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HOMO ENTREPRENAURUS?

Roope Uusitalo

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Valtion taloudellinen tutkimuskeskus

Government Institute for Economic Research

Hämeentie 3, 00530 Helsinki, Finland

Email: roope.uusitalo@vatt.fi

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Abstract: This paper examines the determinants of self-employment and transitions from wage work to self-employment using two sets of Finnish data from the 1990's. The results show that capital constraints have only a minor effect on new business starts. Human capital, in the form of intergenerational links in self-employment and psychological factors play a much larger role. The paper also provides empirical evidence that less risk-aversive workers are more likely to become entrepreneurs.

Key words: entrepreneurship, credit constraints, personality tests

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Tiivistelmä: Tässä tutkimuksessa selvitetään yrittäjäksi ryhtymiseen vaikuttavia tekijöitä 1990-luvun Suomessa. Empiiristen tulosten mukaan luottorajoitteilla on vain pieni vaikutus yritysten perustamiseen. Sen sijaan psykologisilla testeillä mitatuilla yrittäjäpiirteillä ja vanhempien yrittäjätaustalla näyttää olevan suuri vaikutus. Empiirinen aineisto tukee myös hypoteesia, jonka mukaan yrittäjät ovat keskimääräistä vähemmän riskinkaihtajia.

Asiasanat: yrittäjyys, luottorajoitteet, personallisuustestit

Summary

Increasing self-employment has often been proposed as a solution to high unemployment. Various start up allowances and soft loans have been proposed and implemented. The rationale of these policies is that starting a firm requires capital, and potential entrepreneurs often lack sufficient collateral for obtaining a business loan. Hence, capital constraints hinder the creation of new enterprises and, therefore, the creation of new jobs. The argument has gained some empirical support from the studies that show that personal or family wealth has a positive effect on the probability of entering self-employment.

However, there are several other important factors that influence self-employment decisions. This paper assesses the relative magnitudes of the effects of personal and family wealth, parents' entrepreunial background, and, perhaps most interestingly, some psychological factors, such as the degree of risk aversion.

It is found that financial factors have a relatively small impact on self-employment. In contrast, the probability of self-employment rises three-fold if either parent was self-employed. The correlation between sons and parents self-employment is not explained by parents' earnings or wealth, so it is conjectured that parents also transfer their offspring values or entrepreunial skills.

The results from the psychological tests indicate that there is a certain personality type that is more likely to start a firm. This entrepreunial type is dynamic, self-confident and 'risk-loving'. The results, therefore, support some of the early theories of self-employment, that suggest that, all else equal, the least risk averse people enter into self-employment.

The policy conclusion is somewhat pessimistic. Improving incentives or access to capital is not likely to increase self-employment significantly. Promoting self-employment would require affecting peoples attitudes, a task which could prove more difficult than relieving financial constraints.

Contents

1. Introduction

Entrepreneurs are the engine of the market economy. They make new innovations, foster economic growth and create new jobs. Therefore, policies that encourage generating entrepreneurship and new businesses are in high demand, particularly during an era of high unemployment. Policies offering various start-up allowances, soft loans and other subsidies have been proposed and implemented, but a convincing analysis on their effects is yet to be done. Economic theory is also surprisingly silent about the entrepreneur. A firm is still, to a large extent, a black box that produces goods and demands labor. There is relatively little research on why someone would choose to start a new business and whether the number of small enterprises could somehow be increased.

The economic theory on entrepreneurship dates back as far as to the writings of Knight (1921). The basic theory is a theory of choice based of utility maximization. People choose between operating a risky firm and working for a riskless wage. There are, of course, many factors that influence the choice. The most important ones relate to entrepreunial ability, labor skills, attitude towards risk, and initial access to capital required to create a firm.

The theoretical literature varies in its emphasis for these factors. Evans and Jovanovic (1989) build a model where liquidity constraints hinder starting new businesses. Starting a firm requires capital, often more than individuals own savings. Inability to provide adequate collateral from own or family assets may prevent some would-be entrepreneurs from acquiring a business loan and starting an enterprise. Wealthier people are less likely to be constrained and hence more likely to become entrepreneurs.

The Roy model of sectoral choice (Roy 1951) assumes that people form predictions on their earnings in the two sectors, and choose the one that provides higher utility. Therefore, entrepreunial talent and labor skills are the most important determinants of self-employment. Since both income as self-employed and as a worker can never be observed, the empirical implementation requires some correction for selectivity.

Kihlström and Laffont (1979) focus on risk aversion They formulate a general equilibrium model where workers can receive a fixed wage uncertain profits, and show that less risk averse workers become entrepreneurs. Dunn and Holz-Eakin (1996) added tastes for independence in self-employment vs. security in wage work into model.

Empirically, the liquidity constraint hypothesis has gained some support. The problem is that assets are typically badly measured and not really an exogenous

variable. One can argue that accumulated assets depend on ability in wage work. However, there are some natural experiments showing that exogenous influxes of capital, such as inheritances and gifts (Blanchflower and Oswald 1998) or lottery winnings (Lidth and Ohlsson 1996), increase the probability of self-employment.

For the selection based on earnings in two sectors, the evidence is less convincing. Generally, the predicted earnings differential is found to have a weak positive effect on self-employment (Johansson 1998, Rees and Shah 1986). However, identifying such systems requires exclusion restrictions, or finding variables that affect only earnings in the two sectors, without otherwise affecting the choice. Since such variables are hard to find, the evidence is, at best, suggestive. There is also some interesting time series evidence on the positive effect of marginal tax rates on self-employment, hinting that high marginal tax rates make underreporting ones income more appealing and it may be easier to underreport self-employment earnings than wage earnings (Blau 1987).

Hard evidence on risk aversion or tastes for independence is practically non-existent. Risk aversion is not commonly measured in data available for economists. There is some evidence of taste differences. Dunn and Holz-Eakin (1996) claim that intergenerational correlation in self-employment is far too high to be explained by liquidity constraints. Families appear to transmit their offspring entrepreunial skills or human capital. Evans and Leighton (1989) borrow arguments from sociology and psychology and show that ”misfits”, unemployed and workers who have changed jobs a lot, are more likely to be self-employed. They also find that men who have ”internal locus of control”, as measured by a psychological test known as the Rotter Scale, have greater propensity to start businesses.

This paper provides some evidence on the relative magnitudes of these effects. From the policy point of view, the relevance is that promoting entrepreneurship should target the most important factors, not the ones with trivial influence. We sidestep the relative earnings hypothesis on the grounds of avoiding disputable identification restrictions, and to keep the model in the reduced form. We, however, do include the most important exogenous variables of the relative earnings explanation: education and experience. Using two separate sets of data, we are able to test the liquidity constraint hypothesis, examine the intergenerational links in self-employment, and even provide some evidence on the risk aversion arguments.

The focus of this paper is in the determinants of self-employment in the non-agricultural section of the economy. The determinants of self-employment in agriculture are quite different. Practically all self-employed farmers either inherit their farm or marry a farmer’s daughter. The rest of the paper is organised as follows. Section 2 describes the data. Section 3 presents first the cross-section

results on the determinants of self-employment and then the results on the transitions into self-employment. Section 4 concludes.

2. Data and methods

Two separate sets of data are used to study the factors that influence the probability of starting a business. The first is a panel of Income Distribution Surveys (IDS) conducted by Statistics Finland between 1990 and 1997. This is a rotating panel where each household is followed in two consecutive years, and half of the households are replaced each year. The data, therefore, allow studying transitions into (and out of) self-employment and employment status in a cross section. The sample size varies across the years but is on average 10 000 households consisting of 23 000 individuals. The data contain probability weights that allow generalising the results to the whole population.

Information in the Income Distribution Surveys is collected by combining personal interviews and register based data. Altogether there are more than 600 variables in the dataset. The data contain, for example, detailed information on assets and debts of the households. Income data are also of very high quality including information on all wage and capital income as well as received transfers. Some of the most interesting features of the data are that there is also information on whether the household has received an inheritance during the past five years, and whether an individual has received public support for starting an enterprise.

Since transitions to self-employment are rather rare events, the sample size in the IDS data is not sufficient for statistical inference. Therefore, the data from different years are pooled. Persons under 20 and over 64, as well as those outside the labor force, are removed from data. This yields a sample of 85 417 observations.

The second set of data is a sample of 37 000 Finnish army recruits from 1982. These data has been matched with register data from the Labor Force Statistics 12 years later in 1994. The army data contain test scores from a battery of ability and personality tests. The tests measure mathematical, verbal and logical abilities and various personality traits such as achievement motivation, sociability, sense of responsibility and self-esteem. The army ability test is quite similar to common IQ-tests or, for example, SAT-examination. The test score used here is simply the number of correct answers. The personality test consists of a large number of statements with which the test taker has to agree or disagree. The army psychologists convert the answers to measures of eight character traits[1]. Both tests are given to all recruits. Since military service was compulsory at that time for all men, the data provide a unique opportunity to study the effects of

[1] It is not clear whether the scores are cardinal or ordinal measures. To avoid the effect of outliers the raw scores are ranked and the ranks are used as explanatory variables in this study.

psychological factors on entrepreneurship based on a large random sample of young men. Also, the test is taken at the age of 20 and is likely to measure adult personality better than various childhood test scores used in some of the previous studies[2]. Still, since in most cases the test precedes the decision to start a business, common endogeneity problems are avoided.

The army data are also linked to information on the parents of the recruits. Parents' income, occupational status and education are recorded in the 1980 population census. Most important pieces of information here are whether either parent was self-employed. Thus, the data can also be used for studying intergenerational links in self-employment. Furthermore, the impact of the family wealth on business starts can be studied using parents' income as a proxy.

The Labor Force Statistics data from 1994 contain cross-sectional information on the standard labor market variables: education, occupation, earnings and employment. Self-employment status can be defined either based on whether the individual had any earnings from self-employment or whether he was covered by a self-employment pension scheme. In 1994, the men in the sample were on average 32 years of age. Examining the factors that influence the probability of being self-employed in 1994, therefore, combines the probability of having made a transition to self-employment by the age of 32 and remaining in self-employment until the age of 32.

[2] Blanchflower and Oswald (1998) tried to relate self-employment status to childhood scores on a number of psychological tests. They state that results were "relatively disappointing" and that "Individuals' psychology does not seem to play a large role."

3. Empirical results

The simplest kind of entrepreneurship is self-employment. In Finland 330 000 people were classified as self-employed in 1998. One third of them were working in agriculture. Of non-agricultural employment slightly over 10% were self-employed. The number of self-employed decreased during the recession but their share of all non-agricultural employment has slowly but steadily increased for the last ten years. In 1998, the number of self-employed was back at the level of the 1989 boom year, while the number of employees still remained some 200 000 lower than before the recession.

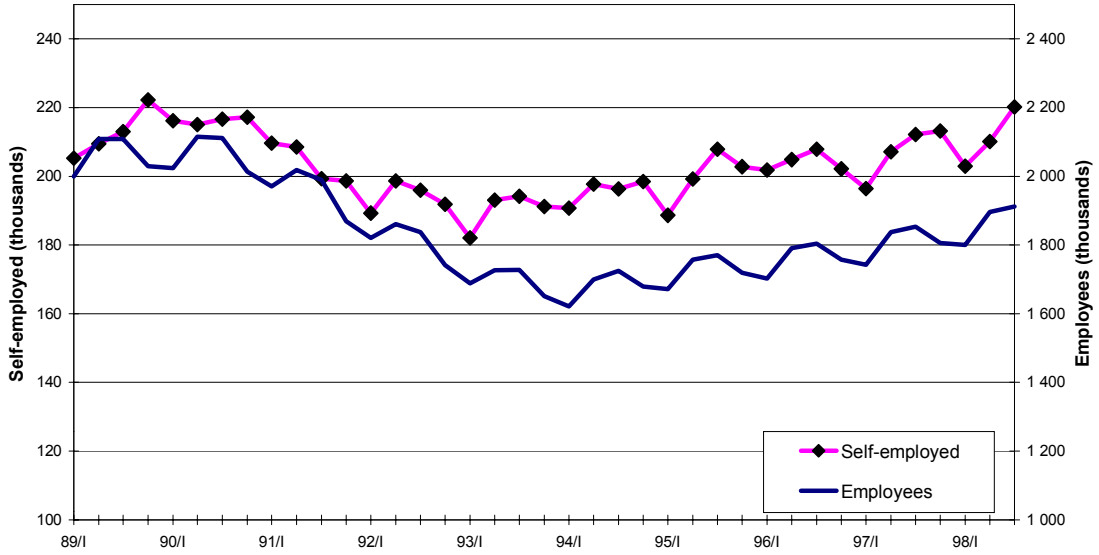

Figure 1 Recent trends in number of self-employed and employees

Source: Labor Force Survey, agriculture excluded

Most entrepreneurs run very small businesses. Approximately 60% of the entrepreneurs hire no outside workers, and only 11% have more than 4 employees. Obviously, self-employment cannot be a solution for high unemployment. Pushing unemployment back to the pre-recession level would require doubling the rate of non-agricultural self-employment. Still, it would be interesting to know what factors influence the decision to start a firm and whether public policy could somehow stimulate self-employment.

Self-employed work longer hours per week and more days per year. According to the Labor Force Survey in 1997, typical weekly hours of the self-employed were

47.8, while employees worked only 37.7 hours. Table 1 gives the estimates of hours and earnings excluding agricultural workers, and simply dividing total hours by total employment and total working days. These figures show somewhat smaller differences. Either way, it is clear that self-employed work considerable more than employees. Still, self-employed earn on average less than other workers. In 1997, the difference in the average earnings was about 30 000 marks. Also, the variance of earnings is higher for the self-employed. Self-employment is risky business. The only conclusion that can be drawn from these statistics is that the entrepreneurs seem peculiar people that for some odd reason reject a monthly pay-check for a much more uncertain future.

Table 1 Earnings and hours of work for self-employed and employees

	Self-employed	Employees
Employment	207 000	1 808 000
Working hours per week	45.1	39.8
Working days per year	247	211
Average annual earnings (mk)	107 000	136 000
Standard deviation of earnings	113 000	71 000

Sources: Hours, days and employment Labor Force Survey, annual review 1997, agriculture excluded. Earnings annual taxable earnings from Income Distribution Survey 1997 microdata.

3.1 Determinants of self-employment

Men are more likely to become entrepreneurs than women. Self-employment rate among men is approximately 14%, which is twice as high as the rate among women. For both sexes the self-employment rate increases as people get older. The growth is fairly steady until the age of forty. After that the entry and exit from self-employment are of an equal magnitude, and self-employment rate stays constant. The sharp rise in the self-employment rate of the oldest workers in figure 2 is a retirement related phenomena. The entry rate into self-employment stays roughly constant throughout the working age, and the number of self-employed at an advanced age does not increase, but employees retire earlier than the self-employed.

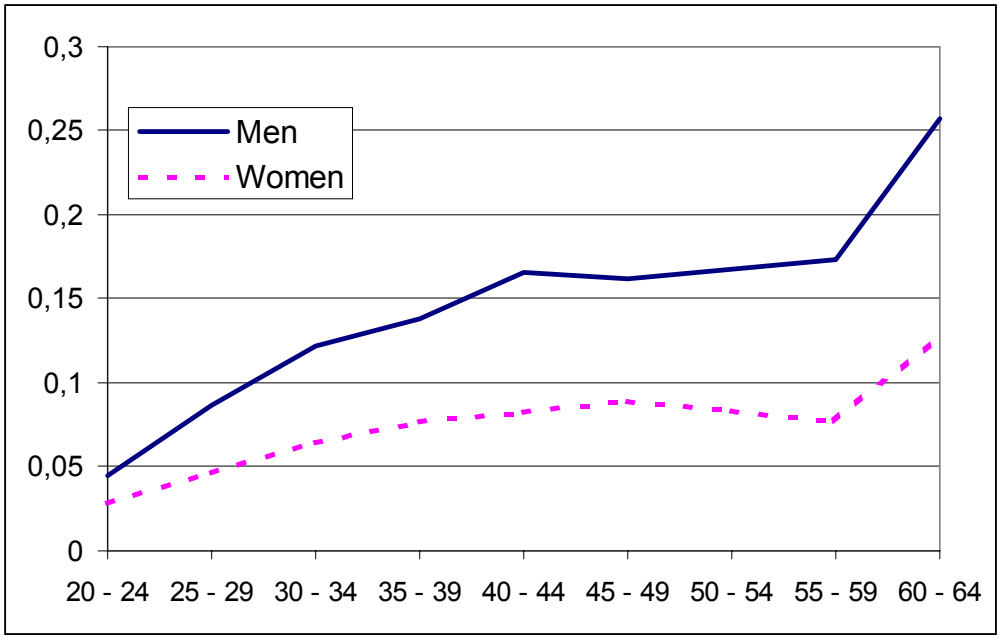

Figure 2 *Self–employment rates by gender and age*

Data source: Pooled Income distribution data 1990-1997. Self-employment-rates are calculated conditional on employment.

Self-employment is much more common in some occupations than in others. Naturally, not many solders or primary school teachers can become entrepreneurs. On the other hand, hairdressers, physiotherapists and truck drivers often own their firm and employ themselves. However, self-employment rate exceeds 50% in only one category of the 2-digit occupational classification. Hence, while self-employment is clearly influenced by the choice of occupation, it is not determined by that choice. Even the hairdressers may work for pay. When the factors that influence self-employment are studied below, occupation is controlled by including self-employment rate in the occupational category among the explanatory variables.

Table 2 Top ten self-employment occupations

Occupation (2-digit code)	N obs.	Self-employment rate
Hygiene and personal care (95)	445	69 %
Managerial (21)	2590	41 %
Therapeutical and rehabilitation (11)	351	39 %
Artistic and entertainment (07)	392	37 %
Professional sports and physical training (97)	50	33 %
Road transport (54)	1878	29 %
Wholesale and retail (34)	2715	28 %
Equipment operation (64)	582	27 %
Sewing etc. (71)	378	21 %
Painting (78)	228	21 %

Data source: Pooled 1990-1997 Income Distribution Survey data (first interviews). Occupational classification is a 2-digit version of the Statistics Finland 1987 occupational classification AMKO87. In Table only occupations with at least 20 observations are included. Self-employment rates are calculated using sampling weights.

Self-employment runs in the family. As shown in table 3, parents' self-employment status is one of the strongest predictors of their sons behaviour. In the army sample, the average self-employment rate is 9.3%. In contrast, 26% of men whose fathers were self-employed and 23% of men whose mothers were self-employed had become self-employed themselves. Parents' self-employment makes it about three times more likely that sons start a business of their own.

Table 3 Intergenerational links in self-employment

	Father self-employed		Mother self-employed		All
	Yes	No	Yes	No	
Self-employment	25.8	8.2	23.1	8.7	9.3
rate in 1993 %	[439]	[1 979]	[265]	[2 153]	[2 418]
N	1 702	24 267	1 147	24 822	25 969

Numbers are conditional on employment, agricultural workers are excluded. Self–employment is defined according to the main activity during the year. Sons' self-employment status is from 1993 Labor Force Statistics and parents' from the 1980 census. Figures in parentheses are numbers of self-employed in the respective category.

Intergenerational links in self-employment could be caused by parents transferring their sons either resources or merely attitudes. It is possible that wealthier parents provide capital for starting a firm. Maybe sons of wealthier parents can obtain a loan without collateral or maybe they inherit their parents. On the other hand, self-employed parents may also transfer human capital to their

sons. These entrepreneurial talents or attitudes could make their sons more likely to become entrepreneurs.

These conjectures are examined more closely in the following logit-model. Self-employment status in 1993 is explained by parents' self-employment status, parents' earnings (as a proxy for parents' wealth) and personality test scores. The model also includes variables controlling for education, age and industry.

Table 4 presents results from several different logit-specifications. The dependent variable is self-employment status in 1993. In the first column the explanatory variables include only education, age, industry and parents' self-employment status. Self-employment rate appears to increase with age and decrease with higher levels of education[3]. These results hold in all four specifications, no matter whether additional variables are included or not. As before, parents' self-employment has a strong impact on sons' self-employment.

If the impact of parents' self-employment is caused by transmission of financial capital and relieving liquidity constraints, we could expect that including parents' wealth (or earnings as a proxy) into the equation, would decrease the coefficient of parents' self-employment. On the other hand, if parents just transfer human capital, we could hope to capture some of the effect by including measures of attitude or ability.

In the remaining columns of Table 4, test scores and parents earnings are added to the equation. Column (2) includes the test scores, column (3) the parents' earnings, and column (4) both the test scores and the parents' earnings. Adding these variables does not change the effect of parents' self-employment; the coefficients are not significantly different in any of the specifications. Nevertheless, the results concerning the effect of the test scores and the parents' earnings are interesting by themselves.

[3] Also Johansson (1998) finds that education decreases the probability to enter into self-employment and to be self-employed at any point of time. This finding is in contrast with Evans and Leighton (1989), who find that more educated are more likely to be self-employed in US.

Table 4 Cross-section logit-results

	(1)		(2)		(3)		(4)	
	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.	Coef.	Std. Err.
Education								
Lower vocational	0.101	0.061	0.128	0.062	0.075	0.061	0.109	0.063
Upper vocational	0.163	0.071	0.063	0.079	0.120	0.072	0.040	0.080
Lowest higher ed.	-0.332	0.116	-0.414	0.124	-0.374	0.117	-0.431	0.124
Bachelor's	-0.497	0.262	-0.638	0.273	-0.538	0.262	-0.655	0.273
Master's	-0.547	0.126	-0.724	0.139	-0.619	0.128	-0.766	0.141
Licentiate or PhD	0.088	0.259	0.014	0.266	0.024	0.259	-0.019	0.267
Age	0.065	0.018	0.068	0.018	0.072	0.018	0.074	0.018
Test scores								
Verbal score			-0.445	0.122			-0.451	0.122
Math score			0.553	0.121			0.523	0.122
Leadership			0.405	0.116			0.398	0.117
Dynamism			0.391	0.115			0.404	0.116
Cautiousness			-0.296	0.091			-0.317	0.091
Parents								
Mother's log income 1980					0.014	0.007	0.009	0.007
Father's log income 1980					0.018	0.007	0.017	0.007
Father self-employed	1.023	0.073	1.013	0.075	0.985	0.074	0.978	0.076
Mother self-employed	0.420	0.091	0.425	0.092	0.440	0.091	0.441	0.093
Constant	-5.826	0.570	-6.201	0.583	-6.306	0.584	-6.607	0.596
N	33 893		32 809		33 589		32 514	
Log likelihood	2318		2328		2332		2339	

Agricultural workers and full-time students excluded. Self-employment defined according to main economic activity in 1993 for sons and in 1980 for parents. Each column also contains self-employment rate in 1-digit industry. Number of observations varies across columns due to missing data on parents and test scores. All test scores are ranks that are scaled to unit interval. Parents' earnings are in 1980 Finnish Markkas.

Of the test scores, mathematical ability seems to have a positive, and verbal ability a negative effect on self-employment. While these results are difficult to interpret, psychological test scores are more interesting. The test items measuring leadership motivation and dynamism get a positive and cautiousness score a significant negative coefficient. The test description defines a person with high leadership score as someone who ”wants to make plans and influence others. He also believes in his ability to lead others and he takes responsibility for his actions”. A person with high score in dynamism ”gets started quickly in his tasks and works fast, sometimes without sufficient consideration for the

consequences". Finally, the test cautiousness is closely related to risk aversion; a person with a high score "considers and plans carefully his doings", "is able to resist temptations" and "avoids unnecessary risks". Risk aversion is rarely measured in economics, but the cautiousness score appears to be very close to what the economists mean by risk aversion. Men with high cautiousness score are less likely to become self-employed. Hence, according to the results, one can claim that entrepreneurs are less risk averse!

Parents' earnings have a positive but small impact on the probability of self-employment. Sons of wealthier parents are more likely to become entrepreneurs, pointing to potential effects of liquidity constraints.

3.2 Transitions into self-employment

Cross-section analysis of self-employment combines the effects on business start-ups and successful operation. From policy perspective this is probably more meaningful than studying just business formation. If most newborn firms die quickly, no permanent improvements in employment or growth can occur. Yet, some aspects of self-employment are better analyzed by studying the entry into self-employment. One such issue are the credit constraints. Starting a business venture requires capital, and if individuals do not have adequate collateral to obtain a loan, the liquidity constraints may be binding. The liquidity constraint hypothesis relates to the effect of assets *prior* to the entry into self-employment. Cross-section analysis of existing enterprises confuses the impact of assets on the entry and the accumulation of assets from a successful business.

As noted in the beginning, self-employment rate rises until the age of forty and levels off after that. This is a combined effect of entry into, and exit from, self-employment. Every year about 1.5 percent of workers under forty switch into self-employment. The entry rate decreases to about 1 percent after the age of forty and remains on that level until the retirement. The age pattern in figure 3 is essentially similar to that documented in U.S. by Evans and Leighton (1989).

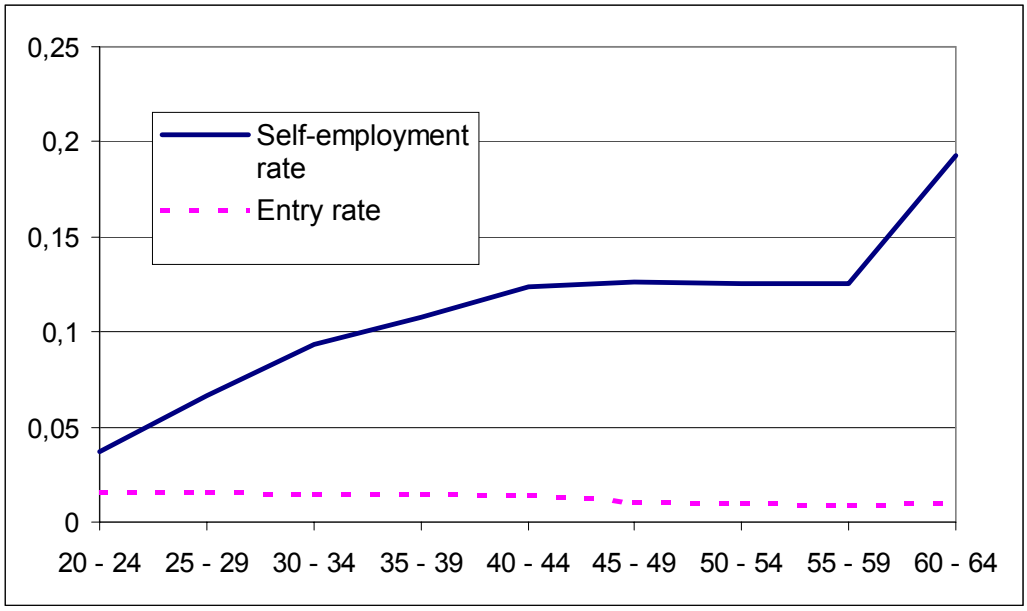

Figure 3 *Self–employment rate and entry into self-employment*

Data source: Pooled Income distribution data 1990-1997. Self-employment-rates and entry rates are calculated conditional on employment.

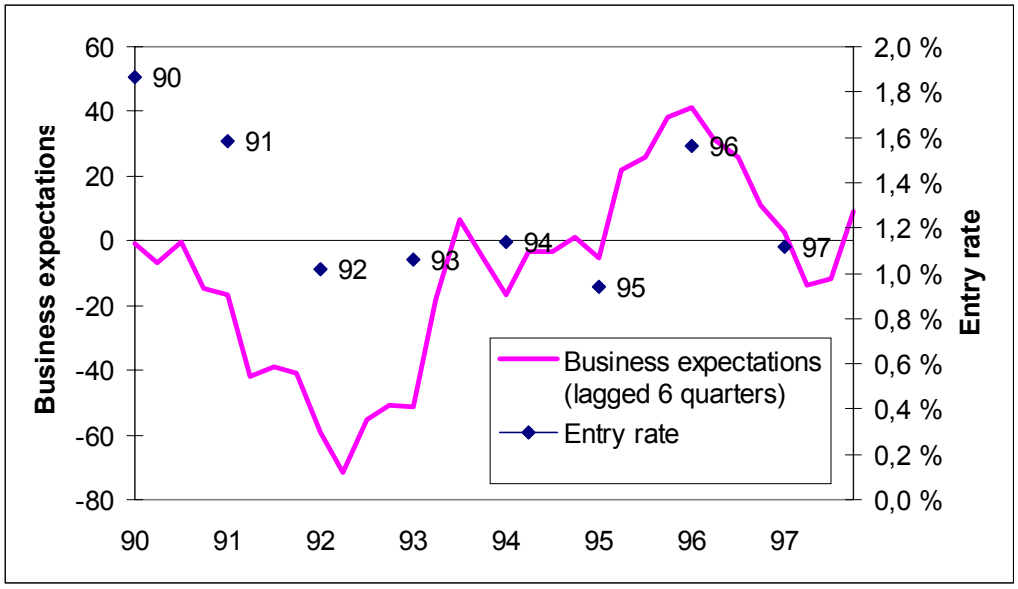

Figure 4 *Business expectations and entry into self-employment*

Entry 90 refers to a person who was not categorized as self-employed in 1990 but was in 1991. Entries in other years are defined similarly. Data are from the Income Distribution Surveys. Business expectations are from Business Cycle Barometer (industry aggregate B15S) and are lagged six quarters.

The entry rate fluctuates along the business cycle. In 1990, almost 2 percent of workers entered into self-employment. The entry rate decreased to about 1 percent during the recession. However, the entry rate is not very highly correlated with the usual business cycle indicators, such as the growth rate of the GDP. Correlation between the entry rate and the business expectations is much greater. Moreover, it is not surprising that the contemporary correlation between these series is smaller than the correlation of the entry rate and the lagged expectations. Starting a firm takes time. The time lag between favourable business expectations and a boom in the new business formation appears to be about six quarters.

Table 5 presents results of logit-models explaining transition into self-employment. The first column only includes gender, education, age, occupation and business expectations as the explanatory variables. These results are pretty much as expected. Men and younger workers are more likely to become self-employed. Education does not seem to matter[4]. Strong business expectations have a positive, but not significant, impact. In column (2), a dummy variable indicating whether the individual had been unemployed at least two weeks during the year before the potential transition is added into equation. A period of unemployment increases the probability of becoming self-employed. This suggests that job loss can also push into self-employment.

[4] Without controlling for occupational differences, the effect of education is negative but insignificant.

Table 5 Transitions into self-employment. Logit estimates

	(1)	(2)	(3)	(4)	(5)	(6)
Male	0.677	0.668	0.658	0.648	0.668	0.444
	(0.130)	(0.130)	(0.130)	(0.130)	(0.130)	(0.344)
Age	-0.015	-0.013	-0.017	-0.009	-0.014	-0.003
	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.013)
Years of education	0.008					
	(0.026)					
Business expectations	0.003					
	(0.002)					
Unemployed last year		0.341	0.386	0.434	0.342	1.080
		(0.150)	(0.153)	(0.155)	(0.150)	(0.355)
Log household wealth			0.030			
			(0.016)			
Log household debts				0.056		
				(0.015)		
Net worth					0.000	
					(0.000)	
Inheritance						0.192
						(0.429)
Constant	-4.892	-4.925	-5.079	-5.590	-4.908	-5.419
	(0.412)	(0.259)	(0.282)	(0.332)	(0.262)	(0.702)
N	36632	36632	36632	36632	36632	4422
Log likelihood	-2181	-2179	-2176	-2165	-2179	-244

Figures in parentheses are standard errors. Data are pooled cross-section data from Income Distribution Surveys 1990-1997. All variables are measured in the year before potential transition. Each column also includes self-employment rate in occupation. Inheritance is only recorded in 1994. Therefore, column 6 only contains households who were first interviewed in 1994.

In the last four columns of Table 5, measures of household wealth and indebtedness are introduced to the model. First, in the column 3, household wealth (sum of taxable wealth of all members in a household) seems to have a positive effect on the probability of becoming an entrepreneur. This gives support to the liquidity constraint hypothesis. Wealthier households are less likely to face liquidity constraints. (Otherwise wealth should have no effect on the choice between paid employment and self-employment.) The result is contradicted by next two columns, though. Also total household debts have a positive effect on the probability of becoming self-employed! Household net worth (wealth minus debts) have a zero effect.

Finally, in column 6, we added into the equation a dummy variable indicating whether the household had received an inheritance or other unusual income during previous five years. This question was only asked in the first wave of the

1994 survey. Of 4 422 households, 811 answered that they had. Inheritance is probably as close to an exogeneous variable as one can hope, and therefore presents a valid test of the credit constraint hypothesis. The coefficient of the variable is positive, but significance level is far from the conventional levels of rejecting the null of no effect.

As a robustness check, we experimented with other available measures of wealth. Yet, the results did not change qualitatively. Owning a house had a positive effect as expected, since the majority of the household taxable wealth is in dwellings. Similarly, household capital income had a positive effect. None of these alternative specifications had any effect on the perverse positive coefficient of the household debts, nor did they alter the conclusion on no effect of the net worth. The results were also robust to other changes in the specification. Adding fixed time effects only made it impossible to identify business cycle effects. Also, the results from a probit-model were more or less identical to the logit-results.

4. Conclusion

Stimulating the formation of new business enterprises through influencing factors that induce entry into self-employment is an attractive policy option. However, according to the empirical results of this study, obtaining the desired results would be a difficult task. Providing better financial incentives or relieving liquidity constraints could have a positive impact on business start-ups, but the impact is likely to be small. The positive effect of personal or household wealth is commonly seen as evidence in favour of the existence of liquidity constraints. These results are replicated also in this study. However, the positive effect of household debts and the zero effect of net worth cast some doubt on these results.

Entrepreneurship appears to be a character trait. Moreover, this trait runs in a family. Therefore, promoting entrepreneurship would require influencing peoples attitudes. This could prove to be more difficult than merely changing the incentives or improving access to capital. At least formal schooling is not helping much. More educated are less likely to start their own businesses. In fact, the role of the psychological characteristics is one of the most intriguing results of this paper. The results support the idea of a certain entrepreneurial personality: dynamic, self-confident and less risk averse – a homo entreprenaurus.

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