Opportunity and/or necessity entrepreneurship? The impact of the socio-economic characteristics of entrepreneurs

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OPPORTUNITY AND/OR NECESSITY ENTREPRENEURSHIP? THE IMPACT OF THE SOCIO-ECONOMIC CHARACTERISTICS OF ENTREPRENEURS.

Abstract:

Few studies have tried to identify the impact of the socio-economic characteristics of entrepreneurs on their opportunity-necessity positioning. Based on a sample of 538 entrepreneurs, we point out that individuals who get involved in an entrepreneurial process, have encountered a situation of necessity and/or opportunity and that the latter can take various forms. We show the impact of the socio-economic characteristics of entrepreneurs on the alignment of their project with a necessity or opportunity entrepreneurial dynamics. The existence of sub-profiles of entrepreneurs within the necessity-opportunity typology is also highlighted. We stress, for instance, that not all jobseekers are necessity entrepreneurs and that new venture creation based on family influence may convey both a necessity and an opportunity dimension. Finally, our study reveals a new kind of entrepreneurship, i.e. hobby entrepreneurship.

INTRODUCTION

The push-pull theory offers an interesting interpretative model for the analysis of the entrepreneurial supply (Amit & Muller, 1995 ; Gilad & Levine, 1986). According to Uhlaner and Thurik (2007), new venture creation obeys to a pull dynamic when it is considered by the individual as a source of profit, be it material or not, and to a push dynamics when the creation results from a conflict between the situation the individual actually finds himself in and the one he looks for. Since Reynolds et al. (2002), the distinction between these two dynamics appears only implicitly in the studies dealing with the decisional factors of new venture creation. As a matter of fact, there has been a semantic shift towards the terms *necessity entrepreneurship* (push) and *opportunity entrepreneurship* (pull) (Verheul et al., 2010). Up to now, few empirical studies have tried to highlight the impact of the socio-economic characteristics of the founder on his positioning in terms of necessity or opportunity entrepreneurship. This issue is important because it is essential to be able to identify the different profiles of potential entrepreneurs in order to adapt start-up assistance measures to the creators' profile(s). Current policies aimed at (future) entrepreneurs seldom make a distinction between opportunistic and necessity-driven entrepreneurial logics. As highlighted

by Bhola et al. (2006), efficient policies for necessity-driven entrepreneurs are likely to be unhelpful to opportunity-driven entrepreneurs. Our study could be a first step towards a refinement of new venture creation policies based on a subtler knowledge of the socio-economic characteristics of both profiles of entrepreneurs and their subcategories.

The aim of this paper is to examine whether it is possible to classify a new venture creation in terms of necessity and/or opportunity entrepreneurship on one hand, and to shed light on the articulations between the entrepreneur's socio-economic characteristics and the alignment of his project with opportunity and/or necessity dynamics, on the other hand. In order to achieve this, we use a sample of 538 individuals.

This paper is structured as follows. Section 1 presents the state of the art regarding the push-pull model as well as the concepts of opportunity and necessity entrepreneurship[1]. Section 2 specifies our research hypotheses. Section 3 describes the methodological framework that has been mobilized. Sections 4 and 5 present our discussion and findings. Finally, the last section draws the conclusions of this study, highlights its political and scientific implications and suggests some directions for future research.

FROM THE PUSH-PULL MOTIVATIONS TO THE NECESSITY-OPPORTUNITY DICHOTOMY: EVOLUTION OF RESEARCH

To the profane, for whom technological innovation, the growth of demand for goods and services or the introduction of new products are the main drivers of business creation, identifying the triggering factors hereof may appear as evident. However, business creation may be the fruit of a diversity of circumstances and motivations (Hechavarria & Reynolds, 2009 ; Kirkwood, 2009 ; Bhola et al., 2006). As highlighted by Shapero and Sokol (1982), the circumstances of business creation can be negative or positive elements which lead an

[1] Exclusively in the context of an individual approach

individual to the decision to found a new start-up. According to Audretsch and Thurik (2000), an individual can create a start-up either because he fears unemployment or because he discovers an opportunity. This vision of business creation is presented by Bhola et al. (2006) as a two 'types of dynamics' one: either push or pull. Since Reynolds et al. (2002), this dichotomy has given birth to the concept of necessity entrepreneurship (push motivation) and opportunity entrepreneurship (pull motivation). Henrekson (2004) on the other hand, assimilates opportunity entrepreneurship to a "first order" entrepreneurship and necessity entrepreneurship to a "second order" one.

Nowadays, it seems that the concepts of opportunity and necessity entrepreneurship have unanimous support from researchers in entrepreneurship because of their capacity to bring together in a simple and coherent way the two general profiles of entrepreneurs (Gurtoo & Williams, 2009 ; Acs et al., 2008 ; Hessels et al., 2008). Their systematic use in the reports of the Global Entrepreneurship Monitor (GEM) since 2002, following Reynolds studies, has undoubtedly contributed to the popularity of these two concepts.

As highlighted above, the classification of entrepreneurial behaviour in terms of opportunity and necessity implicitly results from the push-pull concepts. Therefore, we will start our literature review by presenting the state of knowledge on these two concepts before examining the concepts of opportunity and necessity entrepreneurship. By the end of our literature review, we will present the push-pull indicators that will be used to analyze the necessity and opportunity entrepreneurial dynamics[2]. Let us note that the push-pull and necessity-opportunity distinction is also present in some macroeconomic works such as Kariv et al. (2009) ; McMullen et al. (2008) ; Noorderhaven et al., (2004) ; Ritsilä and Tervo, (2002) ; Georgellis and Wall, (2000) ; Robson, (1996) ; Audretsch and Vivarelli, (1995) ; Fotti and Vivarelli, (1994) ; Hart and Gudgin, (1994) ; Davidsson et al., (1994) ; Garofoli,

[2] When examining the literature on this distinction and on the opportunity-necessity dichotomy, we shall favour an individual approach and shall address only those studies which adopt this perspective.

(1994) ; Fritsch, (1992) ; Moyes and Westhead, (1990) ; Hamilton, (1989) ; Mason, (1989) ; Harrison and Hart, (1983) that will not be examined in this paper.

The Push-Pull Dichotomy

In 1976, Johnson and Darnell, building on the work of Oxenfeldt (1943), developed and tested a push-pull model in order to identify the explanatory factors of new venture creation (Harrison & Hart, 1983). Johnson and Darnell's (1976) starting point is the assumption that new venture creation underpins the shift from salaried or unemployed towards self-employed people. Such a decision is taken when the net monetary and non-monetary payoffs resulting from being self-employed surpass those derived from keeping an employee or unemployed status. According to these authors, the trigger of such a decision may be then interpreted as a function of two types of forces: push or pull. For Uhlaner and Thurik (2007), new venture creation follows a pull dynamics when it is considered by the individual as a source of profits, be they material or not, and a push dynamics when it results from a conflict between the current situation of the 'want-to-be' entrepreneur and the one he would like to experience.

A situation of unemployment can stimulate new business creation (Ritsilä and Tervo, 2002; Mason, 1989; Evans and Leighton, 1989). Mason (1989), for example, has conducted a study on the motivations of two groups of entrepreneurs. The first group comprises individuals who had started their business during the 1976-1979 period (a pre-recession one), whereas the second group is made up by individuals who had founded their firm during the post-1979 period (a recession one). While the entrepreneurial decisions of individuals during the pre-recession period were predominantly motivated by pull factors such as market opportunities, financial purposes, or a new product, the recession entrepreneurs were rather motivated by push factors such as unemployment, a lay-off or work-related insecurity. Ritsilä and Tervo (2002), in their study on the impact of unemployment on new venture creation,

notice that short-term (1 to 8 months) unemployed individuals have a higher propensity to start their own business than long-term (9 to 12 months) jobseekers. Gilad and Levine (1986) have also pointed out that individual short-term (15 to 26 weeks) unemployment has a positive effect on new business creation by these individuals. On top of the unemployment factor, Evans and Leigthon (1989) notice that individuals who have changed jobs frequently, have precarious jobs or low salaries, are more likely to become self-employed. The absence of professional prospects is considered by Burke (1997) as the main motivation behind new music artists' desire to create their own labels and distribution channels. For Brockhaus (1980), the absence of satisfaction in the current job is seen has a push dynamics that leads individuals to start an entrepreneurial activity.

Some studies have also dealt with the push-pull dynamics depending on the gender of the individual. Orhan and Scott (2001), Hisrich and Brush (1985)[3] highlight the fact that push dynamics such as boredom, frustration and the absence of evolution prospects (the glass ceiling phenomenon) in the professional life preceding entrepreneurship, are frequently present among female entrepreneurs and that, unlike their male counterparts, push factors seem to predominate pull ones. Building on the work of Duchéneaut (1997), Orhan and Scott (2001) identify the necessity of a flexible job due to family responsibilities as a push factor among women. For these authors, social factors are the ones responsible for the entrepreneurial motivation differences between men and women. They explain that there are two major push factors among women: their role within the household, on one hand, and their position on the job market and more specifically an absence of professional prospects due to a male chauvinist organisational culture, on the other.

[3] Quoted by Buttner and Moore (1997).

On the contrary, Buttner and Moore (1997) observe that women's dominant entrepreneurial dynamics are of the pull kind. These pull dynamics seem to be predominant in Hughes (2003) as well.

Opportunity and Necessity Entrepreneurship

Since the work of Reynolds et al. (2002), the distinction between push and pull motivations does not appear explicitly in the studies dealing with new venture creation decision-making factors anymore. This distinction has been replaced by the concepts of *necessity* (push) and *opportunity* (pull) *entrepreneurs.*

However, until now, few studies have examined opportunity and necessity entrepreneurship in an individual approach based on the socio-economic characteristics of entrepreneurs (Bhola et al., 2006). Hereafter, we present the main results of the few recent that have dealt with that question.

Vivarelli (2004), referring to the 2001 GEM global report, highlights that opportunity entrepreneurs are predominant, but also that necessity entrepreneurs represent a significant part of potential and actual business founders. Reynolds et al. (2002) show that opportunity entrepreneurs are older (35-44 years) than necessity entrepreneurs (18-24 years). Conversely, based on the 2002-2004 GEM data for Canada, Robichaud et al. (2006)[4] associate youth with opportunity entrepreneurship. The same association can be found in the works of Block and Sandner (2009), Bhola et al. (2006), Block and Wagner (2006) and Wagner (2005). However, for Bergmann and Sternberg (2007), age does not seem to have an impact on the probability of necessity entrepreneurship.

The studies of Bhola et al. (2006), Djankov et al. (2004) and Wagner (2005) show that having entrepreneurial parents, predisposes to opportunity rather than necessity

[4] This study is about individuals who are in a business creation phase.

entrepreneurship. Taking advantage of an entrepreneurial network is more specific to opportunity entrepreneurs (Robichaud et al., 2006).

The educational level of the entrepreneur does not seem to be a discriminatory factor between the two types of entrepreneurs. According to Block and Sandner (2009) ; Block and Wagner (2006), there are no differences between these two types of entrepreneurs. On the other hand, for Bhola et al. (2006) and Robichaud et al. (2006), opportunity entrepreneurs are characterized by a higher level of education. Bergmann and Sternberg (2007) emphasize that the level of education does have an impact but on opportunity entrepreneurship only. These studies have thus led to contradictory conclusions.

Finally, and unsurprisingly, unemployment seems to be a predominant feature among necessity entrepreneurs, as shown by Block and Wagner (2006) and Robichaud et al. (2006).

However, Wagner's (2005) findings show that the unemployment variable has a positive impact on the probability of both necessity and opportunity new venture creations, although the impact is more important for necessity entrepreneurs.

Towards a More Complex Interpretation of Reality

The above-mentioned studies suggest that the socio-economic characteristics of the founder have an impact on his entrepreneurial dynamics. However, these findings should be considered with caution. In fact, the methodology used to make such classifications could be criticized as it implicitly postulates that an entrepreneur is either opportunistic or necessity-driven. For instance, in Robichaud's et al. (2006) study, only the "Are you involved in a new venture creation process because you want to take advantage of a business opportunity or because you have no other employment choice?[5]" item was used to distinguish between push and pull motivations. Wagner (2005) used a similar item[6]. Block and Wagner (2006) who

[5] Translated from French to English

[6]. "....104 of the 349 people...in our survey stated that they start their own business because they do not have a better alternative to earn a living; these nascents are labeled *nascent necessity entrepreneurs*. 217 agreed that they start a new venture to realize a business idea, and they are labeled *nascent opportunity entrepreneurs*"

examined a group of entrepreneurs who were previously unemployed, have made a classification based on the reasons of this situation: "Those who reported to have left their job in paid employment on their own were classified as opportunity entrepreneurs, whereas those who were either dismissed by their employer or laid off because their place of work closed down are classified as necessity entrepreneurs". Finally, in the survey of Bhola et al. (2006), the distinction between opportunity and necessity entrepreneurs was based on the following question: "All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity?".

In our opinion, the necessity/opportunity entrepreneurship dichotomy is too limitative. Indeed, it has not been established that the boundary between opportunity and necessity dynamics is as clear-cut as the aforementioned authors pretend. This view is shared by Arias and Penas (2010), Hughes (2003) and Solymossy (1997).

Hence, the question to be asked is whether entrepreneurs obey exclusively to one or the other dynamic. As Williams (2009) and Block and Sandner (2006) have emphasized, it is worthwhile asking whether necessity and opportunity entrepreneurs are actually homogenous groups. Shouldn’t we examine whether or not there are different subcategories within these two groups? Following Block and Koellinger (2009), Block and Sandner (2006), Bhola et al. (2006) and Solymossy (1997), we consider the possibility of a simultaneous belonging to both dynamics.

Measuring Entrepreneurial Motivations

As highlighted above, the empirical examination of the opportunistic or necessity-driven nature of an entrepreneurial endeavour is not an easy task insofar as few studies offer a set of indicators enabling their identification. Moreover, as stressed by Kautonen and

Palmroos (2010), necessity entrepreneurship is generally associated with a sole motivation: "unemployment". And yet, other factors are likely to originate this kind of entrepreneurship.

On the basis of these observations, we have used indicators which are either supported by previous research, or can be justified with no need for too restrictive assumptions. We have, in a first stage, classified the items of our questionnaire regarding new venture creation motivations depending on whether we considered them as obeying to an opportunity or necessity dynamics. The function of this classification is purely heuristic, all the more so, as Hughes (2003) emphasizes, as the meaning of an event or situation in terms of opportunity or necessity may vary depending on the individual and the specific circumstances he/she faces before start-up. The following table presents this classification.

"Insert Table 1 Here"

Regarding the *get out of unemployment* indicator, our classification is based on previous work by Block and Wagner (2006); van Praag (2003) ; Ritsilä and Tervo (2002) ; Evans and Leighton (1989) ; Mason (1989) and Harrison and Hart (1983). The absence of personal development in one's work and/or the need for recognition are generally associated with professional or personal dissatisfaction and thus with necessity entrepreneurship (Noorderhaven et al., 2004). Therefore, we have classified the *obtaining prestige* and *being socially recognized* indicators in the necesity section. The *meeting family expectations* and *perpetuating the family tradition* indicators have been classified in the necessity section because they correspond to situations where individuals have been pushed to start or take over a business by their family circle. In addition, this choice echoes back to the work of Bhola and al. (2006) who demonstrate that an individual can be pushed into entrepreneurship because of the obligation to take over the family business. Our choices to classify the

indicators[7] *earning big money, increasing one's income, being autonomous, creating one's own job, having no boss anymore, developing new products,* and *developing new manufacturing processes* into the opportunity indicators notably relies on previous research by Cassar (2007); Carter and al. (2003); Kolvereid (1992); Mason (1989); Harrison and Hart (1983).

OPPORTUNITY OR/AND NECESSITY: WHAT POSITIONING AND WHY?

In order to interpret the origin of the founder's positioning, it seems relevant to take his socio-economic characteristics into consideration. These characteristics determine the position of the founder in the professional sphere, as well as the resources that he objectively possesses and those that he can subjectively mobilize. Without taking these elements into consideration, it seems difficult to fully understand the various entrepreneurial dynamics.

This is also what Hisrich et Peters (1998) highlight. According to these authors, the venture creation act presupposes a decision-making process on a change of lifestyle. This process is impacted by factors that make this change *wanted,* i.e. cultural models, and other factors that make it *possible* (notably with respect to the available skills and resources). The decision to change can be enrooted in two kinds of elements: disruptive (necessity) elements such as school failure, bankruptcy, retirement, job loss, divorce, etc. or opportunities revealed by the professional context. This sociological vision of the triggering element of new venture creation is close to Shapero and Sokol (1982)'s approach according to whom starting a new business can be the consequence of negative (disruptive) or positive (opportunities) circumstances. For Buenstorf (2009), the necessity and opportunity motivations must be considered as the triggering element of new venture creation and of entrepreneurial intention.

[7] The *creating one's own job* and *having no boss anymore* indicators refer to the desire of autonomy and independence. These two motivations are generally classified as indicators of opportunity entrepreneurship (Carter et al., 2003).

The decision to change one's lifestyle will be encouraged by a positive perception of this change[8]. This perception will have more impact if it is simultaneously in agreement with the individual's representation system and values as well as with the cultural references prevailing in his social environment.

In this perspective, the socio-economic characteristics of the potential entrepreneur influence the opportunity or necessity dynamics to which the entrepreneurial process obeys. In addition, they have an impact on the perception and interpretation mechanisms of reality. Some entrepreneurial opportunities will be spotted by some individuals and not by others. Similarly, the interpretation of potentially disruptive situations or events, as defined by Hisrich and Peters (1998), will vary depending on these characteristics and this will result in different strategies and positioning along the opportunity-necessity axis. In the context of this study, several articulations can be put forward:

a. The involvement in a new business creation is the outcome of a decision which is enrooted in a disruption and/or opportunity;
b. The nature of disruptions and opportunities is not extraneous to the objective situation of the individual (socio-economic characteristics); the same holds true for the frequency, the incidence and the occurrence of disruptions and opportunities;
c. In addition to the objectivity of these elements (opportunities and dislocations), their subjective interpretation also has an impact on this decision;
d. Since the mechanisms by which an individual interprets and constructs reality, are socio-cultural productions and linked to his social characteristics and background, the relation with the disruptions and opportunities is thus sociologically contingent: a given necessity/opportunity may be interpreted differently depending on these socio-economic characteristics;

[8] This improvement of the lifestyle anticipated by the individual as a consequence of new venture creation is found notably in Uhlaner and Thurik (2007) and Johnson and Darnell (1976).

e. Finally, these characteristics and this path in life will affect the propensity of an individual to get involved in a new business creation and the alignment of this process with an opportunity or a necessity dynamic.

Three propositions can be derived from these links. First, individuals who get involved in an entrepreneurial process have encountered, perceived and invested one necessity and/or opportunity situation(s) and hence, position themselves with more or less intensity on both entrepreneurial dynamics. Second, situations which lead to new venture creation are very diverse and can be interpreted in various ways; this implies that opportunity and/or necessity entrepreneurial dynamics can take various forms. Third, since the socio-economic characteristics have an impact not only on the objective exposure to necessity and opportunity situations, but also on the subjective perception of the latter, one can expect these characteristics will influence the positioning in terms of opportunity and necessity both in intensity and modality.

In more operational terms, we translate these propositions into 3 hypotheses:

H1: *Individuals position themselves with more or less intensity on both types of entrepreneurial dynamics;*

H2: *The opportunity and/or necessity entrepreneurial dynamics may take different forms;*

H3: *the socio-economic characteristics influence the positioning of the entrepreneur in terms of opportunity and necessity entrepreneurship both in intensity and modality.*

We will now test the validity of these hypotheses.

METHODOLOGICAL FRAMEWORK

Presentation of the Database

To identify our population (new businesses started ex nihilo), we have first used the information available in the administrative index of Belgian businesses (*Eurodb*[9] index) in order to isolate ventures started between June 1 1998 and May 31 2000[10]. On the basis of these criteria, 12,748 businesses within the *Eurodb* index have been indentified as new ventures.

In a second stage, all 12,748 businesses were contacted by mail between September 15 and October 30 2001 in order to isolate the businesses created ex nihilo and to identify their founders, as well as their previous experience regarding venture creation. This survey was conducted between October and November 2001. Out of 12,748 businesses which were contacted, 4,562 responded to this survey, which corresponds to a response rate of 35.8%. Among the respondents, 7 out of 10 corresponded to *ex nihilo* creations. The rest had been created through mergers, subsidiary creations or demergers. Out of 4,562 firms, we have been able to identify 6.392 founders, among which 4,322 were first business founder; this represents a little bit more than 70%.

In a third stage, we looked at the socio-economic characteristics of business founders. Between September and October 2004, all founders identified in the previous stage, were invited to take part in a socio-economic survey[11] (through mail and phone reminders). The questionnaire was structured in 4 main sections. The first section dealt with the characteristics of the business at the time of its creation, i.e. between June 1 1998 and May 31

[9] This is an administrative database which comprises a set of non-confidential data (mainly coming from the trade register) on all businesses located in Belgium. The notion of business is here considered at its broadest meaning insofar as both firm and self-employed people are listed. Each business is characterized by its industry, date of foundation, legal form, address of the headquarters, employment size, its VAT number or the number in the national register of legal entities, its last legal situation, etc.

[10] These dates were chosen in order to favour some homogeneity of the context and at the same time they comprise a large enough population of new businesses. The information collection concerned only for-profit incorporated firms.

[11] The questionnaire was pre-tested on a sub-sample.

2000 (date of foundation, name of the company, industry, etc.). The second section was about the process of business creation. This section was particularly aimed at identifying the "temporality" between the idea and the actual creation of the new venture, the personal and professional triggers during this phase, the kind of steps taken, the support obtained or hoped for, and the potential barriers encountered by the business founders. The third section dealt with the financial resources that were mobilized during the creation and the main strategic orientations that were adopted. The fourth and last section focused on the founder and his circle. The questions about the founder concerned his age, academic background, socio-professional and socio-economic situation at start-up. One question was about the personal motivations the entrepreneur was pursuing through the act of business creation.

This questionnaire was sent to 3,520 business founders out of 4,322 that were identified in the previous phase. This difference was due to lacking addresses or phone numbers of 800 founders. After a phase of phone reminders, 538 valid questionnaires were finally received, which corresponds to a response rate of 12.4%[12]

The absence of an official index on the population of interest (the founders) makes the estimation and correction of potential biases due to survey participation impossible (Heckman, 1976). Nevertheless, we can highlight the convergence of our results on the characteristics of founders with other surveys conducted at an international level (The Panel Study of Entrepreneurial Dynamics (PSED) research program (Gartner et al., 2004)).

Methodology

Regarding the data processing, we use a two step method. First, we will try to identify the necessity and opportunity entrepreneurial dynamics. In order to do this, we will

[12] This rate is already high for this kind of surveys and for the method used. The response rate is actually higher than 12.4% because this rate has been calculated on the basis of all questionnaires sent and thus, does not take into account those which found no addressee (e.g. firms having closed down, moved, etc), or which cannot be exploited (off deadline, blank questionnaires or unexploitable responses, etc.). If we take into account these elements, the response rate reaches 23%.

apply a principal component analysis (PCA) to the data on the necessity-opportunity indicators (see table 1). By doing this, we will be able to identify the individual positioning of founders in terms of necessity and opportunity entrepreneurial dynamics. In a second stage, we construct a system of equations that explains the variations of the founders' different individual opportunity-necessity positionings depending on the socio-economic characteristics. The latter analysis is based on the estimation of the equations system through the SUR method ('Zellner's Seemingly Unrelated Regressions Estimation, 1971).

The regression model

Our empirical analysis is thus based on a *n* equations regression model. This model retains the *n* variables identified by PCA as independent variables.

In order to take potential interdependencies between equations into account, we estimate the effects of socio-economic characteristics on these components by using a *SUR*[13] model. This econometric approach is justified by the fact that nothing guarantees that the dynamics that have driven the founders have been formulated independently from one another. Indeed, it is possible that the founder can be simultaneously driven by a dominant necessity creation dynamics but also by a secondary opportunity dynamics. In addition, the presumption of a correlation between the error terms is reinforced because the *n* estimated equations have the same structure, which supports the possibility that some explanatory variables common to the equations could be omitted. Under these various assumptions, the errors of the *n* equations will be correlated with one another at a given time[14]. In this context, the SUR model allows us to take the interactions that may exist between the different motivations into account (Williams, 2008) through the potential correlations between the perturbations of the different equations which make up the system of equations. Based on

[13] For a detailed presentation, the reader can refer to Srivastava and Giles (1987).

[14] In this context, the assumption $Cov(X_i,\varepsilon_i)=0$ is violated and the independent variable is no more independent of perturbations. Therefore, the application of OLS to each of the equations taken separately will produce biased and non-convergent estimators as well as biased t-stat.

determinants relative to the founder(s) characteristics, and by considering the positioning of the founders around our *n* necessity-opportunity axes, we test the following SUR model made of *n* equations:

$$y_j = X_j \beta_j + \varepsilon_j \text{ , } j = 1,...., n, \text{ where } n = 6 \qquad (1.1)$$

where y_j is a vector of T observations of the dependent variable, X_j is the full rank matrix of explanatory variables ($T \times k_j$), β_j is the vector of the k_j unknown coefficients and $\varepsilon_j = (\varepsilon_{1j}, \varepsilon_{2j}, ..., \varepsilon_{Tj})'$ is the column vector $T \times 1$ of random errors. In this system, the interdependence between equations is simply carried out by the error terms that are correlated between the different equations. The SUR model is thus an extension of a linear regression where the error terms of the equations are correlated with one another. This kind of model uses Generalized Least Square (GLS) to estimate the parameters of the system[15]. In the context of our estimations, we present the complete model, i.e. the model which considers both significant and insignificant variables.

The measurement of the explanatory variables

Different explanatory variables[16] that could have an impact on the opportunity or necessity positioning of founders will be tested. These variables are:

- The *age of the founder* which is measured on the basis of the number of years since the birth of the founder;
- *The gender of the founder*. We insert a dichotomous variable in the model which equals 1 if the founder is a man;
- In order to assess the effect of the *founder's level of education*, three dichotomous variables are included in the model. They measure the highest degree obtained by the

[15] The GLS has the same proprieties as OLS: no bias and minimal variance but in this case we shall obtain more significant coefficients.
[16] We refer, inter alia, to the work of Bhola et al. (2006) and Djankov et al. (2004).

founder at start-up. Through these dichotomous variables, three levels of education are taken into account: 1) no qualifications or at best a junior high school diploma 2) high school graduate, 3) university degree, post-graduate or PhD;

- *The impact of the founder's professional background*. Several dichotomous variables have been developed in order to take the socio-professional background of the founder into account: a dichotomous variable which equals 1 if the founder was self-employed before start-up, a dichotomous variable which equals 1 if the founder was unemployed before start-up, a dichotomous variable which equals 1 if the founder was a blue-collar worker before start-up, a dichotomous variable which equals 1 if the founder was an executive in the private sector, a dichotomous which equals 1 if the founder was an employee in the private sector, a dichotomous variable which equals 1 if the founder was an employee in the public sector.
- *The founder's wealth level*. This dimension is captured by a variable which measures the average after-tax monthly income of the founder's household at start-up. At the same time, our model takes the number of people who lived on this income into account;
- *Entrepreneurial family*. We have created a dummy variable which equals 1 if the founder knew personally (parents, uncles, friends) an entrepreneur.
- *Same industry as parents.* We have created a dummy variable which equals 1 if the founder's parents had a business in the same industry as the one in which the founder wants to start his own business.

EMPIRICAL ANALYSIS

Main Characteristics of Founders

The analysis of our database on founders highlights several of their characteristics and of the creation process. Although an in-depth examination of the results of the survey

goes beyond the object of the present paper. We shall nevertheless try to highlight the most striking characteristics.

First, we observe a strong male presence within the sample: some 77% of the founders are men, whereas they represent only 50% of the population[17]. Secondly, within the sample, the portion of founders between 32 and 38 years old is the highest (25%), whereas this age bracket only represents 18% of the total population. Founders over 46 are underrepresented in our sample in comparison with the total population: 24% of the founders versus 36% of the population.

Regarding the correlation between the level of education and new venture creation, we observe that the degree appears as a differentiating factor on whether to start a new business or not. In comparison with the working population, founders are noticeably better educated. In fact, graduates (college, university and post-graduates) represent some 61% of our founders whereas they represent only 15% of the working population.

The second part of the survey identifies the motivations supposed to impact the creation process. The most frequent motivations concern the material and financial aspects as well as the individuals' need for autonomy and independence. 'Increasing income' is the most common motivation among founders. Indeed, some 80% of them consider this motivation as important for their creation process. The motivations concerning independence such as 'being autonomous', 'creating one's own job' and 'having no boss anymore' play also a predominant role in the creation process. On the contrary, getting out of unemployment seems to be a rare motivation[18].

Motivations and Necessity-Opportunity Dynamics: Towards a Multidimensional Understanding

[17] Data based on the 2001 census.
[18] This result must be moderated insofar as the portion of founders who were jobseekers before start-up was very low (17%).

Before our empirical analyses, we verify the internal validity of our classification of push-pull (see supra) indicators by using the Cronbach alpha. We have obtained a 0.879 alpha for the push classification and a 0.907 one for the pull classification[19].

Subsequently, we wanted to examine whether it is possible to interpret the involvement in entrepreneurship in necessity-opportunity terms and if necessary, to characterize it. As in other studies such as Carter et al. (2003), Birley and Westhead (1994), Alänge and Scheinberg (1988) and Scheinberg and MacMillan (1988) which deal with new venture creation decision-making factors, we use a PCA. It is applied to all push-pull indicators retained. The objective is to verify if the indicators presented in table 1 combine with one another along the presupposed opportunity-necessity axis.

When looking at table 2, we observe that 6 factors have an eigen value higher than 1 and that they explain 79.915% of the total variance explained by PCA.

"Insert Table 2 Here"

The VARIMAX procedure that has been used redistributes the variance in a more even way between the different factors and facilitates their interpretation. In order to be able to interpret the final results of PCA, we used a "component after rotation" matrix.

"Insert Table 3 Here"

The analysis of table 3 allows us to draw the following conclusions. For axis 1 (Cronbach's alpha: 0.818), the motivations *being autonomous, having no boss anymore* and

[19] In their study on entrepreneurial career choices, Carter et al. (2003) retain Cronbach values ranging between 0.58 and 0.78 in order to justify the classification obtained by PCA.

creating one's own job are the most representative. The nature of these 3 motivations suggests that axis 1 represents the **desire for independence** as motivation for new venture creation. The analysis of axis 2 (Cronbach's alpha: 0.760) shows that the motivations *perpetuating the family tradition* and *meeting family expectations* are the most correlated with this axis. The latter can be interpreted as referring to the creation motivation resulting from **family influence.** The motivations *developing new manufacturing processes* and *developing new products* are correlated the most with axis 3 (Cronbach's alpha: 0.710). This refers to **market opportunity** as a creation motivation. The motivations *increasing one's income* and *earning big money* are correlated the most with axis 4 (Cronbach's alpha: 0.725). The latter can be interpreted as the creation motivation resulting from "**profit research".** The **search for social recognition** as the creation motivation is identified in axis 5 (Cronbach's alpha: 0.651)[20]. The motivations *obtaining prestige* and *being socially recognized* are the most correlated to this axis. Finally, **unemployment** as a reason for creation is clearly identified by the analysis of axis 6[21] and the *get out unemployment* motivation.

In terms of necessity-opportunity motivations, our PCA has allowed us to indentify 3 kinds of necessity motivations (family influence, social recognition and unemployment) and 3 kinds of opportunity motivations (market opportunity, the desire for independence and profit search).

Personal characteristics and necessity-opportunity positioning: what articulations?

We have just shown that necessity and opportunity dynamics can take different forms. Now we need to explore the assumption according to which the socio-economic characteristics of founders have an impact on their necessity and opportunity entrepreneurial dynamics, both in intensity and modality and hereby on their positioning in terms of necessity and opportunity entrepreneurship.

[20] The value of Cronbach's alpha obtained for this axis can be explained by the fact that a high Cronbach value is sometimes difficult to obtain when an axis is only made of two items (Carter et al. 2003).
[21] The Cronbach's analysis cannot be conducted on this axis because it includes only one item.

Our empirical analysis, using the SUR model, is based on a regression model with 6 equations. This model considers the 6 variables highlighted in the previous section as dependent variables, i.e. the desire for independence, family influence, market opportunity, profit search, social recognition and unemployment.

Results

Table I of the appendix provides a summary of the results of the complete SUR[22] model (*with all significant and insignificant variables*).

- The necessity dynamics

Creation motivated by a 'search for social recognition' is impacted by age, by the education level, by the fact that the founder's parents were/are active in the same industry and by the fact that the founder has been previously employed in the public sector.

Age has a negative impact on this kind of creation. An older individual will not start a business because of a search for social recognition. This can be explained by the fact that an older person has already reached some kind of social recognition through his professional career and/or personal fulfilment. Similarly, holding a university degree has a negative impact on this kind of creation. For university graduates, creation will thus not be induced by a 'search for social recognition' dynamics. This result can probably be explained by the difference in terms of opportunity cost between starting one's own business in order to be socially recognized and accepting a salaried job, the latter seemingly being a more important source of social promotion and recognition for a university graduate. Moreover, the graduate status itself can be synonymous of sufficient social recognition. The fact that parents are

[22] We have also estimated a multivariate probit model where the dependent variables have been coded 1 if the variable is higher than 0. Under this assumption, an individual is considered as obeying to a 'need for independence' creation dynamics if his position on the factorial axis is positive. This multivariate probit model has been estimated using the same explanatory variables as in the SUR model. The analysis of the results of this model confirms the results obtained by the SUR model. These results can be obtained from the authors.

active in the same sector has also a negative impact on creation for recognition motives. A possible explanation for this result would be that these individuals are more conscious of the lack of social recognition regarding the entrepreneur status specific to their industry. Conversely, civil servants seem to search some kind of social recognition in starting their own business. The low social recognition of civil servants can help understand this result.

Regarding new venture creation due to 'family influence', five variables seem to have a significant impact: gender (male), having entrepreneurs in the circle, the fact that parents are active in the same industry as the founder, being a jobseeker and being self-employed. Gender has a positive impact on this entrepreneurial dynamics. Thus, men start more often their business because of family constraints. This could mean that men are more often influenced by their family circle in order to perpetuate the family tradition and/or that they are more sensitive to this constraint. As one might expect, this entrepreneurial dynamic is impacted positively by the fact that the individual has an entrepreneurial family circle. The fact that the individual wants to start a business in the same industry as his parents also has a positive impact. Two mechanisms may explain these results. On one hand, the 'family influence' dynamic could be interpreted in opportunity terms: the *want-to-be* entrepreneur could benefit from the advice of his family and would have the possibility to articulate his entrepreneurial project with an existing family business. On the other hand, it could also correspond to a necessity: the individual starts an entrepreneurial career because he is pushed by his family to perpetuate the entrepreneurial tradition. The 'family influence' entrepreneurial dynamics could also correspond to a combination of necessity and opportunity elements. An individual who is already self-employed will be positively influenced by the 'family influence' dynamics to start his business. Through this activity, he will already have had the opportunity to test his entrepreneurial skills and this can be a positive signal vis-à-vis his family. In this last example, the entrepreneurial dynamic resulting from a family constraint

could be considered as an opportunity dynamic, rather than as a necessity one. Finally, being a jobseeker has a negative impact on the 'family influence' entrepreneurial dynamics. This could mean that being workless within an entrepreneurial family is seen as a bad signal for taking over the family business.

As far as the 'get out unemployment' entrepreneurial dynamics is concerned, five variables have a significant impact: gender (male), age, presence of entrepreneurs in the family circle, the level of income and being a jobseeker. Unlike women, male jobseekers seem to be more prone to start a business to quit inactivity. This could be explained by the existence of some cultural patterns that attribute to men the role of head of the household supposed to meet the needs of the latter. Although there are more necessity entrepreneurs among women (Wagner, 2005 ; Orhan & Scott, 2001 ; Reynolds et al., 2002 ; Hisrich & Brush, 1985), being unemployed might be a more important source of stigmatization for men. Moreover, the studies of Hughes (2003), Orhan and Scott (2001), Duchéneaut (1997), Buttner and Moore (1997) and Hisrich and Brush (1985) show that unemployment does not constitute a predominant entrepreneurial motivation among women. Age, on the other hand, has a positive impact. Like Block and Sandner (2007), Bhola et al. (2006), Block and Wagner (2006) and Wagner (2005), we observe that age has a positive impact on necessity entrepreneurship, here only in the case of unemployment. The greater difficulties that older jobseekers face in finding a job do probably partially explain why these individuals start a business in order to escape this situation. A jobseeker from an entrepreneurial family will be less prone to start a venture when facing an unemployment situation. The fear of the family's judgment in case of failure could be one explanation for this result. This confirms the results of Bhola et al. (2006); Wagner (2005) and Djankov et al. (2004) who stress that necessity entrepreneurship is negatively impacted by the family circle. The negative impact of the income level on this kind of entrepreneurship is both surprising and interesting. We believe

that there are two possible explanatory factors for this negative correlation: the impact of illegal work and a too generous welfare support[23]. Since the Belgian welfare system corresponds to the latter criterion, these jobseekers are probably not always encouraged to consider starting their business for financial reasons despite their precarious status. This could explain to some extent the low level of necessity entrepreneurship in Belgium (Reynolds et al., 2002). Finally and unsurprisingly, similarly to the observations of Block and Wagner (2006), Robichaud et al. (2006) and Wagner (2005), a jobseeker will be positively impacted by his workless status in his decision to start a new venture.

- Opportunity dynamics

The only characteristic with a significant impact on the 'desire for independence' entrepreneurial dynamics is age. The negative impact hereof could be explained by the fact that often an older individual has already gained some financial and social independence and, were he to start a business, this aim will not be predominant. The negative impact of age on this opportunity dynamics infirms the findings of Reynolds et al. (2002) regarding the higher propensity of older people among opportunity entrepreneurs[24].

The 'market opportunity' entrepreneurial dynamics is positively impacted by the 'executive in the private sector' and 'employee in the public sector' variables. The positive impact of the first variable is not surprising. Because of his very function, an executive in a company is more likely to detect market opportunities. He may be part of informative networks which facilitate this detection. In their study on risk and success factors during the seed phase, Van Gelderen et al. (2005) highlight the fact that experience in a given industry can help spotting and assessing new business ideas. More surprising is the observation that being an employee in the public sector has a positive impact opportunity entrepreneurship.

[23] Unemployment benefits and minimum income for integration
[24] At least because of a desire for independence

This could mean that, contrary to some stereotypes, the public sector can also foster the discovery and exploitation of niches.

Four variables have a significant impact on the 'making profits' entrepreneurial dynamics: age, being an executive or employee in the private or public sector. The impact of age is negative. This result corroborates our observations on the impact of age on new venture creation motivated by a need for independence or a search for social recognition. This could mean that an older entrepreneur is often wealthy enough and thus is not motivated by profit. Being an executive or an employee in the private or public sector also has a negative impact. Thus, we can assume that either they face no financial constraint or that these individuals have a utility function in which profit is not predominant. The first hypothesis is more likely for executives, whereas the second one is more likely for employees.

DISCUSSION

In this study we have tried to shed light on the articulations, at an individual level, between socio-economic characteristics and the adoption of an opportunity and necessity entrepreneurial dynamic. The motives of our research were threefold. First, studies on entrepreneurial motivations often classify an individual as opportunistic or necessity-driven based on his push or pull motivation(s) upstream of any analysis of the individual. Yet, this approach has a limit because the same motivation can be a push one for one individual and a pull one for another (Hughes, 2003). Second, up to now, few studies have been interested in the impact of socio-economic characteristics of individuals on their opportunity or necessity positioning (Hessels et al., 2008; Bhola et al., 2006). There are however significant differences between these two entrepreneurial profiles (Block & Sandner (2009); Bergmann & Sternberg (2007) ; Robichaud et al. (2006) ; Bhola et al. (2006) ; Block & Wagner (2006) ; Wagner (2005) ; Djankov et al.(2004) and Reynolds et al. (2002)). Third, building on the

observations of Hughes (2003) and Block and Sandner (2006), it seemed relevant to investigate whether there are subcategories among the opportunity and necessity entrepreneurs.

Based on these motives, we have elaborated three hypotheses. The first one (H1) consisted in verifying whether individuals who get involved in an entrepreneurial process have encountered, perceived and invested in a necessity and/or opportunity situation(s) and thus chosen, with more or less intensity, a necessity and/or opportunity entrepreneurial dynamics. If we refer to our PCA results, H1 is verified. Indeed, we can observe that entrepreneurs' motivations correspond to necessity and opportunity entrepreneurial dynamics. We have formulated a second hypothesis (H2) according to which necessity or opportunity situations which trigger new venture creation are very diverse and can be interpreted in various ways. In other words, necessity and/or opportunity entrepreneurial dynamics can take different forms. H2 is verified by the diversity of necessity and opportunity entrepreneurial dynamics that we have been able to identify in our PCA. Our results demonstrate that necessity and opportunity dynamics are not subtended by a single axis that opposes the two dynamics. The analysis suggests that this bipolar opposition does not always exist as such, in a monolithic way, but that the underlying oppositions and dimensions are subtler. Our findings confirm that a dichotomy is insufficient and, maybe, wrong. According to our third and last hypothesis (H3), the socio-economic characteristics of founders could have an impact on the entrepreneurs' positioning within the opportunity or necessity dynamics both in intensity and modality. Based on the results of our regressions, we can draw 2 important conclusions. First, the socio-economic characteristics do affect the entrepreneur's positioning in terms of opportunity and necessity entrepreneurship: this confirms the findings of previous studies (Bhola et al., 2006). Second, and it is here lies the originality of our approach, we also observe that the socio-economic characteristics of an individual and their impact on his

necessity-opportunity positioning also determine his belonging to potential subcategories of these two types of entrepreneurship. We found, for instance, that a jobseeker could not start a business because of a necessity motivation following a 'family influence'. More generally speaking, new venture creation resulting from 'unemployment' necessity dynamics will not necessarily lead a jobseeker to necessity entrepreneurship if this individual is protected by a welfare system. This last finding does confirm to some extent the idea that a protective welfare system can reduce entrepreneurial intent (Hessels et al., 2008).

Our results also show that young people can be driven in their entrepreneurial motivation by both necessity (search for social recognition) and opportunity (search for profit or need for independence) dynamics. As far as older entrepreneurs are concerned, it seems that older jobseekers are driven solely by a 'get out unemployment' entrepreneurial dynamic and, thus, by necessity entrepreneurship. The findings regarding older non-unemployed entrepreneurs such as (early) retirees are also interesting. These individuals are concerned neither by the necessity nor by the opportunity dynamics that have been identified. This makes us think that another kind of entrepreneurship is possible, i.e. hobby entrepreneurship. This finding paves the way for the hypothesis of an 'opportunity-necessity-hobby' entrepreneurial *trinomial*. Another interesting finding concerns founders with an entrepreneurial family background or those who start a business in the same industry as their parents. For some entrepreneurs, this dynamic seems to correspond simultaneously to necessity and opportunity entrepreneurship. Finally, our findings show also that a same group of individuals can be driven by both necessity and opportunity motivations. We particularly point out the simultaneous positive impact of the 'employee in the public sector' status on the necessity entrepreneurial dynamic driven by a search for 'social recognition' and on the opportunity dynamic driven by a 'market opportunity'.

LIMITATIONS

Our study presents some limits. More in-depth analysis could be conducted on some aspects. It would be interesting to deal with a potential selection bias and it would be relevant to complete the analyses by improving the operationalization of the theoretical framework. We believe that developing an adequate theoretical framework to study necessity and opportunity entrepreneurs would allow to take the whole set of factors that could both influence the individual's positioning in terms of necessity and/or opportunity and its possible evolution (e.g. necessity changing into opportunity and inversely) into account. As Audretsch (2003) argues, the studies looking at firm creation motivations do not consider the whole set of factors likely to influence individuals' decision to set up a business. Therefore, we believe that an appropriate theoretical and empirical framework that would allow to consider several aspects of necessity and opportunity entrepreneurship would be very useful. Finally, as shown by Carter et al. (2003), the use of retrospective data can be a limit when studying entrepreneurial motivations.

CONCLUSIONS

The findings of our research confirm the idea that the study of the impact of socio-economic characteristics of an individual in a necessity-opportunity framework should not be limited to this strict dichotomy, as it has generally been the case in previous research.

Indeed, we have shown that there are different necessity and opportunity entrepreneurial dynamics and that these two dynamics can combine within the same individual. The analysis of the impact of the socio-economic characteristics of the founder on his propensity to be driven by necessity and/or opportunity dynamics, has pointed out that

considering an individual as exclusively opportunistic or necessity-driven, could be haphazard. The opportunity-necessity entrepreneurial typology should be refined. It is essential that in future research, the two profiles be examined separately because they obey to different mechanisms (Hechavarria & Reynolds (2009). According to Gabrielsson and Politis (2009), the motivations of an individual have an impact on his decision-making process and on his way to react. Despite these observations, up to now, no study on necessity and opportunity dynamics has examined whether the latter have an impact on the founder's entrepreneurial strategy regarding resources (financial, human, etc.) used in the seed stage and the kind of venture created. We consider that such a survey could be a significant contribution for a better understanding of the various implications of necessity and/or opportunity dynamics on new venture creation.

Finally, our study has implications for the public policy debate. For the last 25 years, many measures have been taken in order to stimulate entrepreneurship. The genesis of this interest for entrepreneurship is to be found in major role played by entrepreneurship in regional economic growth (Audretsch, 2003 ; Staber & Bögenhold, 1993) as well as in the struggle against unemployment. However, the current policies aimed at (*want-to-be*) entrepreneurs, seldom distinguish between an opportunistic and/or a necessity-driven entrepreneurial logic. As highlighted by Bhola et al. (2006), successful policies for necessity-driven entrepreneurs are likely to be different from those for opportunistic entrepreneurs. Hence, we think that our study could be a first step towards a more adequate policy on new venture creation based on a subtler understanding of the socio-economic characteristics of both profiles of entrepreneurs and their subcategories.

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Table 1. Classification of underlying indicators of necessity-opportunity entrepreneurship

Necessity	Opportunity
Escaping unemployment	Earning big money
Obtaining prestige	Increasing income
Being socially recognized	Being autonomous
Meeting family expectations	Creating one's own job
Perpetuating the family tradition	Having no boss anymore
	Developing new products/services
	Developing new manufacturing processes

Table 2. PCA : Eigenvalue and Percentage of Variance Explained by Each Component After Rotation

Components	Eigenvalue and Variances After Rotation		
	Total	% of Variance	% Cumul. Variance
1	2,303	19,195	19,195
2	1,638	13,651	32,846
3	1,611	13,429	46,275
4	1,541	12,843	59,117
5	1,478	12,315	71,433
6	1,018	8,482	79,915

Table 3. PCA: Component Matrix After Rotation

Necessity-opportunity indicators	Components					
	1	2	3	4	5	6
Obtaining prestige	,308	,242	,273	,269	**,777**	,143
Creating one's own job	**,783**	,144	,262	,284	,170	,140
Being autonomous	**,815**	,160	,333	,197	,129	,107
Developing new manufacturing processes	,280	,245	**,785**	,167	,248	,102
Developing new products/services	,253	,217	**,842**	,160	,124	,143
Being socially recognized	,446	,359	,276	,240	**,525**	,206
Increasing income	,243	,230	,184	**,856**	,170	,140
Earning big money	,401	,329	,201	**,642**	,282	,184
Having no boss anymore	**,773**	,260	,115	,149	,295	,162
Perpetuating the family tradition	,242	**,763**	,283	,295	,205	,192
Meeting family expectations	,211	**,847**	,229	,194	,180	,183
Escaping unemployment	,225	,259	,176	,190	,154	**,889**

Appendix: SUR model estimation – dependent variable = necessity-opportunity component

	Component 'need for independence'			Component 'family influence'			Component 'market opportunity'		
Explanatory variables	Coefficients	Std.	P-value	Coefficients	Std.	P-value	Coefficients	Std.	P-value
Gender	0.0519	0.090	0.564	0.2216***	0.082	0.007	-0.1038	0.093	0.264
Age	-0.0231***	0.006	0	-0.0021	0.005	0.687	-0.0077	0.006	0.188
Age squared	0.0000***	0.000	0	0.0000	0.000	0.660	0.0000	0.000	0.213
High school graduate	0.0053	0.189	0.978	0.1515	0.172	0.379	-0.0562	0.195	0.773
University graduate	-0.0003	0.179	0.998	-0.2476	0.162	0.128	-0.2155	0.184	0.242
Entrepreneurial family	-0.0625	0.101	0.534	0.4783***	0.091	0	0.0939	0.104	0.365
Same industry as parents	-0.1276	0.117	0.277	0.4659***	0.107	0	-0.0720	0.121	0.552
After-tax monthly income	0.0852	0.076	0.265	-0.0902	0.069	0.196	0.0688	0.079	0.383
Number of people living on the income	-0.0204	0.037	0.585	0.0140	0.034	0.681	-0.0286	0.039	0.459
Jobseeker	0.2938	0.220	0.183	-0.3374*	0.201	0.094	0.1428	0.228	0.531
Executive in the private sector	0.2419	0.162	0.136	-0.0431	0.148	0.817	0.4104***	0.168	0.014
Employee in the public sector	-0.0328	0.183	0.857	0.1147	0.166	0.491	0.3394*	0.188	0.072
Employee in the private sector	0.2080	0.138	0.131	-0.1184	0.125	0.925	0.1811	0.142	0.203
Blue-collar worker	0.2978	0.222	0.179	-0.2585	0.202	0.201	-0.0235	0.229	0.918
Self-employed	0.1218	0.135	0.366	0.21184*	0.122	0.085	0.1072	0.139	0.440
Constant	0.7330*	0.362	0.043	-0.2687	0.330	0.0.416	0.3744	0.373	0.316
R2	0.082			0.211			0.044		
N° observations	378			378			378		

*p < 0,10 ; **p < 0,05 ; ***p< 0,001

	Component 'profit search'			Component 'search for social recognition'			Component 'unemployment'		
Explanatory variables	Coefficients	Std.	P-value	Coefficients	Std.	P-value	Coefficients	Std.	P-value
Gender	-0.0521	0.092	0.572	0.0712	0.089	0.426	0.2475**	0.080	0.002
Age	-0.0100*	0.006	0.088	-0.0292***	0.006	0	0.0097*	0.005	0.056
Age squared	0.0000*	0.000	0.088	0.0000***	0.000	0	0.0000*	0.000	0.061
High school graduate	0.0555	0.194	0.774	-0.2511	0.188	0.181	0.0342	0.167	0.838
University graduate	0.0782	0.183	0.669	-0.2934*	0.177	0.098	-0.0293	0.158	0.853
Entrepreneurial family	0.0375	0.103	0.716	-0.0962	0.100	0.335	-0.1492*	0.089	0.095
Same industry as parents	0.1528	0.120	0.204	-0.2535**	0.117	0.030	0.0769	0.104	0.461
After-tax monthly income	-0.0888	0.078	0.257	-0.0628	0.076	0.408	-0.1198*	0.067	0.078
Number of people living on the income	0.0517	0.038	0.178	-0.0135	0.037	0.716	- 0.0455	0.033	0.172
Jobseeker	-0.0480	0.226	0.832	-0.1234	0.219	0.573	2.0053***	0.196	0
Executive in the private sector	-0.2996*	0.166	0.072	0.1707	0.161	0.290	0.1908	0.144	0.186
Employee in the public sector	-0.4519**	0.187	0.016	0.4657**	0.181	0.010	- 0.705	0.162	0.664
Employee in the private sector	-0.3296**	0.141	0.020	-0.1308	0.137	0.339	0.0547	0.122	0.655
Blue-collar worker	-0.3113	0.227	0.170	-0.0736	0.220	0.738	0.1181	0.197	0.549
Self-employed	0.1334	0.138	0.333	-0.0896	0.134	0.503	-0.0274	0.119	0.819
Constant	0.5538	0.371	0.135	1.7056***	0.359	0	-0.3946	0.321	0.220
R2	0.064			0.108			0.280		
N° observations	378			378			378		

*p < 0,10 ; **p < 0,05 ; ***p< 0,001