

ENTREPRENEURIAL INTENTIONS OF UNIVERSITY STUDENTS AND GRADUATES – A FINNISH PERSPECTIVE

Hytti, Ulla – Paasio, Kaisu – Pukkinen, Tommi¹

Small Business Institute, Business Research and Development Centre

Turku School of Economics and Business Administration

Rehtorinpellonkatu 3, FIN - 20500 Turku, Finland

Tel. +358 (2) 481 481, fax +358 (2) 4814 393

Email. Firstname.Lastname@tukkk.fi

ABSTRACT

The Finnish universities have not focused on developing new entrepreneurs. University graduates have been underrepresented in the entrepreneur population in Finland. However, the group of university graduates is heterogeneous calling for investigations of the different sub-groups. The paper confirms earlier studies that the male persons at their prime-age (31-45 years) continue to be the most active group in terms of entrepreneurship and that the role of entrepreneurial role models in the family has a positive effect on the perceptions and intentions. Despite the risks attached to the dual-entrepreneur families, the role of the spouse is underlined in this study to have a positive influence on the personal desirability, feasibility and intent to start a firm. The university students find entrepreneurship both personally and generally desirable, which suggests that the entrepreneurial career in the future might become more typical for the university graduates. However, training and skill-development programmes might be necessary to increase the personal capabilities. Interestingly people with the background in business have more positive attitudes towards entrepreneurship than people with a background in engineering. Similarly, inter-disciplinary courses to include engineering and business students might be necessary to promote the entrepreneurial attitudes of the engineering students in order to promote more new technology-based start-ups. The paper suggests that there should be a continuous effort to promote female entrepreneurship. Furthermore, the third-age persons with the necessary social and financial capital could be targeted specifically to promote the positive attitudes and entrepreneurial intent, which would also support the current employment policies.

INTRODUCTION

Traditionally Finnish universities have educated individuals for the public sector and large enterprises and the role of the Finnish universities has not been important in terms of developing future or current entrepreneurs. It is only recently that this role for the universities has been emphasised by the society due to the structural changes both at the private and public sector (flattening organisations, downsizing of the public sector). Nevertheless, there is still some controversy within the university sector of this role (see Paasio et al 2005). The university graduates are also underrepresented in the entrepreneurial population: There is a negative correlation between education and entrepreneurship in Finland: The more educated a person, the less likely she or he is to act as an entrepreneur albeit the positive attitudes towards entrepreneurship in general.

¹ Authors of the paper are in alphabetical order.

In this study, we are interested in how people with an academic degree perceive entrepreneurship as a personal career alternative. Nevertheless, we must acknowledge that the group of academic graduates is a highly heterogeneous one. In order to grasp these differences, we have selected the respondents from different groups in the study. First, we analyse how people that have graduated the university at different times perceive the alternative. Second, it is also interesting to examine how the future graduates that are currently studying at a university perceive entrepreneurship. Our expectation is that they should be more positive about the option than the older generations as the option is increasingly put forward as an alternative for people with an academic degree. Thirdly, there is currently a strong emphasis on the doctoral studies in Finland. The annual number of PhDs has doubled in the 1990s. For example, in 1995 there were about 800 PhDs which had grown into 1400 PhDs in 2004. At the same time it is assumed that the universities will not be able to absorb the growing number of PhDs into an academic career but they will increasingly need to seek other career options. For this reasons we are also investigating not only the basic degree students (M.Sc., B.Sc.) but also doctoral students and their perceptions of entrepreneurship. Fourthly, it is assumed that the different university disciplines will provide the students with different capabilities with regard to entrepreneurship. The respondents also represent different educational backgrounds: commercial, technical and natural sciences. As a result, we investigate how the background education will affect the entrepreneurial intentions of the respondents.

ENTREPRENEURSHIP AS A CAREER CHOICE FOR THE UNIVERSITY GRADUATE

Recent research results suggest that Finnish people have very positive attitudes towards entrepreneurship in general but only few people have actual plans of setting up a firm (Arenius – Autio 2000, Arenius et al 2004). More particularly it is university graduates that are not interested of the entrepreneurial career. In fact, there is a negative correlation between education and entrepreneurship in Finland: The more educated a person, the less likely she or he is to act as an entrepreneur (see Figure 1). About 1/5 of the working population with a basic degree act as entrepreneur, while the share for the university graduates is only about 10% (Statistics Finland 2004).

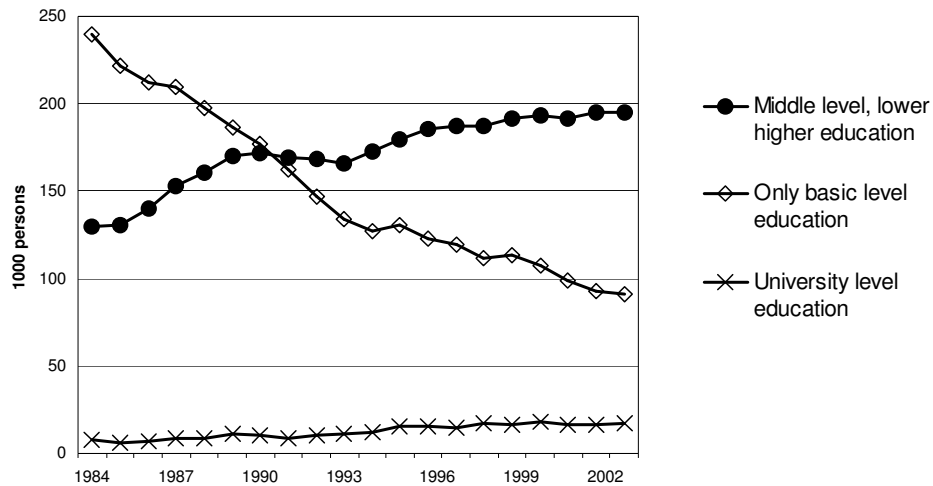


Figure 1 The development of the number of entrepreneurs by level of education 1984-2004 (1000 persons), (Statistics Finland 2004, Paasio – Pukkinen 2005)

There are also important variations between the different disciplines with regard to entrepreneurship. On average only about 1,3% of the students act as entrepreneurs after one year from graduation. However, in certain disciplines the average is much higher (20% of the dentists, 11,5% of the veterinaries). (Statistics Finland 2004, Paasio – Pukkinen 2005) It seems also that in certain disciplines the entrepreneurial activity is based on the level of education (Figure 2). For example, the entrepreneurial option is fairly usual for the people with a lower engineering degree while for the engineers with a university degree the option is less frequent. Within the business and social studies the trend seems to be opposite: the more educated persons act as entrepreneurs more frequently than the persons with a lower degree. The trend is similar for the natural sciences although with a much smaller proportion of entrepreneurs.

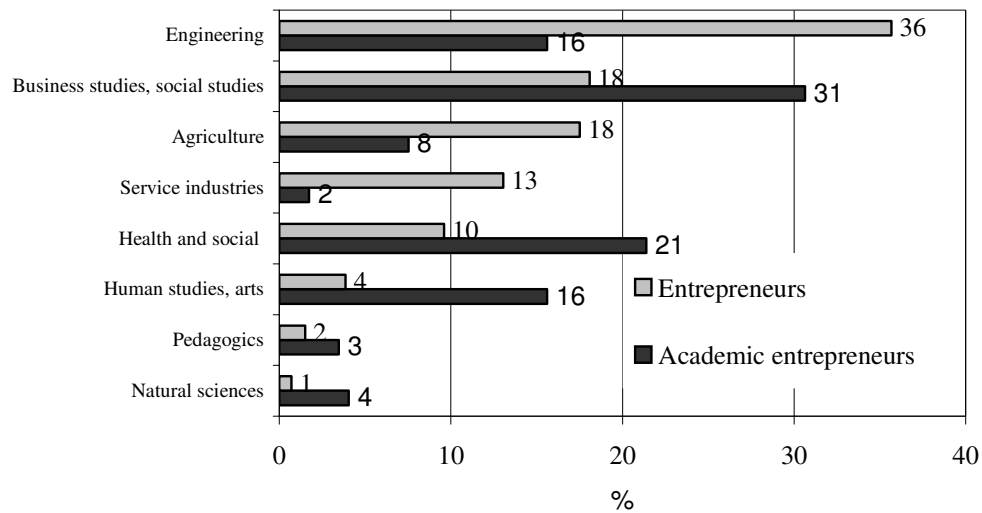


Figure 2 Entrepreneurs and entrepreneurs with an academic degree by education, 2003, %

The basis for the study is that becoming an entrepreneur is intentional, planned behaviour (Shapero – Sokol 1982, Krueger et al 2000, Rouvinen – Väänänen 2004, Grundstén 2004, Kolvereid 1996). Based on the theory the intent and behaviour are dependent on one hand on the perceived personal desirability and on the other hand on the perceived personal feasibility of the endeavour. These personal attitudes are affected by the personal and situational factors (Krueger 2000) such as educational background and working history. The framework for the study is presented in the figure 2.

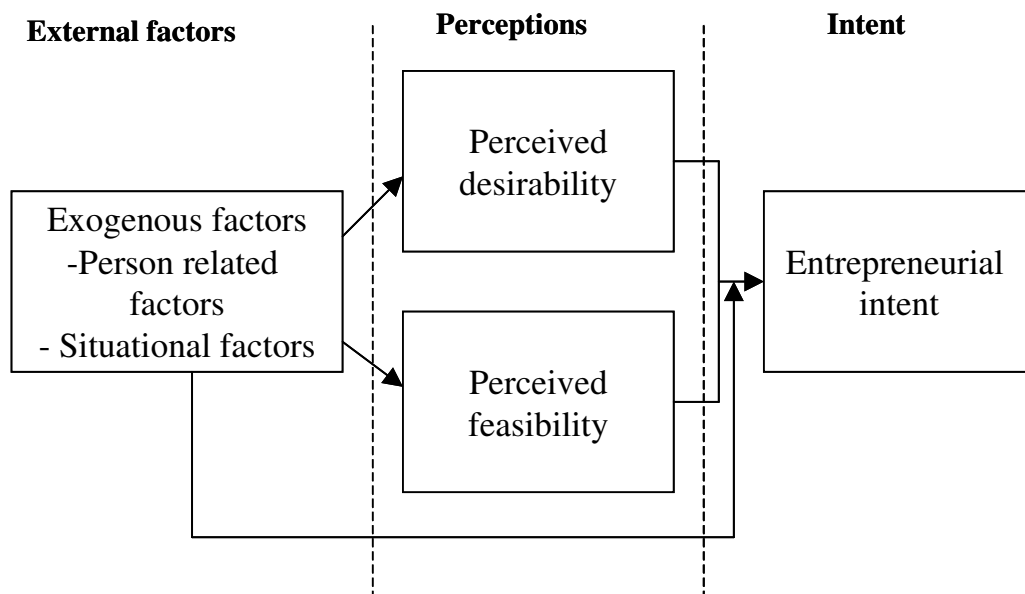


Figure 3 The process of model of entrepreneurship (adapted from Krueger 2000, Paasio – Pukkinen 2005)

The aim of our study is to investigate how university students and graduates perceive entrepreneurship as a personal career alternative.

METHODOLOGY AND ANALYSIS

Data Gathering

For the purposes of this study a dataset was formed to include respondents from the following groups:

- Bachelor or Master’s degree students
 - Turku School of Economics and Business Administration (Finnish speaking business university in Turku), N=188
 - Åbo Akademi (Swedish-speaking university in Turku), N=76
- Doctoral students at the University of Turku
 - Participants at an Entrepreneurship Programme, N=56
- University graduates that work as employees
 - Members of the Finnish association of Graduates in Economics and Business Administration (SEFE), N=471
 - Members of The Finnish Association of Graduate Engineers (TEK), N= 374

Data and Measures

The dependent variables

Entrepreneurial intent: How probable is it that you will start a firm within 5 years (scale 0-100)

Perceived personal desirability: How attractive would it be for you to start a firm? (scale 0-100)

Perceived personal feasibility: How easy would it be for you to start a firm? (scale 0-100)

[Perceived general desirability: How attractive is it for people in general to start a firm? (scale 0-100)]

[Perceived general feasibility: How feasible is it for people in general to start a firm? (scale 0-100)]

The independent variables:

- Sex (1=male)
- Age (1=under 30 years, 2=31-45 years, 3=over 46 years)
- Entrepreneurs in the family (grand-parents) (1=yes)
- Entrepreneurs in the family (parents) (1=yes)
- Entrepreneurs in the family (sisters, brothers) (1=yes)
- Entrepreneurs in the family (spouse) (1=yes)
- Entrepreneurs in the close networks (friends) (1=yes)
- Status (1=Student (M.Sc., B.Sc.), 2=Doctoral student, 3=Employee)
- Education (1=Business studies, 2=Engineering, 3=Natural sciences)

Table 1 Presentation of the data

Sex	n	Age	n	Status	n	Education	n
women	529	under 30 years	446	basic degree	260	commercial	659
men	621	31-45 years	311	doctoral degree	56	technical	446

		46 years of more	400	working life	845	natural sciences	56
missing	11	missing	4	missing	0	missing	0
N	1161		1161		1161		1161

Analysis

We conducted a logistic regression analysis on the relation of gender, age, entrepreneurial role models, status of the respondent (student, doctoral student or already in working life) and educational background towards perceived personal desirability, perceived personal feasibility and entrepreneurial intent. In addition, we conducted a logistic regression analysis on the relation of the above independent variables towards perceived general desirability and feasibility of entrepreneurship.

The relations were first analysed with SPSS Logistic Regression Enter method that includes all the variables in the model. We then iterated the model with Forward Wald method that excludes the variables not explaining the dependent variables. The stepwise analysis excluded some of the variables that appeared as statistically significant in the first phase but included also some new variables that were not statistically significant in case all the variables were included in the models. In the results we have chosen to apply the results from the Forward Wald method.

RESULTS

The variables explaining the positive attitude towards perceived personal desirability and feasibility and entrepreneurial intent are listed in the table below.

TABLE Logistic regression on positive attitudes towards perceived personal desirability and feasibility and entrepreneurial intent

N = 1161	Perceived personal desirability		Perceived personal feasibility		Entrepreneurial intent	
	<i>Exp (B)</i>	<i>Sig.</i>	<i>Exp (B)</i>	<i>Sig.</i>	<i>Exp (B)</i>	<i>Sig.</i>
Male	2,648	0,000	2,434	0,000	2,436	0,000
Young (under 30 yrs)	1,682	0,017	--	--	--	--
Prime age (31-45 yrs)	2,407	0,000	--	--	2,139	0,001
Entrepreneurs in the family (parent)	--	--	1,601	0,003	1,629	0,008
Entrepreneurs in the family (sister/brother)	--	--	--	--	1,759	0,014
Entrepreneurs in the family (spouse)	2,050	0,004	2,133	0,005	2,635	0,000
Engineering studies	--	--	--	--	0,412	0,036
Management studies	1,511	0,020	1,911	0,055	--	--
Student (B.Sc, M.Sc.)	2,636	0,000	--	--	--	--
Doctoral Student	2,372	0,019	--	--	--	--

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Doctoral Student	2,372	0,019	--	--	--	--
Model summary	N=1161; Model Sig. < 0,000; Nagelkerke R Square = 0,150		N=1161; Model Sig. < 0,000; Nagelkerke R Square = 0,095		N=1161; Model Sig. < 0,000; Nagelkerke R Square = 0,111	
Method of analysis: Binary Logistic Regression: Forward Wald						

The variable explaining the positive attitude towards perceived general desirability and feasibility are presented in the table below.

TABLE Logistic regression on positive attitudes towards perceived general desirability and feasibility

N = 1161, Model Sig. = 0,000 <i>Variable</i>	Perceived general desirability		Perceived general feasibility	
	<i>Exp (B)</i>	<i>Sig.</i>	<i>Exp (B)</i>	<i>Sig.</i>
Student (B.Sc, M.Sc.)	2,870	0,000	2,399	0,000
Model summary	N=1161; Model Sig. < 0,000; Nagelkerke R Square = 0,054		N=1161; Model Sig. < 0,000; Nagelkerke R Square = 0,038	
Method of Analysis: Binary Logistic Regression: Forward Wald				

Our results confirm earlier findings that entrepreneurship is predominantly a male activity. Men are about 2,5 times more likely to perceive entrepreneurship as personally desirable as well as feasible and similarly 2,5 times more like to start a firm in the next 5 years than women. The age of the respondents also explains the perceptions regarding entrepreneurship. The likelihood for finding entrepreneurship personally desirable increases for the young people (under 30 years) and prime-age people (31-45 years) compared to middle-aged and older people (over 45 years of

age). As expected, the likelihood for setting up a firm also increases for the prime-agers. People in this prime age group are two times more likely to start a firm within the next five years than the older generations in the study. Hence, the older generation (over 45 years of age) seem to be a 'lost case' in terms of entrepreneurship in Finland although from the point of view of social and financial capital needed for the venture they might be an interesting group (Blackburn – Hart 2004).

Similarly to previous studies the role of entrepreneurial role models (entrepreneurs in the family: parents, sisters and brothers) increases the likelihood for the entrepreneurial intent. More particularly the role of the spouse is underlined in the study: the spouse as an entrepreneur more than doubles the likelihood for the perceived personal desirability, feasibility and intent to set up the firm.

It also seems that the university study background effects the entrepreneurial intent: the students or graduates with an engineering background are less likely to set up a firm compared to students/graduates with a background in management or natural sciences. This is a surprising finding as one might expect that the engineering students and graduates to possess many technology- or knowledge-based ideas that could be the basis for a new venture. Management studies also increase the likelihood for the perceived feasibility which makes sense: they believe to be able to make business plans, manage employees, take care of the finances and all the other things considered necessary for running of the business. Interestingly, management studies also increase the likelihood for the perceived desirability of the entrepreneurial career.

Students (B.Sc., M.Sc., doctoral students) find entrepreneurship more desirable for themselves than people active in the working life. More importantly students also consider it to be a desirable and feasible career option for people in general. In this sense the students seem to consider entrepreneurship very positively. This might be the consequence of the strong emphasis of entrepreneurship in the studies currently and of the current policy debate in the society more generally. It is quite expected that the students do not yet have strong intentions of starting up the firm within the five next years as they presumably lack the necessary skills and experience. However, if the positive perceptions are sustained over the years we might be able to see more entrepreneurs with an academic degree in the future, which is an encouraging finding.

Limitations of the study

For the purposes of this study we have combined a dataset where the respondents represent different groups in order to understand university graduates as a heterogeneous, rather than a homogeneous group. However, there are some problems with the dataset. The groups “natural sciences” and “doctoral students” are identical, hence, we do not have doctoral students in our sample to represent the other educational backgrounds and we do not have basic degree students or people in the working life that would have a background in natural sciences. In the future, we aim to form a more balanced dataset. Furthermore, the engineering students are all enrolled in one university and the business students in another university. Hence, the university per se might have an effect on their perceptions and intent and not only the discipline to be studied. This problem can be corrected by including also the management students in the first university in the sample to verify if there are differences between the disciplines. However, as the second university has a single

discipline (business studies), it is not possible to include engineering students from the other university in the sample. In this sense the group of graduates that includes graduates from all the universities in Finland is the most representative of the samples in our study.

DISCUSSION

This study reinforces the earlier studies that entrepreneurship is predominantly a male activity. Men are more likely to set up a firm in the near future, perceive their own capabilities to be better in setting up the firm and perceive it to be personally a more desirable career alternative than women in our study. This message gives a clear indication to put a continuous effort on encouraging female entrepreneurship. Since based on an earlier study this finding holds true also when only students are targeted (Mäki – Korvela 2002), we believe that the universities have an important role to play in this regard. The possibilities provided by entrepreneurship to reach management position without the fear of reaching the ‘glass ceiling’ and to combine work and family life in a flexible manner might be the messages that the female students might find compelling. At the moment the image of the female students with regard to entrepreneurship might be biased towards ‘slave work and long hours’ that cannot be combined easily with a family.

Based on our study the persons in the younger or prime-age group are motivated by the entrepreneurial endeavour. In contrast, the older generation (over 45 years of age) seem a 'lost case' in terms of entrepreneurship, which raises some concern. Currently, there is an effort increase the number of employed persons by for example prolonging the working period (until 68 years of age). The Western population matures and more and more people represent the third age. These people are still fit and healthy, have generated wealth and experience during their careers and possibly find it too early to retire completely and need something interesting to do. Hence, the third age citizens are also increasingly considered as an important and interesting source for potential entrepreneurs. Not least because the shift in the age profile of the population has major implications for the ability of the state and the corporate sector to continue to pay pensions to retiring employees. (Blackburn – Hart 2004) Based on our study, however, the third agers do not seem motivated by the entrepreneurial career but on the contrary they perceive the option less desirable and are less likely to set up a business in the near future than the persons in the other age categories. This might reflect also the policy development where the youth entrepreneurship has been on the agenda for many years but the idea of the third-age entrepreneurship is a new-comer. Hence, more emphasis should be placed on promoting entrepreneurship, for example, part-time entrepreneurship for the third-age people. In this way, they could more flexibly integrate free time and work-life.

As expected the role of entrepreneurial role models in the family (parents, sisters and brothers) increases the likelihood for setting up the firm. Interestingly, however, the role models do not have an effect on all of the dependent variables. For example, the parents as entrepreneurs increase the intent and the feasibility of the entrepreneurial career but not the personal desirability. This might result that the entrepreneurial are not only positive: If the parents have had limited amount of free-time and not enough time and energy for the family, this might be decrease the desirability of the career although it is considered personally feasible. Especially the role of the spouse is underlined in the study: the spouse as an entrepreneur more than doubles the

perceived personal desirability, feasibility and intent to set up the firm. On one hand this makes sense as the respondent is able to consider that if her or his spouse is doing well as an entrepreneur and enjoying the life, why could not she or he as well? The positive attitudes might also be connected to the intent of joining the spouse's firm later on. On the other hand, we could have expected also a contrary result from the study. The respondents might consider the risks of dual-entrepreneur households and be less likely to start up the firm than the persons with spouses in wage-work. In general, the other family members (parents, sisters etc.) do no longer live in the same household so the economic consequences of their failures do not affect the respondents. In this sense, this is an interesting finding from our study. This is also an area that is rarely discussed in the media or in the policies. Based on our study it might be interesting to provide entrepreneurship training courses directed to the spouses of entrepreneurs.

It also seems that the university study background effects the entrepreneurial intent: The students or graduates with an engineering background are less likely to set up a firm compared to students/graduates with a background in management or natural sciences. Management studies also increase the likelihood for the perceived feasibility. In order to promote the birth of new technology-based firms it might be an interesting option to promote entrepreneurship more heavily for the engineering students and graduates. For example, forming inter-disciplinary teams in the university might help to develop teams with both the technological and business knowledge.

With regard to the future of entrepreneurship in Finland, it seems promising that the students in the study find entrepreneurship more desirable as a personal career alternative than people participating already the working life. The students also consider it to be a generally desirable and feasible career option for other people which might increase their willingness to promote the alternative for other people (friends, relatives). However, they might need further training and skills to increase their perceived personal feasibility and actual behaviour. It is important not to lose this positive attitude over the years at paid work. Hence, it is important the universities and professional associations develop entrepreneurship awareness raising campaigns and training also for the people already at work, not just for students.

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