Start-up motivation and (in)voluntary exit

Peter van der Zwan
Jolanda Hessels

Zoetermeer, May 2013

Panteia
Research to Progress
Research voor Beleid | EIM | NEA | IOO | Stratus | IPM

SCALES
SCientific AnaLysis of Entrepreneurship and SMEs
www.entrepreneurship-sme.eu

This research has been partly financed by SCALES, SCientific Analysis of Entrepreneurship and SMEs (www.entrepreneurship-sme.eu).

Research Reports

reference number	H201309
publication	2013
number of pages	20
email address corresponding author	p.van.der.zwan@panteia.nl
address	Panteia Bredewater 26 P.O. box 7001 2701 AA Zoetermeer The Netherlands Phone: +31(0)79 322 22 00

All the research reports are available on the website www.entrepreneurship-sme.eu.

Start-up motivation and (in)voluntary exit

Peter van der Zwan and Jolanda Hessels

Erasmus School of Economics, Erasmus University Rotterdam, Rotterdam, the Netherlands
Panteia/EIM, Zoetermeer, the Netherlands

Abstract:

We investigate the role of an entrepreneur's start-up motivation in determining the mode of entrepreneurial exit. A distinction is made between involuntary exit through business failure and voluntary exit through business sell-out or transfer. Regarding an entrepreneur's start-up motivation, we include two measures distinguishing between opportunity and necessity motivated business owners. Internationally comparable data from 2009 for 35 countries containing more than 2,600 former business owners are used. We find some evidence that necessity business owners are more likely to exit through failure than opportunity business owners or business owners that are driven by a combination of opportunity and necessity reasons. We argue that necessity business owners have lower entrepreneurial ability than opportunity business owners and run lower quality businesses which increases their probability of failure versus sell-out. Entrepreneurial ability seems to play a role beyond the human capital aspects that are included in the model.

Document: h201309 - motivation and exit v7 (definitief)

Version: June 2013

Keywords: start-up motivation, opportunity, necessity, entrepreneurial exit, mode of exit, Eurobarometer

Contact: Peter van der Zwan, p.van.der.zwan@panteia.nl.

Acknowledgments: This report has been written in the framework of the research program SCALES, carried out by Panteia/EIM and financed by the Dutch Ministry of Economic Affairs. The views expressed here are those of the authors and should not be attributed to the European Commission. Peter van der Zwan acknowledges financial support from the "Van Cappellen Stichting".

1. Introduction

There are many reasons why individuals decide to initiate or terminate entrepreneurial activities. When exiting entrepreneurship, a business owner may, for example, switch to more lucrative opportunities in wage employment, or (s)he may exit because of bankruptcy. These two exit motivations illustrate that an exit can be voluntary as well as involuntary (Taylor, 1999; Amaral et al., 2009). A firm is sold when an exit takes place voluntarily while an involuntary exit may correspond with firm liquidation in combination with low business performance or firm failure (Amaral et al., 2009; Wennberg et al., 2010). The present paper focuses on the relationship between the mode of exit from entrepreneurship and start-up motivation. Regarding the mode of exit, we distinguish between an involuntary exit by means of business failure, and a voluntary exit by means of business sell-out or business transfer.

Concerning the start-up motivation, a distinction can be made between positive factors that "pull" and negative factors that "push" people into business ownership (Shapero and Sokol, 1982; Gilad and Levine, 1986; Amit and Muller, 1995). Within the context of the Global Entrepreneurship Monitor (GEM), Reynolds et al. (2001) introduce the concept of opportunity and necessity entrepreneurship. Partly due to a diverse set of definitions and sample designs used in previous studies, consensus about the different profiles of opportunity and necessity entrepreneurs has not yet been reached. However, the educational background of opportunity and necessity entrepreneurs seems to be distinct (Morales-Gualdrón and Roig, 2005; Block and Sandner, 2009; Verheul et al., 2010; Poschke, 2013). In addition, opportunity entrepreneurs seem to be more satisfied with their start-up than necessity entrepreneurs (Block and Koellinger, 2009; Kautonen and Palmroos, 2010).

Distinguishing between the modes of entrepreneurial exit such as the sell-out or transfer option is important. As the population in many industrialized countries ages and many business owners retire, the demand for people willing to take over or buy existing firms increases accordingly (Lévesque & Minniti, 2011; European Commission, 2006). The economic value of businesses and their employment are preserved only when sellers and potential buyers of businesses can be matched. Investigating the role of necessity versus opportunity entrepreneurship in the determination of the mode of exit is relevant as well. That is, necessity entrepreneurs represent sizeable proportions of the total number of entrepreneurs and the labor force (Poschke, 2013; European Commission, 2012). Some governmental programs aimed at encouraging entrepreneurial activity are tailored for potential necessity entrepreneurs (Block and Sandner, 2009). There is also some evidence that opportunity and necessity entrepreneurs impact economic development differently in the sense that opportunity entrepreneurs contribute to economic growth more than necessity entrepreneurs (Acs, 2006; Wennekers et al., 2005).

The present paper raises the question whether the mode of exit – business failure versus business sell-out or transfer – is directly related to the start-up motivation of a business owner. In essence, we expect opportunity business owners, i.e. those who started their own business to seize a perceived profit opportunity, to have higher entrepreneurial ability than necessity business owners who have been pushed to started their own business, e.g. because they have no alternative options in the labor market. Therefore, we hypothesize that opportunity business owners are more likely to exit through sell-out as compared to exit through failure. Earlier research has hardly distinguished between modes of entrepreneurial exit (Headd, 2003; Wennberg et al., 2010), but

has focused merely on self-employment duration or survival in general. To the best of our knowledge, this study is the first to investigate the association between start-up motivation and the mode of entrepreneurial exit.

Our research question is answered with data that are made available by the European Commission: the Flash Eurobarometer survey on entrepreneurship, no. 283. These data from 2009 contain information about entrepreneurial motivations, behavior, drivers, and traits for more than 26,000 individuals in the EU 27, the US, and some other European and Asian countries. Specifically, the survey asks more than 2,600 former business owners about their start-up motivation in terms of opportunity versus necessity business ownership. In addition, the mode of exit from business ownership is known, i.e. exit through failure or exit through sell-out or transfer. The binary logit regressions reveal that necessity business owners, defined as those who started a business out of dissatisfaction with their previous employment situation, are more likely to exit through failure vis-à-vis sell-out than opportunity business owners, defined as those who started a business because of a perceived business idea.

This paper is structured as follows. Section 2 focuses on relevant earlier literature and proposes the hypothesis to be tested. Section 3 describes the data and provides a descriptive analysis. The results are discussed in Section 4 whereas Section 5 concludes.

2. Literature background

This section starts with an elaboration of the theoretical model of entrepreneurship in Holmes and Schmitz (1990) which leads to our main conjecture to be tested.

To the best of our knowledge, earlier research on the relationship between start-up motivations and the mode of exit from entrepreneurship is non-existent. There are, however, some studies that investigated the role of start-up motivations in relation to entrepreneurial survival and entrepreneurial success. A concise review of these studies is provided in Section 2.2 for entrepreneurial survival and in Section 2.3 for entrepreneurial success. This overview provides interesting insights into the various definitions of opportunity and necessity entrepreneurship that have been used in earlier literature.

2.1. Motivation and the mode of exit

Holmes and Schmitz (1990) develop a theoretical model of entrepreneurship that has implications for an individual's optimal behavior in terms of continuing, selling, or discontinuing their business. An assumption of the model is that individuals differ in their entrepreneurial ability, i.e. the ability to develop emerging entrepreneurial opportunities. The authors theorize that the decision to continue, sell, or discontinue depends on an individual's entrepreneurial ability and the quality or productivity of the business. The model shows that selling or transferring the business is the preferred option among individuals with the highest entrepreneurial ability. Entrepreneurial ability can be enhanced through experience or education. Furthermore, when a business is transferred or sold this usually indicates that the business is of high quality in terms of its productivity.

We argue that opportunity entrepreneurs are likely to have higher entrepreneurial ability than necessity entrepreneurs. Opportunity entrepreneurs are expected to have invested more in

the accumulation of human capital aspects such as experience and education which enhances ability and abler persons tend to invest more in human capital in the first place (Becker, 1993). Indeed, prior research provides some evidence that opportunity entrepreneurs have higher amounts of human capital (Block and Sandner, 2009). According to an earlier study, in terms of prior human and social capital investments, necessity entrepreneurs are less well prepared for their new business start-up (Block and Wagner, 2010). Hence, necessity entrepreneurs are more likely to lack the entrepreneurial skills, experience, and schooling that are needed to run a business. All in all, this would imply that opportunity entrepreneurs are in a better position to detect novel and profitable business opportunities and to have access to information and networks for selling or transferring their business. Combining these arguments with the theoretical derivation in Holmes and Schmitz (1990) we expect that opportunity business owners are more likely than necessity business owners to sell or transfer their business. At the same time, we expect that necessity business owners are more likely than opportunity business owners to exit through business failure.

One must be aware of the fact that necessity entrepreneurs have fewer alternative options such that the urgency of avoiding a business failure may be higher for necessity entrepreneurs. Furthermore, the present focus on the mode of entrepreneurial exit requires a different argumentation than a situation where one would investigate the duration or survival in entrepreneurship. In such a situation, one could even expect opportunity entrepreneurs to leave their business sooner than necessity entrepreneurs. For example, the opportunity costs of the entrepreneurial option are higher for opportunity than for necessity entrepreneurs. In addition, opportunity entrepreneurs could be more motivated by non-monetary rewards than necessity entrepreneurs. The intrinsic benefits for opportunity entrepreneurs may be disappointing which makes them more likely to search for new entrepreneurial opportunities. Necessity entrepreneurs, on the other hand, may be more persistent in pursuing monetary benefits and may therefore be less likely to shut down a business.

2.2. Earlier literature about motivation and survival

Block and Sandner (2009) focus on the self-employment duration of German opportunity and necessity entrepreneurs in the period 1990—2003. The distinction between opportunity and necessity entrepreneurship is based on the circumstances under with the entrepreneur left his/her last job as a paid employee. Necessity entrepreneurs are defined as individuals who left their previous job involuntarily – "because your place or work or office has closed" or "dismissal" – whereas opportunity entrepreneurs left their job voluntarily by resignation. In their multivariate analyses, the authors do not find evidence of a significant difference in self-employment duration between opportunity and necessity entrepreneurs.

Other studies include the start-up motivation as a control variable in the model. Again by using German data, Oberschachtsiek (2012) distinguishes between founders who are motivated by self-fulfillment or potential improvements in income rather than the threat of unemployment. Those with pull motivations have a longer expected duration in self-employment than those with push motivations. In addition, individuals with push motivations are likely to switch to unemployment rather than to wage employment. Using European data for the EU 15 during the period 1994—2001, Millán et al. (2012) find that individuals entering self-employment from unemployment, which can be viewed as a proxy for necessity entrepreneurship, have a shorter

expected self-employment duration than individuals who enter self-employment from another occupational status.

There are two unpublished papers that investigate the relationship between start-up motivation and entrepreneurial survival. First, Furdas and Kohn (2011) use data for a time span of 36 months (2007—2010) to investigate the survival rates of German opportunity and necessity entrepreneurs. The respondents are classified as opportunity entrepreneurs when they started a business because they could realize their business idea; they are classified as necessity entrepreneurs when they had a lack of employment alternatives. It turns out that the start-ups of necessity entrepreneurs have lower survival rates than the start-ups of opportunity entrepreneurs. The authors claim that the "survival gap" can be explained mainly by unobserved differences in productivity and behavioral differences between opportunity and necessity entrepreneurs rather than differences in entrepreneur-specific and business-specific characteristics.

Second, Caliendo and Kritikos (2009) investigate the exit probabilities among German opportunity and necessity self-employed individuals some 2.5 years after their business formation. Opportunity entrepreneurs are defined as individuals who reveal that a pull motivation ("being my own boss", "had first customers", "perceived a market opportunity") was crucial when they decided to start a business. Necessity entrepreneurs argue that push motives ("termination of unemployment, "exhaustion of unemployment benefits", "advice from the labor agency") were crucial. Necessity entrepreneurs turn out to have higher exit probabilities than opportunity entrepreneurs.

In sum, despite some definitional differences, these earlier studies point into the same direction – except for Block and Sandner (2009) – which is that necessity entrepreneurs perform less well in terms of business survival than opportunity entrepreneurs. We interpret this result to be in line with our assumption that necessity entrepreneurs have lower entrepreneurial ability (which explains their poorer survival performance), and take this further by looking at the quality of an exit. These prior studies only focus on exit in terms of duration or survival. Furthermore, exit does not necessarily imply lack of success or failure. Therefore, we consider it relevant to extend these studies to include the mode of exit to distinguish exits that reflect failure from exits that reflect more successful terminations or voluntary choices.

2.3. Earlier literature about motivation and success

Regarding success measures, Poschke (2013) finds that necessity entrepreneurs tend to have lower growth expectations than opportunity entrepreneurs, based on GEM data (2001—2005). Block and Wagner (2010) follow the earnings of German opportunity and necessity entrepreneurs over time (1984—2004). These authors use the same data and definition of start-up motivation as Block and Sandner (2009). Block and Wagner (2010) find that the earnings of opportunity entrepreneurs are 16% higher than the earnings of necessity entrepreneurs.

Amit and Muller (1995) define pull entrepreneurs as individuals who were pulled out of employment because of the attractiveness of entrepreneurship by making more money or by realizing a business concept. Push entrepreneurs, on the other hand, were pushed out of employment by frustration or by a lack of challenge. On basis of a relatively small sample of Canadian entrepreneurs, the authors find that the incomes of the pull entrepreneurs are significantly higher than the incomes of the push entrepreneurs.

De Vries et al. (2013) use a Dutch sample of solo self-employed individuals for the period 2009—2011. Using three definitions that distinguish between opportunity and necessity self-employment, the authors find a significantly lower annual turnover for necessity than for opportunity solo self-employed individuals.

To summarize, looking at incomes or earnings from entrepreneurship both studies seem to suggest that businesses of opportunity entrepreneurs are more successful financially than those of opportunity entrepreneurs. Since it can be expected that businesses that perform well are more likely or better candidates for business sale or transfer this further supports our expectation that opportunity entrepreneurs are more likely to exit through selling or transferring their business.

3. Data and methodology

3.1. Dataset

We use an international survey from 2009/2010 about entrepreneurial motivations and entrepreneurial behavior that was conducted on behalf of the European Commission, i.e. the Flash Eurobarometer survey on entrepreneurship, no. 283. In total, 26,168 interviews with former business owners, current business owners, and other individuals aged 15 years or older were conducted in December 2009 and January 2010, mostly by telephone.[1] The survey does not only cover the 27 European Union Member States,[2] but also Croatia, Iceland, Norway, Switzerland, Turkey, the United States, China, Japan, and South Korea. The observations from Malta are excluded from the analysis because some information about the start-up motivation is missing.

3.2. Measurement

Dependent variable. The present paper focuses on two modes of entrepreneurial exit. Indeed, the survey distinguishes between individuals who do not longer run a business because their business has failed, and individuals who do not longer run a business because their business has been sold or transferred. This leads to the following dichotomy: involuntary exit through business failure, and voluntary exit through business sell-out or transfer.[3]

A dependent variable *Exit* is created with a value of 1 in case of exit through failure, and a value of 0 in case of exit through sell-out or transfer.

Independent variables. We will adopt two ways of measuring start-up motivation by employing a self-assessment criterion and an alternative criterion. First, there is a self-assessment of the start-up motivation that directly distinguishes between opportunity and necessity entrepreneurship. The relevant question is "*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?*" Three answers are possible such that the business owners can be categorized as opportunity-driven, necessity-

[1] Face-to-face interviews were, however, conducted in Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia (approximately 30% of the 26,168 interviews). The target sample size of each country is either 500 or 1,000.

[2] Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom.

[3] The relevant item in the questionnaire referring to exit through failure is "*You once started a business, but currently you are no longer an entrepreneur since business has failed*". The item that refers to exit through sell-out or transfer is "*You once started a business, but currently you are no longer an entrepreneur since business was sold, transferred or closed*".

driven, or driven by a combination of opportunity and necessity reasons. The respective answer possibilities are "*You started it because you came across an opportunity*", "*You started it because it was a necessity*", and "*Both*".

Second, the respondents assess the importance of a few motivations while they decided to start their businesses. Two of these motivations are "*An appropriate business idea*" (motivation 1) and "*Dissatisfaction with regard to your previous situation*" (motivation 2). The respondents give a score of 1 (not important at all), 2 (rather not important), 3 (rather important), or 4 (very important) to each motivation. According to this alternative criterion, business owners are classified as opportunity-driven when their value attached to motivation 1 is higher than for motivation 2. Necessity business owners are those who attach a higher value to motivation 2 than for motivation 1. Finally, opportunity-necessity business owners attach equal values to motivation 1 and motivation 2.

Control variables. A few control variables are taken into account in our multivariate analysis. Since an individual's human capital could play an important role in explaining the probability of failure versus sell-out or transfer we include four indicators of human capital in our analysis: age, educational attainment, entrepreneurial learning during education, and the presence of a self-employed parent. These human capital aspects are thought to capture entrepreneurial ability to some extent, because abler persons tend to invest more in human capital and learn more from their human capital investments. In addition, the model includes two individual characteristics: gender and risk attitudes. We also take account of the degree of urbanization of the living area as well as the country context.

An individual's age is an important factor to incorporate. One may argue that older people have more work experience and relevant human capital than younger people which reduces their probability of failure versus sell-out or transfer. In addition, older individuals have had more time to invest in their social networks which will increase their chances of selling or transferring their firms. Indeed, Wennberg et al. (2010) show that older individuals are more likely to experience an exit through sell-out than an exit by liquidation. However, Amaral et al. (2010) find that the individuals of 65 years or older are less likely to sell their firms and more likely to exit by dissolution than younger individuals. Unfortunately, the current sample does not provide information about an individual's age while experiencing an exit, but only during the time of the interview.

We also include a measure of educational attainment in our analysis. Our education variable represents the age at which an individual finished their full-time education. The educational profile appears to be a distinct characteristic between opportunity and necessity entrepreneurs (Morales-Gualdrón and Roig, 2005; Poschke, 2013). We expect a negative relationship between education and the probability of experiencing a failure.

Another aspect of human capital refers to entrepreneurial learning during an individual's education. One may distinguish between several learning objectives of entrepreneurship education. A straightforward aim of entrepreneurship education refers to the development of an individual's interest in starting a business. However, such education may also be targeted at developing entrepreneurship-related skills (e.g., negotiation skills), attitudes (e.g., self-confidence), or knowledge (e.g., about the role of entrepreneurs in society). The questionnaire contains self-assessments about whether an individual's education contributed to the development

of their entrepreneurial interest, skills, attitude, or knowledge. The corresponding items are the following:

"*My school education made me interested to become an entrepreneur*";

"*My school education gave me skills and know-how that enable me to run a business*";

"*My school education helped me to develop my sense of initiative – a sort of entrepreneurial attitude*".

"*My school education helped me to better understand the role of entrepreneurs in society*";

Each individual gives a score to these items ranging from 1 (strongly disagree) to 4 (strongly agree). We generate a new variable *entrepreneurial learning during education* that equals the average score of the four items. The Cronbach's alpha reliability coefficient is 0.84. We expect that individuals who learned about entrepreneurship during their education are less likely to experience a failure versus a sell-out or transfer as compared to individuals without such an educational background.

The presence of a self-employed parent may point at entrepreneurial human capital that an individual may have inherited from their parents. The variable *self-employed parent* takes a value of 1 if an individual has at least one self-employed parent, and 0 otherwise.

Regarding the individual characteristics gender takes a value of 1 for men and a value of 0 for women. Amaral et al. (2009) find that females are less likely than males to exit through sell-out and more likely to exit through dissolution. In a similar way, Wennberg et al. (2010) show that women have a higher probability of exit by distress liquidation than exit by sell-out.

An individual's risk attitude is measured with the statement "*In general, I am willing to take risks*", with possible values of 1 (strongly disagree), 2 (disagree), 3 (agree), and 4 (strongly agree). There is some evidence that risk-tolerant people are more likely to be opportunity entrepreneurs than necessity entrepreneurs (Verheul et al., 2010; Djankov et al., 2006). We expect that risk tolerant people are more likely to experience a failure than risk-averse individuals because they may pursue less certain and, on average, lower quality opportunities than risk-averse individuals (Stam et al., 2010).

As indicated above we include a subjective classification of an individual's living area in terms of the degree of urbanization. The variable *urbanization* takes a value of 1 if an individual indicates to live in a metropolitan or urban area, and a value of 0 if an individual states to live in a rural region. One may argue that relationships in rural areas are embedded in networks of close personal ties (Hofferth and Iceland, 1998) which increases the probability of finding a successor. On the other hand, Stam et al. (2010) find that business owners in metropolitan and urban environments are more likely to experience a failure than business owners in rural environments.

Finally, we control for country fixed effects by including country dummy variables.

3.3. Descriptive results

Our total sample consists of 815 individuals who experienced a failure and 1,798 individuals who experienced a sell-out or transfer. These absolute numbers refer to 3.1% and 6.1% of the population of at least 15 years old, respectively. The descriptive analyses are

performed with weights that make each nation's sample representative of the underlying population. The weights are provided by the European Commission.

The first two rows of Table 1 inspect the start-up motivation among the individuals who experienced an exit. Panel 1 focuses on the self-assessment criterion whereas Panel 2 zooms in on the alternative criterion measuring start-up motivation. Table 1 shows that – independent of the definition being used – the majority of former business owners started their business out of opportunity rather than necessity. Furthermore, necessity business owners seem to have a higher occurrence of experiencing a failure than opportunity business owners.

Because of the representativeness of the sample of the underlying population of at least 15 years old, the dataset also consists of individuals who are engaged in business ownership at the moment of the survey. For example, the survey distinguishes between individuals who are taking steps to start a business (so-called nascent business owners) and individuals who currently have a business (business owners).[4] For comparison, Table 1 shows a decomposition of the start-up motivation for the nascent business owners and current business owners as well.

Table 2 takes a different approach and shows the prevalence rates of the two modes of entrepreneurial exit for each start-up motivation. Table 2 shows that necessity business owners are most likely to exit through failure than through sell-out or transfer.

Table 3 provides the averages and standard deviations of the dependent variable, the two definitions of start-up motivation, and the control variables. Panel 1 displays the averages of the sample of individuals who experienced an exit, Panel 2 focus on the subset of the individuals who experienced a sell-out or transfer while Panel 3 shows the information for the individuals who experienced a failure. For the ease of interpretation, the individuals who are driven by opportunity *and* necessity reasons are omitted for the calculation of the averages of the motivation variables. Hence, the motivation variables take a value of 1 in case of necessity and a value of 0 in case of opportunity. Regular two-sided *t*-tests reveal significant differences between the two modes of exit for the two definitions of start-up motivation (p-values<0.05). In addition, convincing differences between the modes of exit can be found for age ($p<0.01$) and for having a self-employed parent ($p<0.10$).

4. Regression results

We perform binary logit regressions to determine which individuals exit through failure as compared to exit through sell-out. Based on the rationale above, we expect that individuals who started a business out of necessity are more likely to experience an exit through failure than individuals who started a business out of opportunity.

Table 4 presents the results of our binary logit regression analyses. We performed four regressions. Models I and II in Panel 1 use the self-assessment criterion for start-up motivation as the independent variable, whereas Models III and IV in Panel 2 use the alternative criterion. For each criterion, we first omit the category containing both types of motivations (Models I and III;

[4] More precisely, these individuals have answered "yes" to the following items in the questionnaire: "*You are currently taking steps to start a new business*" (nascent entrepreneur), "*You have started or taken over a business in the last three years which is still active today*" (business owner), or "*You have started or took over a business more than three years ago and it is still active*" (business owner).

comparable with the definitions in Table 3). Models II and IV then include the individuals with mixed motivations, i.e. opportunity *and* necessity, as well.

The standard errors are robust to heteroskedasticity. Average marginal effects are calculated – denoted with *b* – to measure the impact of a one-unit increase of a variable on the probability of experiencing a failure as compared to experiencing a sell-out or transfer. For the dummy variables, the marginal effects represent the probability change as a result of a discrete change from 0 to 1.

Model I reveals that – while controlling for all relevant social-demographic characteristics – opportunity business owners do not differ from necessity business owners in terms of the mode of entrepreneurial exit (b=0.0026; p-value>0.10). In other words, the motivation behind starting a does not have a direct relationship with the mode of exit. This observation does not change when the individuals are taken into account who are driven by both opportunity and necessity reasons, see Model II. Model II shows that individuals who are motivated by both types of factors constitute a separate category: they are less likely to experience a failure than necessity (b=-0.079; p<0.05) or opportunity business owners (confirmed by a Wald test: χ^2=5.80; p<0.05). The coefficients of the categories of the motivation variable are jointly significant (χ^2=6.25; p<0.05).

The results change when the alternative criterion for start-up motivation is taken into account. That is, Model III reveals that the probability of exit through failure is 9.1 percentage points lower for opportunity business owners than for necessity business owners (b=-0.091; p<0.01). A comparable result is found in Model IV (b=-0.085; p<0.05). Again, the categories of the motivation variable are jointly significant (χ^2=6.83; p<0.05).

The results of our human capital variables are relatively stable across the four model specifications. According to our expectations, older individuals are less likely to experience a failure than younger individuals. Including a squared age term to the models leads to insignificant coefficients for age and age squared. For an individual's educational attainment, we do not find a significant result at any reasonable significance level. Entrepreneurial learning during education has a negative relationship with the probability of failure in Model I (b=-0.025; p<0.10) and Model IV (b=-0.22; p<0.10). The coefficient of having a self-employed parent is not significant.

Regarding the individual characteristics, gender has a significant coefficient only in Model III (b=0.043; p<0.10). The coefficient of the risk attitudes variable is not significant. Finally, the living area in terms of the degree of urbanization has a significant negative relationship with exit through failure in each model specification.

The analysis above reveals some differences in the probability of failure versus sell-out or transfer for the three start-up motivations. A straightforward follow-up question would be whether the regression model in Table 3 applies to each start-up motivation. Are the coefficients of the human capital variables and individual characteristics similar for opportunity business owners, necessity business owners, and opportunity-necessity business owners? It could, for example, be that necessity business owners rely more on or benefit more from certain human capital aspects than opportunity business owners. To reveal such potential differences, we compare each full, "restricted", model as displayed in Table 3 with the composite, "unrestricted", models for each start-up motivation. Hence, separate binary logistic regressions for each start-up motivation are performed to allow for different coefficients across start-up motivations. Likelihood ratio tests reveal that there are no significant differences in coefficients for the three

types of start-up motivation (*p*-values>0.10 for Models 1-4). Hence, the models in Table 3 apply to each start-up motivation.

5. Conclusion

Using an international dataset with information for more than 2,600 former business owners we investigate the relationship between the start-up motivation of these former business owners and their mode of exit from entrepreneurship. Two modes of exit are distinguished: involuntary exit through business failure and voluntary exit through business sell-out or transfer. Regarding the start-up motivation, a distinction is made between opportunity business owners, necessity business owners, and business owners who are driven by a combination of opportunity and necessity reasons. We find some evidence that necessity business owners, defined as those who started a business out of dissatisfaction with their previous employment situation, are more likely to exit through failure than opportunity business owners, defined as those who started because of a perceived business idea.

We explain our finding of the higher probability of failure versus sell-out of necessity business owners as follows. We argue that necessity business owners have less entrepreneurial ability than opportunity business owners. Individuals with higher entrepreneurial ability are considered to be more likely to transfer a business than individuals with lower entrepreneurial ability (Holmes and Schmitz, 1990). Importantly, we control for some factors that are considered as key outcomes and/or drivers of entrepreneurial ability. That is, human capital variables are taken into account such as educational attainment and entrepreneurial learning during education. In addition, self-employed parents may be important in transferring relevant entrepreneurial human capital to their children. The fact that start-up motivation plays a significant role beyond the inclusion of these human capital aspects implies that other elements of entrepreneurial ability play a role but are difficult to capture in empirical modeling. It could be the case that opportunity entrepreneurs think more carefully about future exit strategies which may increase their chances of properly selling or transferring their businesses. Furthermore, an element that is missing in our model – and not present in the dataset – refers to an individual's entrepreneurial experience that may mediate the relationship between motivation and mode of exit to some extent. That is, an entrepreneurial exit can be seen as an indicator of accumulated entrepreneurial human capital (Hessels et al., 2011).

While the present analysis focuses on individual characteristics we also acknowledge that firm-specific characteristics may be relevant in explaining the probability of failure versus sell-out such as a firm's age (Holmes and Schmitz, 1996). While we have distinguished between voluntary and involuntary exit, performance measures of firms are not incorporated in our analyses. In practice, it may be the case that closing firms are successful (Headd, 2003), firms that exit by sell-out have a low business performance (Wennberg et al., 2010), or liquidated firms have a relatively high performance (Wennberg et al., 2010). In essence, an individual's decision to continue the business activities, to sale the business, or to discontinue the activities, also depends on the firm's quality (Holmes and Schmitz, 1990).

It would be interesting to know what happens to entrepreneurs after they have transferred or sold their business. Some people are very successful in developing new businesses and once the

business has become operational, rather than managing the business themselves, they may decide to sell or transfer the business and to pursue a new business opportunity. This would also imply that business transfer fosters specialization between setting up and running businesses (Holmes and Schmitz, 1990). Furthermore, if opportunity entrepreneurs have higher entrepreneurial ability, as we argued, they may be more likely to enter entrepreneurship again after they have sold their business because entrepreneurial ability is a determinant of new start up activity. We leave it to future research to further explore such issues.

We find significant proportions of individuals who are driven by combination of opportunity-based and necessity-based motivations. When using the self-assessment criterion in the present paper we find that business owners with mixed motivations constitute a separate category that is least likely to exit through failure. Earlier, Amit and Muller (1995) stated the following (p. 67): "*When both forces ("pull" and "push") are at work one might expect superior performance*". Our result suggests that a simple dichotomy between opportunity versus necessity entrepreneurship does not suffice. Future research should take this observation into account. Indeed, very large proportions (up to 40%) of individuals seem to be driven by combinations of motivations when our alternative measurement of start-up motivation is used.

References

Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations: Technology, Governance, Globalization*, 1(1), 97-107.

Amaral, A.M., Baptista, R., & Lima, F. (2009). Becoming an ex-entrepreneur: Firm performance and the sell-out or dissolution decision. In: Smallbone, D., Landström, H., & Jones-Evans, D. (Eds.), *Entrepreneurship and growth in local, regional and national economies: Frontiers in European entrepreneurship research* (pp. 157-183), Edward Elgar: UK.

Amit, R., & Muller, E. (1995). "Push" and "pull" entrepreneurship. *Journal of Small Business & Entrepreneurship*, 12(4), 64-80.

Becker, G.S. (1993). *Human capital.* Chicago, the United States: University of Chicago Press.

Block, J., & Koellinger, P. (2009). I can't get no satisfaction—Necessity entrepreneurship and procedural utility. *Kyklos*, 62(2), 191-209.

Block, J., & Sandner, P. (2009). Necessity and opportunity entrepreneurs and their duration in self-employment: Evidence from German micro data. *Journal of Industry, Competition and Trade*, 9(2), 117-137.

Block, J., & Wagner, M. (2010). Necessity and opportunity entrepreneurs in Germany: Characteristics and earnings differentials. *Schmalenbach Business Review*, 62, 154-174.

Caliendo, M., & Kritikos, A. (2009). "I want to, but I also need to"-start-ups resulting from opportunity and necessity. *DIW Berlin Discussion Paper No. 966*.

De Vries, N., Liebregts, W., & Van Stel, A. (2013). Explaining entrepreneurial performance of solo self-employed from a motivational perspective. *Panteia/EIM SCALES Research Report H201308*.

Djankov, S., Qian, Y., Roland, G., & Zhuravskaya, E. (2006). Who are China's entrepreneurs? *The American Economic Review*, *96*(2), 348-352.

European Commission (2006). Markets for business transfers—Fostering transparent marketplaces for the transfer of business in Europe. DG Enterprise and Industry, Brussels.

European Commission (2012). Flash Eurobarometer 354, Entrepreneurship in the EU and beyond. DG Enterprise and Industry, Brussels. http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf (accessed: June 1, 2013).

Furdas, M., & Kohn, K. (2011). Why is startup survival lower among necessity entrepreneurs? A decomposition approach. http://www.iza.org/conference_files/EntreRes2011/kohn_k2086.pdf (accessed: June 1, 2013).

Gilad, B., & Levine, P. (1986). A behavioral model of entrepreneurial supply. *Journal of Small Business Management*, 24(4), 45-53.

Headd, B. (2003). Redefining business success: Distinguishing between closure and failure. *Small Business Economics*, *21*(1), 51-61.

Hessels, J., Grilo, I., Thurik, R., & Van der Zwan, P. (2011). Entrepreneurial exit and entrepreneurial engagement. *Journal of Evolutionary Economics*, 21(3), 447-471.

Hofferth, S.L., & Iceland, J. (1998). Social capital in rural and urban communities. *Rural Sociology*, 63(4), 574-598.

Holmes, T.J., & Schmitz Jr, J.A. (1990). A theory of entrepreneurship and its application to the study of business transfers. *Journal of Political Economy*, 265-294.

Holmes, T.J., & Schmitz Jr, J.A. (1996). Managerial tenure, business age, and small business turnover. *Journal of Labor Economics*, 79-99.

Kautonen, T., & Palmroos, J. (2010). The impact of a necessity-based start-up on subsequent entrepreneurial satisfaction. *International Entrepreneurship and Management Journal*, 6(3), 285-300.

Lévesque, M., & Minniti, M. (2011). Age matters: How demographics influence aggregate entrepreneurship. *Strategic Entrepreneurship Journal*, 5(3), 269-284.

Millán, J.M., Congregado, E., & Román, C. (2012). Determinants of self-employment survival in Europe. *Small Business Economics*, 38(2), 231-258.

Morales-Gualdrón, S. T., & Roig, S. (2005). The new venture decision: An analysis based on the GEM project database. *The International Entrepreneurship and Management Journal*, 1(4), 479-499.

Oberschachtsiek, D. (2012). The experience of the founder and self-employment duration: A comparative advantage approach. *Small Business Economics*, 39(1), 1-17.

Poschke, M. (2013). "Entrepreneurs out of necessity": A snapshot. *Applied Economics Letters*, 20(7), 658-663.

Reynolds, P.D., Camp, S.M., Bygrave, W.D., Autio, E., & Hay, M. (2001). Global Entrepreneurship Monitor, 2001 Executive Report.

Shapero, A., & Sokol, L. (1982). *The social dimensions of entrepreneurship*. Encyclopedia of entrepreneurship, 72-90.

Stam, E., Thurik, R., & Van der Zwan, P. (2010). Entrepreneurial exit in real and imagined markets. *Industrial and Corporate Change*, *19*(4), 1109-1139.

Taylor, M.P. (1999). Survival of the fittest? An analysis of self□employment duration in Britain. The Economic Journal, 109(454), 140-155.

Verheul, I., Thurik, R., Hessels, J., & Van der Zwan, P. (2010). Factors influencing the entrepreneurial engagement of opportunity and necessity entrepreneurs. *Panteia/EIM SCALES Research Report H201011*.

Wennberg, K., Wiklund, J., DeTienne, D.R., & Cardon, M.S. (2010). Reconceptualizing entrepreneurial exit: Divergent exit routes and their drivers. *Journal of Business Venturing*, 25(4), 361-375.

Wennekers, S., Van Stel, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293-309.

Table 1. Entrepreneurial exit and start-up motivation.

	Panel 1: Self-assessment criterion[1]			Panel 2: Alternative criterion[2]		
	Opp.	Nec.	Both	Opp.	Nec.	Both
Exit through failure	52.9%	39.5%	7.6%	49.7%	12.4%	37.9%
Exit through sell-out/transfer	57.2%	34.0%	8.8%	55.5%	8.4%	36.1%
Nascent business ownership	58.8%	30.0%	11.1%	50.7%	10.8%	38.5%
Current business ownership	53.3%	34.0%	12.6%	51.2%	10.3%	38.5%
Total	55.4%	34.0%	10.7%	52.0%	10.2%	37.8%

[1] The self-assessment criterion uses the question "*All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity?*"
[2] The alternative criterion compares the motivation "*An appropriate business idea*" with the motivation "*Dissatisfaction with regard to your previous situation*".

Table 2. Probability of failure versus sell-out/transfer for each start-up motivation criterion.

	Exit through sell-out/ transfer	Exit through failure
Self-assessment criterion[1]	66.5%	33.5%
Opportunity	68.3%	31.8%
Necessity	63.1%	36.7%
Both	69.6%	30.4%
Alternative criterion[2]	65.9%	34.1%
Opportunity	68.3%	31.7%
Necessity	56.7%	43.3%
Both	64.8%	35.2%

[1] The self-assessment criterion uses the question "*All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity?*"
[2] The alternative criterion compares the motivation "*An appropriate business idea*" with the motivation "*Dissatisfaction with regard to your previous situation*".

Table 3. Descriptive statistics for the entire sample, for exit through sell-out/transfer, and for exit through failure.

			Panel 1: Exit sample		Panel 2: Exit through sell-out/transfer		Panel 3: Exit through failure	
	Min.	Max.	Mean	SD	Mean	SD	Mean	SD
Dependent variable								
Exit[1]	0	1	0.34	0.47				
Motivation[2]								
Self-assessment criterion	0	1	0.39	0.49	0.37	0.48	0.43	0.50
Alternative criterion	0	1	0.15	0.36	0.13	0.34	0.20	0.40
Control variables								
Age	16	94	53.6	15.7	56.0	15.4	48.7	15.2
Education	15	25	19.4	3.55	19.4	3.61	19.3	3.43
Entrepr. learning education	1	4	2.52	0.77	2.53	0.79	2.48	0.73
Self-employed parent	0	1	0.36	0.48	0.38	0.48	0.33	0.47
Male	0	1	0.58	0.49	0.57	0.49	0.59	0.49
Risk-tolerance	1	4	2.80	0.83	2.80	0.83	2.81	0.82
Urbanization	0	1	0.67	0.47	0.68	0.47	0.67	0.47

[1] Value 1 if exit through failure, and value 0 if exit through sell-out/transfer.
[2] The individuals with opportunity *and* necessity motivations are excluded. Value 1 if necessity, and value 0 if opportunity.

Table 4. Binary logit regressions. Dependent variable: exit through failure (1) versus sell-out/ transfer (0).

	Panel 1: Self-assessment criterion[1]				Panel 2: Alternative criterion[2]			
	Model I		Model II		Model III		Model IV	
	Marg. eff.	SE	Marg. eff.	SE	Marg. eff.	SE	Marg. eff.	SE
Motivation								
Opportunity	0.0026	(0.021)	-0.00054	(0.021)	-0.091***	(0.035)	-0.085**	(0.035)
Necessity	(Reference)		(Reference)		(Reference)		(Reference)	
Both	(Omitted)		-0.079**	(0.032)	(Omitted)		-0.057	(0.036)
Control variables								
Age/10	-0.060***	(0.0071)	-0.065***	(0.0067)	-0.065***	(0.0085)	-0.065***	(0.0068)
Education/10	-0.034	(0.030)	-0.038	(0.029)	-0.040	(0.038)	-0.028	(0.030)
Entrepr. learning educ.	-0.025*	(0.013)	-0.020	(0.012)	-0.014	(0.016)	-0.022*	(0.013)
Self-employed parent	-0.031	(0.021)	-0.024	(0.020)	-0.032	(0.026)	-0.026	(0.021)
Male	0.026	(0.019)	0.024	(0.018)	0.043*	(0.023)	0.028	(0.018)
Risk-tolerance	-0.0034	(0.012)	-0.0064	(0.012)	-0.010	(0.016)	-0.012	(0.012)
Urbanization	-0.050**	(0.022)	-0.045**	(0.021)	-0.059**	(0.028)	-0.042*	(0.021)
Country dummies	YES		YES		YES		YES	
Predicted probability	0.32		0.31		0.31		0.32	
Observations	2,075		2,263		1,351		2,167	
R^2 (McFadden)	0.13		0.14		0.13		0.13	

Marginal effects are displayed with robust standard errors between parentheses.
* denotes a significant marginal effect at 0.10; ** at 0.05; *** at 0.01.
[1] The self-assessment criterion uses the question "*All in all, would you say you started, or are starting, your business because you saw an opportunity or you started it out of necessity?*"
[2] The alternative criterion compares the motivation "*An appropriate business idea*" with the motivation "*Dissatisfaction with regard to your previous situation*".

The results of Panteia/EIM's Research Programme on SMEs and Entrepreneurship are published in the following series: Research Reports and Publieksrapportages. The most recent publications of both series may be downloaded at: www.entrepreneurship-sme.eu.

Recent Research Reports and Scales Papers

H201306	18-04-2013	Self-employment and Job Generation in Metropolitan Areas, 1969-2009
H201303	03-04-2013	Wat drijft ondernemers om maatschappelijke vraagstukken op te pakken? (Nederlandse samenvatting)
H201302	21-03-2013	Unraveling the relationship between the business cycle and the own-account worker's decision to hire employees
H201301	01-02-2013	Entrepreneurship education and self-employment: the role of perceived barriers
H201219	14-1-2013	Firm resources, dynamic capabilities, and the early growth of firms
H201218	8-1-2013	Entrepreneurial activity and the cycle: The roles of observation frequency and economic openness
H201217	17-12-2012	The Environmental Regulation Paradox for Clean Tech Ventures
H201216	17-12-2012	How does employment protection legislation influence hiring and firing decisions by the smallest firms?
H201215	22-11-2012	The Production Structure of Small, Medium-sized and Large enterprises in Dutch Private Enterprise - Analysis by economic sector
H201214	22-11-2012	The Production Structure of Small, Medium-sized and Large enterprises in Dutch Private Enterprise - Analysis at the aggregate level
H201213	11-02-2013	Institutions and the allocation of entrepreneurship across new and established organizations
H201212	11-10-2012	Solo self-employed versus employer entrepreneurs: prevalence, determinants and macro-economic impact
H201211	11-10-2012	Disentangling the effects of organizational capabilities, innovation and firm size on SME sales growth
H201210	1-10-2012	Do firm size and firm age affect employee remuneration in Dutch SMEs?
H201209	1-10-2012	The risk of growing fast: Does fast growth have a negative impact on the survival rates of firms?
H201208	13-09-2012	Investigating the impact of the technological environment on survival chances of employer entrepreneurs
H201207	7-8-2012	Start-Up Size Strategy: Risk Management and Performance
H201206	21-6-2012	Ageing and entrepreneurship
H201205	21-6-2012	Innoveren in het consumentgerichte bedrijfsleven
H201204	16-2-2012	Time series for main variables on the performance of Dutch SMEs
H201203	09-04-2013	Do small business create more jobs? New evidence for Europe
H201202	19-1-2012	Trends in entrepreneurial Activity in Central and East European Transition Economies
H201201	9-1-2012	Globalization, entrepreneurship and the region

H201119	2-1-2012	The risk of growing fast
H201118	22-12-2011	Beyond Size: Predicting engagement in environmental management practices of Dutch SMEs
H201117	22-12-2011	A Policy Theory Evaluation of the Dutch SME and Entrepreneurship Policy Program between 1982 and 2003
H201116	20-12-2011	Entrepreneurial exits, ability and engagement across countries in different stages of development
H201115	20-12-2011	Innovation barriers for small biotech, ICT and clean tech firms: Coping with knowledge leakage and legitimacy deficits
H201114	20-12-2011	A conceptual overview of what we know about social entrepreneurship
H201113	20-12-2011	Unraveling the Shift to the Entrepreneurial Economy
H201112	24-11-2011	Bedrijfscriminaliteit
H201111	25-8-2011	The networks of the solo self-employed and their success
H201110	23-6-2011	Social and commercial entrepreneurship: Exploring individual and organizational characteristics
H201109	27-7-2012	Unraveling the relationship between firm size and economic development: The roles of embodied and disembodied technological progress
H201108	22-3-2011	Corporate Entrepreneurship at the Individual Level: Measurement and Determinants
H201107	30-01-2011	Determinants of high-growth firms
H201106	13-1-2011	Determinants of job satisfaction across the EU-15: A comparison of self-employed and paid employees
H201105	13-1-2011	Gender, risk aversion and remuneration policies of entrepreneurs
H201104	11-1-2011	The relationship between start-ups, market mobility and employment growth: An empirical analysis for Dutch regions
H201103	6-1-2011	The value of an educated population for an individual's entrepreneurship success
H201102	6-1-2011	Understanding the Drivers of an 'Entrepreneurial' Economy: Lessons from Japan and the Netherlands
H201101	4-1-2011	Environmental sustainability and financial performance of SMEs
H201022	16-11-2010	Prevalence and Determinants of Social Entrepreneurship at the Macro-level
H201021	20-10-2010	What determines the volume of informal venture finance investment and does it vary by gender?
H201019	9-8-2010	Measuring Business Ownership Across Countries and Over Time: Extending the COMPENDIA Data Base
H201018	6-7-2010	Modelling the Determinants of Job Creation: Microeconometric Models Accounting for Latent Entrepreneurial Ability