

AN EMPIRICAL STUDY OF ENTREPRENEURIAL QUALITIES AMONG STUDENTS OF CLUJ-NAPOCA, ROMANIA

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ABSTRACT. Regardless of country, political or cultural environment, entrepreneurial activity supports economic development, therefore the large interest expressed in this subject is constantly growing. Even if the number of studies that analyse entrepreneurial qualities is close to hundreds, they must be constantly updated in order to understand in real time the constantly changing phenomenon of entrepreneurship. This study attempts to describe the entrepreneurial qualities of students from Cluj-Napoca, Romania within various sectors of the population. In order to analyse the strength of the entrepreneurial qualities of the students from Cluj-Napoca, Romania, we designed a set of 10 questions that deal with certain entrepreneurial traits. Due to the fact that risk taking was the least common entrepreneurial quality, we decided to formulate hypotheses to help us determine what exactly influences this entrepreneurial quality and how strong these influences are.

Key words: entrepreneurial qualities, Cluj-Napoca, students, entrepreneurial intention, taking risk.

JEL classification: I23, L26

1. Introduction

In recent decades, the field of entrepreneurship has become increasingly appreciated because of its influence on economic development or more specifically, how it represents an important source of innovation and job creation (Audretsch, Carree, Van Stel and Thurik, 2002). Moreover, in an

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uncertain society always facing changes and gaining new perspectives, entrepreneurial behavior is becoming increasingly important. (Gavron, Cowling, Holtham and Westall, 1998).

The considerable interest in entrepreneurial qualities is due to the belief that they have a predictive value of success in this activity (Koh, 1996; Gürol & Atsan, 2006; Pavlovici & Doyle, 2006). Although, in the past, approaching the decision to become an entrepreneur through the qualities that define him has been harshly criticized, an increasing number of researches (Mueller, Thomas, & Jaeger, 2002; Gürol & Atsan, 2006) claim that identifying a cluster of relevant qualities is useful in characterizing the personality of entrepreneurs. Even if many authors have explained entrepreneurial qualities, there is no universal definition or classification; therefore many terms have been used to describe them such as: characteristics, orientations and entrepreneurial attitudes.

A number of internal and external factors such as environment, education, personal values, but also professional experience influence the character of an entrepreneur. (Shane, Locke, & Collins, 2003). Education is one of the factors that positively influence entrepreneurial behavior; statement also supported by Van der Sluis, Van Praag and Vijverberg (2008) who, after analyzing the hundreds of studies made to describe its role, showed that the success of the entrepreneur is directly related to it. The authors go even further and claim that the rate of success for entrepreneurs is higher when the future entrepreneur decides to study for another year instead of working.

2. Theoretical background

Schumpeter J. A. (1934) claims that only a small part of the population has the necessary skills to overcome the obstacles that comes with the process of implementing a new idea. This would suggest that although some individuals have certain entrepreneurial traits, only a few of them have the necessary qualities to become entrepreneurs. While some of these qualities can be innate and others acquired through experience, they must relate to a particular because they vary from person to person (Dilts, 2011). In many cases, entrepreneurial and managerial qualities are equated, but entrepreneurship can also take place outside of the economic field in which case managerial qualities are not as important. (Van Der Kuip & Verheul, 2003) Unlike managerial qualities, entrepreneurial ones are characterized by a low dependence on tasks and environment. Another difference between the two is caused by the early age at which business activities can be taught, activities closely related to the personal characteristics developed during the socialization process.

"Studies reveal the complex phenomenon of entrepreneurship which involves a number of activities with technical, management and entrepreneurial

characteristics, the entrepreneurial performance depending on certain skills." (Filion, 2011). Some personal characteristics separate entrepreneurs from ordinary people and they are essential for an individual if he were to become an entrepreneur (Stokes, Wilson, & Mador, 2010). In order to perform this analysis, we use 10 of the least studied characteristics from the multitude identified by researches, which we describe briefly below.

People capable of working in a team must have a set of values that promote listening and constructive feedback to other teammates' opinions and ideas, while providing support and recognition of others' achievements (Katzenbach & Smith, 1993). Every member of the team must have proper workplace interactions with others, interactions based on kindness, friendship, interpersonal ties, but also logical reasoning (Abebe & Angriawan, 2011). Regarding the role of an entrepreneur within a team, things are slightly different due to the tasks that he has to accomplish: team coordination, team leadership and morale boosting, assuming risk in the name of the team and their possible failures (Hmieleski & Ensley, 2007).

Taking responsibility means, in this case, accepting the consequences that result from one's own actions. The idea that individuals who cannot take responsibility for their personal care don't have the same skills as those who do is instilled into the public consciousness through the language of responsibility (Scourfield, 2007). For individuals to take responsibility more easily in the field of entrepreneurship, it requires an essential prerequisite, relating to the freedom of purchasing goods with the purpose of collecting and using them in the future (Borchard, Cantner, Freytag, & Windisch, 2008).

The *respect for others* represents a powerful incentive in choosing to pursue the entrepreneurial activity, as universal human values are very important for entrepreneurs. The technical systems, raw materials, products and services and even economic markets would have no value without human capital (Branislav, 2013). For this reason, knowing it is an important quality for a future entrepreneur.

The *power of consequences* can even lead to behavioral changes, changes triggered by interactions between the individual and their environment (Diller & Nuzzolilli, 2012). If individuals take responsibility for the consequences of their actions, their chances of success grow considerably. However, if they consider that fulfilling their own dreams is too overwhelming, they tend to pull back into their comfort zone. In the case of companies, regardless of the type of consequences resulted from the entrepreneur's management actions; they tend to have more influence because they affect all those involved in the entrepreneurial process (Casadesus-Masanell & Ricart, 2011).

Although *punctuality* is not the only thing that matters in the entrepreneurial activity, it certainly plays an important role within it, role

proven by Wall, Minocha, & Rees (2010) who perceive time linearly, but also by the research done by Di Pietro (2014) who concludes that punctuality influences “economic development, innovation, competitiveness and also the efficiency of a state”. Although there are 2 main categories of cultures: those that perceive time based on events and those that live watching the clock (Levine, 1998), punctuality denotes responsibility, personal integrity and self-discipline (Di Pietro, 2014), necessary qualities for every entrepreneur.

If professional success is viewed beyond the financial field, in most cases, *love for the job* is also involved. Bird (2003) states that the love with which the individual does his job can lead to an increase in the profitability of his financial, which is one of the main reasons why a future entrepreneur should love his job. The entrepreneur devotes himself fully to fulfilling his plans and visions, which implies a special effort, but also dedication and commitment to the activities he performs (Coach, 2008).

Engagement is a concept studied by many researchers in social psychology, and is sometimes regarded as a decision that influences future behaviors of individuals (Festinger, 1964) and sometimes manifested as long-term aspiration of maintaining a valuable relationship with the environment and with the people with whom they interact (Morgan & Hunt, 1994). Between commitment decisions and actions there is a connection that can be explained by the fact that are motivated by behavior and actions, not by ideas, intentions and feelings (Fayolle & Linan, 2014).

Desire for improvement is a continuous process that can be accomplished by accessing an education of the highest quality to be up to date with all the news that appeared along with the progress of contemporary society (Peta, 2013). Thanks to their passion for education, individuals who possess this entrepreneurial attitude seek to be in the presence of persons from whom they can learn something new, both in the area of interest as well as outside it (Coach, 2008). A potential entrepreneur must pass through a process of self-assessment and self-analysis to be able to fix the shortcomings in his behavior (Bird, 1989).

Integrity and honor influence the behaviour of individuals, interacting with others within society and the method of decision-making. While Chipscholz (2012) believes that honesty refers to the truth you tell, and integrity to the right way of doing things, Linfield (2014) associates honesty with open and transparent behavior, and integrity with ethics and courage. The difficulty of testing and measuring integrity comes from the existence of numerous definitions which overlap and are used interchangeably (Palanski & Yammarino, 2007). However, when an individual takes a leadership position, integrity and honesty are just as important as “air, water and food”.

Taking risks is an entrepreneurial quality widely used by researchers, who characterize, in general, entrepreneurs as people who take risks of all

kinds (Block, Sander, & Spiegel, 2013). There is a positive correlation between the decision to become an entrepreneur and the way in which uncertainty and risk-taking are perceived (Caliendo, Fossen, & Kritikos, 2009). The level of risk that comes with a strategic choice by the entrepreneur will determine whether he can remain independent from the other players on the market or otherwise be dependent on third parties.

Although various studies have been conducted in order to analyze the entrepreneurial qualities that characterize students in Western Europe, the few studies done in Romania are outdated and no longer provide valid information. Our contribution to the previous works in this area consists of the investigation of entrepreneurial qualities in the case of students from Cluj-Napoca, the second largest city in terms of inhabitants in Romania, investigation that has never been conducted before.

3. Methodology

The research is based on a study conducted during April-May 2015 which analyses the field of entrepreneurship. The study is done based on answers given by respondents after completing an electronic questionnaire. Although the self-administration of the questionnaire could potentially limit this research, it has also removed any possible influence by the researchers on the answers. The investigated population was represented by the total number of students who study in Cluj-Napoca, the city with the largest University in Romania (with over 36.000 students) and with more than 70.000 students enrolled in State Universities.

The majority of the papers focusing on the research methodology also refer to the stage in which a research instrument (in this case, the questionnaire) once devised, should be pretested (Hussey & Hussey, 1997). The pretesting phase represents one of the key elements of a research process that should not be omitted; the absence of pretesting could lead to doubtful inquiries which call in question the results (Bailey, 1982). Our research is based on pretesting the questionnaire by applying it to a set of subjects pertaining to the population that represents the research universe (the total number of students located in Cluj-Napoca).

For our analysis, we decided to choose only a part of these students because the sample can reflect as faithfully as possible the characteristics of the population from which it is extracted. To identify the subjects we resorted to random sampling with equal probability with students having equal chances to be a part of the sample. To determine the sample size, we undertook the analysis of a smaller group and also accepted the error threshold between 1% and 5%. Our sample consists of 71 students from Cluj-Napoca, Romania, enrolled at all levels of studies in Bachelor's or Master's degree programs. The questionnaire, consisting

of two parts, was the research tool used for this analysis. Part of the questionnaire includes general information (gender, location, year of study), while the other part is made up of questions that analyze the entrepreneurial qualities, plans to become an entrepreneur, but also the existence of a model in family (role model). The 10 questions that describe the qualities of entrepreneurship are scaled from 1 to 5, 1 means strongly disagree and 5 strongly agree. Its purpose is to identify how the entrepreneurial qualities of students in Cluj-Napoca vary according to different segments of the population. Privacy is provided by the anonymous character of the questionnaire, missing identification data such as name, telephone number and email address.

For processing and analyzing the data we used both Microsoft Excel 2010 and the software SPSS 17 (Statistical Package for Social Sciences). Since the information gathered using the questionnaire follows entrepreneurial interdependencies in the student environment, in addition to the descriptive analysis of the data, we also use inferential statistics.

4. Results and discussions

In order to analyze the set of data obtained after questioning a sample of students from the universities of Cluj-Napoca, first of all, we made descriptive statistics (table 1) that included indicators of central tendency, dispersion and shape of distribution. The parameters of central tendency: mean, median and mode are designed to highlight the position around which the overall values of a variable form (Buiga, Dragos, Parpucea & Lazăr, 2008). The most common answer given to the questions that refer to the love for the job and risk taking is 2, and in terms of desire for improvement, taking responsibility, integrity and respect for others, the most common answer is 3. Punctuality, respect for rules and the ability to work in a team are entrepreneurial qualities with a modal value of 4.

Table 1.

Descriptive Statistics

	Mean	Median	Mode	Standard Deviation	Skewness	Kurtosis
Love for the job	2.69	2	2	1.166	0.358	-0.824
Desire for improvement	3.69	4	3	1.077	-0.264	-0.902
Engagement	4.28	4	5	0.831	-1.343	2.528
Assuming consequences	3.28	3	3	0.74	0.362	0.081
Punctuality	4.17	4	4	0.793	-0.846	0.566
Taking risks	2.62	2	2	1.113	0.617	-0.211
Integrity	3.18	3	3	0.833	0.098	0.039
Taking responsibility	3.68	4	4	0.841	-0.652	-0.065
Respect of others	2.68	3	3	0.938	0.378	0.188
Capability of working in a team	3.65	4	4	0.987	-0.151	-0.98

Source: Authors' calculations

It is interesting to note that commitment is an entrepreneurial quality very commonly found in the sample with a modal value of 5, equal to the maximum possibilities of response, which generates the highest average of all 10 studied entrepreneurial qualities (4.28). The next in ranking according to average is punctuality with a value of 4.17. These two are the only entrepreneurial qualities with an average value greater than 4. Going further, we observed that in half of the analyzed entrepreneurial qualities this parameter has a value between 3-4 (desire for improvement, taking responsibility, integrity, respecting the rules and the ability to work in a team), while the smallest values are around 2.6 (love for the job, risk taking and respecting others).

Regarding the other parameter of the central tendency, the median has the value of 4 in the case of desire for perfection, commitment, punctuality, respect for rules and the ability to work in a team, which means that half of the answers for these questions are below the threshold value of 4 and the other half of the answers have the value of 4 or 5. A not so unusual characteristic of the data is that love for the job and risk taking have a median value equal to the modal value 2, figure that divides the distribution into two equal parts.

Among the scatter indicators, we only analyzed the standard deviation which is the square root of the variant. The higher the standard deviation is the further away from the average value are the values for the set data. Thus, the smallest oscillations of entrepreneurial qualities towards the average value are present in the case of punctuality and taking responsibility. At the opposite pole, there is the love for the job and desire for improvement, whose values of 1.166 and 1.077 of the standard deviation show that they are the furthest away from the average.

Measuring the degree and direction of asymmetry is achieved through the coefficient of skewness whose negative value of entrepreneurial qualities: desire for improvement, commitment, punctuality and respecting the rules shows an asymmetric distribution that is negatively skewed to the left. This happens because the average is less than the median. If the average is greater than the median, the coefficient of skewness is positive in the case of the variables studying entrepreneurial qualities: love for the job, taking responsibility, risk taking, integrity and respecting others are asymmetrically positive with an oblique distribution to the right. The positive Kurtosis coefficient for the variables of commitment, taking responsibility, punctuality, integrity and respect for others show that the curve is higher and sharper than the normal curve (leptokurtic series), while negative values of the Kurtosis coefficient in the case of the variables: love for the work, desire for improvement, risk taking, respecting the rules and the ability to work in a team show that the variable curve is lower and wider than the normal curve (platicurtik series).

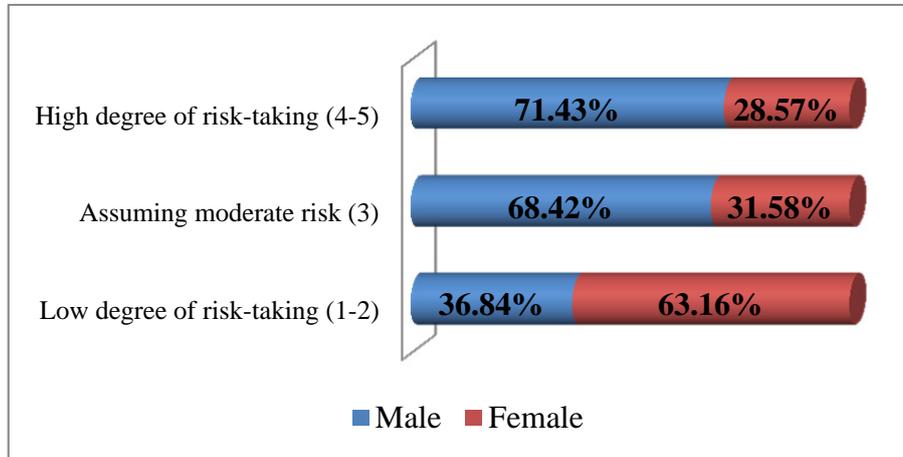
Of all 10 entrepreneurial qualities, we decided to study risk taking more in-depth since according to the relevant published literature it is one of the most important qualities, but also because it recorded the lowest average. According to Al Mutairi & Al Mutairi (2003), entrepreneurial spirit focuses on the individual's character that comes up with business ideas and takes risks permanently to make them more profitable, believing that they play an important role in developing and sustaining a business. In the case of individuals, the oscillations of the entrepreneurial spirit are based on the risk aversion level (Aghion & Howitt, 1992) and its intensity has as main effects the increase of "technological frontiers" and "influences on the production decisions (Galor & Michalopoulos, 2012).

The research is based on a series of 3 working hypotheses, taking into account both null hypothesis and alternative hypothesis. The two hypotheses are mutually exclusive: if one is true, then the other is false. Moreover, the null hypothesis is considered true by default. Statistical interference is made with reference to it, and the statistical probability (significance thresholds) that comes with any statistical test refers to the null hypothesis (Buiga, Dragos, Parpucea & Lazăr, 2008).

Hypothesis 1: Risk taking is influenced by gender

In the Figure 1, we illustrate the distribution of respondents according to the level of risk taking and according to gender. It can be observed that as the level of risk taking increases so does the percentage of male respondents. Thus 36.84% of the students with a low level of risk taking (those who responded with a 1 or 2) are male. Males are also represented by the 68.42% of those who take risks in a moderate manner (those who responded with a 3 to the question that deals with this entrepreneurial quality) The situation changes in the case of female students who are represented by a percentage of 63.16% of those with a low risk taking level, 31.58% of those with moderate risk taking level and 28.57% in the case of students with a high level of risk taking (figure 1).

As a result of the fact that the variables which study the entrepreneurial qualities are measured on a scale from 1 to 5 can be assimilated to the interval type variables and their averages can be computed, we analyze the differences in the averages of these variables with the aid of the t test which is a reliable test in the case of minor samples. We chose this type of test rather than Pearson's coefficient or Spearman's coefficient because neither the variable that measures the level of risk taking nor the gender variable has normal distributions (this can be observed using the Kurtosis coefficient).



Source: Authors' calculations

Figure 1. Distribution of students by gender and level of risk

Table 2 illustrates two rows of numerical results: the upper one regards the t test in the case of equal dispersions, while the lower row refers to the uneven dispersions. The choice is driven by the Levene test of dispersion equality, which is conducted using the columns situated below the Levene's Test header. The statistic is $F = 1.559$ in the emphasized case and the critical probability assigned to the p value is equal to 0.216. Therefore, at a confidence level of 0.05, the hypothesis of dispersion equality cannot be rejected. In this situation, the values pertaining to the upper row of the table will be employed and the t test statistic value of 8.664 and the bilateral critical probability (p value) of 0.085 (larger than 0.05) can be read. In consequence, the hypothesis of equality of the averages for the two groups is accepted. In other words, the gender of the students does not influence the way in which students assume risks, so the hypothesis is rejected.

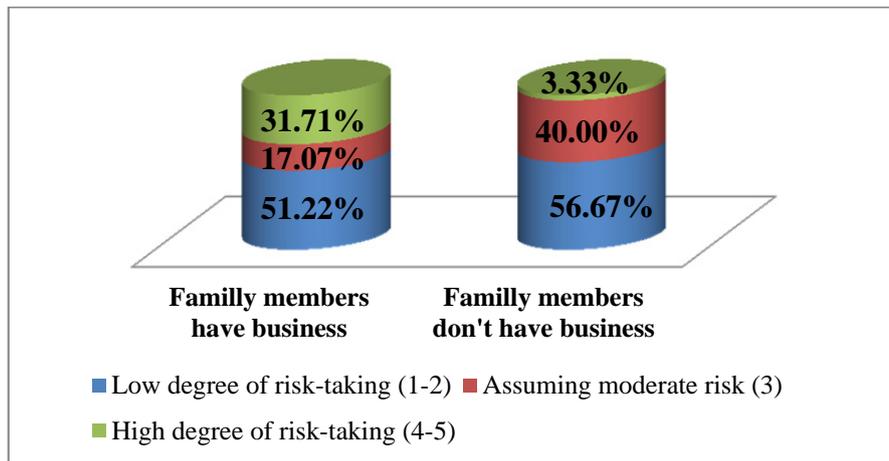
Table 2.

T test – Independent Samples Test for *Hypothesis 1*

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2 – tailed)
Equal variances assumed	1.559	0.216	-1.748	69	.085
Equal variances not assumed			-1.762	68.281	.083

Source: Authors' calculations

Hypothesis 2: There is correlation between level of risk taking and entrepreneurial family example



Source: Authors' calculations

Figure 2. Distribution of students by having a family member who owns a business and level of risk

From the graphical representation in Figure 2, it can be observed that 31.71% of those who have business-owning relatives are more willing to assume risks compared to 3.33% of those who do not have such a model in their family. There are significant differences also in the case of students who are willing to take moderate risks and while only 17.07% of the students who have business-owning relatives responded with 3 to the question that studied this entrepreneurial quality, 40% of the students who do not have a business-owning relative provided the same answer. Students who are not willing to take risks are divided about evenly in the 2 groups and are represented by 51.22% of those who do have a business-owning relative and 56.67% of those who do not (figure 2).

To see the results of the t-test for the difference in the two means, we find the p-value for the test (table 3). The p-value is labeled as "Sig." in the SPSS output and to find the correct "Sig.", we look in the section of the "Independent Samples Test" output labeled "t-test for Equality of Means" and we found the value of "Sig. (2-tailed)." For interpretation of p value we will use the second row because p value is bigger than 0.05 (0.066). In the case of Hypothesis 2 the p-value is .006, implying that the difference in means is statistically significant at the 0.1, 0.05 and 0.01 levels. In other words, having business-owning relatives has a low influence on the risk taking level of the students.

Table 3.

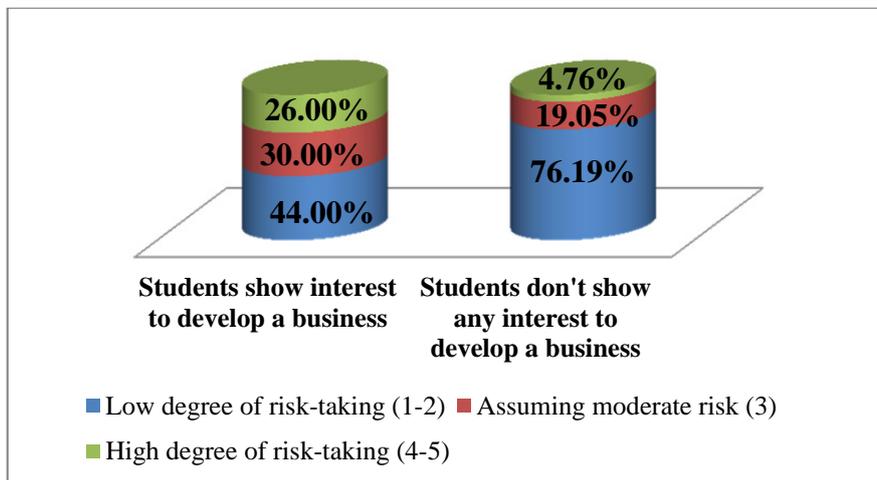
T test – Independent Samples Test for *Hypothesis 2*

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2 – tailed)
Equal variances assumed	3.497	.066	-2.853	69	.006
Equal variances not assumed			-2.977	68.894	.004

Source: Authors' calculations

Hypothesis 3: There is a link between the level of risk taking and the intention to start a company.

In terms of the level of risk taking by the students (Figure 3) we observed that the students who own or intend to start a business are more inclined to assume risks, thus 26% of them have a high level of willingness to assume risk and 30% of them assume moderate risks. The situation changes radically in the case of the students that have not and do not intend to open a business as only 4.76% of them are willing to take risks, while 19.05% assume only calculated risks (Figure 3). The last category of students, those who prefer not to assume risks at all or minimal risks are represented by 44% of the students who have or intend to start a business and 76.19% of those who have not and do not intend to start a business.



Source: Authors' calculations

Figure 3. Distribution of students by intention of starting a business and level of risk

The columns labeled "Levene's Test for Equality of Variances" tell us whether an assumption of the t-test has been met. The t-test assumes that the variability of each group is approximately equal. Because the p value is bigger than 0.05 levels, we will assume that the variances are equal and we use for interpretations the row labeled "Equal variances assumed". In this case, assuming equal variances, the t value is 2.287 because we can ignore the sign of t for a two tailed t-test (Biji, Lilea, Rosca & Vătui, 2010). The column labeled "df" gives the degrees of freedom associated with the t test; in this case, there are 69 degrees of freedom (table 4). In table 4 the column labeled "Sig. (2-tailed)" gives the two-tailed p value associated with the test and the p value of 0.025 tell us that the difference in means is statistically significant at the 0.1, 0.05, and 0.01 levels. This means that interest show to develop a business is influenced by degree of risk taking in the case of students from Cluj-Napoca.

Table 4.

T test – Independent Samples Test for *Hypothesis 3*

	Levene's Test for Equality of Variances		t-test for Equality of Means		
	F	Sig.	t	df	Sig. (2 – tailed)
Equal variances assumed	1.102	.298	-2.287	69	.025
Equal variances not assumed			-2.377	44.479	.022

Source: Authors' calculations

5. Conclusions

The objective of this study is to analyze the intensity of entrepreneurial qualities among students in Cluj-Napoca. It is very important for academic environment to know this information because it can lead to the development of entrepreneurial qualities among students in Cluj-Napoca. The analysis of the 10 entrepreneurial qualities observed among students from Cluj-Napoca reveals that most of them are finding it very hard to take risks. Other entrepreneurial qualities that also need improvement are the respect for colleagues and love for the job. At the opposite pole, there is commitment and punctuality, entrepreneurial qualities that are common to a large number of subjects included in the study.

Since risk-taking was the entrepreneurial quality which ranked lowest following the answers provided to the question "To what extent are you willing to start a business with borrowed money?" we decided to analyze it in

greater detail. This fact together with the high frequency of this entrepreneurial quality in specialized studies led us to formulate 3 hypotheses. After studying these hypotheses, we concluded that the gender of the students does not influence the ability to assume risks. We also concluded that there is a link between risk-taking and family role models and a positive link between risk taking and intention to start a business. This means that the presence of a business-owning family member has a positive impact on the student's risk taking ability, increasing his willingness to engage in risky situations. There is also a positive link between risk taking and the intention to start a business, a favorable aspect since those who wish to become entrepreneurs must always be willing to take risks. However, it should be noted that the links between these variables are weak and their influence is minimal.

Not surprisingly, the rejection of the first hypothesis, encountered in previous studies, can be explained through the high level of education of the subjects participating in the analysis (in our case, students located in Cluj-Napoca). The academic environment in Cluj-Napoca provides students the same education quality, without any discrimination between them, thus, both men and women have access to the same level of education. This result brings us satisfaction as it offers equal chances in a competitive business environment. However, the individuals who have a lower level of education should not be neglected as they are prone to gender discrimination. The situation should be studied with great attention and different programs should be implemented in order to discourage school abandonment. Only through education is it possible to form valuable entrepreneurs who can add value to our society.

Similarly to the previous case, the confirmation of the second hypothesis is consistent with results obtained in other studies conducted in the academic environment and can be attributed to the power of example over individuals. If a student is related to a person who owns a business, it is highly possible for that particular student to exhibit an open attitude towards risk and to be inclined to assume risks more easily. Moreover, family plays an important role in individual character development and we believe that a responsible demeanor is required towards the individual and those who started a business should transfer their professional experience to younger members of the family. This is the reason for which the entrepreneurs within a family need to understand that they can influence the future of their children and should commit to a responsible attitude towards them.

The fact that the level of risk bearing influences the willfulness of students in Cluj-Napoca to open a business can possibly be explained by the risky nature of the business establishing process, thus it is expected that students who are more willing to take on substantial risks are, also, more inclined to consider opening a business.

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