# THE INFLUENCE OF EDUCATION ON THE ENTREPRENEURIAL BEHAVIOUR IN ROMANIA

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Abstract: The aim of this paper is to analyze the existence of a correlation between education and the difficulties the Romanian entrepreneur faces. In order to reach this objective we studied specialized literature, which tried to define the entrepreneur, to identify his/her characteristics, behaviour, education, its importance and the link between the entrepreneur and the level of education. In the case study elaborated within this paper we analyzed quantitative variables, expressed as percentages, which describe the entrepreneur's level of education and the difficulties he/she faces in relation to obtaining contracts and to supply and demand. The data used are annual; they refer to a period of time between 1995 and 2013 and were collected by the Romanian National Institute for Statistics. We used as analysis instruments both Microsoft Excel 2010 and the SPSS 17 statistics programme (Statistical Package for Social Sciences). We elaborated statistical tests which would confirm or contradict the existence of certain tighter or weaker links between the entrepreneur's education and the difficulties he/she faces. The results have proven the existence of strong positive correlations between the entrepreneurs who face supply and demand difficulties and the primary, secondary and vocational levels of education. In other words, as the number of entrepreneurs with the above-mentioned levels of education increases, so does the number of entrepreneurs who face supply and demand-related difficulties. Things change when the number of entrepreneurs with high school and university education increases because the number of entrepreneurs who face supply and demand-related difficulties decreases. Limited access to credit, lack of technology and raw materials are not correlated with the entrepreneur's level of education. Moreover, the increase in education level increases the probability that the entrepreneur face difficulties related to the low market price, the fact that the company is not well-known and lack of marketing skills. This research his useful both from a theoretical viewpoint, and from a practical one, offering an answer with regard to the correlation between education and the difficulties the Romanian entrepreneur faces.

**Keywords:** entrepreneur; education; Romania; demand; supply

JEL classification: I25; L26

## 1. Introduction

During the past years the European strategies and policies have a new direction and are meant to support the European Union's efforts for sustainable development. An important role in the sustainable development of any territory is held by education and continuing education (Rădulescu, et al., 2015). In this context the strategic framework for future European cooperation in the field of education and training was drawn up. It is structured into four chapters, in agreement with the four strategic objectives of the framework, as follows:

- Making lifelong learning and mobility a reality;
- Emproving the quality and efficiency of education and training;
- Promoting equity, social cohesion and active citizenship;
- Enhancing creativity and innovation, including entrepreneurship, at all levels of education and training (European Commission, 2011).

Starting from the fourth objective, in this paper we set forth to analyze whether there is relation between the Romanian entrepreneur's level of education and the difficulties relating to supply and demand and obtaining contracts that he/she faces in his/her activities. This is even more important as there is a consensus regarding the importance of entrepreneurs for economic development (GEM, 2008).

In order to achieve this aim we shall take a look at the specialized literature which tries to define the entrepreneur, identify his/her characteristics, behaviour, education, its importance and the relation between the entrepreneur and the level of education.

## 2. Background

Many economists and academicians support the idea that entrepreneurship becomes a crucial factor in the development and wellbeing of societies; consequently many authors have tried to define the entrepreneur. Despite all these, there is no universal definition of the entrepreneur, unanimously accepted in literature (Gartner, 1989). Most of the specialized literature portrays the entrepreneur as an unambiguous individual, unhindered by incertitude, an individual with inclination towards novelty (Begley & Boyd, 1987). The entrepreneur is regarded as a creative individual, with the potential to create a vision practically starting from scratch, investing energy in the initiation and foundation process of a company, constantly trying to generate new business visions. These visions and actions are determined by the desire to take a calculated risk which implies personal, social, psychological, as well as financial aspects. He/She does every possible thing in order to reach the set goals and in order to avoid failure (Hisrich & Peters, 1998).

The entrepreneur bases his/her actions on knowledge, skills and attitudes:

- The knowledge an entrepreneur requires includes the capacity to identify available opportunities for professional activities, a better understanding of economy, of the opportunities and challenges an employer or an organization faces;
- The skills refer to the ability to plan, organize, administer, delegate, communicate, evaluate, negotiate, work both individually and as part of a team, identify strengths and weaknesses, as well as assess and take risks when these are justified;
- The entrepreneurial attitudes refer to innitiative, proativeness, independance and innovation in the personal life and at the job, as well as the motivation and determination to fulfil both personal and job-related objectives (European Commission, 2011).

As compared to the rest of the population, the entrepreneur has a higher need for achievement, inclination towards risk-taking, innovation and control capacity (Collins, Hanges, & Locke, 2004). Business cycles are viewed as result of innovation, which resides in generating a new idea and materializing it into a new product, process or service, which leads to the dynamic growth of the national economy, the increase of employability, as well as the creation of profit for the innovative enterprise (Thurik & Wennekers, 2001). Moreover, each entrepreneur's vision on the action plan on the market will determine the type of business in which he/she will get involved (Hahn, 2013). Besides, the status of entrepreneur is perceived as attractive (Hordău, 2015).

Within the context of this study, the entrepreneur is any person who carries out economic activities with the purpose of obtaining certain benefits.

In order to be able to respond to the requirements of the modern knowledge-based economy, Europe needs graduates who are highly qualified, equipped not only with specific knowledge, but also with transversal skills such as communication, flexibility and

entrepreneurial spirit, which will allow them to succeed on today's labour market (European Commission, 2011). The probability that a manager reach his/her objectives increases as he/she participates in continuing education courses (Zima, 2013). The companies where continuing professional development and overcoming one's own limitations are a priority have greater chances of success (Vele, 2013). Entrepreneurial skills do not appear at birth; they are developed throughout one's life (Kuratko, 2005). Certain authors recommend in this regard partnerships with schools in order to develop common educational programmes (Pop & Borza, 2016).

Thus education seems important for stimulating entrepreneurship for several reasons. Firstly, education offers a sense of independence, autonomy and trust in oneself to individuals. Secondly, education raises people's awareness as to alternatives in choosing their career. Thirdly, education broadens an individual's horizons, creating people that are better prepared for recognizing opportunities and offers knowledge which can be used by individuals in developing new entrepreneurial opportunities (Sánchez, 2010).

## 3. Methodology

This study was based on the analysis of quantitative variables, expressed as percentages, which describe the entrepreneur's level of education and the difficulties he/she faces with regard to obtaining contracts, supply and demand. The data used are annual; they refer to a period of time ranging from 1995 to 2013, and were collected by the Romanian National Institute of Statistics. The entrepreneur's level of education is described by means of four variables, which represent the international standard classification of education. Primary level or early education: its main objective is to get young children accustomed to a learning process different than the one available within the family. This level of education, which usually targets children not older than 10 or 11 years of age, supports the emotional, physical, social and cognitive development of the pupil. The Secondary level aims at continuing with the results obtained at primary level, so it is based on human development, trying to create a basis for lifelong learning. Another feature which characteristic for this level is the pedagogical education of the teachers in various subjects, trained to offer pupils help in consolidating theoretical concepts in a wide range of subjects. The vocational level is part of the formal educational system and contains planned educational programmes for the pupils who wish to acquire knowledge, skills and abilities specific for a certain job or profession. Usually, within this level the focus falls on practice, which leads to a relevant qualification of the pupil on the labour market. The high school and university level provide a more diversified, profound and specialized education. As regards university education, it focuses on practice and offering specific professional knowledge, skills and competencies. (UNESCO Institute for Statistics, 2012).

The difficulties faced by the entrepreneur in terms of obtaining contracts are studied by the Romanian National Institute of Statistics only by means of three quantitative variables (percentages): without difficulties, supply and demand related difficulties, and difficulties related to supply or demand. For this analysis we used only the first two variables because we did not want to complicate the analysis by introducing the third variable, similar in terms of the difficulties entrepreneurs face.

Unlike the previous case, the difficulties the entrepreneur faces with regard to demand are presented by the Romanian National Institute for Statistics by means of five quantitative variables presented as percentages: clients with limited funds, high competition, too low market price, company is not well-known, and lack of marketing skills. The same characteristics appear in terms of supply as well, except the quantitative variables, which express these difficulties, change: lack of resources, limited access to credits, lack of clients, or clients who pay too late, limited access to well-paid employees, lack of technologies and raw materials.

In order to analyze the link between the entrepreneur's level of education and the

difficulties he/she faces in his/her activity, we used both Microsoft Excel 2010 and the statistics programme SPSS 17 (Statistical Package for Social Sciences) as analysis instruments.

#### 4. Results and discussions

Before carrying out statistical tests which would confirm or contradict the existence of certain tighter or weaker links between the entrepreneur's education and the difficulties he/she faces, in figure 1 we created a chart which presents the evolution of the four levels of education of the Romanian entrepreneur from 1995 to 2013. After 1989, Romania has been through a long reform and restructuring period, thus the Law of education was adopted only in 1995.

If one takes a look at the evolution of the primary level of education of Romanian entrepreneurs, one can notice the existence of a decreasing tendency, even though in 1999 the percentage of entrepreneurs with this level of education at the moment of the founding of the business recorded an increase as compared to the previous year (4% of the total number of Romanian entrepreneurs had primary level of education in 1998, one year later the percentage increases to 6.40% of the total recorded entrepreneurs, this being the maximum values within the period of time analyzed). Within the analyzed period of time there exist other periods during which the percentage of entrepreneurs with primary level of education increases; these are the years 2004-2005 and the years 2008-2009, yet these increases are not as great as in the case presented. If we were to analyze the minimum value of the percentage of entrepreneurs with primary level of education, we can notice that this is recorded in 2013. Moreover, from 2006 to 2013 the percentage of entrepreneurs with primary level of education does not exceed 2%. One of the factors which lead to this phenomenon is Romania's accession to the EU, which took place in 2007.

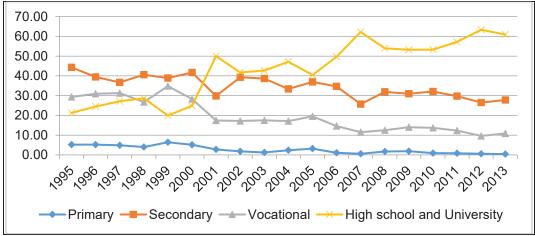


Figure 1. Evolution of the level of education of entrepreneurs in Romania

It until year 2000 the percentage of entrepreneurs with vocational level of education records limited oscillations, it drops dramatically after this year due to the closing down of vocational (industrial) schools, thus reaching in 2015 5,000 graduates of vocational schools/year – 20 times less than in 1990.

Romania's accession to the economic and political European Union generated positive effects in terms of the entrepreneurs' other levels of education as well. Thus after 2007, the secondary level started showing a decreasing tendency, which could be also explained

through the increase within the same period of time of the percentage of entrepreneurs whose level of education was vocational or high school or university.

The evolution of the percentage of entrepreneurs whose education ended at secondary level recorded over the analyzed period three sudden decreases in: 2001, 2004 and 2007; it is noteworthy that at the same time there were significant increases of the percentage of entrepreneurs with high school education or even university education. The period 2000-2003 characterized by a significant increase of the percentage of entrepreneurs with high school/university education was also the period wring which most visas were eliminated, Romanian was invited to join the North-Atlantic Alliance (NATO), The National Investment Fund collapsed, there were numerous street protests generated by the increase in unemployment and delays of the salaries. Beside these data which can explain the spectacular increase in the percentage of entrepreneur with high school or university education, one should also mention the spectacular increase of accredited higher education institutions. If in 1990 there were only 48 universities, in 2004 their number reached 122 (including private universities) (National Institute for Statistics). If one were to analyze the entire high school/university level for entrepreneurs, one would notice another massive increase of this percentage recorded between 2005-2007; this increase was generated by the political measures taken by the state institutions in order to increase the population's level of education, on the background of the accession to the European Union, amongst these measures being the introduction of the Bologna system, which lead to the reduction of undergraduate courses by one year.

If above we presented a descriptive statistics of the Romanian entrepreneurs' level of education, hereafter we will create tests which will confirm the existence or lack of a link between this level and the difficulties the entrepreneur faces. One noteworthy observation is that due to the small number or participants in the poll (N=19) in order to achieve the correlation we will use non-parametrical tests which do not require similarly restrictive conditions. The first correlation subjected to our analysis was the one between the primary level of education and the difficulties which occur in obtaining contracts.

Hypothesis 1. There is a link between the entrepreneur's level of education and the difficulties in obtaining contracts.

In order to establish if there is a link between the two and what the intensity of the link is, we express the null hypothesis "there is no link between the Romanian entrepreneurs' primary level of education and the hypostasis where the entrepreneur does not have any difficulty in obtaining contracts", and the alternative hypothesis, namely that "there is a link between the Romanian entrepreneurs' primary level of education and the hypostasis where the entrepreneur does not have any difficulty in obtaining contracts" and we calculate the Spearman correlation coefficient presented in table 1.

Table1. Correlation coefficients for difficulties in obtaining contracts

		Primary	Secondary	Vocational	High school/ University
Without difficulty	Correlation coeficient	875**	858**	723**	.818**
	Sig. (2- tailed)	.000	.000	.000	.000
Difficulties related to supply and demand	Correlation coeficient	.603**	.584**	.537*	568 <sup>*</sup>
	Sig. (2- tailed)	.006	.009	.018	.011

The result p of the statistic test (Sig's value) is lower than the chosen significance threshold (0.05), which means that we reject the null hypothesis and admit the alternative

hypothesis as real.

The same procedure is applied when dealing with the variables which describe the secondary, high school and university education levels. From table 1 one can notice that the value of p is lower than 0.05, which leads to the rejection of the null hypotheses and the acceptance of the alternative ones, which means that no matter the entrepreneur's level of education, there is a link with the fact that he/she does not face any difficulty in obtaining contracts. After having established that there is a link between the entrepreneur's level of education and that there is no record of difficulties met with when obtaining contracts, we analyzed the correlation coefficients (primary level - 0.875; secondary level - 0.858; vocational level - 0.723; high school/university level 0.818) whose values prove that this link is strong no matter the entrepreneur's level of education. The sign to be found in front of the correlation coefficients in the case of the primary, secondary and vocational levels proves that there exists an inverse link between these and the difficulties faced in obtaining contracts, namely, for example, if the number of entrepreneurs with primary level of education increases, then the number of entrepreneurs who do not face any difficulties in obtaining contracts decreases. When referring to the high school and university level, the correlation is positive; thus, as the number of entrepreneurs with this level of education increases, so does the number of those who do not face any difficulty in obtaining contracts.

When analyzing the existence of a link between the entrepreneurs' level of education and the difficulties linked to supply and demand, we obtain values of the p that are lower than the chosen significance threshold (0.05), which leads to the proof of the existence of a link between these variables. Yet the sign of the correlations changes in relation to the link between the level of education and the lack of difficulties faced by entrepreneurs. Thus there are strong positive correlations between the entrepreneurs who face difficulties in terms of supply and demand, on the one hand, and the primary, secondary and vocational levels, on the other hand. In other words, as the number of entrepreneurs with the abovementioned levels of education increases, so does the number of entrepreneurs facing difficulties in relation to supply and demand. Things change when the number of entrepreneurs with high school and university education increases because the number of entrepreneurs facing difficulties with supply and demand decreases. In order to see into more detail what the difficulties entrepreneurs face in relation to supply and demand are and which have a direct link with the former's level of education, we created two tables with the correlation coefficients regarding the supply-related difficulties and the demand-related difficulties, and expressed two other hypotheses.

Hypothesis 2. There is a link between the entrepreneur's level of education and the supply-related difficulties.

As regard supply-related difficulties, the following quantitative variables were available as percentages: lack of resources, limited access to credits, lack of clients or clients who pay late, limited access to well-paid employees, lack of technology and lack of raw materials. After calculating the Spearman correlation coefficients and testing the null hypotheses (these state that there are no links between the level of education and all the supplyrelated difficulties) we discovered that the entrepreneurs' level of education determines the occurrence of difficulties relative to the lack of resources, client-related issues and the limited access to well-paid employees (all the values of the significance threshold for the four levels of education are lower than 0.05). The correlation between the primary, secondary and vocational education level on the one hand, and the lack of resources on the other hand, is a positive one, thus when the number of entrepreneurs with such a level of education increases, so does the number of entrepreneurs who have issues with resources. At the opposite end there are the entrepreneurs with high school/university education which helps them sole issues related to the lack of resources (the correlation is a negative one which will determine a decrease in the number of entrepreneurs who face the lack of resources when the percentage of entrepreneurs with high school and

university education increases).

The situation changes when dealing with client-related difficulties or difficulties related to the limited access to well-paid employees, the correlation coefficients being negative in the case of primary, secondary and vocational education, and positive in the case of high school and university education, which means that an increase in the percentage of entrepreneurs with primary, secondary and vocational level of education will determine a decrease in the percentage of entrepreneurs who face difficulties with clients and employees, while an increase in the percentage of entrepreneurs with high school/university education brings about a decrease in the percentage of entrepreneurs who face client and employee-related issues.

Table 2. Correlation coefficients for difficulties related to the supply

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		Primary	Secondary	Vocational	High school/ University	
Lack of resources	Correlation coeficient	.596**	.543*	.571*	593**	
	Sig. (2- tailed)	.007	.016	.011	.007	
Limited access to credit	Correlation coeficient	.064	021	169	.095	
	Sig. (2- tailed)	.794	.932	.490	.699	
Without customers or with clients who pay late	Correlation coeficient	724**	798**	789**	.849**	
	Sig. (2- tailed)	.000	.000	.000	.000	
Limited access to highly paid employees	Correlation coeficient	765**	743**	691**	.735**	
	Sig. (2- tailed)	.000	.000	.001	.000	
Lack of technology	Correlation coeficient	.015	.112	.265	209	
	Sig. (2- tailed)	.953	.649	.274	.390	
Lack of raw materials	Correlation coeficient	.200	.285	.252	257	
	Sig. (2- tailed)	.412	.238	.298	.287	

A possible explanation for this phenomenon is the fact that entrepreneurs with primary, secondary and vocational education, due to their experience, are more successful in communicating with the individuals involved in the business they carry out.

As expected, limited access to credits, the lack of technologies and raw materials are not correlated with the entrepreneur's level of education (not matter the entrepreneur's level, the significance threshold is higher than 0.05, which leads to the acceptance of the null hypothesis which states that there is no link between the two categories of variables).

Hypothesis 3. There is a link between the entrepreneur's level of education and the demand-related difficulties.

Table 3 presents the Spearman correlation coefficients which establish whether there are links between the entrepreneurs' education and the demand-related difficulties they face. We analyzed whether there is a link between the variables which describe these difficulties: too low market price, the company is not well-known and the lack of marketing

skills, on the one hand, and all the 4 levels of education on the other hand. After calculating the Spearman correlation coefficients we realized that there are strong links between the last 3 types of difficulties and all the education levels (the significance threshold for p is lower than 0.05). Moreover, all the three types of difficulties linked to demand are in a negative relation with the primary, secondary and vocational levels of education, and in a positive relation with the high school/university level.

Table 3. Correlation coefficients for difficulties related to the demand

		Primary	Secondary	Vocational	High school /University
Big competition	Correlation coeficient	465*	423	383	.398
	Sig. (2- tailed)	.045	.071	.105	.091
The market price is too low	Correlation coeficient	571*	670**	589**	.644**
	Sig. (2- tailed)	.011	.002	.008	.003
The company is not well enough known	Correlation coeficient	805**	808**	709**	.770**
	Sig. (2- tailed)	.000	.000	.001	.000
Inability in marketing	Correlation coeficient	844**	790**	658**	.753**
	Sig. (2- tailed)	.000	.000	.002	.000

These negative correlations prove that as the percentage of entrepreneurs with lower level of education increases, the percentage of entrepreneurs who face difficulties with the low market price, the fact that the company is not well-known and the lack of marketing skills decreases. Despite the fact that we expect positive relations, these phenomena can be explained through the limited degree of complexity the businesses managed by entrepreneurs with primary, secondary and vocational education actually have; those entrepreneurs who are interested in the market price, are willing to sell their products and services even if they do not reach economic efficiency.

On the other hand, the situation changes when the level of education is high school/university, as there are strong positive relations between these and the low market price, the company not being so well-known and the lack of marketing skills. As the level of education increases so does the probability that the entrepreneur face the above-mentioned difficulties because these entrepreneurs try to evaluate their products correctly, negotiate favourably with their business partners and find new ways to promote their company. As the entrepreneur with high school/university education realizes that he/she needs to do all these in order to be successful, the difficulties he/she needs to solve by constantly trying to find the right solutions do not cease to appear.

As regards high competition on the marketplace, there is a negative relation between it and the entrepreneurs' primary level of education (the value of p is lower than 0.05), which can be explained through the fact that this category of entrepreneurs does know their competitors and does not seem to care about them. Entrepreneurs with secondary , vocational and high school education do know their competitors, yet these do not represent a danger in the development of their entrepreneurial activity.

## 5. Conclusions

Education is extremely important for the social-economic evolution of a society because it

represents the manner in which social, human and professional relationships develop.

Only through education can one develop entrepreneurial qualities such as high tolerance for risk and independence; these being qualities which help the entrepreneur face the difficulties which may appear during the entrepreneurial process. These difficulties are related both to the demand and to the supply, and during time of economic crisis thy have the tendency to amplify and multiply. Despite the fact that a higher level of education helps entrepreneurs over obstacle more easily, between these and the demand-related difficulties (the market price is too low, the company is not well-known, the lack of marketing skills) there exists a powerful positive correlation. The explanation is provided by the capacity of education to generate new questions and desire for knowledge; thus the entrepreneur with a high level of education will permanently search to develop his/her business, meeting along the way numerous difficulties he/she needs to solve.

At the opposite side there are the entrepreneurs with low education level (primary, secondary and vocational) for whom the difficulties analyzed do play a role in their business, yet not such a significant one; moreover, they often do not even notice the real problems, thus being unable to improve their business. The only exception to this rule is represented by the lack o resources which is a major problem for entrepreneurs with a lower level of education (because without resources, whether human or material, they cannot perform their entrepreneurial activity, yet if the company is not well-known on the market this process continues) but a minor one for those with high school/university education (due to the fact that these can access information more easily, can negotiate, they often speak a foreign language which helps them externalize their business).

In order to be able to lead a business, whether it is at the beginning or not, entrepreneurs need to combine elements of both formal and informal education. Based on these arguments education must constitute a priority in the life of every individual, as well as in the political environment whose duty is to support and encourage this process through the political measures it promotes.

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