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# **SSE RIGA GRADUATES: DO BETTER GRADES MAKE THEM ENTREPRENEURIAL?**

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# **SSE Riga Graduates: Do Better Grades Make Them Entrepreneurial?**

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## Abstract

Entrepreneurship is agreed to be the major driving force of economic growth and innovation, which is why Stockholm School of Economics in Riga (SSE Riga) was established – to provide the Baltic States with the stock of young entrepreneurs. The aim of this research, however, is to find out, whether SSE Riga has been successful in doing so, or particularly, whether good performance in SSE Riga is of influence when becoming an entrepreneur. When exploring the previous researches in the field, several other factors emerge that should be taken into account as well, when explaining the entrepreneurial capacity of the person, such as education background, employment background, family characteristics and personal factors. The hypothesis with respect to entrepreneurial capacity for each variable is stated, and a *probit* model is formed with the aim to find out, whether it is the academic performance or other independent factors that influence the fact that a person has become an entrepreneur. The data gathered by graduate interviews, survey and with the help of school's administration produce the final results, showing that there is a considerable amount of graduates who have become entrepreneurs and that entrepreneurs and non-entrepreneurs have significant differences in terms of explaining factors. Further analysis, however, shows that academic performance in business related courses in SSE Riga has quite a weak link with probability of being an entrepreneur. Instead, other factors such as education level, family background and personal characteristics are of influence much more. In result, as the academic performance has proven to be less significant than expected and the personal factors have more explanatory power, it is suggested that greater emphasis should be put on effective admission procedures rather than academic content and performance. Finally, the research model shows that the probability of SSE Riga graduate being an entrepreneur is 16%, which suggests quite promising potential for SSE Riga, if personality factors are stressed in admission and finalized by entrepreneurial education.

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## 1. Introduction

Entrepreneurship, broadly defined as “the practice of starting new organizations, particularly new businesses, generally in response to identified opportunities” (Allexperts.com, 2006), is widely agreed to be the major driving force of economic growth and innovation (Bosma and Harding, 2006). Therefore, in transition economies the creation of entrepreneurs is of special importance in order to foster economic development (Galloway, Anderson, Brown and Whittam, 2005). Moreover, education and professional experience positively influence entrepreneurship and formation of businesses (Dombrovsky and Welter, 2006). However, in Baltics, particularly Latvia, entrepreneurial activity is among the lowest in Europe by number of newly found ventures per economically active inhabitants, even though it is quite similar to other ex-communist countries like Poland or Slovenia. When compared with countries covered by Global Entrepreneurship Monitor (GEM) program, the country considerably lags behind (Dombrovsky and Ubele, 2005), emphasizing the need to provide entrepreneurial education eventually leading to economic development.

The Stockholm School of Economics in Riga (SSE Riga), established in 1994, is currently considered to be one of the best education instances for economics and business administration in Europe (Financial Times, 2006). The school was established as a subsidiary of Stockholm School of Economics to provide the Baltic States with “a host of well trained, dynamic and entrepreneurially minded young people that would act as “catalysts of change”” (Timm, 2002). The graduates were expected to set up their own businesses, thus, transforming local business practices and promoting economic development of the region. As most of the students admitted were among the best performing in their secondary schools, it was expected that they would have entrepreneurial interests (Timm, 2002) and therefore take out the most of the education opportunities in order to succeed in new venture creation after the graduation.

However, according to Inese Andersone, coordinator of the Business Lab of SSE Riga, only approximately 5-10% of the graduates are currently being the entrepreneurs in a sense that they own a business they run, which is considerably less than expected by the developers of the school. The main reasons, as concluded in Anja Timm’s research of SSE Riga and its students are as follows. First of all, students are educated according to Western business practices, thus they are more familiar with transnational companies that manage their work accordingly. In result, “after graduation, students overwhelmingly choose to work for transnational companies, which they have come to recognize as their natural habitat” (2002) and that can offer greater

rewards and future opportunities. Next, the local companies generally lack scale and sophistication of operations, thus making it quite difficult to adapt, as the environment is substantially different from the SSE Riga (2002). Finally, students mention supreme education quality, as main attraction to the school, thus suggesting that desire to get the best education in the Baltic States does not actually show ambition for straightforward career track in business (Timm, 2002).

Nevertheless, in research literature there is little evidence on the most important determinants for creating an entrepreneur. Some researchers believe that the personal traits are the most important, meaning that in order to be an entrepreneur, a person has to have qualities that owners or managers in general do not possess (Burns, 2001). However, most researchers argue that just personality is not enough – entrepreneurial education (Gorman and Hanlon, 1997) and cognitive way of thinking (Mitchell, Busenitz, Lant, McDougall, Morse, Smith, 2002) are also required in order to succeed in venture creation. Therefore, as positive link between entrepreneurial education and intentions to start new business exists, potential entrepreneurs should be motivated to have high academic performance, as the knowledge gained would be later used in business venture creation (Lena and Wong, 2003). In case of SSE Riga, even though the previous researches suggest that the ultimate goal for studies might differ, it is of special interest to find out whether taking out the most of the entrepreneurial education in SSE Riga has a positive effect on entrepreneurial success of the graduates.

In result, taking into account the importance of entrepreneurial activity and limited ability of education instances like SSE Riga to promote it in the Baltic States, the research question of

**Does better academic performance in entrepreneurial education courses lead to greater probability of graduate becoming an entrepreneur?**

is formed. The aim of this research question is to find out whether students' initial motivation to become entrepreneur, consequent attention to business courses and, thus, academic performance can explain how the “best option” (Timm, 2002) business school SSE Riga succeeds in creating entrepreneurs.

The further research paper proceeds as follows. First section reviews the previous findings on the most important attributes of becoming an entrepreneur with respect to education and forms the theoretical basis for the research. Next section comments on the sources of data, describes the factors used and establishes the model to be used for analysis. Section three presents the data collection process and the empirical findings that are tested by the model in the following section.

In section four also regression results and discussion is provided, and the last section concludes the paper and gives some suggestions for further research.

## **2. Review of Literature**

In the further research work the definition of entrepreneur being an owner-manager of existing business, or someone in the process of establishing a business in response to identified opportunity (Allexperts.com, 2006) will be used. In broader sense it would mean that entrepreneur should have participated in creating a new venture by putting in it either his financial or intellectual capital or both, and has taken some risk of profit or loss of the business.

Despite no clear evidence of effectiveness of the entrepreneurial education like in SSE Riga in creation of future entrepreneurs, several researches examining the potential of the entrepreneurship have come up with three main groups of factors influencing the entrepreneurial ability and the development of the entrepreneurship, namely macro (external), meso and micro (internal) factors. Macro factors are concerned with the legal and economic environment of the area, such as technological, economic and cultural variables as well as government regulation (Grilo and Thurik, 2004). The business environment has a direct effect on the entrepreneurial activity (Djankov, Miguel, Qian, Roland, Zhuravskaya, 2005; Smallbone and Welter, 2006), thus macroeconomic instability may result in lower entrepreneurial activity, even if gap between actual demand of goods and governmental supply creates plenty of business and profit opportunities (McMillan and Woodruff, 2002). However, the macroeconomic environment for all graduates is assumed to be similar, as it must be faced by all inhabitants of the Baltic states, irrespective to whether one has graduated from SSE Riga or not. For SSE Riga graduates and this research it would mean that “business opportunities are evaluated based on a limited subjective impression of the potential entrepreneur” (Huuskonen, qtd. in Klandt, 1997). Therefore, as the likelihood of setting up the business is determined by the entrepreneur’s attitude towards the legal and economic environment, the macro environment is stated to be homogeneous and entrepreneurial incentives – mostly affected by personal factors and social experiences that will be discussed more in detail further in the paper.

### **2.1. Social experience**

Social experiences of the potential entrepreneurs are defined as specific past experiences that affect the value system and the social status of a person. In this context, the social experiences would include educational factors, cultural values and social norms (Giannetti and Simonov,



2004), as they would shape individual values and subjective judgments about the surrounding environment (Lena and Wong, 2003). In SSE Riga similarly to other elite business schools students establish close ties and networks (Marceau, 1989; Bourdieu, 1996) that are both strategic for future careers, and shape and create the values acquired from the particular social group (Timm, 2002). In result, the general positive attitude towards entrepreneurship in SSE Riga would result in greater entrepreneurial incentives of graduates. What is more, the research by Giannetti and Simonov suggests that individuals are more likely to become entrepreneurs where there are more entrepreneurs, even if entrepreneurship pays less than paid employment (2004). The same effect is particularly present in case if a person has experienced the creation of new venture or has an entrepreneur in family (Dombrovsky and Welter, 2006). However, in this case the main focus will be on the impact of educational factors, such as academic performance in courses related to entrepreneurship, and business school culture and networks with other students as main determinants of SSE Riga success in creating entrepreneurs.

The evidence from previous researches suggests that, in general, higher education levels have positive effect on business growth rates and result in more successful new ventures due to the fact that education as such changes people's values, beliefs and lifestyles, broadening perspectives and revealing new opportunities (Rogoff, Lee and Heck, 1999; Burns, 2001). Yet, according to the same authors, there is no evidence stating the contribution of business education in producing more entrepreneurs as in comparison with any other kind of education. However, students who aim to start firms are more likely to report higher quality ambitions if they have completed an enterprise module (Galloway et al, 2005). Research by Giannetti and Simonov also finds that individuals with experience in various fields are more likely to become entrepreneurs, thus implying that people with more versatile educational background may help to foster entrepreneurship (2004). The applied, experimental learning is more effective than the traditional one, resulting in more graduate start-ups as long-term decision. However, the previous SSE Riga graduate research by Anja Timm suggests a contradicting theory that graduates having more versatile education (degree in area non-related to business or economics) would be less motivated to start up their own business, as additional education is perceived as "time-out" from current career path and its development in the future (2002), thus might have no straight input in the future career plans. What is more, the research by Applegate and Daly notes that higher motivation for studies leads to better academic performance; yet missing classes and working more than 22 hours per week has negative effect on the academic performance (2006).

Finally, the importance of individual's being tied to social network is also mentioned in several researches as an important determinant of entrepreneurial activity. Due to person's ability to create and maintain relations with the "right" people (Byers, Kist, Sutton, 1997) the difference in one's ability to start new venture arises. In SSE Riga case, the ability to make good relations with other graduates already during studies would make them more willing to do business together after graduation by, for example, creating a new venture together.

## **2.2. Personality factors**

The micro or internal factors influencing the entrepreneurial ability of a person are psychological traits, initial wealth and financial assets, family background and previous work experience (Grilo and Thurik, 2004). Among the most important personal factors researchers mention also age and gender (Arenius and Minniti, 2005), risk aversion (Burns, 2001; Dombrovsky and Ubele, 2005, 10) and locus of control (Delmar, 1996), however, there is no single answer of which factors are the crucial ones for entrepreneurial success. What is more, the initial dispute in the area is on whether the entrepreneurs are "born" (McCrimmon, 2006) and the talent and personality are the most important determinants, or they are "made" by developing the initial skills through life experience and business education (Galloway et al., 2005). The research by Berzina and Lubgane summarizes the discussion by stating "while cognitive thinking ability allows people to notice business opportunities and encourages them to become nascent entrepreneurs, experience gained from studies actually gives them means needed to exploit these opportunities successfully" (2006). Accordingly, genetically inborn intelligence must be developed in the light of the surrounding environment over time in order to strive for excellence (Gordon and Lemons, 1997). Therefore, personality development through education and working experience can play an important role in entrepreneurial capability creation.

To begin with, various researches have tested the entrepreneurial incentives with regards to demographic factors such as age, gender, and nationality. Some of the results suggest that in Latvia a typical entrepreneur is "a male, 39 year old ethnic Latvian, who works in the wholesale or retail trade sector, who has no long-term loans from banks or other financial institutions" (Dombrovsky and Ubele, 2005, 6). Accordingly, as macro factors in all three Baltic States are quite similar; this evidence could be applied to all SSE Riga graduates. This evidence contradicts with other authors' evidence stating entrepreneurship as "young man's game" (Huuskonen, qtd. in Klandt, 1997; Arenius and Minniti, 2005). In addition, the gender patterns in entrepreneurship seem to be quite similar in all researches, stating that males are more than two times more likely

to start up their own business (Djankov et al, 2005; Dombrovsky and Ubele, 2005), most likely due to less risk-averse attitude, social responsibilities or psychological factors (Welter and Kolbi, 2006). To sum up, there exist certain demographic factors characterizing the potential entrepreneurs, yet it is assumed that they should reveal other psychological characteristics of a person, not explain the entrepreneurial incentives (Berzina and Lubgane, 2006).

In addition, there are various psychological traits that researchers state as the crucial ones for entrepreneurs. McClelland summarizes the evidence provided by various researches by arguing that to become an entrepreneur a person has to have a certain psychological motivation consisting of three principal needs: achievement, power and affiliation (1961). According to Anja Timm, recognition of these initiatives is a part of SSE Riga upbringing, as students become "aware of opportunities for advancement, achievement and success" (2002).

Furthermore, as already mentioned before, a very important aspect of entrepreneurship incentives is the ability to take on risks, which is quite often closely linked to other personal factors, such as family background and initial wealth. Galloway et al argues that students with a family member in business are more likely to start a business, appear more likely to start-up sooner, and have greater entrepreneurial ambitions (2005). It is explained by Hult that states that single people without children are less risk-averse and thus more willing to engage in entrepreneurship (qtd. in Larsson, 2005). In addition, research by Djankov et al argues that family members already being in entrepreneurship can act as positive role models, thus encouraging to start a new venture more often and more successfully (2005). However, the personal characteristics alone are not enough to explain the entrepreneurial incentives, as some researches fail to approve the necessity of their presence (Delmar, 1996).

Finally, various studies as a personal factor also emphasize the cognitive or effectual thinking that uses given set of means to reach a goal that emerges out of these over time as the entrepreneur turns to previous experience and interacts with the surrounding environment (Sarasvathy, 2001). Thus, entrepreneurs should have the unique ability to make relevant (yet subjective) decisions based on their knowledge, experience in the field and future prospects (Mitchell et al, 2002). Therefore, it can be concluded that in order to become a successful entrepreneur in transition economy environment, a person has to have certain personal traits that are further developed by experience and appropriate education, and ability to think "out of the box" is required to link together the profit opportunities with the means available.

### **3. Methodology**

#### **3.1. Data gathering methods**

After the previous researches on the topic were explored, several groups of factors influencing the entrepreneurial potential were detected. However, as the earlier researches were conducted on general populations, the interviews with some SSE Riga graduates were carried out, in order to clarify whether the factors reviewed have to be reshaped for the specific SSE Riga graduate population. The interview results were used later to develop the actual data gathering method for the primary research.

##### **3.1.1. Interviews**

In order to form an actual method of data gathering, the graduate interviews were carried out with the aim to detect, whether the theoretical factors can be applicable particularly for the graduate sample and whether there are any other sample specific factors that should be taken into account as well. In addition, the interviews were conducted as face-to-face interviews, made quite informal and unstructured, and consisted of open questions or facts introduced for comments in order to make the interview process as brainstorming and focus on individual perception of the problem.

In result, nine graduates in total were interviewed, out of which six were entrepreneurs and three were non-entrepreneurs (*Appendix 1.1*). The purpose for interviewing entrepreneurs was to get the confirmation for the theory based factors introduced earlier in the paper and aimed to be used in the research process. The three non-entrepreneurs were questioned in order to get insight in the other side of the issue – the constraints or limitations that have a negative impact on the probability of becoming an entrepreneur. The graduates were also asked to comment on the preliminary questions for the survey that were designed in order to be sent out to the whole SSE Riga graduate sample during the primary data collection stage of research. In addition to that, the preliminary questions were also commented by SSE Riga Business Lab coordinators Inese Andersone and Kaspars Vītols and tested for understandability by several other school graduates. Finally, the survey questions were reshaped and determined with respect to the information provided by the graduate interviewees. The further description of the graduate survey goes as following.

### **3.1.2. Graduate survey**

After conducting interviews with several SSE Riga graduates, shaping factors and developing the data-gathering basis, the actual gathering of primary and secondary data was carried out. The data gathering process for variables was organized in two steps. First of all, as there was no extensive quantitative research about the SSE Riga graduates done before, a questionnaire (*Appendix 1.2*) was developed in order to obtain data about graduates. After the primary data was gathered, the average grades and the ones for the business-related courses were obtained from the administration of the SSE Riga. The more detailed description of both data gathering methods proceeds as following.

To begin with, the questions for the graduate survey were arranged in five main parts, namely, ID, employment data, education data, family background and personal information. In addition, as the questionnaire contains some questions that are more sensitive for respondents than others, the questions are marked as “mandatory” with asterisk and “optional” (for sensitive questions) in order to get the response rate as high as possible. The “optional” questions, such as income level, working sphere and extracurricular activities at school thus will be used for purpose of general characteristics of graduates, and not coded in variables and used in regressions.

First of all, the questionnaire starts with ID questions, such as the name and surname of the respondent and the graduation year from SSE Riga, so that the answers of the particular respondent can be linked to the academic performance data in the dataset. What is more, as the disclosure of ID also turned out to be rather sensitive for the graduates, the confidentiality of the data was strongly stressed at the survey preface, in order to minimize the cases of graduates unwilling to fill out survey due to this reason.

Next section of the questionnaire deals with the current employment details of the graduate, such as the working sphere and overall education level – whether the respondent has completed also higher education (master degree or PhD) or has gained additional education in sphere unrelated to economics and business. These questions were included in the questionnaire in order to find out whether the sample data corresponds to the hypothesis that more and versatile education increases the entrepreneurial capacity of the respondent, as suggested by the previous researches.

Furthermore, the following section deals with the respondent’s experience during studies at SSE Riga. The graduates are asked about the work experience prior to studies and the motivation

of entering the school, as greater experience and motivation would suggest that the school was perceived as a mean to become an entrepreneur, not just chosen as the “best option” for education in the Baltic States. This section also addresses the issues of respondent’s lifestyle during studies, such as employment during the first two school years, number of lectures attended, and extracurricular activities, in order to detect how involved in study process the respondent was and predict one’s possible academic performance due to these conditions.

To continue, the fourth section addresses both the family background of the respondent, in a sense of whether it could serve as an additional motivator for entrepreneurship and the actual entrepreneurship potential of the SSE Riga graduate. In this section also questions about graduate entrepreneurship and possible business establishment in near future are asked, using the definition developed and used thorough the research work and paper. What is more, in this section the questions are branched, so that more detailed answers can be obtained for positive responses. Thus, if the respondent has participated in new venture creation, more detailed information about the business establishment and its current operations would be gathered.

The final section of the questionnaire deals with personal questions like marital status, children and income level. These questions are included in order to get a more general picture of the respondent and test the impact of these variables on the entrepreneurship potential, as suggested by previous researches.

Furthermore, all questions were kept simple and concrete to avoid misunderstandings (for example, what qualifies as a substantial work experience). Most questions were asked as full sentences in question form, without using specific technical terms and negative questions. Only the questions regarding ID and personal information are not stated in form of questions, as they require a simple and straightforward answer.

Finally, the questionnaire was kept rather short (16-18 questions for non-entrepreneurs, and 17-27 questions for entrepreneurs) and easy to fill in (answers provided), thus the average time for completing it was 9 minutes. In addition, the questionnaires were sent via e-mail as Internet link, as in this way it was fast and easy to respond, and the responses could be gathered also from graduates living abroad. In result, 100 valid responses were obtained after the first call, however, after the call-back within two weeks 177 valid observations in total were collected, which is close to 20% of the graduate population and is considered to be a reasonable sample to make conclusions.

### **3.2. Description of the model**

After the previous literature on the topic was explored and factors were created and shaped by the interviews, three main groups of factors affecting entrepreneurial ability were formed, namely, academic performance, family background and personal factors. The factors of each group would be described in detail in the following section. In addition, it is considered that the sample of the SSE Riga graduates possesses several homogeneous characteristics that should be taken into account for further research. According to that, the following assumptions were formed to deal with this issue.

First of all, as already mentioned in the literature review section, the legal or macroeconomic environment for all SSE Riga graduates is assumed to be homogeneous. The most part of the graduates are from the Baltic States, thus having quite similar business and legal environment. What is more, even though there exist some differences between the three countries, non-graduates of SSE Riga must face the same macro factors, thus it is considered that the effect of external environment on entrepreneurial capacity does not depend on whether one has graduated SSE Riga and is homogeneous.

In addition, as the whole SSE Riga graduate population has graduated from the same school and no other education instance population would be observed, the general effect of economic and business education on person's entrepreneurial capacity would not be explored in the further research, as it is homogeneous for the sample as well. However, the research would focus on SSE Riga graduate sample particularly, by exploring the significance of entrepreneurial capacity with respect to the graduate differences in SSE Riga academic performance. What is more, the graduate differences in obtaining additional education (also unrelated to economics and business) would also be taken into an account to characterize the link with entrepreneurial potential.

To continue, the further research would consist of two main parts, the first part exploring the differences between SSE Riga graduate entrepreneurs and non-entrepreneurs, and the second part characterizing the extent of various factors affecting the entrepreneurial ability of the graduates. In the first part, by comparison of means of the independent variables the average differences between SSE Riga graduate entrepreneurs and non-entrepreneurs would be suggested. There the main focus would be on the academic performance in business related courses, yet also taking into account the statistical differences in other factors explored in data gathering process.

What is more, in order to explore the link between the entrepreneurial ability of the person and the possible explanatory factors, several regressions with the binary dependent variable

(entrepreneur =1; non-entrepreneur=0) would be carried out in the second part of the research.

Here, due to the use of binary dependent variable, the *probit* regression model will be used with the following particular regression:

$$\Pr(Y=1|X)=\Phi(\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\dots+u_i)$$

In the regression, Y stands for the dependent binary variable measuring whether the person is entrepreneur or not, and  $X_i$  summarizes the independent variables, in particular the factors that are considered explanatory for the dependent variable, such as age, year of graduation, and other. In addition,  $\beta_0$  is the constant and  $\beta_i$  represent the coefficients of the independent variables, and  $u_i$  stands for the error term. Thus, the regression explains the probability of dependent variable being equal to 1 by the given independent variables. In result, probability of graduate being an entrepreneur is calculated with respect to factors like academic performance, age, gender, family background and others. Finally, in order to test the variable influence on the dependent variable, the significance levels as well as the coefficients of the variables would be analyzed and interpreted.

### **3.3. Hypothesis and measurement issues**

As the factors affecting entrepreneurship were determined and the method for the further research was selected, further on the three groups of factors as well as the hypotheses stated are explored. In addition, this section addresses specific measurement issues of the factors, applied later in the regression analysis.

#### **3.3.1. Entrepreneurship explaining factors**

To begin with, the first group of the factors can be characterized as **academic performance factors**. In particular, these factors concern the overall educational background of the graduate within the given setup of the research, namely, academic performance in business related courses, education level and diversity of education. These three factors are chosen out of all social experience related factors suggested by previous researches due to the reason that others, such as school's cultural and social network factors, as well as attitude towards entrepreneurship cannot be measured objectively.

The previous literature has suggested that there is no clear evidence of whether the performance in business education promotes new venture creation by the graduates (Rogoff, Lee and Heck, 1999; Burns, 2001; Galloway et al, 2005). In addition, interview with J. Teteris, SSE Riga graduate of Class 1996, suggests that the best performers of SSE Riga are less likely to start



new businesses, as they are often “headhunted” by the largest multinational companies. What is more, as suggested by the same interview, there are several reasons why the student might be among the worst performing ones in SSE Riga. In particular, students might perform worse on average due to the fact that they are more focused on activities outside the school, including the business opportunity exploration. Therefore, as their academic performance is relatively worse, they might be less targeted by the big companies and consider their own business creation, thus resulting in positive link to entrepreneurship. However, as such cases were not considered to be common practice by other interviewees, the main focus of the research remains on detecting the positive link between high academic performance in business related courses particularly and the entrepreneurial potential.

Furthermore, with respect to the course descriptions the courses representing business related education are selected. The applicability of the certain courses to the particular research is tested by questioning Business lab coordinators and several other SSE Riga graduates, finally selecting a list of courses in total considered to be covering all aspects of business education by the respondents. The courses can be divided in two major groups by their main characteristics, namely mathematical and non-mathematical courses (course content descriptions follow in *Appendix 1.3*).

First, the mathematical courses each have some valuable issues regarding business venture setup and operations. In particular, Accounting courses give important insight in financial resource management in company, and Market Research provides essential information on how to analyze current market situation and detecting market opportunities. However, even though Financial Economics (FE) is not directly linked to business creation skills, it is believed that this course should also be taken into an account, due to the following reasons. First, according to interviews, many graduates establish their businesses exactly in finance sphere, i.e., the financial consulting business of A. Kadakovskis presented in Business Lab seminar “Who wants to be a millionaire?”, due to the fact that they get acquainted with the finance markets already during FE course in SSE Riga. In addition, FE is considered to be the toughest course in SSE Riga (Timm, 2002), as according to exam results 2006, only 30% of students pass with the first exam, thus the performance in FE course is believed to be linked with person’s ability to motivate oneself and capability to work under stress conditions, which is common for business owners. Second, Strategy, Human Resource Management (HRM), Marketing, Entrepreneurship and Business Planning (EBP), and other the non-mathematical courses of business education have a great

value focusing on management and organization issues of the business, as well as the promotion in the market.

To proceed, the variables concerning academic performance in business related courses would be calculated as the grade level in a particular business related course minus the average grade level in all subjects. So, *the greater (and the more positive) this change is, the more a person is entrepreneurial oriented thus having a higher probability of establishing his/her own venture after SSE Riga (Hypothesis 1)*. Performance in particular courses is taken in order not just to see the general effect of good academic performance on person's entrepreneurial ability, but also to conduct a deeper analysis of which then are the subjects that are of issue if any. In addition, the average performance in all business related courses might be misleading, as it may turn out that some courses do not have a significant link to probability of being an entrepreneur at all. We also note that taking the difference with the average grade level would solve the problem that there are people that have performed very well in the business courses, but it is not because of their entrepreneurial spirit, but simply because they are the top students in every subject. This would mean there would be zero change between the general grade level and the one of the business related courses.

What concerns the diversity of education, *it is expected that the graduates who have a degree besides SSE Riga in an unrelated field to economics and business should possess a higher probability of being and entrepreneur (Hypothesis 2)*, as it was also suggested by previous researches (Gianneti and Simonov, 2004). Moreover, *higher education level (master and PhD) is expected to be negatively correlated with person having his/her own business (Hypothesis 3)*. Although previous researches suggest that higher levels of education are positively associated with entrepreneurship, the interviews with graduates suggest a somewhat different picture. The reasoning behind is the fact that graduates have to spend additional years studying, leaving them with less time to establish their own enterprises. What is more, higher levels of education are more likely to be associated with getting higher corporate positions in big companies. In addition, this variable is correlated with the academic performance – as the research by Timm (2004) shows, students perform well academically, because they plan to get a higher education level afterwards, and thus they strive for scholarships and better educational institutions.

Secondly, as it was also stated in the review of literature, **family background** plays a big role in shaping future entrepreneurs (Huuskonen qtd. in Klandt, 1997; Djankov, 2005). Thus, *if there has been any entrepreneur in the family of graduate (parents, siblings, aunts or uncles,*

*cousins, grandparents), it is expected that it would have a positive link with a person being an entrepreneur (Hypothesis 4).*

Thirdly, there are specific **personal variables** that influence whether a person becomes an entrepreneur or not. Those would be gender, age, marital status and number of children. As previous researches have shown (Djankov et al, 2005; Dombrovsky and Ubele, 2005), *females are underrepresented in entrepreneurship, thus we expect this variable to be negatively correlated with person being an entrepreneur (Hypothesis 5)*. In addition, due to the fact that the oldest graduates of SSE Riga are around 30 years old, the age range is too small to suggest any hypothesis here, however it is assumed that *older graduates have had more time and thus greater opportunity to start his/her business, thus older graduates are expected being entrepreneurs more (Hypothesis 6)*. This would be thus measured as the graduation year instead of age. Further on, *if the person is married or/and has children, there is a smaller probability that he/she would be entrepreneur, as family people are more risk averse (Hypothesis 7)* (Hult, qtd. in Larsson, 2005). Moreover, the negative link should be stronger for women. In addition, it would be interesting to explore the incomes of entrepreneurs and non-entrepreneurs. As this variable is not related to becoming an entrepreneur (the current income level is measured, i.e., the one that is present when a person already has established a company), income would not be included in probit regressions. However the average effects will be determined by comparing the differences of means between entrepreneurs and non-entrepreneurs, and it is expected that entrepreneurs would have much higher income level than non-entrepreneurs.

### **3.3.2. Academic performance explaining factors**

Finally, in order to reduce the omitted variable bias and increase the internal validity of the regression, the variables affecting the performance in business related courses should be introduced in the model as well. According to previous researches (Applegate and Daly, 2006), academic performance in university is explained by previous work experience, working when studying, number of lectures attended as well as the motivation for studies. In this case we are interested in variables affecting the grades in business related courses only, thus several assumptions are made. First of all, *it is expected that the previous work experience would be positively correlated with the grade level in business courses, as students have seen, how the theory works in real companies, so this variable should also have a positive link with probability of being an entrepreneur (Hypothesis 8)*. Next, if a person has worked during studies, it should have a negative effect on the average grade due to less time left for studies; however it is

assumed that it would not affect the person's talent, i.e., grades in business related courses. Thus, it is expected that, if students have worked during their studies, the difference between the average grade level and that of business related courses should be higher than for those, who have not worked during their studies, reflecting the talent of the entrepreneurial personalities. In addition, work during studies automatically implies higher work experience when graduating, thus *it is expected that work during studies increase the probability of person being an entrepreneur, since the person is more experienced (Hypothesis 9)*. Finally, the number of lectures attended should positively influence the average grade level, as students who have participated in more lectures should be more comfortable with the material covered and would thus do better in the exam. In addition, just as for work during studies, it is assumed that lecture attendance would not influence performance in business related courses. Moreover, as lecture attendance and work during studies should be negatively correlated, *attending less lectures should be positively correlated with entrepreneurial ability (Hypothesis 10)* for the same reasons as for work during studies – if a person attends fewer lectures, there should be more experience either in work or in extracurricular activities that in turn promote creativity that is essential for entrepreneurial personalities. In addition, if a person has a motivation for studies, he/she should perform better. So, if a person has entered SSE Riga due to the fact that he/she wants to be an entrepreneur, it should be reflected in his/her grades in business related courses. Thus, *it is expected that students with entrepreneurial motivation should become entrepreneurs more often (Hypothesis 11)*.

The question about whether the person has ever participated in establishing a new company by either putting in his/her financial and/or intellectual capital after graduating from SSE Riga, will provide this research with the binary dependent variable “**entrepreneur**”. This variable is defined pretty broadly, because this research is focused more on the entrepreneurial capacity of the person rather than on him simply being an owner of the business. Thus, this variable would include people who, besides being the establishers and owners of their own companies, have helped their friends or relatives to establish a company.

To conclude the variable description, the final model would be the following (here, Y=Entrepreneur, X=Independent variables):

$$\Pr(Y=1|X)=\Phi(\beta_0+\beta_1\text{Academic performance}+\beta_2\text{Family background}+\beta_3\text{Personal variables}+\beta_4\text{Work experience before studies}+\beta_5\text{Working when studying}+\beta_6\text{Lecture attendance}+\beta_6\text{Motivation}+u_i)$$



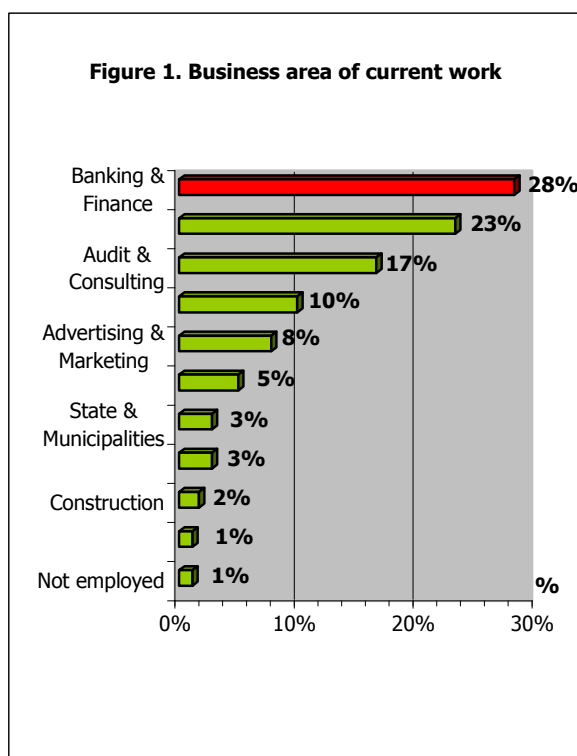
## 4. Results and Analysis

### 4.1. Data description

The data collected during the data gathering stage of thesis writing would be further used for two purposes. First of all, the general statistics of the sample would serve to create an overall description of the SSE Riga graduates and draw conclusions of whether the sample data can be considered as a reasonable representation for the whole population of SSE Riga graduates. Secondly, the dataset would be used to run regressions described in detail in the methodology section and to obtain an answer to the research question.

#### 4.1.1. General picture of the graduates

The general characteristics of SSE Riga graduate sample regarding their education, employment and personal background would be further described with more explicit data presented in *Appendix 1.4*.

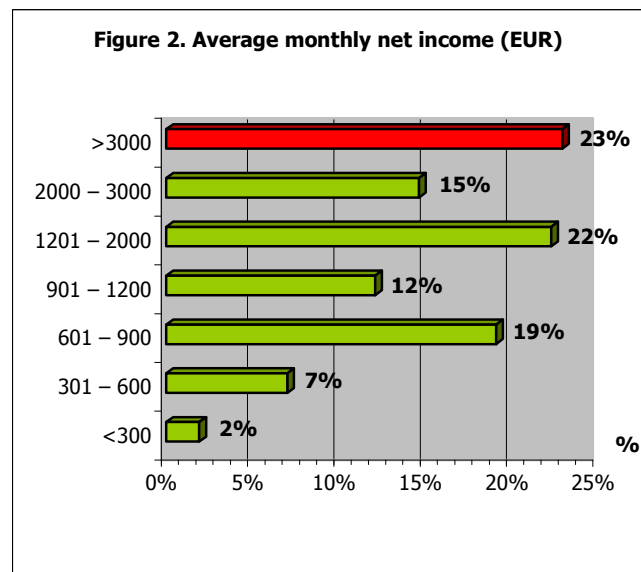


First of all, what concerns the employment details of the graduates, the main part of the respondents work in banking and finance (28%) and audit and consulting (17%) sphere (*Figure 1*), what goes in line with previous assumption of mathematical course like FE and Accounting significance in graduate career choices, as mentioned in the factor description section. However, 23% of all SSE Riga graduates are employed in other business areas, such as telecommunications, government, retail and education, showing that the education obtained in the school is well applicable to great variety of business spheres. What concerns the overall employment background of the graduates, 41%

of respondents have noted working already prior to studies at SSE Riga and 40% have worked during first or second year of studies. Therefore, even though respondents having employment before and during studies might not be the same, it is suggested that quite substantial part of the graduates have had at least some insight in business already during the studies, thus being more

motivated to take education opportunities provided by the SSE Riga. In addition, most part of the graduates (83%) mention attending at least 80% of lectures during studies at SSE Riga (*Figure 2, Appendix 1.4*), thus suggesting quite serious attitude towards education. Finally, the survey results show that still 61% of graduates have bachelor degree and 38% have master degree, yet just 15% have additional education in areas unrelated to economics and business. Thus, the hypothesis of more and diverse education having impact on entrepreneurial capacity suggested can be tested on the specific sample.

Second, what concerns the personal background data of the graduates, most of them are not married (66%) and have no children (75%). That can be explained by the fact that most of them are recently graduated from the SSE Riga and have not yet established their own families. In addition, the income level of SSE Riga graduates (*Figure 2*) is quite various, depending on graduation year – as the largest proportion of respondents are from first three graduation years (*Figure 1, Appendix 1.4*), on average monthly net income for graduates is more than 3000 EUR (23%).



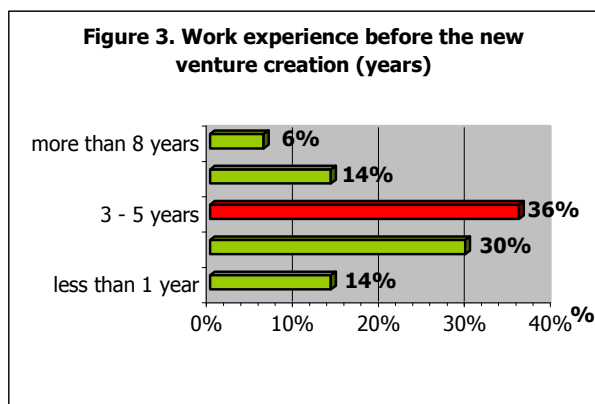
Finally, what concerns the entrepreneurial spirit of graduates, 36% mention entering SSE Riga due to desire to become an entrepreneur in the future. In addition, one half of respondents noted having entrepreneurial experience in the family, in most cases regarding closes relatives, such as parents (37%), and aunts and uncles (22%) with further relatives following (*Figure 3, Appendix 1.4*). In result, the general statistics of the graduate sample show that quite substantial part of the graduate population has already established some career path, mainly in business areas related to education provided in the SSE Riga, also having had some insights into the business world prior to the studies.

#### 4.1.2. Entrepreneurship among graduates

In order to develop the further description of the SSE Riga graduates, with particular focus on entrepreneurship, the following section reviews the graduate statistics for business venture creation and the characteristics of those ventures.

First of all, the survey suggests higher entrepreneurial capacity of the SSE Riga graduates than suggested by Business Lab coordinators in the introductory part of the research. The results show that 49% of all respondents have participated in new venture creation by putting in financial or intellectual capital that corresponds to the entrepreneur definition used in the research paper. In addition, 32% of those who have not explored their entrepreneurial capacity yet plan to start their own business within 3 years, thus the actual entrepreneurial capacity of the graduates in future would be used even more. What concerns the success of the new ventures, the rate of failed enterprises is 13% representing the respondents who have answered that they have participated in organizing a new business and admit that the company is not operating anymore.

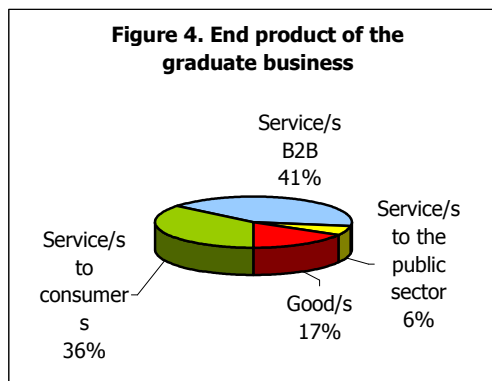
Furthermore, what concerns the business venture establishment process, 78% of the successfully established ventures are not started together with another SSE Riga graduate, and in most cases own capital of graduate (66%) alone or together with external capital or loan from credit institutions used as the initial source of financing the venture. Thus, it can be concluded



that there might be a high entrepreneurial potential in recent and future graduates, as soon as they earn a reasonable financial basis in order to start their businesses. In addition, most respondents have had on average 3-5 years (36%) of work experience (*Figure 3*) that is quite logical, as people with less experience might consider themselves as too inexperienced and insecure to establish their

own business and people with more work experience are more risk averse, as they have already established some career position and are not willing to lose it.





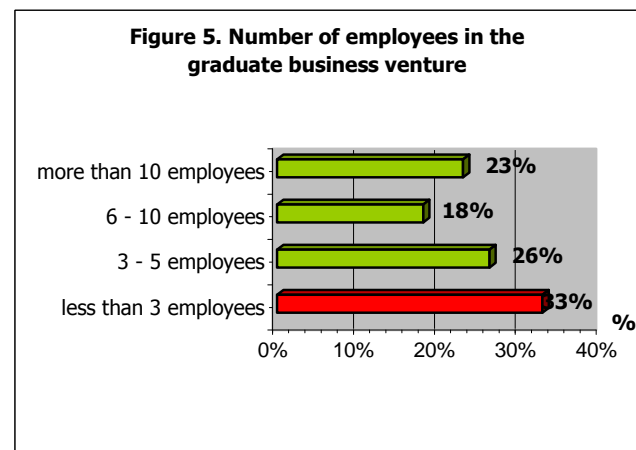
Finally, what concerns the services of the new established graduate ventures, the majority of the established companies operate in service sector (83%), as suggested by A. Kadakovskis that has established his company in consulting. The main part (41%) of the services is business-to-business services (*Figure 4*). Usually the companies are small, one third of them

employing less than 3 employees (*Figure 5*), and in most cases (67%) there are no employees that are graduates of SSE Riga.

Two reasons can be suggested behind that – first of all, the trend of recent graduates becoming entrepreneurs more is evident, as SSE Riga has introduced several features in order to promote entrepreneurship among students. What is more, the school keeps

track of these young entrepreneurs and encourages them to employ students from SSE Riga.

However, the companies are still small, thus there is no strong need for employees yet. Secondly, students from SSE Riga are very ambitious (Timm, 2002) and it is more likely that they would go working for a big company with a stable salary than take a job in a small, recently established one. However, it can be predicted that this trend would decrease in the near future, as the businesses of the graduates grow.



#### **4.2. Differences between entrepreneurs and non-entrepreneurs**

After the general characteristics of the graduate sample are explored, the research further examines the differences in characteristics for both entrepreneurial and non-entrepreneurial groups of respondents. First of all, the differences of personal characteristics, family background and education characteristics are summarized. About 49% of the respondents were identified as having entrepreneurial capacity, i.e., they had at least once participated in creating a new company by putting in their financial or/and intellectual capital. When accounting for failed entrepreneurs, this number decreases to 42%. Yet, to present a benchmark, GEM report about Latvia (2005) has suggested that only around 8.5% of Latvian population aged 18-34 are

entrepreneurs at an early stage of their business, which is a considerably lower value than for SSE Riga graduates. Even though SSE Riga would add up the entrepreneur stock of all three Baltic States, these numbers differ quite considerably. Second, in order to find out whether there are any significant differences in the means of the variables for entrepreneurs and non-entrepreneurs, a t-test is performed. The significant results of the test are summarized in the *Appendix 2, Table 3*.

For the beginning, the results on academic performance are quite unexpected so far. In particular, there are significant differences in the means of grades in ME, HRM, MAF, FE and MR, i.e., the grades in these subjects on average tend to be higher for non-entrepreneurs than for entrepreneurs, which is against *Hypothesis 1*. In addition, when checking for any variations in differences between business related subjects and average grades, non-entrepreneurs still seem to score higher, which is also not in line with the hypothesis stated before. The higher grades for non-entrepreneurs could be explained by the fact that the best students are usually “headhunted” by large multinational companies, as it was suggested by J. Teteris, and thus there is less possibility for otherwise talented people to become entrepreneurs; however the relative differences are still higher for non-entrepreneurs.

In addition, what concerns the individual characteristics of a person, it can be observed that entrepreneurs on average have higher income than non-entrepreneurs – 31% of entrepreneurs and only 14% of non-entrepreneurs earn more than 3000 EUR per month. This is in line with the expectations that business owners have higher income than those who work for somebody else. What is more, as entrepreneurs were broadly defined, it still implies that people willing to participate in creation of new ventures, even if they do not have the connection with the business later on, are more likely to have higher income than those who are not. It is also noted that 22% of SSE Riga graduates in the sample have income of more than 3000 EUR a month, which is quite substantial in comparison with graduates of other universities, i.e., according to research by Trencis (2003), the average income for graduates of Banking Institution is only approximately 40% of the income that is earned by SSE Riga graduate. Thus, it is possible that the difference in income of entrepreneurs and non-entrepreneurs is much smaller for SSE Riga graduates due to higher average income level; however the effect is still present.

Furthermore, previous researches show that females are strongly underrepresented in the entrepreneurship (Djankov et al., 2005), and this is also supported by this research about SSE Riga graduates – on average 53% of non-entrepreneurs and only 24% of non-entrepreneurs are

females. There is no significant difference in the means of marital status, age, number of children, whether a person has higher education level than degree of bachelor and whether he/she has a degree in an unrelated field of business or economics.

Next, literature suggests that there is evidence that the family background of the person might be influencing, when choosing the future career (Huuskonen qtd. in Klandt, 1997). As the results here show, on average 56% of entrepreneurs versus 41% of non-entrepreneurs have or have had at least one entrepreneur in the family. What is more, although most of the respondents have entrepreneurial parents, there is no significant difference in this variable. Instead there is a significant difference between entrepreneurs and non-entrepreneurs in the fact that they have siblings-entrepreneurs and cousins-entrepreneurs. For example, 17% of entrepreneurs have a brother or sister who is an entrepreneur, and only 5% of non-entrepreneurs reveal the same. This could be explained by the fact that a person might feel a strong peer pressure from relatives of approximately the same age (his/her siblings and cousins), when choosing the career. So, if the brother, sister or cousin of a person runs his/her own company, the person would not want to stay behind. In addition, there might be cases when the person has established a company together with his/her sibling or cousin.

Finally, there are several significant differences of entrepreneurs and non-entrepreneurs when studying in SSE Riga. On average, entrepreneurs have had a motivation of becoming an entrepreneur as the main reason behind entering SSE Riga much more often than non-entrepreneurs. Thus, it is more likely that, if a person wants to become an entrepreneur already before SSE Riga, he/she would be much more determined to do so than the one who only realizes it during studies or later. In addition, the results show an interesting fact - the entrepreneurs are more likely to attend only 50-80% of lectures, which is opposite to non-entrepreneurs. Of course, one might argue that those students prefer partying instead of studying, but as the data shows a negative correlation of attending lectures and working when studying, this fact seems to be in line with hypothesis 10 - students who do not attend all the lectures tend to work during studies and so gain more work experience already when graduating, therefore they establish their companies faster than those who only gain work experience after studies. In addition, it is possible that students who attend fewer lectures have instead many extracurricular activities that in turn develop their creativity, which promotes entrepreneurial drive.

To summarize, the main results from comparing the differences of the means are slightly different from what was expected. Individual characteristics and family background are so far in

line with the hypothesis – entrepreneurs are on average males, with a positive role model of entrepreneur in their family, most likely the one in their age group, like siblings and cousins, and they have had the motivation of becoming an entrepreneur already before entering SSE Riga. In addition, entrepreneurs seem to attend lectures less and instead work or involve in extracurricular activities. However, the differences in the means of grades contradict the hypothesis that entrepreneurs are more talented in business related subjects. Yet this is the average effect only and these variables are still to be tested in *probit* regressions in order to see the marginal effects on probability of being an entrepreneur.

### **4.3. Regression analysis and implications**

#### **4.3.1. Correlation analysis**

Before conducting the regressions in the last stage of the research process, the summary statistics of the independent variables are conducted (*Appendix 2, Table 1*). Here it can be observed that two courses, namely MR and BE, considerably lack observations, thus possibly “stealing” the degrees of freedom from the regression, and they are not used for further analysis. Next, the correlations between the independent variables are carried out (*Appendix 2, Table 2*) in order to avoid multicollinearity issues. In addition, as the main focus of the research is on the academic performance variables, it is of special interest to spot the variables having substantially positive correlation, as they could be united into an average variable to avoid perfect multicollinearity. For this reason, the correlations between absolute grades in business related courses are analyzed; however, there is no clear evidence of multicollinearity between any of them. In particular, the highest correlation of 0.5439 is observed between AF and ME, others being substantially lower, what is not enough evidence for multicollinearity. In addition, most correlations are positive and thus provide quite self-evident implications, for example, that SSE Riga student scoring high in most business related subjects is very likely to have similar performance in other courses as well.

In addition, taking into account the correlations, it is decided to take the average of all three Accounting scores (FA, MAF, and AF), as there is a positive correlation between all three of them, and the academic requirements in these courses are related. What is more, in order to avoid multicollinearity, an F-test is performed to test the hypothesis that the means of several variables that are normally distributed are equal, and thus these variables come from a similar origin. The hypothesis is rejected at 99% confidence interval; therefore all the separate variables are

included in the regressions. Moreover, perfect multicollinearity between education level (bachelor and master degree) is detected. The multicollinearity can be explained by the fact that graduate having bachelor degree automatically does not have a master degree and vice versa. There is only one respondent in the sample having higher than master degree of education, thus, only one education degree variable, namely master degree, is used in the regressions.

### 4.3.2. Regression results

In the last stage of the research process, multi-variable *probit* regressions are performed by using STATA software, in order to conduct a deeper analysis of the factors affecting graduate entrepreneurial ability and to evaluate, whether the performance in business related education matters in their future entrepreneurship. The regression results are summarized in *Appendix 2, Table 4*. According to the previous researches done in the field, the results about academic performance impact on entrepreneurial capacity of an individual are dubious. Academic performance would definitely not be the only factor affecting the entrepreneurial ability of a person, as other factors like family background and personal characteristics have proved to be significant in explaining the entrepreneurial capacity.

To begin with, the *probit* regressions are first carried out by including only business related academic performance variables in the regression. Afterwards, in *Regression 2* also other education and study life related variables are included, however, the initial focus on education remains. Next, in the following regression the family background variables are included to explore their additional explanatory power for the graduate entrepreneurial ability. Lastly, in *Regression 4* the graduation year and gender of graduate are inserted as additional variables. In result, the regression output show that the internal validity of the results tends to increase by each regression, as the omitted variable bias is reduced by controlling family background and personal factors. Thus, the analysis of the results suggest that there is no well-built link between graduate academic performance in business related courses and their probability of becoming entrepreneurs, as the academic performance variables become significant in the last regression only. However, as they provide some explanatory power together with other factors, the detailed effect of each regression variable would be presented in the following section.

### 4.3.3. Result implications

After conducting factor correlation and carrying out regressions, several factors suggesting the probability of SSE Riga graduate potential to become entrepreneur are explored.

First of all, the *academic performance in business related courses*, being the major focus of the particular research work, proved to be much less significant than expected in the previous stages of the research. Only three out of ten courses defined as business related ones, namely, HRM, Strategy, and to some extent EBP proved to be significant in affecting entrepreneurial potential by shaping the graduate mindset. Although there are also three other non-mathematical business related courses that are of no significance in creating an entrepreneur, the first implication of the results is that none of the mathematical courses have any link with entrepreneurship whatsoever. It is, however, in line with the previous research on SSE Riga population, suggesting that students might be motivated to enter the school as it is perceived as best education instance in Baltic, and not due to entrepreneurial interests (Timm, 2002). For instance, if the student is talented in hard sciences, one might have good results in mathematical courses such as Accounting, FE, or ME due to that, and not because of entrepreneurial thinking.

Furthermore, what concerns the non-mathematical courses that turned out to be significant, the greatest explanatory power was observed for the HRM course, although it showed a negative link with entrepreneurship. The implication for the negative coefficient of the course is the fact that HRM in general is connected to just one business process (employee motivation) rather than the whole business concept as Strategy or EBP. Therefore top performers in this course would be more willing to pursue their career in HR divisions of large companies than to establish their own venture. However, it is quite surprising that other non-mathematical courses that are also connected to single business process, like OM and Marketing, have positive though insignificant link with the entrepreneurship, as this result is completely different from the HRM result. To proceed, the regression results show that Strategy course is significantly positively associated with the graduate entrepreneurship, being the only variable supporting *Hypothesis 1*. Finally, EBP course, previously considered by authors of this research as being the most entrepreneurship-promoting course in SSE Riga, has proved to have a surprising negative link with the entrepreneurial potential. However, the authors consider this result to be dubious, as the variable was significant only in two regressions out of four conducted. As in the final regression the greatest number of variables was used, and here it proved to be insignificant, it points to the fact, that omitted variable bias was present in the first regressions. Overall, as such a small number of business related course variables proved to be significant factors of explaining the entrepreneurship potential, it is considered not to be a substantial proof for *Hypothesis 1*, thus the hypothesis is not accepted. However, it cannot be rejected as well due to the fact that there is

no proof that the grades in business related courses have a negative effect. Rather the results show that they have almost no effect on entrepreneurship.

To continue, the impact of other factors related to *education background* of the graduates is explored. First of all, the education level of the graduate showed a significant negative link with the probability of becoming an entrepreneur. Although previous research by Rogoff, Lee and Heck (1999) suggests that higher education levels have positive impact on business growth rates, we dared to question that and, indeed, **Hypothesis 3** can be accepted with 10% significance level. So, if SSE Riga graduate has accomplished a master degree, he/she is less likely to be an entrepreneur than the one who has got bachelor degree only – having completed master degree decreases the probability of being an entrepreneur by 6.62 percentage points. A degree somewhere else besides SSE Riga in an unrelated field to economics or business, however, is of no significance at all. Next, what concerns other study life related variables such as motivation of entering SSE Riga and lecture attendance, they do have the expected signs for the coefficients, but are not statistically significant as well, thus **Hypothesis 10 and 11** can neither be accepted, nor rejected.

Moreover, the *employment background*, like previous work experience and working when studying also do not have a significant link with person's entrepreneurial capacity, thus **Hypothesis 8 and 9** can also neither be accepted, nor rejected.

Further on, the *family background* of the person is analyzed, seeking for proof that a role model in family has a positive link with person being an entrepreneur. In contrast to the expectations, the fact that parents are or have been entrepreneurs has a negative effect on the probability of being an entrepreneur. Although the variable is significant, it is still surprising. A possible explanation could be that graduates having entrepreneurial parents either work in their companies, thus not creating their own ventures, or decide to work for somebody else's company, since parents have served as negative role models. Siblings and cousins, on the other hand, have served as significantly positive role models, supporting the belief that people who have siblings or cousins-entrepreneurs either feel peer pressure due to the same age range or decide to establish the company together with them. Other family members, however, have not proved as being significant role models, possibly due to the fact that they are not as close relatives to be observed as role models by graduates. Thus, we can neither accept, nor reject **Hypothesis 4** about the positive entrepreneurial role model in the family.

Finally, what concerns the *personal factors* of the person, it is not possible to explore the link between entrepreneurship and marital status, because the software drops these variables due to multicollinearity issues. Other variables, however, were successfully explored and proved to be significant. First of all, we accept **Hypothesis 5** that females are underrepresented in entrepreneurship, as was also suggested by previous researches – if SSE Riga graduate is a female, the probability of her being an entrepreneur decreases by 1.1%, proving that women are more risk averse and thus unwilling to establish an enterprise. Next, what concerns the age of the person, this variable was not used for the regressions due to high correlation with the graduation year. In addition, it is possible that there is no direct link with entrepreneurship, because SSE Riga graduates do not represent enough variety in their age, the average age being 26.5, the youngest being 21 and oldest just 35 years old. Graduation year, on the other hand is significant and supporting **Hypothesis 6** that older graduates are more likely to be entrepreneurs due to bigger experience, greater personal networks and more time since graduation to establish their own venture.

Although part of the variables are insignificant, the regression still provides the coefficients with respect to the dependent variable. Thus, when inserting the characteristics of an average SSE Riga graduate in the model using the mean values for continuous variables such as income, graduation, grades and binary values for binary variables (i.e., as the number of females is smaller than that of males, use “0” for gender variable), the calculated probability of being an entrepreneur is 16%. This implies that an average SSE Riga graduate has a 16% probability of being an entrepreneur, which is reasonably high value.

To sum up, only a part of the results are in line with the hypothesis stated before. The academic performance in the business related courses show a weak link with the entrepreneurial capacity of a person, and so does the employment background and partially family background. Education level, gender, family members of the same range serving as role models, as well as graduation year implying the age of the graduate are all significant and according to expectations.



## 5. Conclusions and Recommendations

After carrying out the research work to detect whether better academic performance in entrepreneurial education courses at the SSE Riga lead to greater probability of graduate entrepreneurship the following conclusions could be drawn.

First of all, in general, there was no straightforward link detected between better grades in business related courses and graduate entrepreneurial capacity. As most of the courses proved to be insignificant, it is suggested that there are more important factors determining the entrepreneurial ability of a person. Therefore, the authors suggest that even though SSE Riga does not create entrepreneurs in a sense that better results in academic performance make them better entrepreneurs, it certainly improves the graduate potential to create their own ventures and succeed. It is done by development of the graduate entrepreneurial talent and thinking ability by adding various useful skills and knowledge overall and in various business areas.

In addition, even though academic performance has shown less than expected impact on the graduate entrepreneurial ability, the other factors, namely education level, gender, graduation year, and family background have substantial importance. This evidence is in line with previous evidence that person cannot be “made” entrepreneurial – one has to be “born” entrepreneur also, in order to succeed in new venture creation. The observation of summary statistics yet allows drawing significant differences between typical entrepreneurs and non-entrepreneurs. In sum, entrepreneurs of SSE Riga graduates are on average males and have substantially higher income than non-entrepreneurs. It is very likely that they have a positive role model of an entrepreneur in their family, most likely the one in their age group, like siblings and cousins, and have had the motivation of becoming an entrepreneur already before entering SSE Riga. Moreover, entrepreneurs seem to attend lectures less and instead work or involve in extracurricular activities. However, what concerns the average differences in their academic performance, the entrepreneurs, quite surprisingly, tend to perform worse even in business related subjects if compared to non-entrepreneurs.

Finally, as the academic performance has proven to be less significant than expected and the personal factors again have proved to have an excessive role in person’s entrepreneurial ability, the authors would suggest that the ability of SSE Riga to fulfill its goal and develop entrepreneurs depends more on the effectiveness of the admission procedure than the education content itself. Therefore, it would imply that in addition to the standardized mathematics, English

and logics test the main focus of the admission should remain on the personalities, not the previous academic performance. Furthermore, the research model gives the value of 16% in estimation of probability of an average SSE Riga graduate being and entrepreneur. This result shows quite promising SSE Riga graduate potential, suggesting that the combination of taking into account the personality factors and providing excellent business education to polish their entrepreneurial ability has already contributed to some entrepreneurial success.

For the future, as the scope of this research was SSE Riga graduates only, it would be of interest to explore, whether the conclusions are the same for other business universities in Latvia. What is more, it would be challenging to determine, whether the business education provided by the universities of Latvia would be of importance for shaping entrepreneurial personalities in general by adding the graduates of other universities to the sample. What concerns a deeper research of SSE Riga sample, this research has mentioned that the business courses provided by the school have changed over years, by introducing new courses and changing the old ones. Thus, a further research could be done with the focus on the differences in entrepreneurial capacity between the first and later graduates to see, if SSE Riga has succeeded in creating more entrepreneurs by shaping their program accordingly.

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## Appendix 1

### 1.1 List of Interviewees

- Māris Pazars – the graduate of 1998; the chairman of the board of Interaktīvo Tehnoloģiju Grupa Ltd. (18 Jan. 2007)
- Jānis Teteris – the graduate of 1996; the owner and director of Pirmais Brokeris Ltd. (28 Oct. 2006)
- Roma Puisiene – the graduate of 2000; the owner and director of Medgrupe Ltd. (11 Nov. 2006)
- Jānis Volbergs – the graduate of 2006; the owner and director of Trave Ltd. (14 Dec. 2007)
- Ivo Luka-Indāns – the graduate of 1998; the member of the board of Nordic Partners Ltd. (15 Dec. 2006)
- Aigars Zelmenis – the graduate of 2000; the owner and director of Krassky Ltd. (10 Nov. 2006)
- Jānis Spoģis – the graduate of 1998; the marketing director of Tele 2 Ltd. (23 Nov. 2006)
- Gunta Jurča – the graduate of 2006; the account manager of McCann Eriksson Riga Ltd. (15 Dec. 2006);
- Mečislavs Maculēvičs – the graduate of 2005; the human resource manager of Procter & Gamble Ltd.

### 1.2 Questionnaire

Your name and surname:.....

Year of graduation from Stockholm School of Economics in Riga (SSE Riga):.....

What is your level of education?

- Bachelor degree
- Master's degree
- PhD

What is the business area you are currently working in?

- Audit & Consulting
- Banking & Finance
- IT or other technologies
- Advertising & Marketing
- Wholesale & Retail
- Manufacturing
- Construction
- Real estate & Housing
- Transportation & Logistics
- State & Municipalities
- Other .....
- Not employed

Do you have a degree anywhere else besides SSE Riga in an unrelated field to economics or business?

- Yes
- No

When you first applied to SSE Riga, did you plan to eventually become an entrepreneur?

- Yes
- No

Did you have a substantial (more than a month) work experience before SSE Riga?

- Yes
- No

Did you work when being a student of year 1 or year 2, when studying in SSE Riga?

- Yes
- No

How many lectures did you on average attend when studying in SSE Riga?

- More than 80%
- 50-80%
- Less than 80%

Which extracurricular activities were you involved in during studies at SSE Riga?

- Student Association
- Organizing Days of Opportunities or Career Days
- Organizing Open Door Days
- Organizing Peak Time
- Charity group
- Choir
- Drama Club
- Investment Fund
- Je Joue
- Business Lab
- Other .....
- None

Have any of your relatives been or is an entrepreneur?

- Yes
- No

If yes, who?

- Parents
- Siblings
- Aunts, uncles
- Cousins
- Grandparents
- Great – grandparents

Have you ever participated in creating a new company by putting in either your financial or intellectual capital or both after graduating from SSE Riga?

- Yes
- No

Do you plan to start your own business within 3 years?

- Yes
- No

Is the company still operating?

- Yes
- No

Did you establish the business together with someone who has also studied in SSE Riga?

- Yes
- No

What was the initial source of financing when establishing the company?

- Loan from credit institution
- Own capital
- External capital
- Other.....

How many years of work experience did you have before establishing the company?.....

What is the end product of the company?

- Good/s
- Service/s b2b
- Service/s to consumers
- Service/s to public sector

What is the number of employees in the company?.....

How many graduates of SSE Riga are employed by the company excluding you?.....

What was the annual sales figure of the company for year 2006 (in EUR)?.....

Are you married?

- Yes



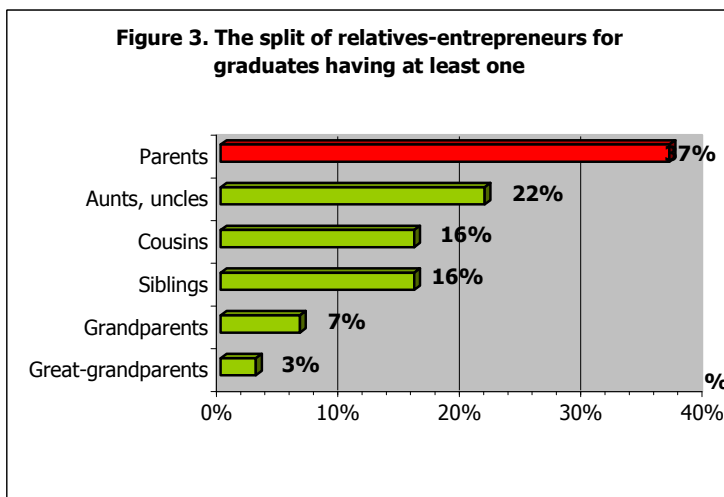
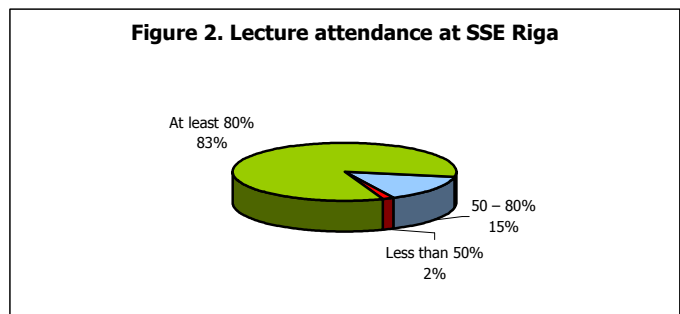
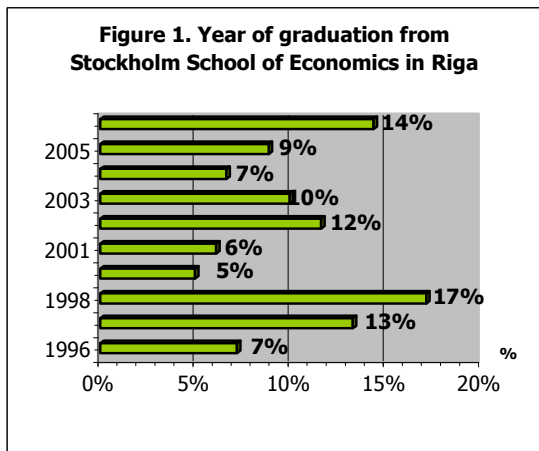
- No  
 -Divorced/widowed  
 How many children do you have?.....  
 What is your monthly net income (in EUR)?  
 -<300  
 -301-600  
 -601-900  
 -901-1200  
 -1201-2000  
 -2001-3000  
 ->3000

### 1.3 Course description

<b>Mathematical courses</b>	
<b>Course</b>	<b>Description of the course content</b>
Managerial Economics (ME)	1. Variety of decision situations, relating to pricing of products, new investments, budgeting, and evaluation of past performance. Acquiring a precise cost accounting terminology. 2. Issues related to methods of planning and management of production. Topics such as model building for different situations (e. g., inventory control, project management, and queuing situations), production management, production strategies, forecasting and decision theory. Introduction to techniques of linear and integer programming.
Financial Accounting (FA)	How to start a business?, What form of business organisation to choose?, Which are the interested parties?, Different concepts: income - expenditure; revenue - expenses; payments; Why do we need accounting?, What is the purpose?, Introduction to double-entry book-keeping; Which are the final Reports?, Profit and Loss Account and the Balance Sheet; Cash flow Statement; Classifying Assets - Current and Fixed; Classifying Liabilities - Current, Long term - and Capital; Valuation of assets - Depreciation; Taxation; Reservations; Studies of Annual Reports of different private/public limited companies.
Management Accounting and Finance (MAF)	Traditional financial accounting conventions, accounting practices, Capital requirements, Management accounting, Limited companies, issue of shares and debentures, Taxation in Accounts, Provisions, reserves and liabilities, The increase and reduction of the share capital of limited companies, Cash flow statements, Financial analyses with key ratios, Consolidated accounts, Consolidated Balance Sheets, Consolidated Profit and Loss Accounts, Budgeting and Budgetary Control, Interpretation of Final Accounts
Accounting and Finance (AF)	1. Advanced Accounting Theory (AT): Recognition and measurement, Acquisitions, Leasing, Depreciation, Inflation accounting; 2. Financial Analysis (FA): Relationship between profitability, financing and growth of the firm, The leverage formula and Du Pont-analysis, Growth analysis; 3. Equity Valuation (V): Dividend discount model, Residual income model, Multiples; 4. Behavioural Management Control (BMC): Relation between financial accounting and managerial control, Balanced scorecard and intellectual capital, Process orientation & management control
Market Research (MR)	Stimulating the working environment of a market researcher. Working with real data from real market research, dealing with imperfections of real life data and research design, challenge to make own assumptions in order to come up with solutions to real business problems.
Financial Economics (FE)	Introduction to financial markets and intermediaries, The Capital Asset Pricing Model (CAPM), Pricing of derivative financial instruments, The Black-Scholes Model, Pricing of fixed income instruments, market Microstructure - How financial markets are organized and work, Financial systems and how different systems work, Theory of financial intermediaries - banks and insurance companies, Corporate finance
<b>Non-mathematical courses</b>	
Strategy (S)	Deals with fundamental decisions that have a big impact on the future of an organization. Explore different areas of strategic management: strategic analysis, strategic choice and implementation. Focus on the link between strategic management in general and the management of technology, e.g. production management, innovation management, and quality management, in particular.
Organization and Management (OM)	Four different perspectives on management and organization, all of which enable to see and understand different facets of organizational life. Theory and application of the learned theories for understanding organizational phenomena and their complexity.
Human Resource Management (HRM)	Critical examination of the role of HRM in the business development process of a company by discussing strategic HRM.

Marketing (M)	External and Internal Marketing Situation Analysis, Demand and Opportunity Analysis, Market Segmentation, Target Marketing and Positioning, Marketing Research and Marketing Intelligence Fundamentals, Product and Service Development and Product-Line Management, Designing and Managing Marketing Promotion Programs, Developing and Managing a Comprehensive Physical Distribution and Channel System, Determining Prices and Other value Consideration for Products and Services
Entrepreneurship and Business Planning (EBP)	1. A general introduction to business administration, the fundamental models, concepts and scientific theory. 2. Entrepreneurship, new venturing, enterprise as a life style. Conditions and actions for start up and growth. 3. Business planning, business idea and business development. The business plan with emphasis on the new and the small firms.
Business Ethics (BE)	Basic notions and theories of business ethics, value formation, deontological and consequentialist theories, justice and responsibility. Covers from an ethical point of view intra-firm relationships in different organizational designs, market relationships and marketing ethics, corporate social responsibility and the ethics of international and transnational business.

### 1.4 General graduate data description



## Appendix 2

Table 1. Summary statistics of the independent variable.

Variable	Obs	Mean	Std.Dev.	Min	Max
bachelor	177	0.6158192	0.4877808	0	1
master	177	0.3785311	0.4863969	0	1
diversed_edu	177	0.1525424	0.3605658	0	1
motivation	177	0.3559322	0.4801531	0	1
work_exp	177	0.4067797	0.4926267	0	1
stud_work	177	0.4011299	0.4915177	0	1
lect_attend	177	2.80791	0.4360784	1	3
family_ent	177	0.4915254	0.5013464	0	1
parent_ent	177	0.2768362	0.4487041	0	1
sibling_ent	177	0.1129944	0.317484	0	1
aunt_uncle_ent	177	0.1581921	0.3659563	0	1
cousin_ent	177	0.1186441	0.3242866	0	1
grandp_ent	177	0.0451977	0.2083269	0	1
grgrand_ent	177	0.0225989	0.1490425	0	1
married	174	0.2988506	0.4590753	0	1
divorced	174	0.0402299	0.197065	0	1
children	174	0.2873563	0.5670743	0	3
gender	177	0.3898305	0.4890953	0	1
income	151	4.81457	1.666949	1	7
me_grad	164	133.939	21.03129	100	186
strategy_g~d	176	137.4205	17.64457	100	175
hrm_grad	177	145.3164	18.21998	105	185
om_grad	177	137.0056	13.33804	107	178
marketing_~d	176	133.4148	21.53067	100	183
ebp_grad	99	141.7778	12.77158	100	173
acc1_grad	164	138.7622	20.7503	100	196
acc2_grad	177	141.8192	23.83468	101	197
acc3_grad	106	131.5755	16.6693	100	180
fe_grad	175	115.7143	12.04964	100	150
be_grad	70	142.6429	12.05547	122	178
mr_grad	71	142.4789	19.57758	101	182
average	176	135.8646	9.687629	113.01	168
age	177	26.54802	3.345487	21	35
grad	177	5.485876	2.962085	1	10
diff_me	163	-1.774356	18.2888	-47.64	55.49
diff_hrm	175	9.434171	16.90094	-28.42999	54.49
diff_om	175	1.057029	12.74245	-30.17999	44.08
diff_marke~g	175	-2.482114	19.38623	-46	49.32001
diff_ebp	130	-3.941616	18.60226	-46.38	38.19
diff_fe	172	-20.12744	12.51706	-54.45	18.78999
diff_be	69	5.574058	11.86496	-17.83	36.56
diff_mr	69	5.718986	18.24503	-31.17	48.69
diff_str	173	1.826185	14.80255	-28.27	45.10001
diff_acc	176	2.811534	13.48913	-21.97333	45.99

Source: STATA output

Table 2. The correlations between the variables

	diff_ME	diff_OM	diff_HRM	diff_marketin g	diff_EBP	diff_FE	diff_BE	diff_MR	diff_strategy	diff_FA	diff_MAF	diff_AF	graduation year
diff_ME	1.0000												
diff_OM	0.0467	1.0000											
diff_HRM	0.2267	0.0516	1.0000										
diff_marketin g	-0.5335	-0.0219	-0.0500	1.0000									
diff_EBP	0.0129	0.2338	0.2155	0.0528	1.0000								
diff_FE	-0.3035	-0.0638	-0.1168	0.0130	0.0701	1.0000							
diff_BE	-0.0736	0.0335	0.0489	-0.0379	-0.0126	-0.0315	1.0000						
diff_MR	0.0782	-0.2153	0.0912	-0.2867	-0.0054	-0.0778	0.0705	1.0000					
diff_strategy	-0.0923	0.0458	-0.0955	-0.1933	-0.1903	0.3192	0.1638	0.3311	1.0000				
diff_FA	0.1071	0.0489	-0.0445	-0.1988	0.0751	-0.0644	-0.1839	-0.0902	-0.3927	1.0000			
diff_MAF	0.2654	-0.1067	0.0836	-0.2403	-0.1897	-0.1743	-0.0600	0.2099	0.1119	-0.0767	1.0000		
diff_AF	0.3293	-0.1283	0.1748	-0.0803	0.0440	-0.2448	0.0700	-0.2750	-0.0154	-0.1214	0.1453	1.0000	
graduation year	0.0022	0.3989	0.0180	-0.3622	-0.0481	0.3848	-0.1623	0.2404	0.3084	0.1871	0.1267	-0.2600	1.0000
bachelor	0.0069	0.1683	0.0561	-0.0265	0.0506	0.1025	-0.1194	-0.0544	0.0342	0.1800	0.0148	0.0204	0.3523
master	-0.0069	-0.1683	-0.0561	0.0265	-0.0506	-0.1025	0.1194	0.0544	-0.0342	-0.1800	-0.0148	-0.0204	-0.3523
diversed	0.1324	0.0221	0.1296	-0.0693	-0.0429	-0.1778	-0.1328	-0.0110	-0.2119	-0.1021	0.0571	-0.0928	-0.3138
motivation	0.0000	-0.0634	0.1476	-0.0011	0.0829	-0.0325	0.1723	0.0460	-0.0352	0.1280	0.0638	0.0929	0.0853
work_exp	-0.1230	-0.0829	-0.1428	0.0424	-0.0426	0.0530	0.2429	0.0710	-0.1203	0.2129	-0.1194	-0.0401	-0.0831
stud_work	0.3315	0.1789	0.0240	0.0334	0.0753	-0.2230	-0.0562	-0.0425	-0.1081	0.0971	0.1157	0.1210	-0.0775
lect_attend	-0.0106	-0.1719	0.0538	-0.0842	-0.0217	0.0579	0.2119	0.0014	0.1157	-0.1273	0.1333	-0.0113	-0.1459
family_ent	0.0150	0.0156	-0.0947	-0.0884	-0.1997	-0.0143	0.0858	-0.0840	-0.1249	0.2184	-0.0631	0.0269	0.0603
parent_ent	-0.0240	-0.0618	-0.0681	-0.0990	-0.0792	-0.0594	0.0627	-0.1085	0.0113	0.2759	-0.1160	0.0035	-0.0549
sibling_ent	-0.0226	0.0944	0.0213	-0.8930	-0.1373	-0.0811	0.1166	-0.0604	-0.1364	0.1248	-0.0586	0.0990	0.0993
aunt_uncle_e nt	-0.0033	0.1101	-0.0264	0.0031	-0.2709	0.0811	-0.0687	-0.0126	-0.0098	0.0869	-0.0096	-0.0784	0.1789
cousin_ent	-0.0644	-0.1146	-0.1299	0.2051	-0.2381	-0.0063	-0.0558	-0.2402	-0.1010	-0.0666	0.1524	-0.0339	-0.0208
grandp_ent	-0.0100	0.0064	0.0349	-0.1106	-0.1104	-0.0407	-0.0959	-0.0590	-0.0133	0.1362	0.0032	-0.0235	0.1284
grgrandp_ent	-0.0159	0.2126	0.1408	-0.1753	0.1081	-0.0393	-0.0008	0.0202	0.1586	0.0732	-0.0683	-0.0041	0.1997
entrep	-0.0255	-0.0168	-0.2120	0.2054	0.0410	0.0188	0.1086	-0.2210	-0.0420	0.0264	-0.2679	-0.0075	-0.2138
married	-0.1579	-0.0643	0.1128	0.0229	0.0476	-0.0327	0.3276	0.0046	0.0755	-0.0151	-0.2474	0.0286	-0.0943
children	-	-	-	-	-	-	-	-	-	-	-	-	-
gender	-0.0043	0.2502	0.1217	0.0609	-0.0007	-0.0291	0.0321	0.0992	0.3619	-0.2802	0.1079	-0.0510	0.1865
age	0.0252	-0.2723	0.0268	0.3324	-0.0184	-0.2527	0.2074	-0.1906	-0.2117	-0.1752	-0.0216	0.2723	-0.7627

	<b>bachelor</b>	<b>master</b>	<b>diversed</b>	<b>motivation</b>	<b>work_exp</b>	<b>stud_work</b>	<b>attend_lect</b>	<b>family_ent</b>	<b>parent_entr</b>	<b>sibling_entr</b>	<b>aunt_uncle_entr</b>	<b>cousin_entr</b>	<b>grandp_entr</b>
<b>bachelor</b>	1.0000												
<b>master</b>	-1.0000	1.0000											
<b>diversed</b>	-0.4322	0.4322	1.0000										
<b>motivation</b>	-0.0246	0.0246	-0.1693	1.0000									
<b>work_exp</b>	0.0614	-0.0614	-0.0614	0.0300	1.0000								
<b>stud_work</b>	0.0390	-0.0390	0.0616	-0.0595	0.0301	1.0000							
<b>lect_attend</b>	-0.1789	0.1789	0.0853	0.0955	-0.0483	-0.0149	1.0000						
<b>family_ent</b>	0.0430	-0.0430	-0.1359	0.3201	0.2872	-0.0432	-0.0659	1.0000					
<b>parent_entr</b>	0.0032	-0.0032	-0.1089	0.3731	0.1766	-0.1555	0.0740	0.6675	1.0000				
<b>sibling_entr</b>	-0.0853	0.0853	-0.0389	0.3584	0.1191	-0.0250	-0.1126	0.5073	0.1119	1.0000			
<b>aunt_uncle_entr</b>	0.0643	-0.0643	-0.1807	0.0427	0.0588	0.0923	0.0080	0.5617	0.2343	0.1901	1.0000		
<b>cousin_entr</b>	-0.2059	0.2059	-0.0646	0.0579	-0.1226	-0.1144	0.0852	0.2008	0.0993	0.1590	0.3575	1.0000	
<b>grandp_entr</b>	-0.1015	0.1015	-0.0928	0.2158	-0.1726	-0.1644	-0.0057	0.2884	0.4321	0.2284	0.3543	0.3260	1.0000
<b>grgrandp_entr</b>	0.0646	-0.0646	-0.0646	0.0579	-0.1226	-0.1144	0.0852	0.2008	0.3008	0.1590	0.1357	-0.0308	0.6961
<b>entrep</b>	-0.0165	0.0165	0.1087	0.1268	0.0950	-0.1014	-0.1434	0.1296	0.0605	0.3022	-0.0458	0.1834	0.1374
<b>married</b>	0.0646	-0.0646	-0.0646	0.0579	0.0641	0.0772	0.0852	-0.1532	-0.1023	-0.0777	-0.0861	-0.0308	-0.0442
<b>children</b>	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>gender</b>	0.0430	-0.0430	-0.1359	-0.1240	-0.1240	0.1543	0.0567	-0.0336	-0.0248	-0.0619	0.1808	0.0238	0.0342
<b>age</b>	0.2742	0.2742	0.3557	-0.0648	-0.0648	0.0236	0.0147	0.0013	0.0393	-0.0149	-0.0915	0.0271	-0.1099

	<b>grgrandp_entr</b>	<b>entrep</b>	<b>married</b>	<b>children</b>	<b>gender</b>	<b>age</b>							
<b>grgrandp_entr</b>	1.0000												
<b>entrep</b>	0.0079	1.0000											
<b>married</b>	-0.0308	0.1834	1.0000										
<b>children</b>	-	-	-	1.0000									
<b>gender</b>	0.2008	-0.2925	0.0238	-	1.0000								
<b>age</b>	-0.1283	0.2180	0.0788	-	-0.1054	1.0000							

Source: STATA output

**Table 3.** The differences between entrepreneurs and non-entrepreneurs

	<b>Whole sample</b>	<b>Entrepreneurs</b>	<b>Non-entrepreneurs</b>	<b>p-value for test of differences in means</b>
<b>Entrepreneurs, %</b>	<b>0.49</b>	<b>1</b>	<b>0</b>	<b>-</b>
<b>Individual characteristics</b>				
Income >3000 EUR, %	0.22	0.31	0.14	0.0136 **
Females, %	0.39	0.24	0.53	0.0001 ***
<b>Family background</b>				
There is at least one family member that is an entrepreneur, %	0.49	0.56	0.41	0.0432 **
Brother or sister are entrepreneurs, %	0.11	0.17	0.05	0.0119 **
Cousin is entrepreneur, %	0.11	0.18	0.05	0.0068 ***
<b>SSE life characteristics</b>				
Motivation of becoming an entrepreneur, when entering SSE Riga, %	0.36	0.44	0.27	0.0202 **
Attended 50-80% of lectures, %	0.16	0.21	0.11	0.0708 *
ME grade	134	130	137	0.0420 **
HRM grade	145	140	149	0.0007 ***
MAF grade	141	137	146	0.0146 **
FE grade	115	113	117	0.0184 **
MR grade	142	137	147	0.0267 **
Difference between HRM and average grade	9.43	5.8	12.8	0.0058 ***
Difference between MAF and average grade	6.19	2.74	9.50	0.0306 **
Difference between MR and average grade	5.7	1.7	9.4	0.0799 *

Note: \*significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%

Source: STATA output

**Table 4.** Entrepreneurship, academic performance, family background and individual characteristics

<b>Independent variable</b>	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
Difference between ME and average grade	-0.005 [0.006]	-0.007 [0.007]	-0.005 [0.007]	-0.005 [0.008]
Difference between HRM and average grade	-0.019 [0.008]	-0.019 [0.008]**	-0.020 [0.008]**	-0.215 [0.009]**
Difference between OM and average grade	0.001 [0.008]	0.0005 [0.008]	0.0002 [0.009]	0.004 [0.010]
Difference between Marketing and average grade	0.005 [0.007]	0.003 [0.007]	0.003 [0.008]	0.011 [0.008]
Difference between EBP and average grade	-0.019 [0.007]	-0.020 [0.007]***	-0.022 [0.008]***	-0.014 [0.010]
Difference between FE and average grade	-0.001 [0.009]	-0.003 [0.010]	-0.0004 [0.010]	0.003 [0.010]
Difference between Strategy and average grade	-0.002 [0.008]	-0.0001 [0.008]	0.0003 [0.008]	0.023 [0.010]**
Difference between Accounting and average grade	-0.010 [0.010]	-0.010 [0.010]	-0.010 [0.010]	-0.010 [0.011]
Master degree		-0.214 [0.298]	-0.274 [0.314]	-0.662 [0.369]*
Diverse education		0.176 [0.337]	0.185 [0.344]	0.106 [0.380]
Motivation		0.407 [0.247]*	0.339 [0.274]	0.372 [0.286]
Work experience before SSE Riga		0.192 [0.249]	0.141 [0.262]	-0.026 [0.280]
Working when studying		-0.007 [0.264]	-0.018 [0.278]	0.186 [0.295]
Number of lectures attended		-0.122 [0.268]	-0.078 [0.264]	-0.079 [0.285]
Parents are entrepreneurs			-0.201 [0.308]	-0.614 [0.338]*
Siblings are entrepreneurs			0.807 [0.418]*	1.086 [0.478]**
Aunts or uncles are entrepreneurs			-0.229 [0.338]	0.147 [0.398]
Cousins are entrepreneurs			0.582 [0.383]	0.743 [0.412]*
Grandparents are entrepreneurs			0.338 [0.626]	0.664 [0.623]
Great-grandparents are entrepreneurs			0.605 [0.799]	0.992 [0.733]
Person is female				-1.106 [0.281]***
Graduation year				-0.331 [0.098]***
Observations	128	128	128	127
Pseudo R-squared	0.0762	0.1012	0.1438	0.2803

Note: Probit regressions with marginal effects conducted, whether a person is entrepreneur is the dependent variable, all the independent ones are listed in the table. Standard errors in brackets.

\*significant at 10%; \*\*significant at 5%; \*\*\*significant at 1%

Source: STATA output

**Table 5.** The independent variables, hypothesis to be tested and the results.

<b>Independent variable</b>	<b>Hypothesis No.</b>	<b>Hypothesis with respect to dependent variable</b>	<b>Result</b>
Grade level in business education	1	Higher grades increase the probability of a person being an entrepreneur.	Neither rejected, nor accepted
Diversification of education	2	If a person has a degree besides SSE Riga in an unrelated field to economics or business, it increases the probability of a person being an entrepreneur.	Insignificant
Level of education	3	Higher level of education decreases the probability of a person being an entrepreneur.	Accepted
Family role model	4	If a person has a family member who is an entrepreneur, it increases the probability of a person being an entrepreneur.	Neither rejected, nor accepted
Gender	5	If a person is male, it increases the probability of a person being an entrepreneur.	Accepted
Age/graduation year	6	The older the person, the higher the probability of being an entrepreneur.	Accepted
Married and/or children	7	If a person is married and/or has children, it decreases the probability of a person being an entrepreneur.	Insignificant
Previous work experience	8	If a person has a substantial work experience before SSE Riga, it increases the probability of a person being an entrepreneur.	Insignificant
Work during studies	9	If a person has worked during studies, it increases the probability of a person being an entrepreneur.	Insignificant
Lecture attendance	10	Attending fewer lectures increases the probability of person being an entrepreneur.	Insignificant
Motivation	11	If a person has had entrepreneurial motivation, when entering SSE Riga, it increases the probability of a person being an entrepreneur.	Insignificant