



# NOVICE CREATORS: PERSONAL IDENTITY AND PUSH PULL DYNAMICS<sup>1</sup>

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## **Abstract:**

Our goal is to examine whether individuals' (re)orientation towards entrepreneurship can be interpreted in terms of push-pull dynamics. We describe these dynamics and clarify the interaction between them and individual characteristics of entrepreneurs. We apply a principal component analysis on the results of a socio-economic survey to identify the differences between push and pull dynamics. We show that individuals who engage in entrepreneurial activities encountered disruptive situations or opportunities. These individuals can therefore be defined in terms of the push or pull dynamics they are affected by with various degrees of intensity. We also demonstrate that the disruptive situations and opportunities leading to entrepreneurial activities are of very different nature, and, consequently, that the push and pull dynamics can take a variety of forms. Finally, the results of our regression analysis highlight the influence of entrepreneurs' social position and biographical past on their positioning in terms of push-pull dynamics.

## **Keywords:**

push-pull dynamics, novice creator, entrepreneurship

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## INTRODUCTION

Several researchers have reached the conclusion that discrepancies between individuals exist where business success is concerned. Vivarelli (2004), Vivarelli and Audretsch (1998) and Evans and Leighton (1990), among others, have clearly demonstrated this point. One plausible argument which allows to explain this finding resides in the fact that, prior to setting up a business, people differ in their entrepreneurial motivations and their social characteristics. The extent of the research devoted to identifying the personal motivations that influence the decision to start a business demonstrates the importance of this issue (for example Hughes, 2003; Ritsilä and Tervo, 2002; Burke, 1997; Moyes and Westhead, 1990; Evans and Leighton, 1989).

The push-pull theory provides a framework that could explain entrepreneurial supply (Gilad and Levine, 1986). On the basis of Oxenfeldt's research (1943), Johnson and Darnel (1976) developed and tested a framework to analyse the push-pull factors (Harrison et Hart, 1983). An entrepreneurial initiative stemming from a push dynamic would correspond to a defensive reaction vis-à-vis the state of the job market and/or the entrepreneur's personal difficulties. In contrast, the pull dynamic would arise from a proactive initiative, in which case entrepreneurial initiatives are more likely to derive from strong professional aspirations articulated in an offensive posture, possibly originating in the identification of a market opportunity (Harrison and Hart, 1983). So far, little research has attempted to identify the mechanisms that could explain the positioning of entrepreneurs in relation to the push-pull binomial factor. Similarly, little empirical research has tried to highlight the characteristics of this positioning. Yet we consider these questions to be important because, while business success can generate values and personal fulfilment, failure, on the other hand, prompts major social and human costs. As a result, identifying the differing profiles of potential entrepreneurs is an important issue, not to deter people from starting a business, but rather to adapt the various support measures for setting up businesses to candidate profiles.

The purpose of our study is first to examine whether, for a set of persons who have (re)orientated their career towards entrepreneurship, it is possible to interpret their course of action in terms of push-pull dynamics and characterise them if necessary. Secondly, we want to throw light on the linkages between these dynamics and the entrepreneur's personal characteristics. To answer our questions, we have used a sample of 538 novice creators, i.e. people who, before choosing that (re)direction, had no previous experience of setting up a company.

We have organised our article as follows. Section 1 is a summary of the literature relating to the individual determinants of firm creation. The concept of action logic provides an original sociological framework for the push-pull model. In Sections 2 and 3, the data, methodology and results are presented, while Section 4 draws the conclusions of the study, reminds the reader of the scientific and political stakes involved and proposes future research avenues.

## **THEORETICAL FRAMEWORK**

### **SME creation and push-pull dynamics: general framework**

Over the past quarter of a century, various policies have been implemented to foster the spirit of entrepreneurship and to facilitate the creation of SME's. This enthusiasm for the world of SMEs has its roots in the fundamental role they play in the economic growth of regions, the number of jobs they generate (Audretsch, 2003 ; Staber and Bögenhold, 1993), and the fact that they constitute an effective tool in fighting unemployment. Parallel to the political realization of the importance of firm formation, researchers began to look into the determinant macroeconomic factors of SME creation (Noorderhaven et al., 2004 ; Ritsilä and Tervo, 2002 ; Georgellis and Wall, 2000 ; Robson, 1996 ; Audretsch and Vivarelli, 1995 ; Foti and Vivarelli, 1994 ; Hart and Gudgin, 1994 ; Davidsson et al., 1994 ; Garofoli, 1994 ; Fritsch, 1992 ; Moyes and Westhead, 1990 ; Hamilton, 1989 ; Mason, 1989 ; Harrison and Hart, 1983) and/or individual factors (Vivarelli, 2004 ; Hughes, 2003 ; Moore et Mueller, 2002 ; Ritsilä et Tervo, 2002 ; Orhan et Scott, 2001 ; Burke, 1997 ; Buttner et Moore, 1997 ; Solymossy, 1997 ; Evans et Leighon, 1989 ; Mason, 1989 ; Brockhaus, 1980).

For those who believe that technological innovation, growth of demand or the introduction of new products are the principal forces behind new ventures, identifying the factors underlying creation may, at first, seem straightforward. Nevertheless, the study of the determinants of firm formation is far less straightforward than it initially appears. Indeed, as we will see in the remainder of this paper, there currently exist no empirical studies both unanimously accepted and capable of convincingly explaining the whole set of determinants of firm formation.

Nevertheless, these studies have brought forward two explanatory dynamics of firm formation: on one side, the "recession-push" theory and, on the other, the "demand-pull" theory, more commonly known as, respectively, « push » and « pull » factors (Harrison et Hart, 1983) or “defensive “ and “innovative” motivations (Vivarelli, 2004).

Based on the works of Oxenfeldt (1943), Johnson and Darnel (1976) developed and tested a framework of analysis of push-pull factors (Harrison et Hart, 1983). Johnson and Darnell (1976)'s starting point is that the creation of new firms subtends the movement of individuals in salaried employment or unemployment towards self-employment. Such a decision is taken when the net monetary and non-monetary benefits resulting from self-employment, interpreted as the utility level, exceed the net benefits of salaried employment or unemployment. The decisive element in this decision can then, according to Johnson and Darnell (1976), be interpreted as a function of two types of forces: push or pull.

### **Push-pull factors in the literature**

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The analysis of the determinants of firm formation can be placed within two separate frameworks: macroeconomics - regional or national - and microeconomics (individual). As our research focuses on the individual factors leading to firm formation, we will only present past literature results dealing with microeconomic factors in firm formation.

The works of Ritsilä and Tervo (2002), Mason (1989) or Evans and Leighton (1989), highlight the role of unemployment as a factor influencing firm formation. Mason (1989) carried out a study on the motivations of two groups of entrepreneurs. The first of these groups includes individuals who set up their firms between 1976 and 1979 (a pre-recession period), while the second includes individuals who set up their business post-1979 (recession period). For the pre-recession period, the motivations of individuals are essentially pull factors, such as market opportunities, financial ambition and new products. The motivations of recession period entrepreneurs are of a push nature, such as unemployment and job insecurity. Ritsilä and Tervo (2002) studied the impact of unemployment on firm formation and observed that individuals in unemployment for a short period (1 to 8 months) are more likely to set up their own firm than longer term unemployed individuals (9 to 12 months). Short term unemployment (15 to 26 weeks) is also identified in Gilad and Levine (1986) as having a positive impact on firm formation among those individuals. In addition to the unemployment factor, Evans and Leighton (1989) observe that individuals having frequently changed jobs, with precarious jobs, or with low wages are more likely to become self-employed. Burke (1997) finds that the lack of professional prospect is the principal motivation behind new musical artists' decision to form their own label and distribution channel. In Brockhaus (1980), the lack of satisfaction in their current job is identified as one of the push motivations leading individuals to undertake entrepreneurial activities.

Noorderhaven et al. (2004) identify different types of dissatisfaction who positively influence the likelihood of self-employment.

Analysis of the push-pull model is often confined to the sole role of unemployment, fear of job loss or the instability of a person's current job. However, motivation analysis cannot limit itself to the impact of the unemployment factor only (Mason, 1989), as we shall see below.

While a person's motivations for setting up a firm may be understood to some extent, our knowledge of the linkages between an individual's characteristics and his/her motivations is practically non-existent. Apart from the types of push/pull motivations, should we look on those who set up a business as a homogenous group? As Reynolds (1997) points out, there is a strong presumption that people who start a firm are all unique and face distinct circumstances. To the best of our knowledge, only a handful of authors (Block and Wagner, 2006; Block and Sandner, 2006; Robichaud et al., 2006; Wagner, 2005; Reynolds et al., 2001) have jointly examined the motivations behind setting up a firm and the traits of the individuals involved. For these authors, the distinction between push and pull dynamics is merely implicit because it has given way to the concepts of *necessity entrepreneurs* (push) and *opportunity entrepreneurs* (pull).

### **Characteristics, necessity and opportunity: principal empirical results**

On the basis of a GEM report of 2001, Vivarelli (2004) notes that opportunity entrepreneurs (firm formation linked to opportunity, personal interest, (Reynolds et al., 2001)) are more widespread, but that necessity entrepreneurs (no better employment alternative, non-voluntary decision, (Reynolds et al., 2001)) still represent a non-negligible part of potential and actual firm creators. Furthermore, Reynolds et al. (2001) point out that across the 29 countries participating in the GEM study, necessity entrepreneurs constitute 43% of all entrepreneurs, and opportunity entrepreneurs 54%<sup>1</sup>. The same authors observe that opportunity entrepreneurs are more likely to be found among an older age group (35-44 years) than necessity entrepreneurs (18-24 years). Inversely, on the basis of 2002-2004 data of the GEM report relating to Canada, Robichaud et al. (2006)<sup>2</sup> link youth and opportunity entrepreneurship. Based on two separate databases of German individuals, the same link is found in Block and Wagner (2006) and Wagner (2005),

In Wagner (2005), family incidence appears to have a positive and statistically significant effect on the probability of becoming an opportunity entrepreneur. Robichaud et al. (2006)

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<sup>1</sup> The remaining 3% consists of entrepreneurs who gave other reasons for firm formation or did not give any.

<sup>2</sup> This study concerns individuals involved in a firm formation phase.

note that benefiting from an entrepreneurial network is specific to opportunity entrepreneurs. Nevertheless, Block and Wagner (2006) do not identify any differences regarding the impact of individuals' environment on the type of entrepreneurship they are engaged in.

The level of education does not appear to differ between the two types of entrepreneurs either, according to Block and Wagner (2006). Inversely, Robichaud et al. (2006) observe that opportunity entrepreneurs are more educated than necessity entrepreneurs.

Finally, and unsurprisingly, unemployment appears to be a much more prevalent characteristic among necessity entrepreneurs, as shown in Block and Wagner (2006) and Robichaud et al. (2006). Nevertheless, Wagner's (2005) results demonstrate that unemployment positively influences both the probability of being an opportunity entrepreneur and of being a necessity entrepreneur; though the unemployment factor plays a more important role for necessity entrepreneurs.

According to these studies, it appears that a person's human and social characteristics play a role in their opportunity-necessity positioning. Still, these results are based on a strict dichotomy. In our opinion, the methodology used to classify *necessity entrepreneurs* versus *opportunity entrepreneurs* is much too narrow. In Robichaud et al. (2006) only the question "Were you involved in launching a company to seize a business opportunity or because you had no other job option?" was used to distinguish between push and pull motivations. Wagner (2005) has a very similar position when he reports that "... 104 of the 349 people....in our survey stated they start their own business because they do not have a better alternative to earn a living; these nascent 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." Lastly, Block and Wagner (2006) base their classification on the reasons why people were unemployed: "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".

We believe that when authors classify people at the outset of their investigations, as described above, their approach is much too simplistic, because they implicitly work on the premise that a person is either an opportunist or one in need. Yet, we are still far from having proved that the frontier between the push and pull motivations is so neatly drawn (see Solymossy, 1997). Moreover, if the distinction drawn by Robichaud et al. (2006) and Wagner (2005) may be justified in so far as they define a necessity entrepreneur by referring to concepts of survival

and/or the lesser of two evils, Block and Wagner's distinction (2006) is astonishing. What becomes of the distinction between opportunity and necessity entrepreneurs if we assume that some individuals in their sample left their jobs because they were dissatisfied with their work, when this factor - as we have seen – is being considered in the literature as a motivation arising from a push dynamic?

With reference to these works, we feel that a study whose purpose is to determine the influence of the personal characteristics of new entrepreneurs on their opportunity-necessity stance should start by identifying more comprehensively the type of push and pull factors that have encouraged these people to set up their own businesses. Secondly, and to avoid an overly rigid classification of the two types of entrepreneurs based on their motivation, a finer analysis could be conducted to determine whether or not push or pull factors designate homogenous categories of people. As Block et Sandner (2006) stress in their conclusion, future research will also have to ask if necessity and opportunity entrepreneurs genuinely form homogenous groups. Should we not also query the existence, within these two subgroups, of different subtypes of necessity and opportunity entrepreneurs? Like Block and Sandner (2006), we are alluding to the possible interactions between the two types of motivations within the same person, and also to the different profiles of necessity and opportunity entrepreneurship.

### **Towards a sociological approach of push-pull dynamics: the use of the principles of action theory**

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The analysis of the links between individual characteristics and entrepreneurial behaviour in terms of pull-dynamic can be considered in light of sociological theory. The concept of *principle of action* (logique d'action) developed by Bernoux (1995) and Amblard *et al.* (1996) provides a very interesting framework to do so. According to these sociologists, the principles of action relate to the interaction between the actor, who is made up of strategic, historical and cultural elements, on the one hand, and the situation in which the action takes place, on the other. Approaching entrepreneurship in terms of the principles of action adopted by the potential entrepreneur can help to clarify the complex relationships between (1) the sociological characteristics of the entrepreneur (in particular in terms of his socio-demographic profile on the one hand and his personal history on the other hand), (2) the particularities of his environment, (3) the strategic viewpoint with reference to the creation of the firm (the aims and the procedures followed when starting a business and the expectations thereof) and (4) the creation of the firm and the outcome thereof. Furthermore, this approach



allows for the inclusion of elements put forward by other models, which are often restricted to a descriptive list of the factors which influence entrepreneurial behaviour, in a comprehensive model capable of taking account of both the *objective* and *subjective* dimensions of the creative process.

The understanding of these relationships is important, namely because the strategies cannot be limited to objective dimensions. Indeed, such dimensions are themselves involved in processes of translation, investment and appropriation whose impact and intensity vary according to the sociological characteristics<sup>3</sup> of the entrepreneur. Taking into account these characteristics and the way they shape strategies helps to understand the diversity of positions of people acting in a similar situation and context. This enables to understand why each unemployed person does not get involved in self-employment or entrepreneurship.

This approach echoes other theories. According to Hisrich and Peters (1998), entrepreneurship has to be read as a decisional process which implies a change from present life-style. It is influenced by factors which make entrepreneurship desirable (namely national culture and individual subculture) and possible (namely in terms of competencies and resources). The decision for change can be initiated by two elements: disruption in the present life-style (due to relocation, scholar failure, lost job, retirement, divorce ...) and/or opportunities offered by work environment. Decision for a change will be easier if this change is positively perceived. This perception is socially elaborated, according to the values and cultural frame of the actor. This idea is quite close to the one developed by the general theory of principles of action about the articulations between strategies and social identity.

The (potential) entrepreneur, as a strategic actor, will take specific decisions in line with the reigning context. He will decide to work through a series of actions in accordance with the perceived interests at stake, the perceived reality, the opportunities he believes to be available to him, the resources that are objectively available and can subjectively be mobilised as well as any concrete constraints imposed by the situation. These choices will be determined by the entrepreneur's rationality, motivation (whether precisely defined or not) and his interpretation of the rules of play. He will develop a strategy on the basis of his perception of the situation - past, present and future - this strategy being in interaction with a series of both symbolic and regulatory reference points and with his assets, past experiences and learned lessons.

From that point of view, it appears that the social identity of the entrepreneur has an impact on the fact that he is in pull or a push dynamics. On the one hand, socio-cultural

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<sup>3</sup> These characteristics have to be considered in a very wide way: social and cultural backgrounds, human and capital capital, economic situation... For more details, see Guyot (2004).

characteristics influence the way reality is perceived and translated. Business opportunities will be perceived by some and not by others. In the same way, disruptive situations will be estimated differently according to these characteristics, which will imply differentiated positions and strategies in terms of entrepreneurship. On the other hand, the level and nature of economic, human and social capital determine the objective conditions of the strategy. For instance, the more the social capital of the wannabe entrepreneur is important, the more important are his chances to develop opportunities for partnership in business creation.

Therefore, considering pull-push dynamics, several connections can be put forward:

- 1 entering an entrepreneurial career is a decision rooted in a disruption and/or an opportunity;
- 2 the nature and the importance of the disruptive factors and opportunities that can occur in the situation of the potential entrepreneur depend on the situation itself;
- 3 rather than the objective occurrence of disruptions and opportunities, it is the subjective construction of these elements that induces the decision of entering an entrepreneurial career;
- 4 the modalities by which people translate and construct their reality are social and cultural products and, therefore, are linked with the social embeddedness of the people and with their biography and personal history;
- 5 the position in face of disruptions and opportunities is sociologically contingent: the same event can be perceived in different ways according to the sociological characteristics and the personal history of the people;
- 6 in the same way, strategies involved by the occurrence and the perception of disruptions and opportunities have to be read at the light of these characteristics and history.

From a more operational point of view, one could expect that:

- i. individuals entering an entrepreneurship process have encountered, perceived and invested disruption(s) and/or opportunity(ies) and are, therefore, in a push and/or pull movement with less or more intensity;
- ii. disruptions and opportunities that initiate the decision of firm creation can be of various nature and have various meanings for the entrepreneur; therefore, pull and push dynamics may present various shapes;

- iii. social characteristics and personal history of entrepreneurs have an impact on their position with regards to pull-push dynamic, both in terms of intensity and of modality.

## **DATA and METHODOLOGY**

The Walloon Region, the French-speaking region of Belgium and the geographical territory of our analysis, almost always uses either employers as observation units, or businesses considered as legal entities, in its current administrative and statistical systems. There is no list of people who have set up companies, not to mention "new" entrepreneurs or business founders. It is therefore not easy to identify these individuals and an indirect approach must be used.

We proceeded in three stages. We began by using the data on companies to single out those set up between June 1<sup>st</sup> 1998 and May 31<sup>st</sup> 2000. Then, we contacted each of the 12,748 companies in order to discover who had set them up and to find out if these initiators had a prior experience in setting up a business. This survey was conducted in October and November 2001. In the third stage, on the basis of the results of the 2001 survey, we carried out, in September and October 2004, a comprehensive survey covering the 3,520 novice creators we had identified. Of these, 538 filled in and returned valid questionnaires which allowed us to retrace the respondents' entrepreneurial path.

The absence of exhaustive information on the target population prevents us from estimating the extent of biased participation in the survey, although some survey elements would point to its existence. Take, for instance, the time elapsed — between 4 and 6 years, depending on individual circumstances — from the moment the survey was handed in and the moment when the company was set up. During that time, some company founders will have closed shop and, presumably, will be less inclined to take part in the survey, an attitude that will have methodological consequences: the characteristics of these failed entrepreneurs probably differ from those of their counterparts whose firm is still operating at the time of the survey.

Concerning the examination of the push-pull dynamics<sup>4</sup>, the survey included a series of questions aimed at defining the motivations underlying the move towards setting up a business<sup>5</sup>.

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<sup>4</sup> Although the examination of these dynamics, as such, was not the survey's first goal.

Where the data processing is concerned, we will proceed in three stages. First, we look at the motivations for moving to the phase of setting up a company from a purely descriptive angle. During the second stage, we try to identify the push-pull dynamics underlying these motivations by applying a factorial analysis of the motivation-related data. We shall thus be able to identify the personal positionings of novice creators vis-à-vis these dynamics. And, lastly, in the third stage we use the SUR<sup>6</sup> model of  $n$  equations to achieve a combined estimation of the effects of identity characteristics on these positionings.

## EMPIRICAL ANALYSIS and DISCUSSION

### Push-pull dynamics and the motivations behind the move to set up a business

As far as we know, there is no theoretical or empirical framework that identifies all the push-pull factors clearly. We therefore confined ourselves to variables whose push-pull categorisation could either benefit from the backing of earlier research or from the ability to find justification for them without resorting to overly restrictive hypotheses. On this basis, we have classified the variables in the questionnaire into push and pull variables. This classification is merely heuristic and has still to be validated.

**Table 1: Push and pull indicators**

Push	Pull
Get out of unemployment	Earn as much money as you can
Meet family expectations	Enjoy social recognition
Carry on the family tradition	Develop new products
Be my own boss	Develop new manufacturing processes
To be autonomous	Increase your income
Create my own job	Win prestige

The push categorisation of the motivations “*to be autonomous*” and “*get out of unemployment*” is justified by the earlier studies of Ritsilä and Tervo (2002), Evans and Leighton (1989), Mason (1989), and Harrison and Hart (1983). Although the desire for

<sup>5</sup> Here we only use the questions treating the motivations identified in the literature as push-pull related dynamics, in other words motivations based on a list of pre-established proposals. The latent and implicit motivations are not covered.

<sup>6</sup> This type of model is often called the SUR model, *Zellner’s seemingly unrelated regressions (SUR) model*.

autonomy is often considered a pull factor<sup>7</sup>, Harrison and Hart (1983) refer to the works of Scott (1980) to explain why people's desire for job autonomy may arise from fear of losing their job, and is thus a push factor, at least at a time of increasing unemployment. The majority (86.3%)<sup>8</sup> of the novice creators in our sample consists of individuals who were employed before they set up their own business. Moreover, the period 1996-2000, the years when these firms were set up, coincided with the period when the rate of unemployment in Wallonia was the highest in the country (Belgian National Bank, 2002). On the basis of these two observations and the works of Harrison and Hart (1983), we have decided to categorise the variable "*be autonomous*" as a push factor. The motivations "*be my own boss*" and "*create my own job*" are not identified as such in the literature. However we can assume that these people looked on the setting up of their own businesses as a means of escaping the constraints of salaried work, which might arise from the need for autonomy or dissatisfaction in their current job. Looking at it from this perspective, we believe that these two motivations should be characterised by push motivations.

The motivations "*meet family expectations*" and "*carry on the family tradition*" correspond to situations in which people have been pushed by their family and friends to start up an entrepreneurial activity. That is why we have put them in the push category.

Choosing the pull category for motivations such as "*develop new manufacturing processes*", "*develop new products*", "*enjoy social recognition*", is justified by the earlier research of Oxenfeldt (1943), Harrison and Hart (1983), Mason (1989), and Kolvereid (1990)<sup>9</sup>. Mason (1989) identified the search for profit, illustrated here by the variables "*earn as much money as you can*" and "*increase your income*", as a pull dynamic. Table 2 shows us the importance, within our sample, of these different motivations for setting up a company.

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<sup>7</sup> See Janssen (2002: 117).

<sup>8</sup> This percentage is obtained by removing students, people staying at home, job seekers, the prepensioned and others.

<sup>9</sup> As Janssen (2002) remarks, the *social standing* motivation, represented here by the variables *win prestige* and *earn social recognition*, is a pull factor.

**Table 2: Distribution of answers according to the importance of motivations (in %)**

Motivations/Relevance (%)	Very unimportant	Somewhat unimportant	Important	Very important
Win prestige	61,4	24,9	12,2	1,5
Develop new manufacturing processes	72,0	14,4	10,1	3,5
Meet family expectations	75,3	12,1	7,5	5,0
Carry on the family tradition	75,8	12,5	6,0	5,8
Enjoy social recognition	47,8	23,6	20,5	8,1
Get out of unemployment	82,4	3,4	5,9	8,9
Earn as much money as you can	32,6	33,6	24,4	9,4
Develop new products	49,1	13,1	25,5	12,3
Increase your income	15,6	21,2	42,0	21,2
Be my own boss	31,5	15,0	24,8	28,8
Create my own job	19,7	8,8	31,2	40,2
To be autonomous	20,4	6,2	29,0	44,4

Table 2 also shows that, apart from what we observe for the motivations “*develop new manufacturing processes*”, “*carry on the family tradition*”, “*live up to family expectations*” and “*get out of unemployment*”, the answers are distributed with some variability and the motivations for the move to set up one's on business are diversified. We note, however, that the motivations with the greatest influence on the decision to set up a business are “*increase one's income*”, “*be one's own boss*” i.e. *without superiors*, “*create one's own job*” and “*enjoy autonomy at work*”.

### **Motivations and the push-pull dynamics: towards a multidimensional interpretation**

One of the aims of our paper is to determine whether or not, in the case of a group of people who (re)directed their careers towards entrepreneurship, it is possible to express this (re)direction in terms of push or pull dynamics and, if necessary, to characterise these impulses. To achieve our purpose, we follow the studies of authors such as Birley and Westhead (1994), Alänge and Scheinberg (1988), Scheinberg and MacMilland (1988) on the decisional factors of entrepreneurship, and compute our own principal components analysis (PCA). This analysis includes all the motivations taken into account, the end-goal being to see if the indicators in Table 1 merge along the presupposed push-pull axis.

In this context, we have considered the extraction of the first 6 main components<sup>10</sup> (6 axes). It is usual in this type of analysis to only consider those axes whose eigenvalue is equal or greater than 1<sup>11</sup>. One taken into consideration, as we see in Table 3 below, the eigenvalue of the first four axes each exceed the unit. Our decision to take factors 5 and 6 into account was based on three findings. First, the eigenvalues of Factors 5 and 6 are barely below the unit. Secondly, we felt it was worthwhile to include these two axes because of the information they provide in terms of push-pull dynamic. Thirdly, Jolliffe's rule (1972) supports our choice. This rule sets at 0.7 the minimal eigenvalue of an axis before it can be taken into consideration.

**Table 3: PCA, eigenvalue and percentage of variance explained by each component before rotation**

Components	Initial eigenvalues		
	Total	% of Variance	% Cumul. Variance
1	3,714	30,950	30,950
2	1,586	13,213	44,163
3	1,498	12,482	56,645
4	1,045	8,709	65,354
5	,941	7,844	73,198
6	,806	6,716	79,915
7	,515	4,289	84,203
8	,432	3,598	87,801
9	,403	3,355	91,156
10	,387	3,223	94,380
11	,367	3,055	97,434
12	,308	2,566	100,000

We see that the first 6 factors explain 79.91% of the total variance demonstrated by the PCA. The first factor alone explains almost 31% of the total variance found in the PCA. After the sixth explanatory factor, the eigenvalue of the factors drops below 0.6. Table 4 below presents the eigenvalues and the variance percentage explained by the PCA after rotation.

<sup>10</sup> A factorial analysis using the software programme SPSS 12.0

<sup>11</sup> This rule is known as the Guttman-Kaiser criterion (Jackson, 1991).

**Table 4: PCA, eigenvalue and percentage of variance explained by each component after rotation**

Components	Eigenvalues 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

Note that after rotation, the eigenvalues of the 6 components all exceed the unit. This is due to the fact that our VARIMAX control allowed us to redistribute the variance between the various factors more accurately and to interpret them more easily. We were able to interpret the final PCA results with the help of the "components after rotation" matrix.

**Table 5: PCA, after rotation components matrix**

Variables	6 components					
	1	2	3	4	5	6
Win prestige	,075	,150	,103	,197	<b>,844</b>	-,012
Increase your income	,122	,045	,009	<b>,909</b>	,075	,003
Create my own job	<b>,809</b>	-,032	,101	,189	,061	,143
Develop new manufacturing processes	,110	,110	<b>,857</b>	-,015	,137	,076
Develop new products	,107	,011	<b>,888</b>	,024	,065	-,058
To be autonomous	<b>,843</b>	,035	,206	,121	,142	-,001
Enjoy social recognition	,322	,068	,134	,087	<b>,767</b>	,169
Earn as much money as you can	,293	,121	-,001	<b>,766</b>	,237	,069
Be my own boss	<b>,829</b>	,108	-,014	,120	,186	,030
Carry on the family tradition	,051	<b>,885</b>	,057	,114	,049	,072
Meet family expectations	,033	<b>,881</b>	,059	,025	,145	,028
Get out of unemployment	,117	,090	,009	,048	,102	<b>,974</b>

Analysis of Table 5 leads us to the following conclusions. The outcomes reveal a more complex situation than anticipated in Table 1. No single axis that would split apart the push and pull dynamics underlies the motivations detected. The different axes show that this bipolar cleavage is not apparent as such, but that the conflicting ideas and dimensions supporting them are more nuanced. The results of this Table therefore confirm that a strict push-pull classification or division into opportunity v. necessity entrepreneurs does not go far enough.



For Axis 1, the motivations “*be autonomous, be your own boss and create your own job*” are the most representative. The nature of these 3 motivations suggests that Axis 1 represents the desire for independence as a motivational dynamic of job creation. Analysis of Axis 2 shows how the motivations “*carry on the family tradition and live up to family expectations*” correlate most closely with this axis, which can be interpreted in terms of **family pressure** as a factor motivating the setting up of one's own business. On the other hand, the motivations “*develop new manufacturing processes and develop new products*” best correspond to Axis 3 relates to **market opportunity** as the motivation dynamic. The motivations “*increase your income and earn as much money as you can*” correspond most closely to Axis 4, which is taken to mean the **search for profit** as a motivation for setting up one's own business. The **enhancement of one's social standing** as a motivation for setting up a business is identified with Axis 5, the motivations “*win prestige and gain social recognition*” best fit this Axis. Lastly, the factor **unemployment** as the motivation for setting up one's own business and the motivation “*get out of unemployment*” are clearly identified as corresponding to Axis 6.

In terms of the push-pull dynamic of setting up a firm, our PCA allowed us to identify 3 push and 3 pull components. The push components are the desire to be autonomous, family pressure and unemployment. The pull components are market opportunity, social enhancement and the search for profit. We must emphasise that the push-pull dynamic identified by our PCA is perfectly coherent with the literature on the push-pull model as hypothesised in Table 1.

The axes highlighted in our PCA, with the exception of **family pressure**, can be found in Birley and Westhead (1994), Alänge and Scheinberg (1988), Scheinberg and MacMillan (1988).

### **Push-pull dynamics and social position**

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As we have discussed above, many economic and non economic factors are likely to explain the entrepreneurship push-pull dynamics. In this section, our purpose is to study the impact of the social position and the biographical trajectory on these push-pull dynamics.

#### *The model*

The empirical model consists of a system of six equations where the dependent variables are the following motivations: “the need for independence”, “the family pressure”, “the market opportunity”, “the search for the profit”, “the social development”, “the exit of

unemployment”. In order to take into account the contemporaneous correlation between our equations, the set of estimators is obtained using seemingly unrelated regressions (SURE model). The general SURE model may be specified as follows:

$$y_j = X_j \beta_j + \varepsilon_j, j = 1, \dots, n, \text{ where } n = 6 \quad (1)$$

where  $y_j$  is the vector of the dependent variables,  $X_j$  is the full rank matrices of explanatory variables,  $\beta_j$  is the vector of the  $k_j$  coefficients and  $\varepsilon_j = (\varepsilon_{1j}, \varepsilon_{2j}, \dots, \varepsilon_{Tj})$  is the column vector  $T \times 1$  of random errors

#### *The explanatory variables*

Six sets of explanatory variables have been included as potential determinants of the relative position of creators on the push-pull axes in the equation (1). This set of variables concerns the individual characteristics of the novice’s creators. We distinguish between several characteristics:

- *The age of the creator* which is measured by considering the number of years since his birth;
- *The genre of creator*. We created a dummy variable with a value of 1 if the founder is a man;
- *The human capital level*. In order to evaluate the impact of the human capital level, three different levels of education are defined by means of dichotomous variables: 1) no qualifications or at best a junior high school diploma, 2) a senior high school diploma, 3) a university degree, postgraduate degree or doctorate;
- *The previous professional experience*. In order to take the influence of the business founder's previous professional experience into account before setting up his business, our model includes a dichotomous variable with a value of 1 if the business founder also worked freelance on a part-time basis before setting up his business, a dichotomous variable with a value of 1 if the founder was unemployed before setting up his business, a dichotomous variable with a value of 1 if the founder was a manual worker before setting up his business, a dichotomous variable with a value of 1 if the founder worked in the private sector as an executive before setting up his business, a dichotomous variable with a value of 1 if the founder worked in the public sector as employee before setting up his business;

- *The financial resources of the novice's creator.* To capture this dimension, we use the log of the net average monthly income of the creators' household. This dimension is apprehended by a variable which measures the level of the net average monthly income at the time of creation. In addition, we also control for the number of people who lived of this income;
- *The entrepreneurship family link.* To cover links with an entrepreneur, we created a dummy variable with a value of 1 if the founder knows a company director personally (parents, uncles, friends);
- *The knowledge of the business sector of the parents.* To take of the possibility of a link between the previous professional sector of the parents and the sector of the firm into consideration, we created a dummy variable with a value of 1 if the firm is located in the same sector as the professional sector as their parents.

### *Results*

Table 1 (see annex) reports the estimation results for the SURE model. This model is constituted of six equations. The first equation analyses the determinants of the “the need of independence”. The second equation concerns the determinants of the “family pressure”. The third equation focuses on the analysis of the explanatory variables on the axes “market opportunity”. The fourth equation analyses the impact of the individual characteristics on the “search for the profit”. The fifth equation concerns the determinants of the “social development”. The last equation tries to identify the factors that influence the novice creators who created a firm in order to quit unemployment.

The novice creators who are creating a firm for “**a need of independence**” are negatively affected by the age of the creator. It is consistent to find a negative relationship between the age of the creator and the creation in terms of “need of independence” if we postulate that social and financial independence increase in line with the age of the creator. In this context, the motivation to create a firm for “a need of independence” is not essential for older individuals. The negative impact of the age on this push factor confirms the empirical results of Reynolds et al. (2001) who detect a larger proportion of older peoples among the opportunity entrepreneur.

Concerning the creation for “**family pressure reason**”, five variables seem to affect significantly this factor : the gender (male) and the variables associated with personal links with entrepreneurs, knowledge of the sector, previous part-time freelance activity, unemployed or worker in the private sector. Indeed, gender has a significant and positive

influence on this “motivation factor”. This result seems to suggest that males are more sensitive to family pressure. We may also hypothesize that the capital reproduction dynamics and the family models concern mainly males. In parallel, empirical results tend to suggest that sector of activity of the parents has an influence on the sectoral choice of creation. In addition, having personal links with an entrepreneur seems to have a positive influence on the decision to set up a business. These results might indicate that novice creators often benefit from a family ‘network and family s’ advices. Our results regarding previous professional activity (or unemployment) show that a previous unemployment experience has a negative impact on the decision to set up a business under a « family pressure motivation». The fact that the firm may be run by an unemployed does not offer enough guarantee to the family to encourage the creation process. Finally, business founders with a previous experience as a freelance will more likely be pushed by their family to convert their freelance activity into a full time activity. Through freelance activities, they will have been able to assess their entrepreneurial qualities in a relatively risk-free manner. This previous professional experience may therefore be regarded as a kind of learning curve.

According to the results of the model, we can see that having a previous professional experience in the private sector as an executive or in the public sector as an employee, has a significant and positive effect on the decision to set up a business for “**market opportunity reason**”. This result confirms some empirical studies which have concluded that a manager is indubitably able to detect market opportunity. Van Gelderen et al., (2005) point out that it is reasonable to assume that previous experience in the industry will lead to specific knowledge of the products, technologies and market opportunity. On the other hand, it is surprising but interesting to note that previous professional experience in the public sector may also have a positive impact on the decision to set up a business. This seems to indicate that, contrary to the generally accepted ideas, the public sector is also likely to allow the discovery and the exploitation of new markets.

Two variables have a significant impact on the decision to set up a business for “**the search of the profit**”: the age and the socio-professional position (to be an executive in the private sector or an employee in the public sector). Our results show that the age of the entrepreneur has a negative impact. It confirms our conclusions about the impact of the age on the decision to set up a business for “a need of independence”. This result reflects the fact that older individuals have better financial resources which reduce the probability to create a firm for the search of profit. According to these observations, we can formulate the following

hypotheses : some entrepreneurs are not motivated to set up a business for “the search of the profit” because of the absence of a financial constraints or a utility function where the search for the profit is not dominant.

Concerning the decision to set up a business for “**a social development**”, the age of the business founder, the level of education and the fact that the parents are active in the same sectors would appear to be highly significant. Our results concerning the influence of the age confirm our conclusions about the impact of the age on the decision to set up a business for “a need of independence”. The older individuals are, the lower the probability is to set up a business for “social development motivation”.

According to the results of the SURE model, we can see that having a university or postgraduate degree has no significant impact on the decision to set up a business for “social development motivation”. This surprising result can nevertheless be explained. If we postulate that promotion and social development is more present for salaried workers, it is consistent not to find a relationship between the level of education and the motivation to create a firm for this motivation. To take account of the possibility of a link between the previous professional sector of the parents and the sector of the firm

Variables associated with the possibility of a link between the previous professional sector of the parents and the sector of the firm do not have a significant effect on the decision to set up a business for “**social development**”. The fact that previous sector of the parents does not have any influence seems to suggest that the novice creators more conscious of the weak social position of the entrepreneur. On the other hand, we can see that having a previous experience in the public sector has a significant and positive effect on the decision to set up a business for “social development”.

Five variables have a significant effect on the decision to set up a business for “**exit of unemployment**”. These variables are: age, gender, level of financial resources of the novice creator, the fact that the entrepreneur knows a company director personally (parents, uncles, friends) and the fact that the founder was unemployed before setting up his business. The unemployed person has a higher probability to set up a business because of “exit of unemployment”. Age has also a positive influence on this creation factor. This result can be related to the disemployability effects of older people. According to this view, as older unemployed people have a lower employability, they participate more actively in the creation process in order to exit from unemployment. In addition, our results tend to demonstrate a

negative impact of the level of financial resources of the business founders on the decision to set up a business for “**exit of unemployment**”. Finally, our results confirm the studies conducted by Block and Wagner (2006), Robichaud and al. (2006) and Wagner (2005), which underline that unemployed male are positively influenced in the decision to set up a business by the motivation to get out of unemployment.

## CONCLUSION

We have tried to clarify, at the individual level, the links between socioeconomic status, the motivation for setting up a firm, and push-pull dynamics. Whether from a political and/or purely scientific perspective, we believe this approach has its merits. Indeed, because of the motivations behind entrepreneurial behaviour, it is realistic to assume that efficient policies aimed at push-type entrepreneurs should not be the same as those for pull-type entrepreneurs. We approached the subject from three angles: Firstly, we looked at the diversity in intensity of positionings of novice creators in terms of push-pull dynamics; secondly the various ways and means of expressing these positionings in concrete terms and, thirdly, the influence of the social status and the biographical path of these novice creators on the intensity and the type of their positionings.

We cannot, at this stage, make forthright, exhaustive statements to determine the links between the push-pull dynamic and people's personal social standing. These links are too complex to be explored in their entirety on the basis of the sources that are currently available and the tools used.

Nevertheless, our results show that individuals who engage in entrepreneurial activities encountered or perceived disruptive situations and/or opportunities. These individuals can therefore be positioned, with varying intensity, along the push and pull dynamics. Our results also demonstrate that the disruptive situations and opportunities leading to firm creation are of very different nature, and, consequently, that these push and pull dynamics can also take a variety of forms. Our results highlight the impact of social position and biographical past of entrepreneurs on their positioning along push and pull dynamics (whether through the intensity or the modality). Several lessons can be learned from this exploratory analysis. First, the motivations we distinguish in our PCA confirm the results of existing empirical literature. Second, the push-pull dichotomy is sensitive to the age and/or status of individuals. Younger individuals are guided by both push factors (desire for independence) and pull factors (profit

objective and social status). Older creators can be divided into two groups. First, the old unemployed are solely guided by lack of an employment can be categorized as necessity entrepreneurs. Second, our results regarding the non-unemployed older creators, such as early retirees and retirees are also interesting. These individuals are neither concerned with defensive motivations nor with the innovative motivations we identified. This may indicate that a third form of entrepreneurship exists i.e.: entrepreneurship as a hobby. This last result paves the way for the hypothesis of a “push-pull-hobby” entrepreneurial trinom. Our results also demonstrate that certain factors initially considered as pull or push reveal themselves to be push or pull for certain groups of individuals. In particular, we refer to the impact of the status of public sector employee on the “social status” motivation (pull). According to our observation, the aforementioned motivation should be considered as of the push type. Finally, we observe that all the unemployed cannot be considered as being guided *stricto sensu* by push motivations. For example, we observe that an unemployed person coming from an entrepreneurial environment does not develop an entrepreneurial activity in order to fight his unemployment situation.

These various observations lead to two conclusions. First, unemployment should not systematically associate with necessity entrepreneurship. Second, some motivations recognized as push-pull in literature are in fact the contrary for certain individuals.

These results probably need to be explored in greater depth. It would be worth examining the possible presence of selection bias and it would also be helpful to complete the analyses by improving the operability of the theoretical frame.

Perhaps our analysis is handicapped by the size of the sample used. This is due to the fact the data relates to entrepreneurs constrained by a specific legal status, that is by the framework of an incorporated company.

Again, it would be relevant to apply qualitative methods, more closely attuned to understanding the players' action rationales. Such methods would allow us to better grasp, in light of the identity element of these rationales, the social construction mechanisms of the ruptures and opportunities which could drive the move towards setting up a business. They would also make it possible to characterise accurately the strategic management of these same ruptures and opportunities, and thus ensure a greater understanding of the origin of novice business projects. In addition, to our knowledge, no studies relating to the push-pull model have analysed whether these factors are linked to the sector of activity chosen by the novice

creators, and if these factors define the selected strategy, the type of project, the evolution of employment within the firm and the allocation of resources. This is the direction our current research is taking.



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## Annex : SURE model estimation , push-pull dynamics

	Need of independence			Family pressure			Market opportunity		
	Coefficients	Std.	P-value	Coefficients	Std.	P-value	Coefficients	Std.	P-value
<i>Genre</i>	0.0519	0.090	0.564	0.2216***	0.082	0.007	-0.1038	0.093	0.264
<i>Age</i>	-0.0231***	0.006	0	-0.0021	0.005	0.687	-0.0077	0.006	0.188
<i>Age squared</i>	0.0000***	0.000	0	0.0000	0.000	0.660	0.0000	0.000	0.213
<i>Diplôme secondaire supérieur</i>	0.0053	0.189	0.978	0.1515	0.172	0.379	-0.0562	0.195	0.773
<i>University level</i>	-0.0003	0.179	0.998	-0.2476	0.162	0.128	-0.2155	0.184	0.242
<i>Knowledge of an entrepreneur</i>	-0.0625	0.101	0.534	0.4783***	0.091	0	0.0939	0.104	0.365
<i>Same sector of the parents</i>	-0.1276	0.117	0.277	0.4659***	0.107	0	-0.0720	0.121	0.552
<i>Montly net income</i>	0.0852	0.076	0.265	-0.0902	0.069	0.196	0.0688	0.079	0.383
<i>Nbre de personnes vivant du revenu mensuel</i>	-0.0204	0.037	0.585	0.0140	0.034	0.681	-0.0286	0.039	0.459
<i>Unemployed just before the creation</i>	0.2938	0.220	0.183	-0.3374*	0.201	0.094	0.1428	0.228	0.531
<i>Executive in the private sectore just before the creation</i>	0.2419	0.162	0.136	-0.0431	0.148	0.817	0.4104***	0.168	0.014
<i>Employee of the public sector just before the creation</i>	-0.0328	0.183	0.857	0.1147	0.166	0.491	0.3394*	0.188	0.072
<i>Employee of the private sectore</i>	0.2080	0.138	0.131	-0.1184	0.125	0.925	0.1811	0.142	0.203
<i>Manual workers</i>	0.2978	0.222	0.179	-0.2585	0.202	0.201	-0.0235	0.229	0.918
<i>Freelance</i>	0.1218	0.135	0.366	0.21184*	0.122	0.085	0.1072	0.139	0.440
<i>Constant term</i>	0.7330*	0.362	0.043	-0.2687	0.330	0.0416	0.3744	0.373	0.316

	Search of the profit			Social development			Exit of unemployment		
	Coefficients	Std.	P-value	Coefficients	Std.	P-value	Coefficients	Std.	P-value
<i>Genre</i>	-0.0521	0.092	0.572	0.0712	0.089	0.426	0.2475**	0.080	0.002
<i>Age</i>	-0.0100*	0.006	0.088	-0.0292***	0.006	0	0.0097*	0.005	0.056
<i>Age squared</i>	0.0000*	0.000	0.088	0.0000***	0.000	0	0.0000*	0.000	0.061
<i>Diplôme secondaire supérieur</i>	0.0555	0.194	0.774	-0.2511	0.188	0.181	0.0342	0.167	0.838
<i>University level</i>	0.0782	0.183	0.669	-0.2934*	0.177	0.098	-0.0293	0.158	0.853
<i>Knowledge of an entrepreneur</i>	0.0375	0.103	0.716	-0.0962	0.100	0.335	-0.1492*	0.089	0.095
<i>Same sector of the parents</i>	0.1528	0.120	0.204	-0.2535**	0.117	0.030	0.0769	0.104	0.461
<i>Montly net income</i>	-0.0888	0.078	0.257	-0.0628	0.076	0.408	-0.1198*	0.067	0.078
<i>Nbre de personnes vivant du revenu mensuel</i>	0.0517	0.038	0.178	-0.0135	0.037	0.716	- 0.0455	0.033	0.172
<i>Unemployed just before the creation</i>	-0.0480	0.226	0.832	-0.1234	0.219	0.573	2.0053***	0.196	0
<i>Executive in the private sectore just before the creation</i>	-0.2996*	0.166	0.072	0.1707	0.161	0.290	0.1908	0.144	0.186
<i>Employee of the public sector just before the creation</i>	-0.4519**	0.187	0.016	0.4657**	0.181	0.010	- 0.705	0.162	0.664
<i>Employee of the private sectore</i>	-0.3296**	0.141	0.020	-0.1308	0.137	0.339	0.0547	0.122	0.655
<i>Manual workers</i>	-0.3113	0.227	0.170	-0.0736	0.220	0.738	0.1181	0.197	0.549
<i>Freelance</i>	0.1334	0.138	0.333	-0.0896	0.134	0.503	-0.0274	0.119	0.819
<i>Constant term</i>	0.5538	0.371	0.135	1.7056***	0.359	0	-0.3946	0.321	0.220
<i>R2</i>	0.064			0.108			0.280		
<i>Number of observation</i>	378			378			378		

\*p<0.10 ; \*\*p<0.05 ; \*\*\*p<0.01