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Entrepreneurial Exit in Real and Imagined Markets

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Entrepreneurial exit in real and imagined markets

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Abstract: Entrepreneurs exit their business due to selection mechanisms experienced in the market place. Next to this well known ex-post decision to exit, entrepreneurs select ex-ante whether they are willing to pursue an entrepreneurial career at all, or to give up these entrepreneurial intentions. This paper compares the role of personal and ecological factors as determinants of these two types of selection: exit in real and in imagined markets. Entrepreneurs in imagined markets are more likely to exit in strong welfare state regimes, while real entrepreneurs are more likely to exit when they have low levels of human capital and when they are located in metropolitan areas.

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1. Introduction

Entrepreneurs are important drivers of variation in the economy (Metcalf 1997; Baumol 2002). Without variation there is no selection and learning and hence no economic progress (Audretsch et al. 2004). Economic progress hinges on the essential mechanisms of the creation of variation and the operation of selection. Creation of variation is often analyzed investigating the entry of new firms, whereas selection is analyzed investigating the exit of incumbent firms (*ex-post* selection). In the evolutionary approach, the creation of new organizations does not only involve new variation but also includes *ex-ante* selection, as the persons involved evaluate whether an opportunity can be turned into a business which is sufficiently profitable in the sense that its foundation offsets the (opportunity) costs¹ involved. However, entry selection (*ex-ante* selection) has hardly received attention (Barnett et al. 2003). Two environmental characteristics drive the entry decision: the munificence of opportunities and the availability of resources. The combination of these two characteristics and the individual's evaluation of the potential business make the nascent entrepreneur decide to start a firm. Without opportunities, persons will not be triggered to take any action to start a new firm, and without resources, nascent entrepreneurs are likely to be frustrated in the pursuit of the opportunities.

Post-entry market selection is a much better researched phenomenon (Mata and Portugal 1994; Mata et al. 1995) than pre-entry market selection. An important empirical reason for the lack of research on ex-ante selection processes resides in the difficulty of obtaining data about nascent entrepreneurs (Reynolds 1997; Van Gelderen et al. 2005) or pre-producer firms (Jovanovic 2004; Carroll and Khessina 2005): in other words about the risk set from which entry selection processes must be selected. Such studies require drawing samples of individuals from the entire population (instead of census-based firm data), which is often difficult for researchers to accomplish. This also involves a shift of level of analysis from the firm to the person (Scott and Rosa 1996; Shane and Khurana 2003).

A theoretical reason for the neglect of ex-ante selection is that in mainstream economics, ex-ante and ex-post selection are often treated as close to being observationally equivalent: ex-ante selection by rational actors and ex-post market selection are said to deliver the same outcomes (Loasby 2002).² This assumes that foresight is perfect.³ Finally, the economics profession in general focuses on revealed preferences (ex-post selection) instead of stated preferences (ex-ante selection). This drives the study of the differences between pre-entry and post-entry market selection outside the scope of the dominant debates.

In a societal context both types of exit are highly relevant. Exit before business start-up could prevent excess entry (Camerer and Lovo 1999) and prevents over investment and the waste of resources as a positive consequence. However, a negative consequence might be absence of experimentation (new variety) and (entrepreneurial) learning. Exit after business start-up might have private losses and the waste of resources (in the form of sunk costs) as a negative consequence; but possible individual and vicarious learning about entrepreneurship and markets (Knott and Posen 2005) as a positive consequence. Persons that have faced the market with their own business are likely to be better informed about markets than persons that have never entered the market with their own business. Market forces provide feedback to entrepreneurs in a more immediate, concrete and blunt way than many other settings where expertise is attained. This is why 'market experience' might have positive learning effects beyond the life of the entrepreneur's firm (Stam et al. 2006).

In this paper both ex-ante and ex-post selection processes will be analyzed using a large survey among the European and US adult population that have once thought about starting a business and that have closed down their business. Exit before business start-up (ex-ante selection) depends on market expectations of the nascent entrepreneur (imagined markets), while exit after business start-up (ex-post selection) is more likely to be affected by the (revealed, real) market selection process. There has been a long debate in industrial economics and organizational ecology on selection processes (Alchian 1950; Geroski 2001; Barnett et al. 2003). However, organizational ecology and industrial economics research generally only include revealed preferences; this paper also includes stated preferences and the decision to exit the population of nascent entrepreneurs. More specifically,

these two exit processes connect closely to recent debates in entrepreneurship research on the recognition, evaluation and exploitation of entrepreneurial opportunities (Shane and Venkataraman 2000). There has been much research on the recognition and exploitation of opportunities but little is known about their evaluation. This evaluation can be done by the entrepreneur, which may lead to giving up the pursuit of a business opportunity. Better known is the evaluation by the market, i.e. the external selection environment of businesses already in operation, which may lead to the closure of a business. The two selection processes can also be conceived as two types of exits out of the entrepreneurial process: 1) Exit after opportunity recognition: “I have thought of starting a business or I had already taken steps to start a business, but gave up”; and 2) Exit after opportunity exploitation: “I once started a business but am currently no longer an entrepreneur”.⁴

The main contributions of this paper are the analyses of the role of ecological and personal characteristics in ex-ante and ex-post market selection, and of the differences in the explanations of entrepreneurial exit from imagined and real markets, respectively. We take into account characteristics related to personality and human capital, while the ecological characteristics reflect levels of environmental munificence, competition and welfare state arrangements. Unlike prior studies with an evolutionary approach, we do not take the organization as the unit of selection, but instead the (potential) entrepreneur (with specific cognitive and other abilities).⁵ In combining both personal and ecological factors we bring together the traits and rates approaches (Aldrich and Wiedenmayer 1993).

This paper will focus on two main research questions: 1) How can entrepreneurial exit in real and imagined markets be explained? and, 2) How does exit in real markets differ from exit in imagined markets? The paper starts with a discussion of entrepreneurial exit in real and imagined markets. After the discussion of these two phenomena, we will propose a number of hypotheses reflecting (implications of) our current knowledge of exit in real and imagined markets. Next, the data and method are presented. In the succeeding section we present and interpret the outcomes of our empirical study. The paper ends with the conclusion.

2. Entrepreneurial exit

Once the entrepreneur has entered the market with his new firm, he has to face the real – and not just the imagined – market selection. Most research, particularly in economics, studied the (relative) importance of industry and firm specific variables explaining firm exit. Some stylized facts in this tradition are that firm exit is negatively related to firm (start-up) size, the number of plants operated by the firm, the industry growth rate, and positively with the extent of entry in the industry (Mata and Portugal 1994; Ilmakunnas and Topi 1999).

However, for understanding new firm formation (including pre-entry selection) and survival, one must understand the way individuals aspire and take actions to start a firm (Shane and Khurana 2003). In their analysis of firm survival, Cefis and Marsili (2005) also make a plea for taking into account the characteristics of entrepreneurs when explaining the survival of new firms. The few economic studies of firm exit that consider personal characteristics find ambiguous effects of age and a negative effect of several kinds of human capital (such as general education, industry experience) (Bates 1990; Van Praag 2003). There has been some research on the relationship between the entrepreneur’s personality and firm exit (Ciavarella et al. 2004), but knowledge of the relation between personal characteristics and firm exit is scarce. In the present paper we focus on entrepreneurial exit, i.e. the decision to quit an entrepreneurial career. This is not necessarily the same as firm exit, because entrepreneurs may own several firms at the same time (“portfolio entrepreneurship”) or successively (“serial entrepreneurship”), in which cases firm exit does not automatically equal entrepreneurial exit.

Many people never think about being an entrepreneur. This group of people can hardly be thought of as being at risk of becoming an entrepreneur, nor as being confronted with the market forces in a process of economic selection (Alchian 1950). People that are thinking about starting a business (Blanchflower et al. 2001; Grilo and Irigoyen 2006; Grilo and Thurik 2008), or that are even taking

steps to start a business (Reynolds 1997; Davidsson 2006), are at risk of becoming an entrepreneur. They have to take into account the market forces they are confronted with after the business has been started. This implies that they have to develop expectations about the market forces that will eventually determine the viability of their future business. The closer they come to the entry of the market, the more likely they will have developed an image of the selection environment.

The central question here is “Why does one person actually succeed in starting a business, while a second person gives up?” This question has been dealt with in recent entrepreneurship research on so-called nascent entrepreneurship (Reynolds 1997; Van Gelderen et al. 2005; Davidsson 2006; Kolvereid and Isaksen 2006). The results of these studies indicate that nascent entrepreneurs that aim to start full-time, seek information and guidance, and have industry experience, are more likely to get their business up and running, while perceived risk of the market has a negative effect (Van Gelderen et al. 2005). Other more general personal characteristics like gender, age, and education do not seem to have an effect. Nascent entrepreneurs who intend to use relatively much start-up capital have lower probabilities to get their business running (Van Gelderen et al. 2005), perhaps reflecting high entry barriers.

These studies on nascent entrepreneurship have focused mainly on the individual-level explanations. However, Van Gelderen et al. (2005) conclude that most significant findings on the success of a nascent entrepreneur relate to his environment. We will explicitly take into account different elements of the environment, for example the perceived resource availability of the environment, the degree of urbanization (a proxy for resource availability and competition), and the national institutional system. This latter element relates to a recent study by Henrekson (2005), which shows how key welfare state institutions tend to reduce economic incentives for entrepreneurship. So, persons thinking about or taking steps to start a business in countries with a large welfare system, are more likely to give up these entrepreneurial intentions and efforts, because they are less likely to pay off in comparison to wage labor in such systems.

In order to explain exit in real and imagined markets, we need to compare the persons that currently own a business with persons that no longer own a business, and persons that aspire and take steps to start a business with persons that have given up these entrepreneurial aspirations and efforts. This means that we are talking about a subset of the general population that has been at risk to start or has started a business. Persons that have never considered starting a business are outside the equation. In the next two sections we will discuss the potential – personal and ecological level – drivers of exit in imagined and real markets.

Personal characteristics: hypotheses

Risk tolerant persons are more likely to experiment and fail. This means that on average they are more likely to maintain entrepreneurial intentions or to be actively preparing a business, less likely to give up these intentions and preparations, but also that they have a higher chance of once having closed a business.

H 1a. Risk tolerant persons are less likely to give up their entrepreneurial intentions and efforts.

H 1b. Risk tolerant persons are more likely to have closed their business.

Persons with an internal locus of control⁶ are more likely to be committed to their activities, and are thus less likely to have given up their entrepreneurial intentions and efforts, and are also less likely to have closed their business (Kalleberg and Leicht 1991; Boone et al. 2000).

H 2. People with an internal locus of control are less likely to exit.

On the one hand highly educated people are more likely to develop the necessary skills for realizing their entrepreneurial ideas and running a business successfully. However, on the other hand, they are also more likely to face high opportunity costs in comparison to wage labor and thus exit. While two studies have found a negative effect of education on entrepreneurial exit (Bruce 2002; Burke et al. 2005), even more studies did not find an effect (Taylor 1999; Van Praag 2003), or even found a positive effect (Blanchflower and Meyer 1994). What these results mean for the present study is

unclear: we do not anticipate an effect of education upon entrepreneurial exit (Van der Sluis et al. 2005), neither in imagined nor in real markets.

Persons with self-employed parents will be more committed to entrepreneurship, due to both social norms and the entrepreneurial skills that they have acquired (indirectly) (Aldrich and Kim 2007). This means that they will be less likely to exit than persons without self-employed parents. Lentz and Laband (1990) found that for self-employed individuals, acquisition of entrepreneurial human capital occurs primarily through experience, and that sons and daughters of self-employed benefit greatly from exposure at an early age to their parents' business establishments and subsequently decide to go into business themselves. Cooper (1993) found that having parents who owned a business appeared to increase the probability of firm survival. Two studies that analyzed this effect on survival in self-employment did however not produce evidence that could confirm this relation (Taylor 1999; Burke et al. 2005). Burke et al. (2005) explain this with the over-optimism caused by "evangelical entrepreneurial role models", which may perhaps increase the probability of an individual to become self-employed, but decrease their persistence in self-employment (De Meza and Southey 1996). We hypothesize a negative effect on "gave up", but no clear hypothesis on "no longer".

H 3. Persons with self-employed parents are less likely to give up their entrepreneurial intentions and efforts.

Young persons are likely to be more adventurous and experimenting than older people, which makes them more likely to think or take steps to become entrepreneur (Lévesque and Minniti 2006; Davidsson 2006), but even more likely to give up these intentions and efforts. Once they have started, they are also more likely to exit because they have less experience (overconfidence: Forbes 2005) and more alternative labor market opportunities. Several studies found a negative effect of age on entrepreneurial exit (Evans and Leighton 1989; Blanchflower and Meyer 1994; Holtz-Eakin et al. 1994; Taylor 1999; Van Praag 2003). This latter outcome can be explained by the combined effect of two mechanisms: age increases the human capital of the individual and thus should have a positive effect on the survival of the business, and age lowers the possibility of returning to employment (due to fewer labor market alternatives: Cooper 1993) making the shift to a wage-earner career less likely. Evans and Leighton (1989) found very high exit rates for young persons, which reaches a plateau after the age of 30.

H 4. Younger persons are more likely to exit than older persons.

Age can have various meanings: it can reflect "knowledge of the world" (or for younger persons: "overconfidence") or "leadership" (Van Praag 1999), but also job immobility, and risk aversion (Lévesque and Minniti 2006). When we take the retirement age of individuals into account, we expect a slightly U-shaped curve, with increasing chances of exit at the right-hand side of the curve.

Ecological characteristics: hypotheses

The ecologies in which entrepreneurs are active differ in their level of resource munificence and competition, which are expected to have negative and positive effects on exit, respectively. Munificent environments are likely to lower the barriers to entry and the chances of exit. We expect that indicators of perceived constraints in the environment are related to giving up entrepreneurial intentions and efforts, and to closing a business as well.

H 5. Perceived environmental constraints are likely to facilitate exit.

These perceived environmental constraints may be caused by a lack of resources in the environment or by a lack of *access* to resources. This latter cause relates to the legitimacy of the entrepreneur's activities (Hannan and Freeman 1984; Delmar and Shane 2004): in certain environments the activities of new firms are regarded as relatively less reliable and accountable than in other environments. This constrains their access to the necessary resources to realize a new firm and to survive in competition with established firms. This legitimacy effect is most likely reflected in the perceived lack of financial support and perceived difficulty of obtaining sufficient information.

Market opportunities, resources and competition are in general more concentrated in metropolitan and urban areas than in rural areas. The availability of resources and/or social networks that provide

access to these resources (Sørensen and Sorenson 2003; Stuart and Sorenson 2003) makes it less likely that entrepreneurial intentions and efforts are constrained in urban areas. The large concentration of entrepreneurs in urban areas also lowers the ambiguity attached to entrepreneurship and promotes its choice as a viable source of revenues (Minniti 2005). An interesting related research question is whether the high levels of competition have a stronger effect on ex-ante selection than on ex-post selection. If we leave aside the persons that have never intended to start a business, especially metropolitan but also urban areas are likely to have a positive effect on exit. This competition is more likely to be experienced in real markets than in the imagined markets in which persons with entrepreneurial intentions or efforts are active, so we do not expect an effect (or perhaps only a smaller effect) of the competition element on giving up entrepreneurial intentions or efforts.⁷

H 6a. Persons in metropolitan and urban areas are less likely to give up their entrepreneurial intentions and efforts.

H 6b. Persons in metropolitan and urban areas are more likely to have closed their business.

Many studies on entrepreneurship and firm exit use evidence from a single country to identify the role of economic institutions or policy. A cross-country set of micro-level data provides better identification of the effect of different institutional settings (Bartelsman et al. 2005; Reynolds et al. 2005). Welfare state institutions tend to reduce economic incentives for entrepreneurship (Henrekson 2005). So, even if persons are thinking about or taking steps to start a business in countries with a strong welfare state, they are more likely to give up these entrepreneurial intentions and efforts, because these are less likely to pay off in comparison to wage labor in such systems. Strong welfare states also discourage risky businesses and in this sense thus have a positive effect on the survival of existing businesses.⁸

H 7a. Persons in strong welfare states are more likely to give up their entrepreneurial intentions and efforts.

H 7b. Persons in strong welfare states are less likely to close their business.

The hypotheses are summarized in table 1.

TABLE 1 ABOUT HERE

3. Data and method

Data are used from the 2004 *Entrepreneurship Flash Eurobarometer* survey conducted in 2004 and covering 25 EU member states and the US. This survey contains nearly 20,000 observations of which 6,554 (after excluding respondents that have never considered to start a business) can be used for our estimation.⁹ Observations with no answer to one of the questions used in the present analysis were dropped.

The following question forms the basis for the explanation of both types of exit: “*Have you started a business recently or are you taking steps to start one?*” The options for answering are:

“It never came to your mind.”

“No, you thought of it or had already taken steps to start a business but gave up.”

“No, but you are thinking about it.”

“Yes, you are currently taking steps to start a new business.”

“Yes, you have started or taken over a business in the last 3 years and are still active.”

“Yes, you started or took over a business more than 3 years ago and are still active.”

“No, you once started a business, but currently you are no longer an entrepreneur.”

The first group of respondents is excluded from our analysis, because they are not at risk of entering the marketplace with their own business. Hence, we have selected a subset of the general population in this study, namely those that have been at risk to start or have started a business. First, we compare persons that currently have entrepreneurial intentions or are taking steps to start a business with persons that gave up these intentions or efforts. Second, we put persons that currently have a business against persons that have closed their business (see table 2).¹⁰

TABLE 2 ABOUT HERE

We use binomial logit models with “gave up” (versus “thinking” and “taking steps”) and “no longer” (versus being a business owner) as dependent variables. Respondents belonging to “no longer” may either have been successful entrepreneurs who retired or transferred their business or entrepreneurs who met with less success and failed. The country averages per engagement level are given in table 3. Clear differences between the European countries and the US can be observed. In the US only 1% gave up whereas the European unweighted average is 7%. The “thinking”, “taking steps” and “young business” categories in Europe are considerably lower than in the US (unweighted averages of 18%, 2% and 3% versus 32%, 9% and 4% in the US). In the US 49% never considered setting up a business while in the EU countries this percentage is 58. In the “gave up” category, Germany, France, Luxembourg and the Netherlands stand out with high percentages. The differences between the eight former communist member states and the other 17 are relatively small. In the former communist countries 54% reports “never considered” while 60% gives this answer in the non-communist countries. The “thinking about” category amounts to 24% in the former communist and 15% in the non-communist countries. In these two categories the post-communist countries perform remarkably similar to the US, especially when these countries are put against the percentages of the 17 non-communist countries. In the other five categories former communist and non-communist European countries are comparable in terms of unweighted averages.

TABLE 3 ABOUT HERE

The explanatory variables used in the present study can be divided into two types: personal characteristics and environmental (ecological) characteristics.

Personal characteristics: gender, self-employed parents, age and level of education. “Age when finished full education” is used as a continuous approximation of the level of education.¹¹ Age is measured as the current age – in years – of the respondent (not necessarily at time of exit; which happened more likely at younger age). Self-employed parents and gender are the obvious dummy variables. The latter variable is only taken into account as a control variable.

Next to these ‘usual suspects’ in demographic research, we have also included two often used entrepreneurial personality variables, namely risk tolerance and locus of control. Risk tolerance is captured by the following question: “*One should not start a business if there is a risk it might fail*”. For this statement the risk tolerance dummy takes value “1” if “disagree” or “strongly disagree”, and “0” if “agree” or “strongly agree” is given as response.¹²

The perception of internal and external success factors (internal versus external locus of control) is captured by the following question: “*When one runs a business, what do you think most determine its success?*” The answers can be chosen from the below six:

- a “The director’s personality.”
- b “The general management of the business.”
- c “The overall economy.”

d “The political context.”

e “Outside entities.”

f “Other.”

The variable locus of control takes the value “1” if a and/or b are mentioned without mentioning c, d, or e; “-1” if at least one of c, d or e is mentioned, but not a or b; and “0” if one or two of either categories, or f are answered.¹³

Environmental characteristics: We have explicitly taken into account different elements of the environment: the perceived environmental constraints, the degree of urbanization (a proxy for resource munificence and competition), and the national institutional system. The perceived environmental constraints are measured using four variables: the perception of lack of available financial support, the perception of complexity of administrative procedures, lack of sufficient information, and economic climate. These variables are captured, respectively, by the question: “*Do you strongly agree, agree, disagree or strongly disagree with the following statements?*” given the following statements:

“It is difficult to start one’s own business due to a lack of available financial support.”

“It is difficult to start one’s own business due to the complex administrative procedures.”

“It is difficult to obtain sufficient information on how to start a business.”

“The current economic climate is not favorable to start one’s own business.”

For each statement a dummy variable is constructed. The dummy variables take the value “1” in the case of “strongly agree” or “agree” for the four statements. The degree of urbanization (a proxy for resource munificence and competition), is measured by asking the respondent in which kind of locality his business is located. Finally, the country-specific institutional systems are taken into account using the categorization of institutional systems, by Esping-Andersen (1999) (see table 4). In this categorization, Liberal/Anglo-Saxon countries¹⁴ are taken as the base. Therefore, the coefficients associated with these variables are to be interpreted as the impact of being in the corresponding institutional systems rather than being in Liberal/Anglo-Saxon.

TABLE 4 ABOUT HERE

4. Estimation results

How can exit in real and imagined markets be explained? The coefficients presented in table 5 describe the effect of the explanatory variables on pre-entry (“gave up”)¹⁵ and post-entry selection (“no longer”). We will first present and discuss the effects of personal characteristics in this section, followed by a presentation and discussion of ecological characteristics.

TABLE 5 ABOUT HERE

Personal characteristics

In contrast to our expectations, the entrepreneurial personality variables (risk tolerance; internal locus of control) hardly have an effect on both types of exit. Earlier research has shown that risk tolerance matters for having entrepreneurial preferences (Grilo and Irigoyen 2006; Grilo and Thurik 2005a) and entry into self-employment (Van Praag and Cramer 2001; Cramer et al. 2002): perhaps it only has effect on the probability of being at risk to become an entrepreneur, but does not discriminate within the group of individuals that are at risk to become an entrepreneur. However, while we

hypothesized that risk tolerant people are more likely to close their business, the results suggest the reverse.

There is less consensus on the effects of the locus of control on entrepreneurship (Grilo and Thurik 2005b; Van der Zwan, Thurik and Grilo 2008). Hypotheses 1a, 1b and 2 cannot be confirmed.

Education has no effect on exit in imagined markets. A clear negative effect, however, is found for exit in real markets (with a mainly irrelevant turning point at 35 years). This might indicate that higher educated persons are more able to manage a business successfully, because the ability to acquire necessary developed skills dominates the high opportunity costs of highly educated people.

Persons with self-employed parents are not less likely to give up their entrepreneurial intentions and efforts but once they have started a business, they are less likely to close it. This might indeed be explained by the indirect learning effect, i.e. observing entrepreneurial actions of role models (Aldrich and Kim 2007). Hypothesis 3 cannot be confirmed.

Age seems to have a positive effect on exit in imagined markets, but an expected negative effect on exit in real markets. When we use age squared, the effect on “gave up” remains largely positive with an (irrelevant) turning point around the age of 72 years, and the effect on “no longer” is negative, but becomes positive after the turning point around the age of 37 years.¹⁶ So, the effects of age are largely in contrast with our expectations.

Ecological characteristics

The (four) perceived environmental constraints hardly have an effect on exit. A perceived unfavorable economic climate has a consistent positive effect on both types of exit, which supports hypothesis 5. In contrast to what one might expect, perceived administrative complexity does not have an effect on giving up entrepreneurial intentions and efforts. However, this perception has a significant positive effect on exit in real markets.

Urban and metropolitan locations do not have an effect on exit in imagined markets, and have the expected positive effect on exit in real markets. The effect of real competition in urban environments seems to be more relevant than the imagined effect. The higher likelihood of not being a business owner anymore in metropolitan and urban areas might also be explained by overconfidence: the relatively high number of new firms in urban and metropolitan areas may draw poorly prepared or overly optimistic founders into the entrepreneurial population.

Finally, the welfare state regimes have the expected positive effect on exit in imagined markets: persons in strong welfare states have fewer incentives to maintain their entrepreneurial intentions and efforts. The strongest effect is found in the Corporatist category (we also checked average marginal effects). Concerning exit in real markets, the relationships are not significant.

In contrast to the perhaps expected similar effect of real and imagined markets on exit decisions, there is hardly any similar effect on the two types of exit. In general, the personal characteristics more often have a significant effect in real markets than in imagined markets. Both age and gender have opposite effects in imagined and real markets, while only the perceived environmental constraints have similar effects in both imagined and real markets. Finally, the institutional environment seems only to make a difference in imagined markets. Table 6 summarizes the empirical evidence of our analyses.

TABLE 6 ABOUT HERE

Summarizing these outcomes and comparing them to other studies (Grilo and Irigoyen 2006; Grilo and Thurik 2005a), it can be said that concerning entrepreneurial personality factors only risk tolerance matters in the equation for exit in real markets, with an unexpected negative relation. Human capital factors like educational level and having self-employed parents seem to be advantageous in withstanding the forces of real market selection. Older people are more likely to give

up their entrepreneurial imaginations. For young people, market selection becomes less fierce, until the ‘mid life crisis’, when the chances of exit in real markets increase again.¹⁷ The effect of perceived environmental constraints is consistent: these constraints reflect strong selection pressures in both imagined and real markets. An urban environment only makes a difference for the real market selection pressures, while a strong welfare state reveals only to have an effect on selection in imagined markets.

Highly educated, male persons, with self-employed parents are more likely to have taken the “right” decision to become an entrepreneur. Older persons in constrained environments are less likely to have continued their entrepreneurial intentions and efforts, and when they have become a business owner once, they are more likely to be no longer a business owner.

Given the special position of the Anglo-Saxon countries (with relatively few people that have given up to think about starting a business), we are interested in coefficient differences between the countries in the Liberal/Anglo-Saxon institutional system and other countries concerning exit in imagined markets. We find significant differences, by comparing likelihoods.¹⁸ The regression of Anglo-Saxon countries shows that – compared with the overall regression in table 5 – internal locus of control is of significant importance and that gender, age, and perception of the economic climate do not significantly influence exit in imagined markets. In other words: age and a perceived unfavorable economic climate do not hold back people in Anglo-Saxon countries to think about starting a new business.¹⁹

5. Conclusion and discussion

In this paper we have presented evidence on the determinants of entrepreneurial exit in real and imagined markets using a cross-section survey of 6,554 individuals in European countries and the US. Prospective business owners enter an imagined market when they start thinking about setting up a business or are taking preparatory steps. The novelty of our approach is in the comparison of ex-post selection (in real markets) with ex-ante selection (in imagined markets). We have assessed the role of personal and ecological characteristics in the explanation of exit in real and imagined markets.

Entrepreneurial personality characteristics (i.e. risk tolerance and internal locus of control) are hardly related to exit. Human capital variables like educational level, having self-employed parents, gender (male) and age turn out to have significant negative relations with entrepreneurial exit in real markets. Ecological characteristics like perceived environmental constraints and urbanization have positive relations with exit in real markets, while the welfare state indicator is only positively related with exit in imagined markets. Our analyses reveal significant differences in the explanation of exit in real and imagined markets. Remarkably, personal characteristics are more often related to exit in real markets than in imagined markets. The institutional environment (welfare state arrangements) seems to be more relevant for giving up entrepreneurial intentions and efforts, than for exit in real markets.

Future research should distinguish between different types of firm exit. Due to data availability we could not distinguish between different types of ex-post exit, as the business might also be (successfully) sold or the entrepreneur might be retired. The latter two types of firm exit cannot be regarded as straightforward outcomes of market selection. Future research should also concentrate on longitudinal effects: those who do not exit from the imagined market and enter the real market become candidates for exit from the real market. Future research should include a better categorization of the entrepreneurial environment next to the welfare state typologies (Freytag and Thurik 2007).

We can also interpret our results from a ‘rational expectations’ viewpoint: prospective entrants objectively assess the returns of entering the market as an entrepreneur. They make decisions on whether or not to enter, and the timing and mode of entry, in a manner that seeks to maximize expected profit in an uncertain environment (Helfat and Lieberman 2002). While rational behaviour of this sort may be a reasonable first approximation, numerous studies suggest that entrants often suffer from cognitive biases (Kahneman and Lovallo 1993; Dosi and Lovallo 1997). Entrants may be

overly optimistic about their own abilities which would mean that such biases would contribute to 'excessive' entry as well as deviations from viable resource matching. This seems especially relevant when certain explanatory variables do not have an effect on exit in imagined markets, but do have an effect on exit in real markets. There might be too optimistic entry of individuals with low levels of human capital, and in urban areas. Camerer and Lovo (1999) found evidence of excess market entry – entry into crowded markets that offered slim success chances – ostensibly instigated by individuals who held biased (e.g. overconfident) assessments of their competitive abilities. This can be prevented, if potential entrepreneurs become better informed about their chances of entrepreneurial success (and thus will be more likely to “give up”). The current paper provides the necessary insight.

6. References

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Table 1
Hypotheses concerning exit in imagined and real markets

Hypothesis	Variable	“Gave up”	“No longer”
1a/1b	Risk tolerance	-	+
2	Internal locus of control	-	-
-	Education	+/-	+/-
3	Self-employed parents	-	+/-
4	Age	-	-
5	Perceived environmental constraints	+	+
6a/6b	Metropolitan/urban	-	+
7a/7b	Strong welfare state	+	-

Table 2
Composition of dependent variables

Engagement levels:	Never considered	Thinking	Taking steps	Gave up	Business <3years	Business >3years	No longer
Our reduced categories:	Category excluded	Entrepreneurial intentions/efforts		Exit in imagined market	Business owner		Exit in real market
Value of dependent variables:		“0”		“1”	“0”		“1”

Table 3

Percentages per entrepreneurial engagement level per country

	Never considered	Gave up	Thinking	Taking steps	Business <3 yrs	Business >3 yrs	No longer	Observations
Austria	56	4	19	4	4	7	7	476
Belgium	70	8	9	1	1	5	5	972
Cyprus	59	5	18	1	3	7	5	496
Czech Republic	55	9	15	2	5	8	7	972
Denmark	54	9	18	1	4	6	8	498
Estonia	50	4	31	4	4	4	3	468
Finland	53	11	13	2	1	11	9	499
France	67	12	11	1	1	3	4	983
Germany	46	15	20	3	4	5	7	963
Greece	46	5	23	2	5	9	10	996
Hungary	58	4	15	2	3	8	9	983
Ireland	62	1	22	3	2	6	3	489
Italy	62	5	16	3	2	6	7	999
Latvia	60	4	29	2	1	2	2	504
Lithuania	49	2	36	2	1	3	6	491
Luxembourg	58	12	12	3	2	6	6	484
Malta	73	6	11	1	1	5	4	483
Netherlands	52	12	13	2	3	8	9	972
Poland	51	11	23	1	3	6	6	993
Portugal	65	4	16	2	3	5	5	996
Slovakia	49	7	27	4	5	6	2	481
Slovenia	60	1	30	1	1	3	3	492
Spain	70	2	13	3	2	4	6	991
Sweden	64	1	17	3	2	6	7	500
United Kingdom	60	3	16	5	3	4	9	996
Total EU	58	7	18	2	3	6	6	18,177
United States	49	1	32	9	4	3	1	890
Total EU+US	58	6	19	3	3	6	6	19,067

Source: Flash Eurobarometer Survey 160 (conducted in 2004)

Table 4

Categorizations of national institutional systems

Categories	Countries
Social democratic/ Universalist/Scandinavian	Denmark, Sweden
Corporatist/Social Insurance	Belgium, France, Germany, Italy, Luxembourg, Netherlands, Austria, Finland
Liberal/Anglo-Saxon	Ireland, United Kingdom, United States
Southern Europe	Greece, Spain, Portugal, Cyprus, Malta
Post-communist	Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, Slovakia

Table 5
Logit model: Effects on the probability of exit

	"Gave up"		"No longer"	
	Coef.	S E	Coef.	S E
Intercept	-6.385***	0.483	2.688***	0.665
Personal determinants				
Risk tolerance	0.058	0.082	-0.187*	0.097
Internal locus of control	-0.042	0.053	-0.058	0.064
Education	0.027	0.027	-0.107***	0.031
(Education/100) squared	-6.477	5.251	15.271**	6.324
Self-employed parents	-0.048	0.090	-0.212**	0.101
Male	0.192**	0.078	-0.306***	0.098
Age	0.109***	0.014	-0.120***	0.022
(Age/100) squared	-7.620***	1.568	16.386***	2.272
Ecological determinants				
Perceived lack of financial support	0.113	0.102	-0.038	0.117
Perceived administrative complexity	-0.018	0.092	0.198*	0.109
Perceived insufficient information	-0.053	0.082	-0.067	0.101
Perceived unfavorable economic climate	0.199**	0.090	0.207*	0.113
Metropolitan	-0.059	0.103	0.329***	0.126
Urban	-0.070	0.092	0.318***	0.109
Corporatist	2.451***	0.192	-0.061	0.169
Southern Europe	1.523***	0.208	-0.264	0.183
Post communist	1.451***	0.201	-0.010	0.179
Social democratic	1.589***	0.269	0.110	0.253
Further statistics				
Observations	4,292		2,262	
LR χ^2	653.36		330.92	
Prob.> χ^2 (18 df)	0.000		0.000	
Log-likelihood	-2,057,88		-1,354,51	
McFadden R^2	0.14		0.11	

*** denotes significance at the 0.01-level; ** at 0.05; * at 0.10.

Table 6
Empirical evidence concerning exit in imagined and real markets

Variable	"Gave up"	"No longer"
Risk tolerance	0	-
Internal locus of control	0	0
Education	0	-
Self-employed parents	0	-
Male	+	-
Age	+	- (after 37 years: +)
Perceived environmental constraints	+	+
Metropolitan/urban	0	+
Strong welfare state	+	0

¹ Both ex-ante and ex-post selection are likely to be affected by opportunity costs (Amit et al. 1995), i.e. alternative job market opportunities. Especially exit after business start-up is likely to be affected by the aspiration levels of the entrepreneurs (Gimeno et al. 1997). See also Baldwin and Rafiqzaman (1995) for an economics perspective.

² This assumption is not shared by the organizational ecology paradigm. In this paradigm two selection processes are distinguished, that do not necessarily align: e.g. involuntary unemployment or forced retirement likely increases the likelihood of attempting to found a new business but may not increase its odds of success, and conversely, a strong regulatory regime may decrease the rate of attempts but increase the success rate of those that do (Carroll and Khessina 2005). Widely held notions of bounded rationality also suggest that while expectations about the future may guide individual behavior, common social situations are filled with uncertainty, ambiguity and imperfect information, thereby making the equation of ex-ante with ex-post selection unrealistic.

³ According to Alchian (1950), the probability of entry and the probability of survival are likely to be interrelated. However, the presence of uncertainty and incomplete information (i.e. the absence of perfect foresight) makes it likely that these two probabilities differ.

⁴ The latter type of exit does not necessarily imply a business failure, as the business might also be (profitably) sold or the entrepreneur might simply retire.

⁵ There are at least two arguments in favor of taking the individual person instead of the firm as the level of analysis: first, in the case of ex-ante selection a firm does not (yet) exist, and second, most firms – even in advanced capitalist economies – are dominated by the entrepreneur. In Europe, the majority of formally registered firms involve less than two persons (European Commission 2004).

⁶ Locus of control is a personality trait referring to individual differences in a generalized belief in internal versus external control of reinforcement (Rotter 1966). Those with an external locus of control see themselves as relatively passive agents and believe that the events in their lives are due to uncontrollable forces. Conversely, those with an internal locus of control see themselves as active agents, feel that they are masters of their fates, and trust in their capacity to influence the environment (Rotter 1966).

⁷ There might also be more job opportunities in urban areas, that have a positive effect on the exit in real markets (i.e. exchanging an entrepreneurial career for a better paid wage earner career).

⁸ Weak welfare states like the US and the UK have less stringent regulations concerning the start-up of firms, which leads to relatively low entry and exit costs (Nicoletti et al. 1999).

⁹ This survey was conducted on behalf of the European Commission's Enterprise Directorate-General, and the questionnaire, collection method and key findings are presented in Flash Eurobarometer 160 "Entrepreneurship", European Commission 2004, available at http://europa.eu.int/comm/public_opinion/flash/fl160_en.pdf.

¹⁰ If the respondent did not answer "no longer", this does not necessarily mean that he or she had not closed a business before. Also being currently a business owner does not exclude having closed a business before (as with serial or portfolio entrepreneurs; see Westhead and Wright 1998), while currently thinking about entrepreneurship or taking steps could mask prior business ownership. This, and the cross-sectional nature of our data, explain that for example in the US 8% of the adult population has been recognized as a (once) business owner, while 40% of American adults experience a spell of self-employment over their lifetimes (Reynolds and White 1997).

¹¹ 270 individuals (out of 6,554) responded that they never have attended full time education. These observations have value "0" for the education level.

¹² Clearly, this is a crude indicator of risk attitudes and calling this dummy "risk tolerance" may be abusive. Nevertheless, in the absence of a better measure we believe it provides some information on how taking risks is perceived by the respondent.

¹³ Using ordered logit models and data from the 2004 *Entrepreneurship Flash Eurobarometer* survey, Van der Zwan et al. (2008) find no "control" influence discriminating between internal and external success factors.

¹⁴ This category is similar to the "Liberal Market Economy" in the "varieties of capitalism" literature (Hall and Soskice 2001; Casper and Whitley 2004).

¹⁵ The regression on exit in imagined markets contains respondents that indicate to run a business at the same time. It could for example be that these respondents represent "imagined portfolio entrepreneurs" in that they have taken steps or have thought about setting up a business next to their present business. We investigate whether there are differences in estimated coefficients for these imagined portfolio entrepreneurs (212 observations) and respondents having no business at all. That is, we estimate a restricted model and two unrestricted models (portfolio and non-portfolio) and compare these models by means of a likelihood ratio test. We find *no* difference in coefficient estimates, implying that it is not worthwhile to treat (potential) portfolio entrepreneurs separately.

¹⁶ This partly equals the outcomes in the study of Evans and Leighton (1989), who found very high exit rates for young persons, which reaches a plateau after the age of 30.

¹⁷ To a certain extent this is an artifact of the data: older people have a higher chance to have gone through the cycle of starting to think, or starting a business and exiting than younger people.

¹⁸ Regressions are available from the authors upon request.

¹⁹ This Anglo-Saxon analysis represents 584 observations and, compared with other categorizations of countries, the R^2 is relatively low.