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Entrepreneurial Restarters in Germany**

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ABSTRACT

Taking a Second Chance: Entrepreneurial Restarters in Germany*

Folklore has it that the comparatively low proportion of self-employed in Germany is in part due to a habit that might be termed 'stigmatisation of failure': taking a second chance to build one's own firm after failing as a self-employed is said to be much more difficult here than in other countries. This paper uses data from a large recent survey in ten German planning regions to document that 18 percent of today's firm owners founded a firm in the past that went out of business in between, and that 8 percent of people who went out of business with their former firm are actively engaged in starting a new business today. The determinants of such a restart are investigated econometrically. It turns out that both individual and regional factors are important for the probability of taking a second chance: This probability is negatively related to age, attitude towards risk, 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.

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1. Introduction

Folklore has it that Germany suffers from a gap in self-employment with a level of entrepreneurial activity that is too low compared to other developed industrial countries, and that one reason for this lies in an element of the business culture which could be labeled 'stigmatization of failure': If you did not make it with your first attempt to start a firm of your own and if you had to go out of business once, you will never have a second chance or, at least, taking a second chance will be much more difficult.¹

Given the high rate of failure of newly founded businesses during their first years - the wellknown 'liability of newness'² - an attitude like this would indeed lead to less entrepreneurs and a lower proportion of self-employed *ceteris paribus*. Sound empirical evidence on this issue, however, is scarce and far from clear-cut. Sternberg (2000, p. 103f.) reports that in a population survey conducted in 1999 about one third of all interviewees in Germany answered the question whether a failure of a start-up is viewed as a personal defeat of the founder in the affirmative, and that this proportion is much lower in other countries. Only some ten percent of the experts interviewed, however, shared this opinion in Germany, a proportion in line with other countries. From the 'Flash Eurobarometer 83 Entrepreneurship', a population survey conducted by EOS Gallup Europe on behalf of the European Commission in September 2000, a somewhat different picture emerges showing that the offer of a second chance to people who failed is seen as normal on both sides of the Atlantic, and a huge majority is obviously not stigmatising entrepreneurs who tried but failed. Results for Germany did not differ from the average of 15 European countries, and from the US (see EOS Gallup Europe, 2000).

This paper contributes to the literature by empirically investigating two issues based on data from a large recently conducted survey of the adult German population:

- The percentage of firm owners who were actively running their own firm at the time of the survey and who founded a firm in the past that went out of business before, and the percentage of people who are taking their second chance at the time of the survey by actively engaging in starting a new business of their own after going out of business with their old one before.

- The determinants of taking a second chance, or restarting as a self-employed.

¹ Statements telling this folklore abound; see, e.g., the speech by Lesser (a CEO of the Deutsche Ausgleichsbank, a leading German institution in financing start-ups) at the opening of the "gruenderwelt" entrepreneurship fair at March 9, 2001, where he argued that "one chance is too less" and that a "culture of a second try" would be an important milestone on the way to a more entrepreneurial Germany (see: www.berlinews.de/gruendernews/1020.shtml), or a press release by the Business Angels Netzwerk Deutschland published in May 1999 where it is argued that a new "culture of failure" is needed (see www.business-angels-de./presse/pressemitteilungen/990512.htm). Recent examples from the economics literature include Frick et al., 1998, p. 274f., and Sternberg et al., 2000, p. 20, and Sternberg et al., 2001, p. 27 and p. 41.

² For empirical evidence on the high rates of failure of new business during their first five years in 14 European countries, see The European Observatory for SMEs, 1997.

The rest of the paper is organized as follows: Section 2 introduces the survey data used, section 3 gives empirical information on different forms of entrepreneurial activity, section 4 discusses results from an econometric investigation of the determinants to restart, and section 5 concludes.

2. The *Regional Entrepreneurship Monitor REM Germany 2001* survey

The data used in this paper are taken from a survey of the German population aged 14 years or older that was conducted using computer assisted telephone interviewing by TNS EMNID, a leading German opinion research institute, in the summer of 2001. This survey is part of the research project *Regional Entrepreneurship Monitor REM Germany* which focuses on the extent of the difference in entrepreneurial activities between regions in Germany, its determinants, and its consequences for regional development.³

In 10 (out of 97) so-called planning regions (or *Raumordnungsregionen*, see Bundesamt für Bauwesen und Raumordnung, 2001) a random sample of 1.000 people was interviewed, leading to a data set with 10.000 cases.⁴ The questionnaire⁵ asked for socio-demographic characteristics (sex, age, education, marital status, size of household, employment status, income) and a number of items related to entrepreneurial activities (e.g., whether the interviewee is the owner of a firm that is currently actively run by her or him, whether she/he is currently engaged in starting an own business). This data set gives a snapshot of activities and attitudes related to self-employment and new firm formation in the 10 regions in the Summer of 2001. Even if we can not claim that the data are representative for Germany as a whole, the regions were selected in such a way that they mirror the spatial structure with regard to old and new federal states (i.e., West and East Germany), highly industrialized versus more rural regions, center and periphery, etc. With a pinch of salt information relating to the average in the selected regions can be considered to be a valid instrument for information on Germany as a whole.

3. Incidence of restart activities in German regions

From the survey discussed in the former section we know whether an interviewee owns a firm (as a whole, or in part) in which he actively works in a leading position. Let us call such a person an *active owner*. If we consider the part of the population that is aged between 18 and 68 years - and we will focus on this subgroup in this paper - the share of active owners is 11 percent.⁶

³ Further Information about the REM project is available from the author on request. REM is closely related to GEM, the Global Entrepreneurship Monitor, a multi-country study that investigates the same topics at a national level (see Reynolds et al., 2000).

⁴ The data will be made available for public scientific use after the completion of the REM project.

⁵ An English version of the questionnaire is not yet available; a German version is available from the author on request.

⁶ All numbers reported for subgroups in this section are computed from weighted data that control for the (small) differences between the sex and age distribution in the random samples and in the populations in the regions based on information from the Mikrozensus 2000, an official one percent sample of the German population.

Furthermore, we know whether an interviewee started - alone or together with others - a business in the past that has been "closed or given up" (and not sold to others) later. Although we do not know whether an interviewee who answered this question in the affirmative went bankrupt in the past and whether he lost 'outside money' from bank credits, suppliers, etc., with a pinch of salt we label these people *failed entrepreneurs*. The share of this group in the population is 8.7 percent. The share of *failed entrepreneurs* among all *active owners* (as defined in the last paragraph) is 18 percent. According to this result nearly every fifth owner of a firm active today failed (at least) once in the past.

The interviewees were asked whether they are (alone or with others) actively involved in starting a new business that will (as a whole or in part) belong to him, and whether this business did not pay full time wages or salaries for more than three months to anybody (including the interviewee). Those who answered in the affirmative are considered to be *nascent entrepreneurs*.⁷ The share of this group in the population is 3.7 percent. While 23 percent of all *nascent entrepreneurs* are *failed entrepreneurs*, and while this figure is somewhat larger than the share of *failed entrepreneurs* in the group of *active owners* (which is 18 percent according to the evidence discussed in the paragraph above), 8 percent of all *failed entrepreneurs* are *nascent entrepreneurs* taking a second chance at the time of the survey.⁸

Whether these German figures for the share of *failed entrepreneurs* in all *active owners*, of *failed entrepreneurs* in all *nascent entrepreneurs*, and of *nascent entrepreneurs* in all *failed entrepreneurs* should be considered as "rather high" or "rather low" is open for discussion given the absence of comparable figures from other countries. What we can learn from these figures is that taking a second chance is not at all a rare event in Germany today.⁹ 'Stigmatization of failure' does not prevent restarts, at least not completely.

Table I reports detailed results for all the shares mentioned in the ten regions. Interregional differences in the order of magnitude point to differences in the level of entrepreneurial activity among the regions. Cases in point are the share of *nascent entrepreneurs* in the population that is about twice as high in the regions Köln and München as in the regions Emscher-Lippe and Mittleres Mecklenburg, and the share of *failed entrepreneurs* among *nascent entrepreneurs* that is more than two times as high in Westsachsen as in Mittelhessen or Stuttgart. The causes of these differences, and their consequences are at the heart of the research project REM. Here we will focus on one aspect - the share of *nascent entrepreneurs* in all *failed entrepreneurs*.

Results for all ten regions together furthermore control for differences in the absolute size between the ten regions.

⁷ This definition of a nascent entrepreneur is identical to the definition used in the GEM project mentioned above; see Reynolds et al., 2000, p. 9.

⁸ Note that people who failed in the past and who were active owners at the time of the survey were excluded from the calculation of the share of people taking a second chance 'right now'.

⁹ Evidence from the so-called *Munich Founder Study* points to a similar direction for the mid-1980s: Some 30 percent of all founders interviewed in this study reported that they started at least one business before they registered the start-up covered by this study. However, this survey did not ask whether this former business has been sold, or closed down (see Brüderl et al., 1996, p.87).

[Table I near here]

4. Who takes a second chance?

According to the evidence reported in table 1 about one in five *active owners* and *nascent entrepreneurs* is a *failed entrepreneur*. These *failed entrepreneurs*, therefore, form a considerable part of today's entrepreneurial population in Germany. However, not all *failed entrepreneurs* who are not *active owners* are *nascent entrepreneurs* - according to table 1 only 8 percent of these were taking a second chance at the time of the survey. What distinguishes these restarters from the rest of the failed, and what can we learn from any differences between the two groups? In this section the determinants of a restart are investigated econometrically. We will test for the role played by both individual and regional factors in shaping the probability of taking a second chance.

To start with the individual factors, we will look at sex, age, education, unemployment status, the time span passed since the closure of the former firm, and the personal attitude towards risk:

Given that we know that men have a higher probability to start a new business in Germany (e.g., Sternberg, 2000, p. 59), it is interesting to test whether this holds for the probability of a second start, too. Furthermore, we test whether the probability of a restart diminishes with age due to the diminishing pay-off period for any investment in a new venture. The role played by general human capital is measured by a dummy variable showing whether a person has a higher education (went to school for at least 12 years, or holds a degree) or not. Whether unemployment acts as a push factor into self-employment (e.g., due to the lower opportunity costs compared to people who have to give up their former job) is tested with a dummy variable.

Two more dummy variables are included in the empirical model: The survey asks whether the interviewee personally knows someone who started a new business during the last two years, and we look for a positive impact of contact with such a 'role model' (see Sternberg 2000, p. 60). Furthermore, the interviewee is asked whether fear to fail would prevent him from founding a firm. If he answered this question in the affirmative we consider this as an indicator of a high degree of risk aversion, and we expect a negative impact on the probability of a restart.

Descriptive statistics for these variables are given in Table II. About half of the persons in our sample of 484 *failed entrepreneurs* are male, and the percentage is higher for restarters than for non-restarters. 63 percent of all restarters but only 41 percent of the non-starters have a higher education. The proportion of unemployed is higher among those who take a second chance (11 percent) than among non-restarters (7 percent), and restarters are on average about six years younger than non-restarters. The average time span since their "old" firm closed is about six years for the first group, and seven for the second. Slightly more than half of the non-restarters but nearly 80 percent of the restarters have personal contacts with a young entrepreneur, and only 18 percent of those taking a second chance compared to 41 percent of those who do not state that fear of failure is a reason not to start a new venture.

[Table II near here]

The *ceteris paribus* role played by these characteristics in determining the probability of taking a second chance is investigated in an econometric model with a dummy endogenous variable taking the value one if a person is a restarter, zero otherwise.¹⁰ Results are reported in the column headed 'Model A' in Table III. From the prob-values¹¹ it follows that according to this model neither sex, nor unemployment, nor the years since the closure of the old firm have any influence on the probability of a restart. In line with our priors the probability diminishes with age, and it is lower for people with a high degree of risk aversion. Knowing a role model personally has a positive impact, and the same holds for a higher education although the coefficient is significantly different from zero at a level of 7 percent only.

[Table III near here]

Model A considers the role of personal attributes and attitudes only. From the descriptive evidence reported in Table I we know that the level of various forms of entrepreneurial activities differs considerably between regions. If this points to interregional differences in what is often called 'entrepreneurial culture' we would expect that these differences influence the decisions taken by individuals living in a region. As a next step, therefore, we additionally test for the role played by the region in determining whether a failed entrepreneur takes a second chance.

Results for an augmented empirical model containing nine dummy variables for the regions (using the Emscher-Lippe region as the standard group) are reported in the column headed 'Model B' in Table III. Many of the estimated coefficients of the region dummies are highly significant statistically, and a Wald test of the null hypothesis that all these coefficients are zero rejects the null at the one percent level of significance.¹² Note that the estimated coefficients for the other variables included and their levels of significance differ between Model A and Model B, although the big picture does not change much.

To peek inside the black box of the regional effects revealed by the dummies a third empirical model was estimated in which the dummy variables were substituted by three measures which mirror different aspects of the regional level of entrepreneurship activity and culture: the share of *nascent entrepreneurs*, the share of *failed entrepreneurs* among the *active owners*, and the share of *failed entrepreneurs* in the population. A higher share of *nascent entrepreneurs* points to a better developed entrepreneurial culture in a region, and we expect that this

¹⁰ To take the survey design described in section 2 above into account, the models were estimated with Stata 7.0 using the survey probit program `svyprobit` with the region as the primary sampling unit (psu) to control for clustering; see StataCorp, 2001, p. 321ff. for an overview of survey estimation.

¹¹ We report prob-values instead of t-values for two reasons: First, the degrees of freedom for the t in `svyprobit` are the number of clusters (i.e., regions) minus one, and not the number of observations minus the number of estimated coefficients, and this might cause irritation; second, the prob-values give an immediate and exact impression of the empirical significance level of an estimated coefficient.

¹² To test the null hypothesis an adjusted Wald test was computed. The test statistic has a value of $F(7,3) = 23.40$ with $\text{Prob} > F = 0.0128$.

increases the probability of taking a second chance. The same effect is expected from a higher share of *failed entrepreneurs* among the *active owners*, signalling that many others did it successfully, so I might expect to make it with my second start, too. A high share of *failed entrepreneurs* in the population, on the other hand, could point to comparably bad regional conditions for new firms and might be expected to be regarded as a bad oracle by potential newstarters, thereby leading to a lower probability of a restart.

Results for this model are reported as 'Model C' in Table III. The estimated coefficients for the three regional variables all have the expected signs, although the influence of the share of firm owners with a second start is not statistically significant at a conventional level. Again, the big picture from the results for the personal characteristics and attitudes is the same as in Model A and B: The probability of a restart is lower for older people and those with a high risk aversion, it is higher for those who personally know a role model. Sex, higher education, unemployment, and length of time span since closedown of the old firm does not matter.

Discussion of results hitherto was limited to the *statistical* significance of the estimated coefficients and the direction of influence conducted by the variables. Information on the extent of this influence, or on the *economic* significance, however, is even more important. Evidently, a variable that has no statistically significant impact can be ignored from an economic point of view, but the opposite is not true: A variable that is highly significant statistically might not matter at all economically - if the estimated probability for a restart diminishes by 0.00001 percent when a person is 68 instead of 18 years old, we can ignore age of a person in discussing who takes a second chance irrespective of any high level of statistical significance indicated by the prob-value.

Unfortunately, the estimated coefficients from a probit model (or for any other non-linear model) can not easily be used for statements about the size of the *ceteris paribus* effect of a change of the value of an exogenous variable (e.g., an increase in the age of a person by five years) on the value of the endogenous variable (e.g., the probability of taking a second chance), because the size of this effects depends on both the value of the exogenous variable under consideration and on the values of all other variables in the model (see Long and Freese, 2001, 87ff.).

One way to ease interpretation of the estimation results is to compute the estimated values of the endogenous variable (here: the probability of taking a second chance) for a person with certain characteristics and attitudes (male, 38 years old, with higher education, not unemployed, etc.), and then to see how a change in the value of one exogenous variable (e.g., the age) changes the estimated probability. With a lot of exogenous variables this procedure tends to lead to results not easy to survey.

A way out is to construct a limited number of types of persons using dichotomous variables that are statistically significant (ignoring those that are not) and to summarize the estimation results for various values of a significant continuous variable in a figure. Given that sex, higher education, unemployment, and time span since closedown of the old firm are all insignificant statistically, we will only consider unemployed men with higher education and a time span since closedown of 6.78 years (the average value in the sample). Furthermore, for the moment we fix the three regional variables at their sample means. Next, we use combinations of the two (statistically significant) dichotomous variables, high degree of risk aversion and personal contacts with a role model, to form four types of persons labeled TYP A to TYPE D and listed in Table IV. For every type the

estimated probability of taking a second start is then computed for values of the age variable between 18 and 68.¹³

[Table IV near here]

Results are graphed in fig. 1. From this it is obvious that age matters much. For example, the estimated probability of taking a second chance for a TYPE C person declines from .49 for an 18 year old youngster to .13 in the age of 68. For any given value of age, the probability to restart is much higher for a TYPE C person (who has no high risk aversion, and personally knows a young entrepreneur) than for any other person considered. Note that TYPE D and TYPE A have nearly identical restart probabilities although they are 'the opposite' regarding both high risk aversion and contacts with a young entrepreneur. This illustrates that the opposite effects of different determinants of restart probability can net out.

[Figure 1 near here]

The *ceteris paribus* impact of the variables can be seen from comparing the results for various types of a given age. A 30 years old TYPE A, for example, has an estimated restart probability of .12; for a TYPE B of the same age, the estimated probability is .05, and this much lower value is due to the lack of personal contact with a young entrepreneur. If we compare this TYPE A person with a TYPE C person of the same age, we see from the estimated probability of a restart of .25 for TYPE C that the absence of high risk aversion increases the probability for taking a second chance considerably. From this exercise we can conclude that risk aversion and personal contacts with a young entrepreneur are not only statistically significant, but economically important, too.

As a next step we will look at the *ceteris paribus* effect of the two variables that mirror aspects of the entrepreneurial culture of the regions, and that are statistically significant according to the results for Model C in Table III, i.e. the share of *nascent entrepreneurs* and the share of *failed entrepreneurs* in the population. To illustrate these effects we slightly modify the strategy applied in the last paragraphs. We take a TYPE A person from Table IV, look at it at different ages (25, 45, and 65), and let the regional shares vary over the sample range, but only one at a time while fixing the other two at their respective sample means. Results are graphed in fig. 2 and 3.

Fig. 2 illustrates that the share of *nascent entrepreneurs* in a region is important for the estimated probability of a restart for a given person. This probability is only .14 for a 25 years old TYPE A in the region with a share at the sample minimum, and it is .46 in the region with the highest share of nascent entrepreneurs.

¹³ All computations and graphics are done using SPost, an add-on package of ado-files for Stata written by J. Scott Long and Jeremy Freese (Scott and Freese 2001). Note that SPost does not work with Stata's *svyprobit* program, so the model has been reestimated using Stata's *probit* program with the option 'cluster', using the region as a cluster. The estimated coefficients that are needed to calculate the estimated restart probabilities are numerically identical for *svyprobit* and *probit* with this cluster option.

Note that this figure (and the figure to be looked at next) again shows the high importance of age for the restart probability.

[Figure 2 near here]

Finally, fig. 3 demonstrates that the higher the share of *failed entrepreneurs* in a region, the lower is the individual probability to take a second chance. For our 25 years old TYPE A the estimated restart probability declines from .31 to .20 when we compare the two regions with the lowest and the highest share of *failed entrepreneurs* in the population.

[Figure 3 near here]

5. Concluding remarks

This paper contributes to the literature on entrepreneurship in Germany by using data from a large recent survey to document that 18 percent of today's firm owners founded a firm in the past that went out of business in between, that 23 percent of all *nascent entrepreneurs* are *failed entrepreneurs*, and that 8 percent of people who went out of business with their former firm are actively engaged in starting a new business today. Restarts, therefore, matter. From an econometric investigation of the determinants of these restarts we see that both individual and regional factors are important statistically, and economically, for the probability of taking a second chance: This probability is negatively related to age, attitude towards risk, 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*.

The implications of these findings for economic policy are quite clear in one sense: What is good for entrepreneurship in general is good for fostering restarts. It is open for discussion, however, whether there is such a thing as a 'stigmatization of failure' in German business culture, and whether this is a reason for a too low level of entrepreneurship due to a too low level of people taking a second chance, asking for policy measures tailored to deal with this problem. Maybe, comparable figures for the share of restarters among *active owners* or *nascent entrepreneurs* in other highly developed industrialized countries could serve as a benchmark, but they are (at least, to the best of my knowledge) not available. However, given that there is no such thing as an optimal share of self-employed in a population that can be rigorously derived from a theoretical model, we have no objective measure to classify a given share of self-employment or restarters as too low (or too high). This makes a case against fixing any number related to entrepreneurial activities as a target for economic policy.

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Table I: Interregional distribution of selected entrepreneurial activities¹

Region	Share of "active owners" in the population (percent)	Share of "failed entrepreneurs" in the population (percent)	Share of "failed entrepreneurs" among "active owners" (percent)	Share of "nascent entrepreneurs" in the population (percent)	Share of "failed "entrepreneurs" among "nascent entrepreneurs" (percent)	Share of "nascent entrepreneurs" among "failed entrepreneurs" (percent)
Emscher-Lippe	5.98	7.96	20.03	2.53	14.98	5.68
Köln	10.52	9.28	17.27	5.87	21.47	13.43
Lüneburg	12.00	9.52	20.39	4.25	25.83	9.31
Main-Rhön	10.24	7.58	18.92	3.11	34.26	4.77
Mittelhessen	12.01	7.33	18.03	2.63	17.90	7.36
Mittleres Mecklenburg	9.64	7.05	20.75	1.95	37.30	3.58
München	13.29	9.72	16.76	4.63	21.91	10.10
Schleswig-Holstein Mitte	10.15	7.16	13.75	3.61	22.47	9.24
Stuttgart	12.74	9.75	17.85	2.92	19.95	3.28
West Sachsen/Leipzig	8.15	6.94	24.77	2.55	43.93	10.37
Average	11.06	8.73	18.02	3.74	22.98	8.08

Source: Own calculations based on weighted data from the Regional Entrepreneurship Monitor REM Survey 2001

¹ For a definition of the groups in " " see text.

Table II: Descriptive statistics¹

Variable	All failed entrepreneurs		Restarters		Non-restarters	
	Mean	Std.	Mean	Std.	Mean	Std. Dev.
Entrepreneurial restarter (Dummy, 1 = Yes)	0.08	0.27	1.00	0.00	0.00	0.00
Sex (Dummy, 1 = Male)	0.54	0.49	0.63	0.49	0.53	0.50
Age (Years)	46.70	12.15	40.92	9.79	47.19	12.22
Higher education (Dummy, 1 = Yes)	0.42	0.49	0.63	0.49	0.41	0.49
Unemployed (Dummy, 1 = Yes)	0.07	0.25	0.11	0.31	0.07	0.25
Years since closure of old firm	6.78	7.06	5.79	5.19	6.87	7.20
Fear of failure a reason not to start (Dummy, 1 = Yes)	0.39	0.48	0.18	0.39	0.41	0.49
Personal contact with a young entrepreneur (Dummy, 1 = Yes)	0.54	0.49	0.79	0.41	0.52	0.50
Regional share of "nascent entrepreneurs" (%)	3.56	1.16	4.02	1.23	3.52	1.15
Regional share of firm owners with a "second start" (%)	18.63	2.65	18.23	2.81	18.67	2.64
Regional share of persons with a "failed" firm in the past (%)	8.41	1.13	8.58	1.14	8.40	1.14
Region Emscher-Lippe (Dummy, 1 = Yes)	0.10	0.30	0.05	0.23	0.11	0.31
Region Köln (Dummy, 1 = Yes)	0.11	0.32	0.21	0.41	0.11	0.32
Region Lüneburg (Dummy, 1 = Yes)	0.11	0.32	0.16	0.37	0.11	0.32
Region Main-Rhön (Dummy, 1 = Yes)	0.08	0.28	0.05	0.23	0.09	0.29
Region Mittelhessen (Dummy, 1 = Yes)	0.08	0.27	0.08	0.27	0.08	0.28
Region Mittleres Mecklenburg (Dummy, 1 = Yes)	0.07	0.25	0.03	0.16	0.08	0.27
Region München (Dummy, 1 = Yes)	0.12	0.32	0.16	0.37	0.12	0.32
Region Schleswig-Holstein Mitte (Dummy, 1 = Yes)	0.09	0.29	0.13	0.34	0.10	0.30
Region Stuttgart (Dummy, 1 = Yes)	0.11	0.32	0.05	0.23	0.12	0.33
Region Westsachsen/Leipzig (Dummy, 1 = Yes)	0.08	0.27	0.08	0.27	0.08	0.27
Number of cases	484		38		446	

¹ For a detailed definition of the variables see text.

Table III: Estimation results for determinants of an entrepreneurial restart¹

Variable	Model A		Model B		Model C	
	Coeff.	P> t	Coeff.	P> t	Coeff.	P> t
Sex (Dummy, 1 = Male)	0.1020	0.582	0.1803	0.382	0.1484	0.458
Age (Years)	-0.0209	0.049	-0.0223	0.059	-0.0224	0.051
Higher education (Dummy, 1 = Yes)	0.3437	0.073	0.3137	0.171	0.3117	0.140
Unemployed (Dummy, 1 = Yes)	0.3599	0.188	0.3293	0.312	0.3317	0.279
Years since closure of old firm	0.0076	0.635	0.0071	0.716	0.0068	0.716
Fear of failure a reason not to start (Dummy, 1 = Yes)	-0.5263	0.006	-0.4673	0.017	-0.4906	0.011
Personal contact with a young entrepreneur (Dummy, 1 = Yes)	0.4631	0.050	0.4685	0.045	0.4572	0.047
Regional share of "nascent entrepreneurs" ² (%)					0.2534	0.001
Regional share of firm owners with a "second start" ² (%)					0.0199	0.210
Regional share of persons with a "failed" firm in the past ² (%)					-0.1248	0.045
Region Köln (Dummy, 1 = Yes)			0.5052	0.000		
Region Lüneburg (Dummy, 1 = Yes)			0.3744	0.000		
Region Main-Rhön (Dummy, 1 = Yes)			-0.0601	0.483		
Region Mittelhessen (Dummy, 1 = Yes)			0.0700	0.223		
Region Mittleres Mecklenburg (Dummy, 1 = Yes)			-0.1993	0.219		
Region München (Dummy, 1 = Yes)			0.2198	0.018		
Region Schleswig-Holstein Mitte (Dummy, 1 = Yes)			0.2980	0.001		
Region Stuttgart (Dummy, 1 = Yes)			-0.3708	0.000		
Region Westsachsen/Leipzig (Dummy, 1 = Yes)			0.1847	0.084		
Constant	-0.9391	0.041	-1.0917	0.027	-1.1428	0.122
Number of cases	484		484		484	

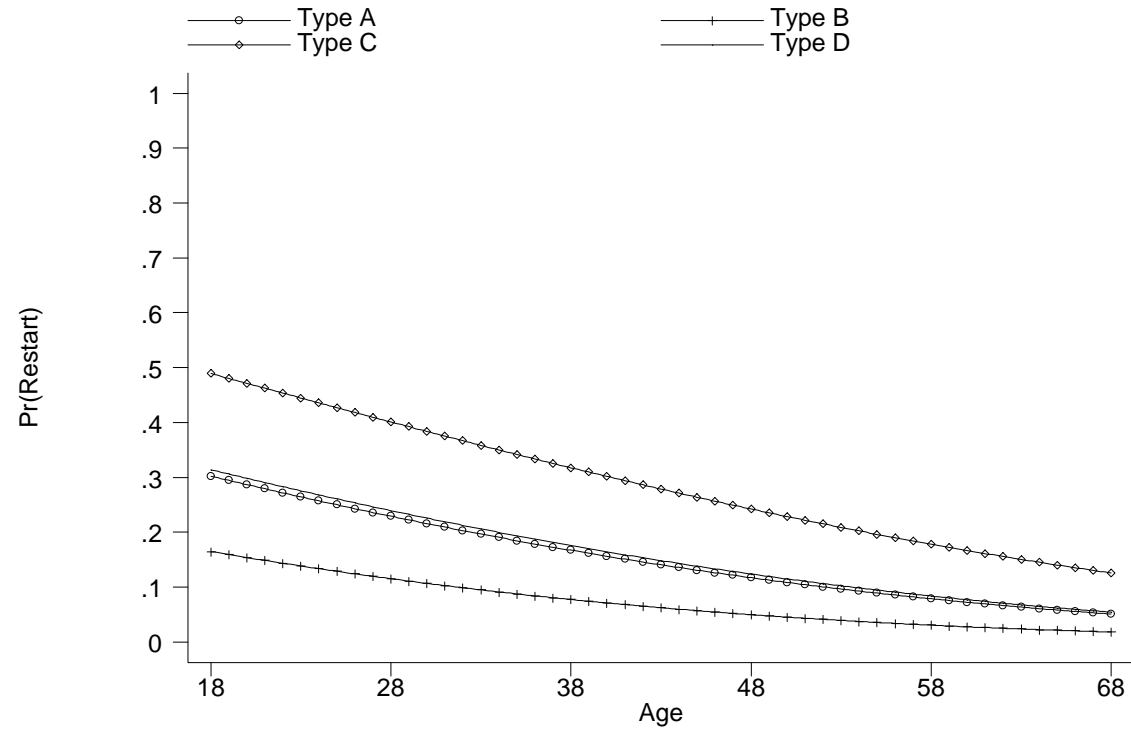
¹ The models were estimated by Stata 7 using the program svyprobit with the region as a cluster.

² See table 1

Table IV: Types of persons for simulations¹

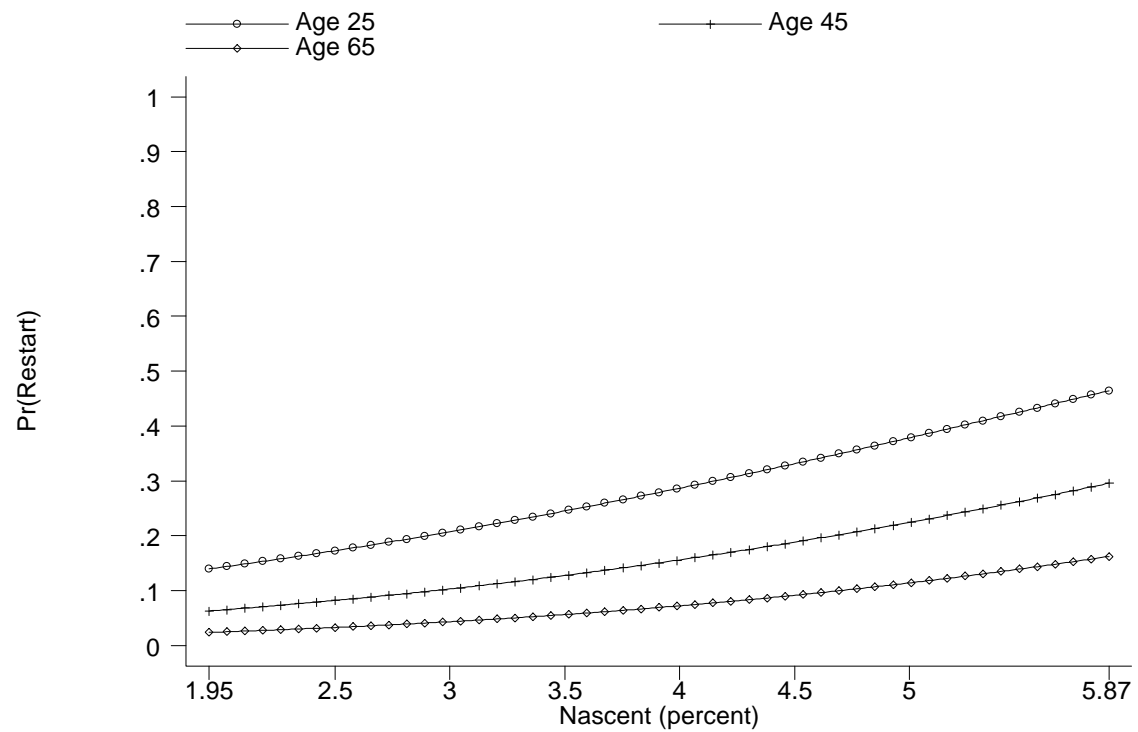
Variable	/ Type	A	B	C	D
Sex (Dummy, 1 = Male)		1	1	1	1
Higher education (Dummy, 1 = Yes)		1	1	1	1
Unemployed (Dummy, 1 = Yes)		1	1	1	1
Years since closure of old firm		6.78	6.78	6.78	6.78
Fear of failure a reason not to start (Dummy, 1 = Yes)		1	1	0	0
Personal contact with a young entrepreneur (Dummy, 1 = Yes)		1	0	1	0
Regional share of "nascent entrepreneurs" (%)		3.56	3.56	3.56	3.56
Regional share of firm owners with a "second start" (%)		18.63	18.63	18.63	18.63
Regional share of persons with a "failed" firm in the past (%)		8.41	8.41	8.41	8.41

¹ For a detailed definition of the variables see text.

Figure 1: Estimated restart probabilities for various types of persons¹

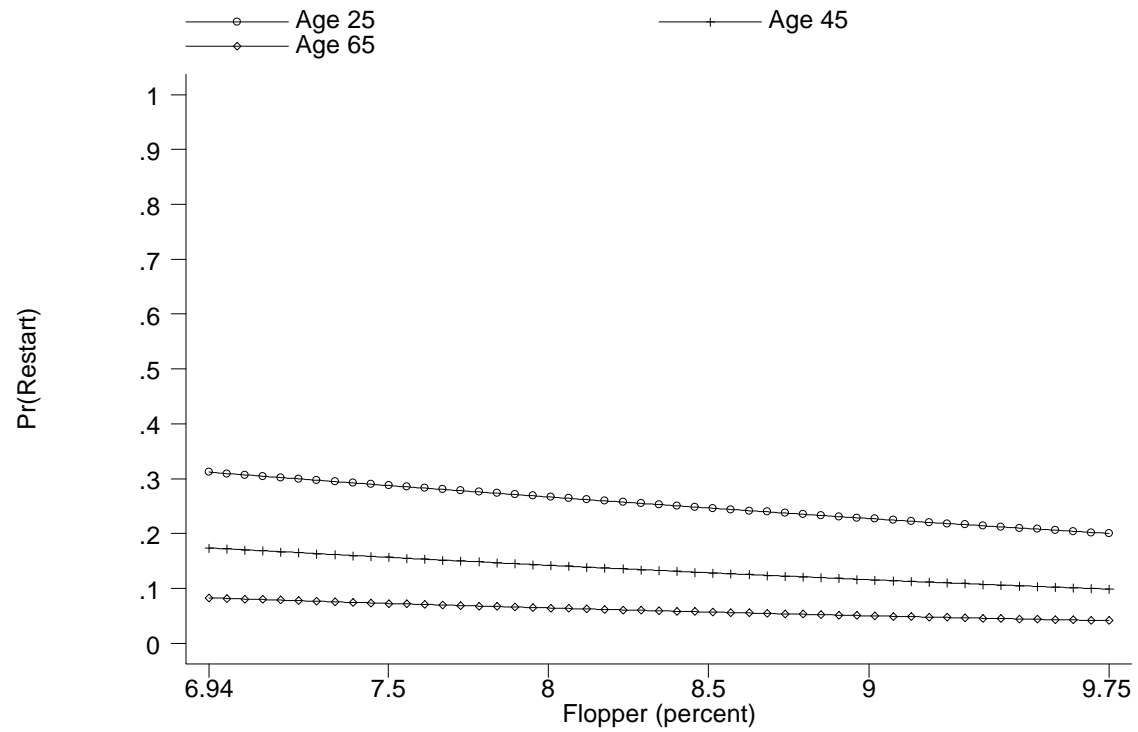
¹ For a definition of types of persons see table IV

Figure 2: Estimated restart probabilities for various regional shares of nascent entrepreneurs in the population ¹



¹ For a definition of nascent entrepreneurs see text

Figure 3: Estimated restart probabilities for various regional shares of failed entrepreneurs in the population ¹



¹ For a definition of failed entrepreneurs see text

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