (2008) analyzed the relationship between the perceptions of feasibility and desirability on student's self-employment intentions in Catalonia. Furthermore, prior researches that attempted to link perceptions of feasibility, desirability, self-employment intentions and region are limited. Alternatively, the majority of studies have investigated some aspects of this relationship. For example, Diaz-Casero et al (2012) found that students in Spain and Portugal have positive perceptions of desirability and Iakovleva et al (2011) concluded that less developed countries have stronger entrepreneurial intentions than developed countries. Our research adds to the current state of knowledge by examining how perceptions of feasibility and desirability interact with region (southern versus northern European countries) and how this influences self-employment intentions. One similar approach can be found in Serrano et al (2009) who compared Mediterranean and Scandinavian countries and discovered that the effect of role models and perceived self-efficacy on self-employment intentions is higher among the Mediterranean countries.

6. Limitations

This research is subject to a number of limitations that could have influenced the data and the results obtained from the data. Some of them are related to characteristics of the Eurobarometer database. For example, the number of observations related to self-employment intentions is small in this database, which makes it difficult to generalize the results. The construction of the dependent variable, self-employment intentions could also be questioned. Maybe an ordered variable with several ordered responses would have been a more reliable measure. The discrimination between southern and northern countries might result in a disproportionate comparison, since southern countries consist of Mediterranean countries which are few compared to northern countries which include Nordic countries.

Missing variables could be a limitation of this research, because other variables which are not included in this research could also affect the dependent variable. Furthermore we cannot control for all the variables, there could be unobserved variables influencing the number of health conditions. Moreover, there could be “self-selection bias” meaning that individuals may have a pre-inclination towards entrepreneurship. Individuals with strong intentions towards entrepreneurship may have high perceptions of feasibility and desirability of entrepreneurship making it difficult to avert reverse-causality effects.

This study is also limited by its cross-sectional data; participants are observed only at a single point in time, not across time. Last but not least, we must also take into account the economic recession that took place in the period that this survey was conducted, so it is very likely that this has been reflected on the respondents’ answers’ regarding their perceptions.

7. Policy recommendations

Overall, our findings suggest that positive perceptions of feasibility and desirability increase self-employment intentions. Therefore, there is a great need for implementing policies that will enhance both perceptions of feasibility and desirability. By doing so, individuals will feel more capable and more attracted with the idea to start a business. Education is one very relevant instrument in order to promote more positive perceptions of feasibility and desirability of self-employment. This can be achieved by enhancing self-efficacy and outcome expectations. As for self-efficacy, educators can help students boost their confidence in feeling able to perform activities and encourage them by offering psychological and emotional support. Education is an important factor in order to have enterprising citizens, as the Green Paper on Entrepreneurship in Europe states. Furthermore, educators should be aware of the necessary skills that an entrepreneur must acquire and stimulate young students to be entrepreneurs through entrepreneurship education programs. Policy makers should also find a way to prove that financial and other rewards of self-employment are valuable. Finally, society should avoid policies that deter potential entrepreneurs from being involved in the entrepreneurial process due to the obstacles they face.

It was also found that the influence of perceived desirability on self-employment intentions is less strong for individuals who live in southern European countries than those who live in northern European countries. As far as different countries are concerned, entrepreneurship education programs should be specific for every country since entrepreneurial intentions differ by country. Thus, it may be beneficial for policy makers to develop strategies to improve perceptions of desirability of entrepreneurs in southern European countries. In other words, they should provide more entrepreneurial environments, in order for individuals to consider self-employment a possible career choice. For example, they can highlight positive characteristics of entrepreneurs or even advertise successful entrepreneurs for the promotion of the positive profile of entrepreneurs. This could result in the emergence of role models, which leads in the approval by social norms and therefore in a greater social legitimation of the entrepreneur. If policy makers succeed to nurture potential entrepreneurs with this

entrepreneurial spirit, then the probability of thinking about setting up a business would be higher among southern European countries.

8. Future research

The present research paper presents several possibilities for future research. We believe that we have added to the entrepreneurship literature by showing how perceptions of feasibility and desirability influence entrepreneurial intentions. We hope that our findings will be useful for future studies that can further explore the impact of cognitive factors on self-employment intentions. It would be of interest for future research to replicate this study using a new questionnaire to overcome the present limitations. Additional research will serve to confirm or reject the present finding that the influence of perceived desirability on self-employment intentions is stronger in northern European countries. Next to that, getting more insight by testing empirically the social norms could also be a future extension of this study. Another future research direction is to continue comparing countries with differences in their socio-cultural background on the framework we set, or depending on the data potential, make a two country comparison. Lastly, possibly a longitudinal approach can be used to capture the changing patterns over time, since data was collected at a certain point in time.

9. References

- Acs, Z., Audretsch, D., Braunerhjelm, P., & Carlsson, B. (2004), "The missing link: The knowledge filter and entrepreneurship in endogenous growth", *CEPR Discussion Paper*, 478.
- Acs, Z.J. & Audretsch, D.B. (1993), *Small firms and entrepreneurship: an East-West perspective*, Cambridge University Press.
- Ajzen, I. (1987), "Attitudes, traits, and actions: Dispositional prediction of behavior in social psychology", *Advances in Experimental Social Psychology*, 20, 1–63.
- Ajzen, I. (1991): "The Theory of Planned Behavior", *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Arenius, P. & Minniti, M. (2005), "Perceptual Variables and Nascent Entrepreneurship", *Small Business Economics*, 24(3), 233-247.
- Audet, J. (2004), "L'impact de deux projets de session sur les perceptions et intentions entrepreneuriales d'étudiants en administration", *Journal des petites entreprises et de l'entrepreneuriat (JSBE)*, 10, 1-2, 3-16.
- Bandura, A. (1977), *Social Learning Theory*, Prentice-Hall, Englewood Cliffs, N.J.
- Bandura, A. (1982), "Self- Efficacy Mechanism in Human Agency", *American Psychologist*, 37.
- Bandura, A. (1986), *The Social Foundations of Thought and Actions*, New Jersey: Prentice Hall.
- Baumol, W. (1990), "Entrepreneurship: Productive, Unproductive, and Destructive", *Journal of Political Economy*, 98(5.1), 893–921.

Bird, B. (1988), "Implementing Entrepreneurial Ideas: The case for Intention", *Academy of Management Review*, 13, 442-453.

Bosma, N., Jones, K., Autio, E. & Levie, J. (2008), "Global Entrepreneurship Monitor 2007 Executive Report", *Global Entrepreneurship Research Association*, London.

Bosma, N. S. & Levie, J. (2010), "Global Entrepreneurship Monitor 2009 Executive Report".

Brockner, J., Higgins, E.T., & Low, M.B. (2004), "Regulatory focus theory and the entrepreneurial process", *Journal of Business Venturing*, 19, 203–220.

Bygrave, W. D., & Minniti, M. (2000), "The social dynamics of entrepreneurship", *Entrepreneurship Theory and Practice*, 24, 25-36.

Campbell, C.A. (1992): "A decision theory model for entrepreneurial acts", *Entrepreneurship Theory and Practice*, 17(1), 21-27.

Cantillon, R. (1931), *Essai sur la nature du commerce en general*, edited and translated by H. Higgs, London: Macmillan.

Carlsson, B. (1996): "Small Business, Flexible Technology, and Industrial Dynamics", in P. H. Admiraal (Eds), *Small Business in the Modern Economy*, Blackwell, Oxford, 63-125.

Cialdini, R. & Trost, M. (1998), "Social influence: social norms, conformity, and compliance", in Gilbert, D.T., Fiske, S. and Lindzey, G. (Eds), *The Handbook of Social Psychology*, McGraw-Hill, Boston, MA, pp. 151-92.

Davidsson, P. (1995), "Determinants of Entrepreneurial Intentions", Paper presented at the RENT conference, Piacenza, Italy, Nov.23-24.

Davidsson, P. & Wiklund, J. (1997), "Values, beliefs and regional variations in new firm formation rates", *Journal of Economic psychology*, 18(2), 179-199.

-
- Díaz-Casero, J.C., Ferreira, J.J.M., Mogollón, R.H. & Raposo, M.L.B. (2012), “Influence of institutional environment on entrepreneurial intention: a comparative study of two countries university students”, *International Entrepreneurship and Management Journal*, 8(1), 55-74.
- Drnovsek, M. & Erikson, T. (2005), “Competing Models of Entrepreneurial Intentions”, *Economic and Business Review for Central and South-Eastern Europe*, 7(1), 55.
- Edelman, L. & Yli-Renko, H. (2010): “The Impact of Environment and Entrepreneurial Perceptions on Venture-Creation Efforts: Bridging the Discovery and Creation Views of Entrepreneurship”, *Entrepreneurship Theory and Practice*, 34(5), 833-856.
- Engle, R.L., Dimitriadi, N., Gavidia, J.V., Schlaegel, C., Delanoe, S., Alvarado, I., He, X., Buame, S. & Wolff, B. (2010): “Entrepreneurial intent: A twelve-country evaluation of Ajzen’s model of planned behavior”, *International Journal of Entrepreneurial Behaviour and Research*, 16(1), 35-57.
- Etzioni, A. (1987): “Entrepreneurship, Adaptation and Legitimation: A Macro-Behavioral Perspective”, *Journal of Economic Behavior and Organization*, 8, 175-189.
- Eurostat (2013), European Commission,
<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>
- Fisman, R. & Sarria-Allende, V. (2004): “Regulation of entry and the distortion of industrial organization”, No. w10929, National Bureau of Economic Research.
- Fitzsimmons, J.R. & Douglas, E.J. (2011): “Interaction between feasibility and desirability in the formation of entrepreneurial intentions”, *Journal of Business Venturing*, 26, 431-440.
- Galloway, L. & Brown, W. (2002), “Entrepreneurship education at university: a driver in the creation of high growth firms?”, *Education & Training*, 44(8/9), 398–405.

-
- Gasse, Y. & Tremblay, M. (2011), "Entrepreneurial beliefs and intentions: A cross-cultural study of university students in seven countries", *International Journal of Business*, 16(4), 303.
- Gatewood, E.J., Shaver, K.G. & Gartner, W.B. (1995), "A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation", *Journal of Business Venturing*, 10, 371–391.
- Giacomin, O., Jansen, F., Pruett, M., Shinnar, R.S., Llopis, F. & Toney, B. (2011): "Entrepreneurial intentions, motivations and barriers: Differences among American, Asian and European students, *International Entrepreneurship and Management Journal*, 7, 219-238.
- Gilad, B. & Levine, P. (1986), "A behavioral model of entrepreneurial supply", *Journal of Small Business Management*, 24(4)4, 45-54.
- Gnyawali, D.R. & Fogel, D.S. (1994), "Environments for Entrepreneurship Development: Key Dimensions and Research Implications", *Entrepreneurship Theory and Practice*, 18(4), 43–62.
- Griffiths, M.D., Kickul, J. & Carsrud, A.L. (2009), "Government Bureaucracy, Transactional Impediments, and Entrepreneurial Intentions", *International Small Business Journal*, 27(5), 626-645.
- Grootaert, C. & van Bastelaer, T. (2001), "Understanding and measuring social capital: A synthesis of findings and recommendations from the social capital initiative", *The World Bank, Social Capital Initiative, Working paper no. 24*.
- Guerrero, M., Rialp, J. & Urbano, D. (2008), "The impact of desirability and feasibility on entrepreneurial intentions: A structural equation model", *International Entrepreneurship and Management Journal*, 4(1), 35-50.
- Hofstede, G. (1980), *Culture's Consequences: International Differences in Work-Related Values*, Sage Publications, Beverly Hills.

Iakovleva, T. (2007), "Factors Associated with New Venture Performance: The Context of St-Petersburg", PhD series No. 12-2007, Høgskolen i Bodø, Bodø.

Iakovleva, T., Kolvereid, L. & Stephan, U. (2011), "Entrepreneurial intentions in developing and developed countries", *Education and Training*, 53(5), 353-370.

Jung, D.I., Ehrlich, S.B., De Noble, A.F. & Baik, K.B. (2001), "Entrepreneurial self-efficacy and its relationship to entrepreneurial action: A comparative study between the US and Korea", *Management International*, 6(1), 41-53.

Kennedy, J., Drennan, J., Renfrow, P. & Watson, B. (2003), "Situational factors and entrepreneurial intentions", *16th Annual Conference of the Small Enterprise Association of Australia and New Zealand*.

Kirzner, I. (1979), *Perception, opportunity and profit*, Chicago, IL: University of Chicago Press.

Kolvereid, L. (1996), "Prediction of employment status choice intentions", *Entrepreneurship Theory and Practice*, 21(1), 47-57.

Krueger, N. F. (1993), "The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability", *Entrepreneurship Theory and Practice*, 18(1), 5-21.

Krueger, N., and D.V. Brazeal (1994), "Entrepreneurial Potential and Potential Entrepreneurs," *Entrepreneurship Theory and Practice*, 18(3), 91-104.

Krueger, N.F. (2000), "The cognitive infrastructure of opportunity emergence", *Entrepreneurship Theory and Practice*, 24(3), 5-23.

Krueger, N.F., Reilly, M.D. & Carsrud, A.L. (2000), "Competing models of entrepreneurial intentions", *Journal of business venturing*, 15(5), 411-432.

Krueger, N. F. (2003), "The Cognitive Psychology of Entrepreneurship", in Acs, Z. J. and Audretsch, D. B. (eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction*, Kluwer, London, 105-140.

Laviolette, E. M. & Radu, M. (2008), "Symbolic Role Models and Entrepreneurial Intention", *International Council for Small Business, World Conference*, June 22-25, Halifax, Nova Scotia, Canada.

Lin, N. (2003), *Social capital, a theory of social structure and action*, Cambridge: Cambridge University Press.

Linan, F. & Santos, F. J. (2007), "Does Social Capital Affect Entrepreneurial intentions?", *International Advances in Economic Research*, 13(4), 443-453.

Linan, F., Santos, F.J. & Fernandez, J. (2011), "The influence of perceptions on potential entrepreneurs", *International Entrepreneurship and Management Journal*, 7(3), 373-390.

Locke, E.A., Latham, G.P., Smith, K.J. & Wood, R.E. (1990), *A theory of goal setting & task performance*, (Vol. 21), Englewood Cliffs, NJ: Prentice Hall.

Love, I. and Klapper, L. (2010), "The Impact of the Financial Crisis on New Firm Registration", *Policy Research working paper*, no. WPS 5444.

Luiz, J. (2008), *Managing business in Africa, Practical management theory for an emerging market*, South Africa: Oxford University Press.

Luthje, C. & Franke, N. (2003), "The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT", *R&D Management*, 33(2), 135-47.

Manolova, T.S., Eunni, R.V. & Gyoshev, B.S. (2008), "Institutional Environments for Entrepreneurship: Evidence from Emerging Economies in Eastern Europe", *Entrepreneurship Theory and Practice*, January, 203-218.

-
- McClelland, D. C. (1965), "Need achievement and entrepreneurship: A longitudinal study, *Journal of Personality and Social Psychology*, 1, 389–392.
- North, D. (1990), *Institutions, institutional change, and economic performance*, New York: Norton.
- Penrose, E. (1959), *The theory of the growth of the firm*, Oxford: Oxford University Press.
- Pittaway, L. & Cope, J. (2007), "Entrepreneurship education: a systematic review of the evidence", *International Small Business Journal*, 25(5), 479–510.
- Praag, C.M.V. & Cramer J.S. (2001), *The roots of entrepreneurship and labor demand: Individual ability and low risk*, *Economica*, 68, 269:45-62,
- Pruett, M., Shinnar, R., Toney, B., Llopis, F. & Fox, J. (2009), "Explaining entrepreneurial intentions of university students: a cross-cultural study", *International Journal of Entrepreneurial Behaviour & Research*, 15(6), 571-94.
- Reynolds, P.D. (1992), "Sociology and entrepreneurship: Concepts and contributions", *Entrepreneurship Theory and Practice*, 16(2), 47-70.
- Reynolds, P. D., Storey, D. J., & Westhead, P. (1994), "Cross-national comparison of the variation in new firm rates", *Regional Studies*, 28, 443–456.
- Robinson, P.B., Stimpson, D.V., Huefner, J., & Hunt, H.K. (1991), "An attitude approach to the prediction of entrepreneurship", *Entrepreneurship Theory and Practice*, 15(4), 13–31.
- Scherer, R., Adams, J., Carley, S., & Wiebe, F. (1989), "Role model performance effects on development of entrepreneurial career preference", *Entrepreneurship Theory and Practice*, 13, 53-81.

Schultz, T.W. (1975), "The Value of the Ability to Deal with Disequilibria", *Journal of Economic Literature* 13, 827-846.

Segal, G., Borgia, D. & Schoenfeld, J. (2002), "Using social cognitive career theory to predict self-employment goals", *New England Journal of Entrepreneurship*, 5(2), 47.

Serrano, J.F., Alcalde, F.L. & Cumplido, F.J.S. (2009), "Cognitive aspects of potential entrepreneurs in Southern and Northern Europe: An analysis using GEM-Data", *Revista de economía mundial*, 23, 151-178.

Shane, S. (2000), "Prior knowledge and the discovery of entrepreneurial opportunities", *Organization Science*, 11(4), 448–469.

Shane, S. & Venkataraman, S. (2000), "The Promise of Entrepreneurship as a Field of Research", *Academy of Management Review*, 25(1), 217-226.

Shapiro, A. (1981), "Self-renewing economies", *Economic Development Commentary*, 5(Apr.), 19-22.

Shapiro, A. (1982), Social dimensions of entrepreneurship. In C. A. Kent et al. (Eds.), *The encyclopedia of entrepreneurship* (pp. 72–89). Englewood Cliffs, NJ: Prentice-Hall.

Shapiro, A. & Sokol, L. (1982), "Social Dimensions of Entrepreneurship", in Kent, C. A.; Sexton, D. L. and Vesper, K. H. (eds), *Encyclopedia of Entrepreneurship*, Prentice Hall, Englewood Cliffs (NJ), 72-90.

Specht, P.H. (1993), "Munificence and carrying capacity of the environment and organization formation", *Entrepreneurship Theory & Practice*, 17(2), 77–86.

Stephen, F., Urbano, D. & Hemmen, S. (2005), "The impact of institutions on entrepreneurial activity", *Managerial and Decision Economics*, 26, 413–419.

Stevenson, H., Roberts, M., & Grousbeck, H. (1989), *New business ventures and the entrepreneur*, Boston: Irwin.

Stevenson, H.H. & Jarillo, J.C. (1990), “A paradigm of entrepreneurship: Entrepreneurial management”, *Strategic Management Journal*, 11(4), 17–27.

The Doing Business Project, (2002). World Bank, URL:
<http://www.doingbusiness.org/rankings>.

Thurik, A.R., Uhlaner, L. & Wennekers, S. (2002), “Entrepreneurship and Its Conditions: a Macro Perspective”, *International Journal of Entrepreneurship Education*, 1(1), 25-64.

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

Vroom, V.H. (1964): *Work and Motivation*, Wiley, New York, NY.

Wennekers, A.R.M., van Stel, A., Thurik, A.R. & Reynolds, P.D. (2005), “Nascent Entrepreneurship and the Level of Economic Development”, *Small Business Economics*, 24(3), 293-309.

Wilken, P.H. (1979), *Entrepreneurship: a Comparative and Historical Study*, Ablex, Norwood, N.J. Appendix.

Xavier, S.R., Kelley, D., Jacqui K., Herrington, M. & Vorderwülbecke A. (2013). The Global Entrepreneurship Monitor. *2012 Global Report, GEM 2012*.

Zellweger, T., Sieger, P. & Halter, F. (2011), “Should I stay or should I go? Career choice intentions of students with family business background”, *Journal of Business Venturing*, 26, 521-536.

10. Appendix

Table 1:

Descriptive statistics: means, max, min and standard deviation

Variable	N	Mean	Std. Dev.	Min	Max
Self-employment intentions	15222	0.1606885	0.3672554	0	1
Feasibility	22606	1.832478	0.9887354	1	4
Self-efficacy	25431	0.8328418	0.3731244	0	1
Desirability	25287	2.403765	0.6699019	1	3
Region	22156	0.2733797	0.4741892	0	1

Notes: (1) N= number of observations,
(2) Std. Dev. = Standard Deviation,
(3) Region: 1= southern countries, 0= northern countries.

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

Table 2.

Pearson correlation coefficients of variables (N=11680)

Variables	intentions	feasibility	Self- efficacy	desirability	region
Self-employment intentions	1				
Feasibility	0.4194***	1			
Self-efficacy	0.0608***	0.1118***	1		
Desirability	0.0743***	0.1147***	0.0784***	1	
Region	-0.0087	-0.0175**	0.0342***	-0.0139**	1

Notes: (1) N = number of observations,

(2) Region: 1= southern countries, 0= northern countries.

(3)*** denotes significance at 1%, ** denotes significance at 5%, * denotes significance at 10%

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

Table 3.**Sample distribution by region**

	Southern countries	Northern countries
Dependent variable		
Self-employment intentions		
-never thought about it (%)	0.8506	0.8434
-thinking about starting a business (%)	0.1594	0.1566
Independent Variables		
Perceived Feasibility		
-not feasible at all (%)	0.5455	0.5219
-not very feasible (%)	0.1947	0.2097
-quite feasible (%)	0.1909	0.1927
-very feasible (%)	0.0689	0.0757
Perceived self-efficacy		
-not certain I will accomplish difficult tasks (%)	0.1454	0.1739
-certain I will accomplish difficult tasks (%)	0.8546	0.8261
Perceived Desirability		
-rather unfavourable (%)	0.1221	0.0951
-neutral (%)	0.3548	0.3881
-favourable (%)	0.5231	0.5168
<hr/>		
N	6057	16099

Notes: (1) Southern countries: Italy, Greece, Spain, Portugal, Cyprus, Malta, Turkey and Bulgaria. Northern countries: France, Belgium, Netherlands, Germany, Luxemburg, Denmark, Ireland, United Kingdom, Finland, Sweden, Austria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, Romania, Croatia, Norway, Switzerland and Iceland.

(2)N=number of observations.

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

Table 4.**Average marginal effects****Dependent variable: self-employment intentions**

	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
Independent variables				
Feasibility		0.09585*** (0.00287)		0.09500*** (0.00347)
Self-efficacy		0.00538 (0.00856)		-0.00444 (0.00982)
Desirability			0.02835*** (0.00509)	0.01751*** (0.00587)
Region		-0.03152*** (0.00666)	-0.0365*** (0.00675)	-0.03146 (0.03342)
Interaction terms				
Feasibility*region				0.00555 (0.00733)
Self-efficacy*region				0.05246** (0.02358)
Desirability*region				-0.02404** (0.01112)
Control variables				
Male	0.049898*** (0.00622)	0.0284*** (0.00641)	0.04725*** (0.00673)	0.02825*** (0.00652)
Age	-0.085225*** (0.00243)	-0.05598*** (0.00282)	-0.08603*** (0.00269)	-0.05625*** (0.00287)
Self-employed father	0.023085*** (0.00791)	0.01646* (0.00845)	0.02564*** (0.00873)	0.01558* (0.00859)
Self-employed mother	0.000316 (0.0104)	-0.0153 (0.0116)	-0.006345 (0.01223)	-0.01572 (0.01184)
Risk-taking	0.06104 *** (0.0601)	0.0324*** (0.00654)	0.05392*** (0.00654)	0.03185*** (0.00669)
Locus of control	0.016245** (0.0796)	-0.002097 (0.00917)	0.00436 (0.00898)	-0.00264 (0.00939)
N	14517	11598	12231	11239
Log-likelihood	-5710.2558	-3999.0653	-4751.9707	-3897.6279
Pseudo R ²	0.1177	0.2141	0.1174	0.2151

Notes: (1) Standard errors in parentheses.

(2) The measurement for feasibility ranges from not feasible at all to very feasible, the measurement of desirability ranges from unfavourable to favourable. Reference category for self-efficacy is not having self-efficacy beliefs, Region: 1= southern countries, 0= northern countries, Reference category for feasibility*region is those who have high perceptions of feasibility and reside in northern countries. Reference category for self-efficacy*region is those who have self-efficacy beliefs and reside in northern countries and those who don't have self-efficacy beliefs and reside in southern countries. Reference category for desirability*region is those who have high perceptions of feasibility and reside in northern countries. Reference category for male is female. Reference category for self-employed father is not having self-employed parent. Reference category for self-employed mother is not having a self-employed mother. Reference category for risk-taking is being risk-averse. Reference category for locus of control is not having locus of control.

(3) N= number of observations.

(4) *** denotes significance at 1%; ** denotes significance at 5%; * denotes significance at 10%.

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