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Joachim Wagner

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*University of Lueneburg
and IZA Bonn*

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
Email: iza@iza.org

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ABSTRACT

Nascent Entrepreneurs*

Nascent entrepreneurs are people who are engaged in creating new ventures. This chapter reviews the international evidence on how many of them are there around the world, what they are doing, who they are, what makes them different, and which ones see their vision through to eventual start-up.

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Joachim Wagner
University of Lueneburg
Institute of Economics
21332 Lueneburg
Germany
Email: wagner@uni-lueneburg.de

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1. What is a nascent entrepreneur?

The creation of a new venture is a process. Following Reynolds and White (1997, p. 6) and Reynolds (2000, p. 158ff.) this process, analogous to biological creation, can be considered to have four stages (conception, gestation, infancy, and adolescence), with three transitions. The first transition begins when one or more persons start to commit time and resources to founding a new firm. If they do so on their own, and if the new venture can be considered as an independent start-up, they are called *nascent entrepreneurs*. If they are sponsored by an existing business, they are considered nascent intrapreneurs. The second transition occurs when the gestation process is complete, and when the new venture either starts as an operating business, or when the nascent entrepreneurs abandon their effort and a stillborn happens. The third transition is the passage from infancy to adolescence – the fledgling new firm's successful shift to an established new firm.

This chapter deals with the first two stages and the first two transitions of this process, and with their main actors – nascent entrepreneurs. This means that we will neither look at nascent intrapreneurs, nor will we deal with the survival (or not) and growth pattern of active new firms. And we will not look at those who just state that they would prefer being self-employed over being an employee – a group which can be labeled latent entrepreneurs (Blanchflower, Oswald and Stutzer 2001; Blanchflower 2004, p. 16ff.). Instead, we will focus on people who are currently taking explicit steps to start a new business. To fix ideas, and following the definition used in the Panel Study of Entrepreneurial Dynamics (PSED) (Reynolds 2000, p. 170f.; Shaver, Carter, Gartner and Reynolds 2001; Gartner and Carter 2003, p. 203f.; Reynolds et al. 2004a) and in the Global Entrepreneurship Monitor (GEM) (Reynolds et al. 1999, 2000, 2001, 2002a, 2004b), a nascent entrepreneur is defined as a person who is now trying to start a new business, who expects to be the owner or part owner of the new firm,

who has been active in trying to start the new firm in the past 12 month, and whose start-up did not have a positive monthly cash flow that covers expenses and the owner-manager salaries for more than three month.

Using this definition of a nascent entrepreneur, the rest of the chapter will review the literature considering the following questions: How many nascent entrepreneurs are there, around the world (Section 2)? What do nascent entrepreneurs do (Section 3)? Who are the nascent entrepreneurs (Section 4)? What makes a nascent entrepreneur (Section 5)? What happens to nascent entrepreneurs, and why (Section 6)? Section 7 concludes.

2. How many nascent entrepreneurs are there, around the world?

Given that newly founded firms are important for the economic development of nations and regions, and that nascent entrepreneurs are by definition important for the foundation of new firms, information about nascent entrepreneurs is important for understanding crucial aspects of the economy. This information, however, can not be found in publications from official statistics. Some ten years ago, therefore, we knew next to nothing about nascent entrepreneurs. The situation improved considerably when results from two pioneering studies – the Wisconsin Entrepreneurial Climate Study conducted in Spring 1993, and a national pilot study for the U.S. done in October / November 1993 – were published (see Reynolds and White 1997). Furthermore, for the U.S. the Panel Study of Entrepreneurial Dynamics (PSED) that started in 1998 now is a representative national database on the process of business formation (Reynolds 2000; Reynolds et al. 2002b, 2004a).

In 1999 the Global Entrepreneurship Monitor (GEM) project was started (Reynolds et al. 1999, 2000, 2001, 2002a, 2004b). At the heart of this international project are representative surveys

of the adult population in the participating countries that use an identical questionnaire to measure various aspects of entrepreneurial activity. The share of nascent entrepreneurs in the population is measured by asking the interviewees a set of questions that closely follows the definition of a nascent entrepreneur given in section 1. 31 countries participated in the 2003 wave of GEM, and some 100,000 adults were interviewed. Table 1 reports the share of nascent entrepreneurs computed from these surveys (together with the lower and upper bounds of the 95% confidence interval for the point estimates).

Table 1 near here

From table 1 it is evident that nascent entrepreneurs are not at all a rare species. There are millions of it. Using the figures reported for the share of nascent entrepreneurs in table 1, and the numbers for the total population 18 – 64 years old from the GEM 2003 executive report (Reynolds et al. 2004b, p. 16), one calculates that in 2003 there were some 14,689 million nascent entrepreneurs in the U.S., 1,843 million in Germany, and 1,271 million in the UK.

Table 1 reveals one more striking fact: The share of nascent entrepreneurs differs widely between countries. While in Venezuela in 2003 one in five adults was a nascent entrepreneur, we found one in twelve in the U.S., one in 29 in Germany and the UK, and one in 111 in France. Given that the shares are point estimates based on (representative) samples, the differences between the numbers reported in column two of table 1 for two countries are not always statistically significantly different from zero at a usual error level (as can be seen from the lower and upper bounds of the 95% confidence intervals in column 3 and 4) – consider, for example, the reported shares for New Zealand and the U.S., or Finland and Ireland. However, it is evident that there are many differences which are both statistically significant

and large in an economic sense – just compare the U.S. with the UK and Germany, and Germany with its neighbor countries France and the Netherlands. It should be noted in passing that similar differences in the share of nascent entrepreneurs have been found between regions in Germany (Wagner and Sternberg 2004).

How can these differences in the share of nascent entrepreneurs across space be explained? What makes a country more or less entrepreneurial? Using data for 36 countries participating in the Global Entrepreneurship Monitor 2002 van Stel et al. (2003) investigate this question employing four empirical approaches: First, they hypothesize nascent entrepreneurship to be a function of the level of economic development of a country, using per capita income as an indicator. Second, they test for the influence of an innovative capacity index. Third, they take an eclectic stand and link nascent entrepreneurship to a portfolio of determinants including economic and non-economic conditions, such as technology, demography, culture and institutions. Fourth, they combine the approaches mentioned before in a single empirical model.

Both for the relationship of the share of nascent entrepreneurs with per capita income and with innovative capacity van Stel et al. (2003) find a u-shaped nexus: Rising levels of economic development and innovative capacity go along with a declining share of nascent entrepreneurs in the adult population up to a certain level, and then start to rise again as per capita income or the index of innovative capacity increases still further. Using the empirical model based on the eclectic approach they start with a set of twelve exogenous variables and apply a stepwise procedure to end with four determinants (the sign of the estimated regression coefficient is given in brackets): A variable measuring the stock of incumbent business owners (+), the innovative capacity index (-), social security costs as percent of GDP (-), and a dummy variable indicating whether a country has been a communist country in the past or

not (-). In the full model combining the other three approaches the positive relationship with the stock of incumbent business owners, the negative impact of being a former communist country, and the u-shaped relationship with the innovative capacity index still hold (while the u-shaped relationship with per capita income is no longer statistically significant at a conventional level); the regression coefficient of the social security costs variable remains negative, but is not longer statistically significant at a conventional level.

The authors themselves point out three limitations of their study: It is based on cross section data for one moment in time only; it does not disaggregate by sector of activity (industry vs. services, etc.) nor does it make a distinction between necessity and opportunity entrepreneurship; and it assumes that the same empirical model is appropriate for countries as different as the U.S., Russia, and Brazil. Furthermore, the stepwise approach used might be expected to end up in an empirical model that is tailor-made for the data set at hand.

In an empirical investigation that has a focus on the role of post-materialism as a cultural factor influencing cross-country differences in total entrepreneurial activity (defined as the share of nascent entrepreneurs plus the share of people who are owner-managers of a business less than 42 months old) Uhlaner and Thurik (2004) report estimates for an empirical model regressing the share of nascent entrepreneurs on five variables (see their table 2, column 7), too. The study is based on data from 28 countries which are a subset of the countries that participated in the Global Entrepreneurship Monitor 2002, and, therefore, a subset used in the study by van Stel discussed above. They find a weakly significant positive relationship with an index of life satisfaction and a highly significant relationship with the gross enrollment ratio in secondary education; the estimated coefficients of the variables measuring post-materialism, per capita income, and the gross enrollment ratio in tertiary education are statistically insignificant at any conventional level. Given that the investigation of cross-

country differences in the share of nascent entrepreneurs is not at the center of the study, and the limitations of the study (which are similar to those mentioned in the context of the van Stel et al. study), the results should not be expected to shed much light on the topic considered here.

The two pioneering studies by van Stel et al. (2003), and by Uhlaner and Thurik (2004), are (to the best of my knowledge) the only empirical investigations looking at cross-country differences in the share of nascent entrepreneurs (for studies on cross-country differences in total entrepreneurial activities - defined as the share of nascent entrepreneurs plus the share of people who are owner-managers of a business less than 42 months old – besides Uhlaner and Thurik (2004), see Minniti and Arenius (2003), and Verheul and Thurik (2003)). It is an open question, and one well worth future research efforts, whether the findings in these studies can be replicated for different samples of countries and for different periods, and what is the role played by other factors not investigated hitherto.

3. What do nascent entrepreneurs do?

What are the activities nascent entrepreneurs are involved in when they are actively engaged in creating a new venture of their own? The only way to find out is to ask them, and this has been done in the U.S. in the Wisconsin Entrepreneurial Climate Study conducted in Spring 1993, in a national pilot study for the U.S. done in October / November 1993 (Reynolds 1997; Reynolds and White 1997), and in the Panel Study of Entrepreneurial Dynamics (PSED) that started in 1998 (Reynolds 2000; Reynolds et al. 2002b; Gartner and Carter 2003; Reynolds et al. 2004a). Furthermore, we have evidence from surveys conducted in Norway (Alsos and Ljunggren 1998) and in Canada (Diochon et al. 2001).

In the order of “popularity” among the respondents in the U.S. sample of 1993 the following start-up activities were reported by at least one third of the nascent entrepreneurs (Reynolds 1997, p. 452; Reynolds and White 1997, p. 41): Serious thought about business; looked for facilities/equipment; initiated savings to invest; invested own money in the new firm; organized start-up team; written business plan; bought facilities/equipment; sought financial support; license, patent, permits applied for; developed first model or prototype; received money from sales. About 95% of the nascent entrepreneurs indicated two or more start-up behaviors, the median number of steps taken was 7. Using a similar (but not identical) list of activities, Diochon et al. (2001) report similar (but not identical) results from interviews with some 120 nascent Canadian entrepreneurs performed in 2000: respondents are engaging in multiple activities, and the most intensely pursued are: defining market opportunities; personally investing money in the venture; purchasing raw materials, inventory, supplies or components; generating sales revenue; and marketing, promotional efforts. Looking at gender differences in start-up activities among 114 male and 35 female Norwegian nascent entrepreneurs interviewed in 1997, Alsos and Ljunggren (1998) find few differences between male and female nascents – among others, a smaller proportion of the women than of the men reported having prepared a business plan and to hire employees.

Evidence on the “first behavior” of nascent entrepreneurs based on the interviews from the Panels Study of Entrepreneurial Dynamics is reported by Gartner and Carter (2003, p. 203f.). According to their findings, 57 % of the 715 nascent entrepreneurs “spent a lot of time thinking about starting business” first, followed by 16 % who “took classes or workshops on starting business”, 15 % “saving money to invest in business”, 14 % “invested own money in business”, and 12 % “developed model or procedures for product/service”. The authors list 21 more start-up behaviors that occurred first among less than 10 % of the nascent entrepreneurs. Carter and Kolvereid (1998) compare first activities between male and female

nascent entrepreneurs in the U.S. and in Norway, and they find variation across both gender and country.

Unfortunately, we do not have comprehensive and comparable evidence on the set of activities nascent entrepreneurs are involved in, and on the timing of these events, for a large number of countries, because this is a topic that has not been investigated in the Global Entrepreneurship Monitor project. From the evidence we have on start-up activities it is clear that there is neither a fixed set of events (although some events are more common than others) nor a uniform sequence. The industry, the region, and personal factors (like gender, skills, and financial reserves of the nascent entrepreneurs) all matter in determining what a nascent entrepreneurs does, and when.

4. Who are the nascent entrepreneurs?

Are nascent entrepreneurs different from the rest of the adult population, and is there a typical nascent entrepreneur with a typical set of characteristics? Table 2 reports the relationship between the prevalence rate of nascent entrepreneurs and selected personal characteristics and attitudes. This evidence is based on the (weighted) data from the 29 countries that took part in the Global Entrepreneurship Monitor in 2001 (Reynolds et al. 2001, p. 32).

Table 2 near here

According to table 2 the share of nascent entrepreneurs in the total population covered by the surveys is much higher for men than for women, and it declines with age; it is more than twice as high for those who know an entrepreneur than for those who do not, and more than

three times higher for those who perceive a good opportunity for business compared to those who do not; the presence of business skills increases the share by a factor of nearly 6. Fear of failure matters – the share of nascent entrepreneurs is twice as high among those who consider failure fear not as a problem compared with those who do. The better the family future looks, the higher is the prevalence rate of nascent entrepreneurs; the link with the perception of the country’s economic future, however, is non-monotonic with the lowest share of nascents among those who state that the country future looks the same as today. As regards educational attainment, the share of nascents is lowest for those at the top and at the bottom end, and considerably higher in between. Nascent entrepreneurs are more often found among individuals who are working full or part time than among those who are not working or are not in the labor force. The higher the household income, the higher is the prevalence rate of nascent entrepreneurs. This evidence from the Global Entrepreneurship Monitor project shows that certain types of individuals are more likely to be involved in creating a new venture, but that individuals from all categories are involved to some extent.

Although the evidence reported in table 2 reveals important facts about nascent entrepreneurs two shortcomings are evident:

First, a look at the (weighted) average of data from 29 countries in one year is a bird’s eye view – a closer look at data for single countries (or regions inside countries) and several years will demonstrate important differences across both space and time. Fortunately, there are detailed annual country reports for each country which took part in the Global Entrepreneurship Monitor project, and most of these reports are available free of charge from the project’s homepage (www.gemconsortium.org). Furthermore, comprehensive descriptive information on nascent entrepreneurs in selected countries are available from other sources, too – for the U.S. (see evidence based on the Panel Study of Entrepreneurial Dynamics

reported in Reynolds et al. 2002b, 2004a), Canada (Diochon et al. 2001), Sweden (Delmar and Davidsson 2000), and for selected regions in Germany (Bergmann et al. 2002; Lückgen and Oberschachtsiek 2004). This provides researchers interested in a specific country, or in inter-country comparisons, with a rich set of information; and it offers the possibility to augment the bird's eye view given in table 2 by views through a looking glass.

Second, the empirical evidence reported in table 2 is only descriptive in nature, and it does not reveal the extent to which the various factors considered are interrelated. To give just one example, consider the relationship between gender and nascent entrepreneurship on the one hand, and between labor force status and nascent entrepreneurship on the other hand. Men are more than twice as often involved in creating new ventures than women, and so are people who are working full or part time compared to those who are not working or are not in the labor force. Given that the share of men who are in paid employment is much higher than the share of women, what is the *ceteris paribus* effect of being male, and of working full or part time, on the propensity of being a nascent entrepreneur? Descriptive bivariate comparisons can not reveal this. Multivariate analyses that tackle this topic are reviewed in the next section.

5. What makes a nascent entrepreneurs?

Empirical investigations of the *ceteris paribus* impact of individual (and other) characteristics and attitudes on the propensity to become a nascent entrepreneur are usually – either explicitly or implicitly - based on a theoretical framework that can be outlined as follows:

Consider a utility-maximizing individual that has the choice between paid employment and self-employment (taking the decision to participate in the labor market as given). This person

will choose the option self-employment if the discounted expected life-time utility from self-employment ($DELUs_i$) is higher than that from paid employment ($DELUp_i$). The difference N_i between $DELUs_i$ and $DELUp_i$,

$$(1) \quad N_i = DELUs_i - DELUp_i$$

therefore, is crucial for the decision of individual i , and it will choose self-employment if N_i is positive. $DELUs_i$ and $DELUp_i$ are determined by the expected monetary and non-monetary returns from self-employment and paid employment according to the utility function of the person and the individual's discount rate. Higher returns lead to higher values of $DELU$.

The expected monetary and non-monetary returns from both types of employment depend on variables that are either endowments of the individual i (like age, a university degree, or the degree of risk-aversion) or other relevant variables (like characteristics of the region a person lives in). All these variables are summarized in a vector x_i . Given that N_i depends on $DELUs_i$ and $DELUp_i$, and $DELUs_i$ and $DELUp_i$ depend on the monetary and non-monetary returns, N_i can be written as a function of x_i :

$$(2) \quad N_i = N_i(x_i)$$

Elements of x_i that have a more positive or less negative impact on $DELUs_i$ than on $DELUp_i$ increase N_i (and vice versa). Given that the expected monetary and non-monetary returns from both types of employment, the utility function, and the discount rate of an individual are unknown to an observer, we cannot observe N_i . Therefore, we cannot test directly whether an individual characteristic or attitude (say, a university degree, or a high degree of risk aversion) has a positive impact on N_i or not. If, however, N_i is greater than the critical value zero,

according to our theoretical framework a person will choose to become an entrepreneur, and the decision to do so or not is observable.

Empirical models that investigate the *ceteris paribus* influence of the elements of ξ on the probability that a person is a nascent entrepreneur use this known decision *pro* or *contra*. In these models the dummy variable indicating whether a person is a nascent entrepreneur or not is regressed on a set of exogenous variables made of characteristics and attitudes of the individual, and on other variables considered as relevant for this decision. Given the dichotomous nature of the endogenous variable these empirical models are estimated by (variants of) logit or probit, and the empirical approach can be labeled a reduced form logit (or probit) approach.

Note that by focussing on the factors affecting the decision to become self-employed, as opposed to remaining in paid-employment, instead of looking at differences in the probability that people are self-employed rather than employees, one avoids confounding entry and survival effects: The probability of being self- employed at a point in time depends on the probability of switching into self-employment in the past and then surviving as a self-employed until the time of the survey (see Parker 2004, p. 25f).

While there is a large empirical literature on the *ceteris paribus* impact of personal and other variables on the probability of being an “adult” entrepreneur versus a paid employee (surveyed in Parker 2004, ch. 3), econometric investigations that ask what makes a nascent entrepreneur are scarce. One group of these studies deals with the more general question what makes a “typical” nascent entrepreneur, attempting to identify factors that are statistically significant for the decision to create a new venture or not. A number of econometric investigations tackle more specific issues (like gender differences in the propensity to become

a nascent entrepreneur, or the role of young and small firms as hothouses for nascent entrepreneurs). These two groups of studies are reviewed in turn.

In a pioneering study, Reynolds and White (1997, p.52ff.) and Reynolds (1997) use the data from a national pilot study for the U.S. done in October / November 1993 (mentioned above) to estimate in a first step logistic regression models predicting nascent entrepreneurs. The forward stepwise and backward stepwise procedures applied lead to slightly different “optimal models”, but three characteristics are statistically significant in both cases: age (with a negative impact), and self-employment and divorce, both of which increase the tendency. A number of other factors are present in one or the other variants of the empirical model. To consider the potential impact of interaction among the various factors, in a second step a variant of the Automatic Interaction Detection (AID) technique is applied. This leads to the identification of subgroups in the adult population where many, few, or no nascent entrepreneurs can be found. For instance, 69% of new firm start-ups are provided by 17% of the adult population: people aged 25 to 34 that are self-employed, unemployed, or students, and those with employment and more than a high school degree.

Further evidence for the U.S. for the determinants of the decision to become a nascent entrepreneur is reported by Kim, Aldrich and Keister (2003) based on data from the Panel Study of Entrepreneurial Dynamics (PSED). From the results of logistic regressions they conclude that financial resources are not significantly associated with becoming a nascent entrepreneur, while several human capital variables (like education, full-time work experience, previous start-up experience, current self-employment, and the percentage of relatives who are entrepreneurs) are.

Comparable results for other countries are scarce. Delmar and Davidsson (2000) use an approach quite similar to the one adopted by Reynolds and White (1997) and Reynolds (1997) to look at Swedish data. Among others, they find a negative impact of age, and positive effects of being male, having self-employed parents, education, being self-employed, and having experience in management on the probability of becoming a nascent entrepreneur (see also the results from logistic regression reported in Davidsson and Honig 2003, table 1). Using data from the first wave of the Global Entrepreneurship Monitor (GEM) for Germany collected in 1999 Sternberg (2000, p.58f.) estimates a logit regression to investigate the *ceteris paribus* impact of age, gender, living in western or eastern Germany, size of city, education, household income, and number of persons living in the household on the probability to become a nascent entrepreneur. He finds a strong positive effect of being male, and a negative effect of being more than 54 years old.

What do we learn from these studies that attempt to identify factors that are important for becoming a nascent entrepreneur or not? In my view, not too much. The most important reason for this pessimistic view is that we do not have evidence from a large number of studies covering many different countries and applying identical (or at least highly similar) empirical models to different data sets. Therefore, a promising strategy for further research might be the coordination of an international research project that brings together experts from many countries who agree on a common empirical methodology to be applied to comparable data sets like those from the GEM project (for a role model, see the project on regional differences in new firm formation described in Reynolds, Storey and Westhead 1994). From such a project we can learn a lot about what makes a nascent entrepreneur, and how and why determinants differ across space and time.

Besides the papers that try to answer the question what makes a “typical” nascent entrepreneur and to identify factors that are statistically significant for the decision to create a new venture or not, there are a number of econometric investigations that tackle more specific issues related to nascent entrepreneurship. This literature is reviewed below, starting with papers that focus on the ceteris paribus impact of one specific personal characteristic, and followed by studies that investigate the ceteris paribus impact of elements of the environment a person lives and works in.

Gender: In western industrialized countries men are on average more than twice as active in entrepreneurship as women. Little is known about precisely why this is the case. Using data from the Regional Entrepreneurship Monitor (REM) Germany, a recent representative survey of the adult German population described in detail in Lückgen and Oberschachtsiek (2004), Wagner (2004a) estimates an empirical model for the decision to become self-employed to test for differences between women and men in the ceteris paribus impact of several characteristics and attitudes, taking the rare events nature of becoming an entrepreneur into account. Furthermore, a non-parametric approach using Mahalanobis-distance matching of men and women who are as similar as possible is used to investigate the difference in the propensity to become self-employed by gender. The core finding of this empirical exercise is that considering fear of failure to be a reason not to start an own business has a much smaller negative influence on the propensity to step into self-employment for men than for women – in other words, women tend to be much more risk averse than men.

Professional background: Recently, Edward Lazear (2002, 2004) proposed the jack-of-all-trades view of entrepreneurship. Based on a coherent model of the choice between self-employment and paid employment he shows that having a background in a large number of different roles increases the probability of becoming an entrepreneur. The intuition behind

this proposition is that entrepreneurs must have sufficient knowledge in a variety of areas to put together the many ingredients needed for survival and success in a business, while for paid employees it suffices and pays to be a specialist in the field demanded by the job taken. Lazear (2002, 2004) and Wagner (2003a) show that this theory is in line with empirical results for self-employed vs. paid employees in the U.S. and in Germany, respectively. Using the REM data (mentioned above) Wagner (2003b) tests the jack-of-all-trades hypothesis for nascent entrepreneurs vs. persons who decide to continue working as paid employees. He finds evidence for a ceteris paribus positive impact of both the number of fields of professional experience and the number of professional degrees for the decision to become a nascent entrepreneur.

Employment status: Is nascent entrepreneurship different among the unemployed, the employed, and the not employed (i.e., those out of the labor force)? Wagner (2003c) investigates this topic using the REM data (mentioned above). A comparison of the results for the unemployed on the one hand and the employed / not employed on the other hand reveals some remarkable differences: While being male and having a higher education does not matter for the unemployed, it has a positive impact for the other two groups considered here. Age, however, only matters for the unemployed; and considering fear of failure a reason not to start has a negative impact for the employed only. The only individual variable that has the same statistically significant sign for all three groups is the personal contact with a young entrepreneur – the probability of becoming a nascent entrepreneur is higher for anybody with such a contact.

Failure in the past: Folklore has it that the comparatively low proportion of self-employed in Germany is in part due to a habit that might be termed “stigmatization of failure”: taking a second chance to build one’s own firm after failing as a self-employed person is said to be

much more difficult here than in other countries. Wagner (2003d) uses the REM data (mentioned above) to document that 8% of all people whose former firm went out of business are nascent entrepreneurs today, while the share of failed entrepreneurs among the nascent entrepreneurs is 23%. He investigates the determinants of such a restart. It turns out that both individual and regional factors are important for taking a second chance: this probability is negatively related to age, a high risk aversion, and the share of persons in the region who failed in the past, while it is positively related to personal contacts with a young entrepreneur and the regional share of nascent entrepreneurs.

Regional characteristics: Two stylized facts emerged from a number of empirical studies for many countries – new venture entry rates differ between regions, and the propensity to become an entrepreneur is influenced by socio-demographic variables and attitudes. Wagner and Sternberg (2004) develop a theoretical framework to discuss this link, and test whether for a person of a given age, degree of schooling, attitude towards risk etc. regional variables and, therefore, regional policies, do matter for the decision to start a new business *ceteris paribus*. Using the REM data (mentioned above) they find that the propensity to be a nascent entrepreneur is higher for people who live in more densely populated and faster growing regions with higher rates of new firm formation, while high prices of land have the opposite impact. Interestingly, it does not matter whether the region has a “left” or “right” government.

Characteristics of the (former) workplace: A stylized fact emerging from a vast number of empirical studies on the inter-regional differences in new firm formation is that the start-up rate in a region tends to be positively related to the share of employees working in small firms, or the proportion of small firms among all firms in the region. A similar point has been made in studies dealing with inter-industry differences in new firm formation. A theoretical explanation for this empirical regularity argues that working in a small firm tends to provide

employees with a much more relevant experience for starting a new business (e.g., contacts with customers, and with the owner of the firm who therefore provides a role model to follow) than working in a large firm. If this argument holds one should expect that people who are working in a small firm (or did so in the past) should have a higher propensity to step into self-employment than others who work(ed) for a large enterprise. A similar argument can be made for those who work(ed) in young firms compared to those in old firms: Through a close contact to a successful entrepreneur people in a young firm have the opportunity to gather information about the transition from paid employment to self employment with all its problems, and about possible solutions. The "employer-as-a-role-model" argument put forward in the context of the small firm should be even more relevant here, because not all small firms are young (and, therefore, not all owners of small firms are role models for potential starters of new firms today), but most of the young firms are small. And we expect it to be most relevant in the case of work experience gathered in a young and small firms. Using the REM data (mentioned above) Wagner (2004b) tests the hypothesis that young and small firms are hothouses for nascent entrepreneurs, controlling for various individual characteristics and attitudes. He finds that work experience in a firm that is both young and small is statistically significant and economically important for the decision to become a nascent entrepreneur.

The studies reviewed above that focus on the *ceteris paribus* impact of specific personal characteristics or on selected elements of the environment a person lives and works in on the decision to start creating a new venture shed some light on important aspects of nascent entrepreneurship. However, given that they each are based on a single data set from a single country, collected in a single point in time, it is an open question whether the results are valid in general. Hopefully, further research attempting to replicate these findings using different

data sets will tell. And, obviously, there are lots of aspects related to the determinants of nascent entrepreneurship that are waiting for theoretical and empirical investigations as well.

6. What happens to nascent entrepreneurs, and why?

Not all nascent entrepreneurs see their vision through to an eventual start-up in some given period of time (say, in a year after they outed themselves as nascent entrepreneurs in a survey) – some give up, and others are still trying. A number of studies report empirical findings on the proportions of these sub-groups, and on variables that differentiate between them. This literature is surveyed in this section. We summarize the core findings country by country, starting with North America (United States and Canada) and then turning to Europe (Austria, Germany, Italy, the Netherlands, Sweden and Norway), and look at differences and similarities across space afterwards.

United States: In a pioneering study Katz (1990) used data from the Panel Study of Income Dynamics for 1968 to 1972. Of the 2251 wage-or-salaried employees who participated in the survey in 1968, 33 aspired to self employment. Of these, 27 (or 1.2% of all paid employees) made some effort to prepare themselves for self-employment; these come close to what we call nascent entrepreneurs today. Of these 27, only 6 (or 22%) eventually became self-employed between 1968 and 1972. Note that no details are reported in what respect these 6 starters differ from the 19 non-starters.

Using data for 71 nascent entrepreneurs (taken from two representative samples of 683 adult residents in Wisconsin and of 1016 adult residents of the United States conducted between 1992 and 1993) which were re-interviewed six to eighteen months after their initial interview, Carter, Gartner and Reynolds (1996) report that between the first and the second interview,

48% of the nascent entrepreneurs had set up a business in operation. 22% had given up and were no longer actively trying to establish a new venture, while 30% report that they were still trying to establish a firm. The authors present what they term “activity profiles” of these three types of nascent entrepreneurs. They suggest that nascent entrepreneurs who were able to start a business were more aggressive in making their business real, acting with a greater level of intensity, and undertaking more activities than those people who did not start. Those who gave up performed a pattern of activities that seems to indicate that they discovered that their initial idea for business would not lead to success. Those who are still trying are characterized as putting not enough effort into the start-up process in order to find out whether they should start the business or give up.

Reynolds and White (1997, ch. 4) use data from the same surveys as Carter, Gartner and Reynolds (1996), but distinguish four different outcomes (proportions given in brackets): New firm established (45%); actively working on the start-up (28%); temporarily inactive (11%); given up on new business (16%). The authors ask what factors known about the start-up teams and their efforts might differentiate these outcomes, and they look at characteristics of the respondent, selected features of the business effort, and the activities pursued in starting the business. Important findings include: Men are twice as likely as women to report the business is operating; the proportion of start-ups decreases systematically as educational attainment increases; the proportion of business births is highest for those with intermediate levels of income; most individual attributes, as well as measures of judgement or attitudes, however, have no relationship with the start-up outcome; there are some small effects associated with the economic sector in which the firm operates; and the actual level of effort and investments in the start-up was substantially greater for start-ups that resulted in a firm birth.

Evidently, the samples of U. S. nascent entrepreneurs traced over time in the studies reviewed here are extremely small, and the results reported are, therefore, not very reliable. The Panel Study of Entrepreneurial Dynamics (PSED) that involves detailed information on a longitudinal sample of 830 nascent entrepreneurs provides a much better data base for empirical investigations on the topics dealt with in this section. According to Reynolds et al. (2004a, p. 282), however, studies using the PSED longitudinal sample are, to date, primarily at the working paper and conference presentation stages.

Canada: Diochon, Menzies and Gasse (2003) track the start-up efforts of 151 Canadian nascent entrepreneurs over a two-year period (2000-2002). After 12 (24) months, 29.8% (25.2%) had established an operating business, 33.8% (5.3%) were still trying, 11.2% (5.3%) were inactive, 12.6% (25.2%) had given up entirely, and 12.6% (21.1%) could not be reached. Exploring the role individual-level factors play in sustaining efforts to start a business, the authors find no significant differences in personal background factors (socio-demographic, work and career backgrounds), but certain aspects of personal context and personal predispositions are shown to differentiate those who disengaged from the start-up process from those who preserved. It turns out that problem-solving style and goal orientation are especially significant.

Austria: Kessler and Frank (2004) analyze data from a longitudinal study in which 290 nascent Austrian entrepreneurs were monitored over a period of three years from 1998 to 2001. At the end, 54.9% of these 1998-nascent had started a business. Those who did not include the 7.2% who were still trying and the 37.9% who gave up. From a binary logistic regression with “sustained startup success” as the dependent variable the authors conclude that experience with entrepreneurial thinking, startups in the area of crafts and trades and services, full-time business activity, a higher indicated startup probability at the time of the

initial survey, and being male are positively related to the probability that a new venture emerges, while those who planned their endeavors jointly with others (team startups) were only half as likely to realize their startups.

Germany: Bahß, Lehnert and Reents (2003) use data from the KfW-Gründungsmonitor project to investigate how many of those persons who stated in April – July 2002 that they intend to step into self-employment during the next six month did so until February 2003. From the 300 participants in this follow-up survey 29% were indeed self-employed, 21% were still trying, 32% delayed their project, and 18% gave up. The authors mention that unemployed more often stop the process of setting up a new venture compared to paid employees, and that “starters” and “stoppers” do not differ in important personal characteristics like risk aversion and aspiration for independence; details, however, are not reported. Given that those who state in a survey that they intend to become self-employed in the next half year can not be considered to be nascent entrepreneurs according to the definition given in section 1 above, these findings are not strictly comparable to the results reported in other studies reviewed here. However, they provide the only information available for Germany that at least comes close to, given that no longitudinal study on German nascent entrepreneurs has been done as yet (see Bergmann (2000) for a fruitless attempt to use the German household panel GSOEP for an investigation of this topic).

Italy: Vivarelli (2004) explores a database including 365 Italian “potential entrepreneurs” who were interviewed in the first quarter of 1999. He considers these individuals to be “potential entrepreneurs” because they attended – during the ‘90s – special training courses for people intending to found a new firm. Note that this concept of a potential entrepreneur differs widely from that of a nascent entrepreneur. At the moment of the interview 59% had actually started a new economic venture, while 41% had definitely given up. In a probit equation the

probability of starting is positively and statistically significantly related to the startup decision being the best choice (opposed to more defensive motives), a high level of information, no free admittance to the training course, and writing a business plan.

Netherlands: Van Gelderen, Bosma and Thurik (2001) followed 330 nascent entrepreneurs identified in the fall of 1998 over a one year period and asked for the current status of the start-up effort. 47% started their business, 27% were still organizing, and 26% had abandoned the effort. They report that in comparison to people who gave up starters are entrepreneurs already, have more industry experience, start out with less start-up capital, use less third party loans, and start out in manufacturing, while compared to those who are still organizing starters are relatively often male, entrepreneur, and want to start full-time. In a follow-up study van Gelderen, Thurik and Bosma (2003) report that after three years, a minimum of 36% of the sample started and a minimum of 20% abandoned the startup effort, while there is no information about the eventual startup status of the remaining 44%. A comparison of those who succeed in starting a business and those who abandon the startup effort reveals that significant variables include start-up capital (nascents who intend to use more start-up capital have lower probabilities to get their business running) and perceived risk of the market, starting a manufacturing firm, and starting full-time. None of the included individual characteristics seem to distinguish successful nascent entrepreneurs from the unsuccessful ones.

Sweden: Davidsson and Honig (2003) followed 380 Swedish nascent entrepreneurs first interviewed between May and September 1998 for 18 months. They use the occurrence of a first sale during these 18 months as an evident instrumental indication of a nascent firm's eventual emergence. 62% of the nascent entrepreneurs reported first sales during this period. In a logistic regression the probability of having a first sale turns out to be unrelated to several

measures of human capital (years of education, business class taken, years experience as manager, years work experience, and previous start-up experience) and to age and gender. Among the social capital variables, only being member of a business network and having close friends or neighbors in business have a statistically significant positive impact on the probability of a first sale.

Norway: Alsos and Ljunggren (1998) report that from 149 Norwegian nascent entrepreneurs interviewed first in a survey conducted early in 1996 46% started a business when re-interviewed twelve months later, 25% were still trying, and 29% gave up. These proportions are identical for men and women.

Some but not all of the studies reviewed in this section follow, explicitly or implicitly, but sometimes only partly, the research design of the Panel Study of Entrepreneurial Dynamics (PSED) discussed in Reynolds (2000). Comparability across space, therefore, is limited. Furthermore, the rather small and sometimes tiny samples, different time frames for follow-up studies, and different specifications of the empirical models used make it impossible to draw any definite conclusions. However, at least two tentative conclusions emerge: First, a significant fraction of nascent entrepreneurs – between one in two and one in three - step into the next phase, becoming infant entrepreneurs in the year following the first survey. Second, observed individual characteristics tend to play a minor role only in differentiating who starts and who gives up.

7. Concluding remarks

While we knew next to nothing about nascent entrepreneurs ten years ago, thanks to the joint effort of a group of researchers most of whom are affiliated with the Global Entrepreneurship

Monitor (GEM) project we now have reliable information on the share of nascent entrepreneurs in the population of a large number of countries; the reasons for differences in this share across space and time, however, is less well understood. Furthermore, we have a sound knowledge about the prevalence of nascent entrepreneurs in certain sub-groups (like males and females, or people with various educational backgrounds). Less is known about precisely what nascent entrepreneurs are doing, and about the timing of the activities. The same conclusion holds regarding factors that are important for becoming a nascent entrepreneur, and for crossing the threshold between nascent and infant entrepreneurship: Lack of comparability among the numerous empirical studies for different countries makes it impossible to draw any definite conclusions.

Stylized facts that could be most valuable for entrepreneurship researchers, policy makers, and, last but not least, nascent entrepreneurs, need to be based on results from a number of studies using large, comprehensive longitudinal data bases that are comparable across countries, and that can be accessed by researchers for replication and extension of former studies. The Global Entrepreneurship Monitor (GEM) and the Panel Study of Entrepreneurial Dynamics (PSED) projects, and the data collected within these projects, are important steps towards this aim. The high importance of new firms for economic dynamics, and the high importance of nascent entrepreneurs for new firms, point to the need for further steps in the future.

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Table 1

Share of nascent entrepreneurs in the adult population (18 – 64 years) in 2003

Country	Share of nascent Entrepreneurs	Lower bound of 95% confidence interval	Upper bound of 95% confidence interval
Venezuela	0.192	0.174	0.210
Uganda	0.148	0.125	0.170
Argentina	0.124	0.109	0.140
Chile	0.109	0.095	0.124
New Zealand	0.093	0.079	0.107
U.S.	0.081	0.075	0.087
Iceland	0.073	0.061	0.085
Australia	0.066	0.055	0.077
Brazil	0.065	0.054	0.076
Ireland	0.051	0.040	0.062
Canada	0.051	0.040	0.061
Spain	0.044	0.039	0.049
Switzerland	0.043	0.034	0.053
China	0.043	0.033	0.053
Finland	0.041	0.030	0.051
Norway	0.040	0.030	0.050
Germany	0.035	0.030	0.040
UK	0.034	0.031	0.037
Denmark	0.031	0.023	0.038
Singapore	0.030	0.022	0.038
Slovenia	0.030	0.022	0.038
Greece	0.029	0.022	0.037
Belgium	0.028	0.021	0.035
South Africa	0.027	0.021	0.034
Italy	0.020	0.014	0.027
Sweden	0.020	0.014	0.027
Croatia	0.018	0.011	0.024
Netherlands	0.017	0.012	0.022
Hong Kong	0.017	0.011	0.023
Japan	0.014	0.008	0.019
France	0.009	0.004	0.013

Source: Global Entrepreneurship Monitor 2003 (data provided by Rolf Sternberg)

Table 2

Impact of selected factors on nascent entrepreneurship (29 GEM countries, 2001)

Factor	Share of nascent entrepreneurs in total population of all countries
Gender:	
Men	9.3%
Women	4.2%
Age:	
18 – 24 years old	8.0%
25 – 34 years old	7.9%
35 - 44 years old	7.5%
45 – 54 years old	5.2%
55 – 64 years old	4.5%
Contact with entrepreneurs:	
Know an entrepreneur: Yes	11.6%
Know an entrepreneur: No	5.1%
Perception of business opportunities:	
Good opportunity for business: Yes	14.5%
Good opportunity for business: No	4.3%
Business skills:	
Have skills to start a business: Yes	13.8%
Have skills to start a business: No	2.4%
Fear of failure:	
Failure fear NOT a problem: Yes	8.5%
Failure fear NOT a problem: No	4.1%
Family's economic future:	
Family future looks: Better	10.5 %
Family future looks: Same	4.4%
Family future looks: Worse	3.3%
Country's economic future:	
Country future looks: Better	8.6%
Country future looks: Same	5.1%
Country future looks: Worse	6.3%
Educational Attainment:	
Graduate program experience	5.4%
Beyond secondary school	7.6%
Secondary school degree	8.4%
Not completed secondary school	5.7%
Labor force status:	
Working full or part time	8.4%
Not working: Homecare, unemployed	4.3%
Not in labor force: Retired, student	3.4%
Relative household income:	
HH income in upper third for country	7.9%
HH income in middle third for country	6.9%
HH income in lower third for country	6.1%

Source: Global Entrepreneurship Monitor 2001 Summary Report (Reynolds et al. 2001, p. 32)