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Assessing the entrepreneurial intention in Romania. An approach based on a binomial logistic regression

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Abstract. *Entrepreneurship is an increasingly popular activity, spread worldwide. Every year, thousands of individuals choose to start their own business, some of them beginning from college, others after years of experience and activity in other companies, as simple employees. In Romania, entrepreneurial activity is a practice of great interest in society during the last years. But what could be the reasons behind the entrepreneurial intention and decision in Romania? We intend to answer this question using as a starting point the database provided by the Global Entrepreneurship Monitor, from which a series of variables considered relevant in line with other studies on this topic will be selected. We will therefore identify what determines Romanians to choose the path of entrepreneurship, but also to what extent. The methodology applied in this paper is the binomial logistic regression. Using this technique, four regression models will be estimated, based on them concluding which are the explanatory factors of the entrepreneurial intent in Romania. The results will show that in Romania some significant factors to explain the preference for entrepreneurship are individuals' confidence in their own abilities, fear of failure, knowledge of other entrepreneurs, but also occupational status. These records will prove to be in line with the results obtained at the level of other states. However, it will be shown that unlike other nations and societies, in Romania there are no significant differences regarding the entrepreneurial decision in terms of age or gender.*

Keywords: logistic regression, entrepreneurial intention, RStudio, classification problem, GEM database, data mining

Introduction

In recent years, entrepreneurial activity has been extensively studied through different methodologies.

Entrepreneurship is an increasingly common practice, with a significant impact on the economy. In general terms, entrepreneurship is perceived as a sort of activities that individuals undertake to launch their own business, to run that business and to produce value. Entrepreneurs are a distinct category, those individuals who unlike those who want to be employed in an enterprise, prefer the alternative of launching a new venture. More and

more individuals who used to work in various public or private institutions as simple employees nowadays choose to launch their own businesses, to become their own boss.

Responsible causes have been intensively studied, the researchers trying to identify certain factors that can explain this choice. Starting with demographic factors and continuing with psychological factors, but also considering elements related to living standards, all have been shown to have a certain impact on the decisions of certain individuals to start their own businesses. The present paper aims to provide an overview of the portrait of the Romanian entrepreneur. Therefore, starting from a series of selected variables in line with other studies on this research topic and applying a binomial logistic regression model, this article aims to identify the factors responsible for the entrepreneurial intent in Romania. Among the factors proposed for analysis are, for example, the level of professional training of respondents. It was selected based on the idea that the behavior of the potential entrepreneur should be in a certain connection with his educational path. For example, we will suppose that individuals trained in higher education institutions will show a more pronounced intention in the direction of entrepreneurship. On the other hand, the income category of individuals was proposed for study, starting from the idea that people who aim for financial independence and financial security should be more prone to entrepreneurship. Self-confidence and self-perception of having specific entrepreneurial skills are expected to increase an individual's chances of engaging in entrepreneurial activity compared to those people who may lack self-confidence and prefer to work as employees in a company. Occupational status is another factor whose significance will be studied to notice potential differences between people who work, who are looking for a job or who fall into categories such as students or retirees. Socio-demographic factors such as the age and gender of respondents will be also analyzed to see if there are significant differences in attitudes towards entrepreneurship based on these characteristics.

Literature review

Numerous research papers aimed to identify the responsible causes for certain individuals to become entrepreneurs. The concept of entrepreneurship has been defined in several ways, such as: the intention to own a business (Crant, 1996), the intention to be "self-employed", (Douglas & Shepherd, 2002) or the intention to start a new business (Zhao et al., 2005).

In this paper, the term of "entrepreneurial intention", defined by Ridha and Wahyu (2017), will be used as "the conviction that a particular individual will launch a business, rigorously planning the specific actions to start that business".

Bretones and Radrigan (2018) investigated the attitude towards entrepreneurship using a questionnaire to which 499 students from Spain and Chile answered. They noted the existence of significant differences between men and women when it comes to starting a business, namely that men are more likely to become entrepreneurs. The lack of support from family, society and authorities are factors that inhibit entrepreneurial intention. The study program that the students follow is also a factor that can explain their preference for becoming entrepreneurs. Thus, it has been found that those students who follow programs in technical or business fields, with more pronounced individualistic values, have a higher chance of setting up their own companies in the future.

Although some researchers argue that gender differences in attitude toward entrepreneurship are small or even non-existent there have been situations where compared to women, men have a more pronounced attitude toward entrepreneurship. At the same time

they are more active when it comes to getting involved in risky situations, thus involving a preference for risk compared to women. Data show that, unlike men, women face barriers to entrepreneurship. These barriers are mainly determined by gender stereotypes and social gender roles. (Sitaridis & Kitsios, 2019).

Cinar et al. (2019) analyzed the entrepreneurial intention in France. Based on their study it was found that 5.15% of the respondents had already started a business. 76% of them argue that they have entrepreneurial skills while 83% are claiming that fear of failure is not an obstacle to starting their own business.

The effect of the economic status of individuals on entrepreneurial intention was analyzed by Debarliev and Iliev (2020), who found that people from high income families are more likely to start their own business. They have such financial resources that motivate them to start their own business and support the growth of the company. They also find that individuals from families whose parents have had a stable job are more likely to become entrepreneurs. One explanation for this is that they have been exposed to career models, that they have been influenced by their parents and that they also pursue success in their professional lives.

Entrepreneurial intention has also been investigated in some Islamic states. It was found that the respondents who run their own companies are characterized by previous consolidated experience, moral obligation, self-efficacy and support from the company. The moral obligation and self-efficacy summarize the fact that entrepreneurs are convinced that through their activities they can contribute to improving the socio-economic situation of their community. Also, the support from the company is directly related to the decision of the individuals to launch their own businesses (Ashraf, 2019).

Tiwari et al. (2017) identify another determinant of entrepreneurial intent, namely emotional intelligence. Their study shows that people with a higher coefficient of emotional intelligence (EQ) demonstrate a more pronounced attitude towards entrepreneurship.

Barral et al. (2018) conducted a study at the level of 6 public and private universities in Brazil. By developing a questionnaire and applying the factor analysis technique, they researched the entrepreneurial attitude of 566 students. No significant differences in entrepreneurial intent were identified between students enrolled in public universities compared to those studying at private universities. However, the differences regarding the attitude towards entrepreneurship are generated by the perceived self-efficacy of the interviewed individuals.

Kaya et al. (2019) compared Germany and Cyprus in terms of entrepreneurial intent. They questioned 293 students and applied a logistic regression model to determine what factors would lead the young people to set up their own companies. In both cases, it was found that a minimum experience in the field of work (for example, participation in an internship program) increases the chances of a student becoming an entrepreneur. There was also a more pronounced intention for entrepreneurship among men compared to women. The presence of an entrepreneur in the families of the respondents has proved to be another significant factor to explain the entrepreneurial intention. An argument in this regard is that entrepreneurship can be perceived as an "inheritance", as a continuation of tradition in those families.

Methodology

Within this paper, the analysis was performed using a binomial logistic regression model. By estimating such a model one will obtain the probabilities that a certain variable will fall into a certain category. These probabilities are obtained in logarithmic form. The dependent variable in the logistic regression is usually the dichotomous variable, which can take the value 1 with a probability of success p, or the value 0 with the probability of failure 1-p.

In our study the dependent binary variable in the model is the probability that a respondent is willing to set up his own business or not. In this case, the dependent variable was constructed based on the answers obtained to the question: "Would you be willing to start your own business?".

It will be considered that Y is the dependent variable, where $Y_i = 1$ indicates that a certain individual intends to become an entrepreneur and $Y_i = 0$ otherwise. For r independent variables $x_1, x_2, \dots, x_r$ the logistic function is:

$$p = \frac{e^{\beta_0+\beta_1 x_1+\beta_2 x_2+\cdots+\beta_r x_r}}{1+e^{\beta_0+\beta_1 x_1+\beta_2 x_2+\cdots+\beta_r x_r}} \quad (1)$$

where p represents the probability that an individual intends to become an entrepreneur. $\beta_i \; for \; i = 1, \dots, r$ will be calculated. Denoting $g(x) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_r x_r$ and by applying the logistic transformation, a linear relationship between the logarithm of probabilities and the independent variables will be obtained.

$$logit(y) = \ln\left(\frac{p}{1-p}\right) = ln \frac{\frac{e^{g(x)}}{1+e^{g(x)}}}{1-\frac{e^{g(x)}}{1+e^{g(x)}}} = g(x) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \cdots + \beta_r x_r \quad (2)$$

For a sample of n dimension, for $i = 1, \dots, n$, y_i is the observed variable and $x_i' = (1, x_{i,1}, \dots, x_{i,r})$ the vector of the explanatory variables. The probability density of Y is:

$$f(y_i|\beta) = p_i^{y_i}(1-p_i)^{1-y_i} \quad (3)$$

where

$$p_i = \frac{e^{g(x_i)}}{1+e^{g(x_i)}} \quad (4)$$

For the whole sample we will have

$$L(\beta|y) = \prod_{i=1}^{n} {p_i}^{y_i}(1-p_i)^{1-y_i} \quad (5)$$

The logarithm will be used as follows:

$$ln\, L(\beta|y) = ln \prod_{i=1}^{n} {p_i}^{y_i}(1-p_i)^{1-y_i} \quad (6)$$

Defining the response variable together with the possible results, the entrepreneurial intention of the 1698 Romanian respondents will be modeled using the binomial logistic regression, specified as follows:

$$Log\left(\frac{Pi}{1-Pi}\right) =$$
$$f\ (\text{GEMWORK3, GEMHHINC, suskill, knowent, fearfail, age, GEMEDUC, gender }) \quad (7)$$

The model can be rewritten as follows:

$$Log\ (\frac{p}{1-p})= \beta_0 + \beta_1 GEMWORK3_i + \beta_2 GEMHHINC_i + \beta_3 suskill_i + \beta_4 knowent_i + \beta_5 fearfail_i + \beta_6 age_i + \beta_7 GEMEDUC_i + \beta_8 gender_i \quad (8)$$

where

$\beta' = (\beta_0, \beta_1, \dots, \beta_8)$ represents the coefficients vector of the of the predictor variables

P_i is the probability of $Y_i = 1$

Y_i sums up the respondent's intention to become an entrepreneur or not ($Y_i = 1$ or $Y_i = 0$)

$GEMWORK3_i$ represents the occupational status of the i-th respondent

$GEMHHINC_i$ represents the income category of the i-th respondent

$suskill_i$ represents the i-th respondent perception of owning entrepreneurial skills

$knowent_i$ determines whether the i-th respondent knows an entrepreneur

$fearfail_i$ determines whether the i-th respondent is afraid of a potential failure

age_i represents the age category of the i-th respondent

$GEMEDUC_i$ represents the educational degree of the i-th respondent

$gender_i$ represents the gender of the i-th respondent

The purpose of this paper is to model the decision of individuals to become entrepreneurs, based on some influencing factors. This will try to identify the profile of the Romanian entrepreneur, considering some predictor variables.

The volume of the sample on which the following results were obtained is 1698 respondents from Romania. In the initially collected data set, the number of responses recorded at the level of Romania was 2002, but a processing of the data was necessary, so that the observations corresponding to missing values or NA values were eliminated from the sample.

The source of data collection is represented by the website of the Global Entrepreneurship Monitor organization.

The RStudio statistical package was used in data processing and model estimation.

The dependent variable of the model was defined as the intention of the respondents to become entrepreneurs, coded as follows:

$$Y_i = \begin{cases} 1, & if\ the\ respondent\ intends\ to\ start\ his\ own\ business \\ 0, & otherwise \end{cases} \quad (9)$$

The selected explanatory variables represent on the one hand demographic indicators (such as age or gender of individuals) and on the other hand indicators that summarize the occupational status, the income and educational levels of the respondents. At the same time, there were selected some variables that reflect the perception of respondents regarding entrepreneurship.

The eight variables will be further detailed in Table 1.

Table no 1. Description of the variables

No.	Variable	Description
1	GEMWORK3	Occupational status of the individual - a categorical variable with three levels - (1) Full-time or part-time employed; (2) Searching for a job; (3) Student or retired
2	GEMHHINC	Household income level of the respondent - categorical variable with 3 levels: low income ("L33"), average income ("M33"), high income ("U33")
3	suskill	The perception of individuals about possessing entrepreneurial skills - binary categorical variable with the levels "Yes" and "No".
4	knowent	Categorical variable with 2 levels: "Yes" (if the respondent states that he has knowledge about someone that started a business in the last two years) and "No", otherwise.
5	fearfail	Categorical variable with 2 levels: "Yes" and "No". The variable expresses the respondent's position on the following question "Do you consider that fear of failure is an obstacle to opening a business?".
6	age	Age of the respondent
7	GEMEDUC	The education level of the respondent - a categorical variable with 5 levels: "1" - secondary school, "2" - up to 10 classes, "3" - high school, "4" - post-secondary school, "5" - higher studies.
8	gender	Gender of the respondent

Source: GEM monitor and authors' own research

Results and discussions

As previously explained, the analysis will focus on the 1698 responses kept in the analysis. Of the 1698 respondents, 1417 stated that they do not intend to launch their own business, while only for 281 of them entrepreneurship represents an option that can be taken into account in the immediate period.

Analyzing the respondents' profiles according to the variables selected in the analysis, the following aspects were found: From the point of view of occupational status, the majority of individuals (71%) stated that they have a stable job. As for the income category in which their household falls, almost half of the respondents are in the low-income category. Regarding their educational level, most respondents have completed high school. In terms of gender, men and women were interviewed in approximately equal proportions, as they belong to all age categories. The perception of having entrepreneurial skills and the impact of fear of failure in business is distributed about equally. Almost half of individuals believe that they have the specific skills of the entrepreneurs. Also, almost 53% of the respondents claim that the fear of failure is a potential obstacle in a future entrepreneurial activity and may inhibit their willingness to launch a business. Most of the respondents (1150 of 1698) declared that they do not know other entrepreneurs.

To analyze to what extent these variables contribute to respondents' decision to launch their own enterprise, a first logistic regression model will be estimated below. The model will include all the variables described in the previous section. For the estimation of the parameters of each model, the integrated function for the generalized linear models (GLM) was used.

Table no 2. Estimated coefficients of the Logit 1 model

Terms	Log(odds)	Std. Error	z value	Pr(>|z|)	Significance	Odds ratio
(Intercept)	-15.563	433.778	-0.036	0.971		0.174
GEMWORK3Not working	-0.167	0.239	-0.696	0.486		0.846
GEMWORK3Retired students	-0.629	0.304	-2.071	0.038	***	0.533
GEMHHINCMiddle 33%tile	0.141	0.190	0.746	0.455		1.151
GEMHHINCUpper 33%tile	0.056	0.190	0.297	0.766		1.057
suskillYes	1.356	0.167	8.074	6.1e-16	***	3.880
knowentYes	0.772	0.145	5.303	1.1e-07	***	2.164
fearfailYes	-0.548	0.145	-3.774	0.000	***	0.578
age9c25-34	0.083	0.260	0.320	0.748		1.086
age9c35-44	0.001	0.250	0.006	0.994		1.001
age9c45-54	-0.307	0.262	-1.171	0.241		0.735
age9c55-64	-0.263	0.278	-0.946	0.344		0.768
GEMEDUCSOME SECONDARY	13.007	433.778	0.030	0.976		445521
GEMEDUCSECONDARY DEGREE	13.337	433.778	0.031	0.975		619705
GEMEDUCPOST SECONDARY	13.204	433.778	0.030	0.975		542530
GEMEDUCGRAD EXP	13.083	433.778	0.030	0.975		480700
genderFemale	-0.184	0.148	-1.243	0.213		0.831

Note on Significance codes: 0'***' ; 0.001'**' ; 0.01'*' ; 0.05'.' ; 0.1' '.
Source: Authors' own research

The existence of significant differences between the categories expressed in the previous table and the basic categories of the variables will be identified using the probabilities calculated in the last column. Thus, we notice the following: There are significant differences between the respondents, depending on the occupational status, the perception of possessing the skills necessary to start a new business, the fear of failure, but also the fact that the respondent knows in turn an entrepreneur.

At the level of Romania, according to the estimated model, there are no significant differences in terms of income categories, age, educational level and gender. Therefore, the non-significant variables will be removed and a logistic regression model will be redefined. The lack of statistical significance regarding the gender of the respondent is in opposition to the empirical records in the field. According to the literature review we found that in most cases there is evidence regarding differences between men and women when it comes to setting up an enterprise.

Table no 3. Estimated coefficients of the Logit 2 model

Terms	Log(odds)	Std. Error	z value	Pr(>|z|)	Significance	Odds ratio
(Intercept)	-2.447	0.169	-14.471	2e-16	***	0.086
GEMWORK3Not working	-0.251	0.226	-1.114	0.265		0.777
GEMWORK3Retired students	-0.812	0.273	-2.970	0.002	**	0.443
suskillYes	1.370	0.165	8.338	2e-16	***	3.965
knowentYes	0.822	0.142	5.766	8.1e-09	***	2.276
fearfailYes	-0.544	0.142	-3.814	0.000	***	0.579

Note on Significance codes: 0'***' ; 0.001'**' ; 0.01'*' ; 0.05'.' ; 0.1' '.
Source: Authors' own research

It is observed that in the previously estimated model (Table no 3) all the coefficients have statistical significance. It should be mentioned that following the estimation of the

logistic regression model, one will identify the impact of the analyzed factors on the logarithm of odds ratio between starting or not starting a new business by a certain individual. Therefore, to a better interpretation of the results it is necessary to exponentiate these coefficients. Following the exponential transformation, the values from the last column will be computed, representing the odds ratio.

Applying the exponential transformation to the estimated coefficients leads to the following conclusion: People looking for a job are almost 22.3% less likely to start their own business compared to the basic category, that of people who have a stable workplace. At the same time, individuals in categories such as students / retirees are less likely to become entrepreneurs, more precisely they are 55.7% less likely to start a business. The evidence is in line with the conclusions drawn from most of the research in the field. People who have a stable job have other perspectives on entrepreneurship. One can exemplify the situation of employees in the corporate environment, an increasing number of them making the transition to running their own business. They are more exposed to the business environment, more involved and more informed. The experience gained within companies, as well as the relationships and contacts of these individuals represent an advantage when setting up their own business. An interesting aspect is the own perception of the individuals regarding the possession of the specific competences of the entrepreneur. Thus, those who consider that they are gifted with entrepreneurial skills are 296% more likely to become, in fact, entrepreneurs, as opposed to the basic category. The fact that a respondent knows an entrepreneur also increases the possibility for that person to start its own business by almost 127%. The fear of failure of the questioned people strongly diminishes the chances of them becoming entrepreneurs (by about 42.1%).

Next, the 1698 observations collected at the level of Romania will be divided into two subsamples, one for training and one for testing. 80% of the observations will be included in the training set, while the remaining 20% will be included in the test set. A new regression model will be estimated using the training set. It is noted that after estimating the model, the computed coefficients are still statistically significant (Table no 4).

Table no 4. Estimated coefficients of the Logit 3 model

Terms	Log(odds)	Std. Error	z value	Pr(>|z|)	Significance	Odds ratio
(Intercept)	-2.397	0.185	-12.907	2e-16	***	0.090
GEMWORK3Not working	-0.395	0.255	-1.547	0.121		0.673
GEMWORK3Retired students	-0.808	0.301	-2.679	0.007	**	0.445
suskillYes	1.271	0.180	7.057	1.70e-12	***	3.564
knowentYes	0.866	0.158	5.463	4.68e-08	***	2.377
fearfailYes	-0.473	0.158	-2.998	0.002	***	0.623

Note on Significance codes: 0'***' ; 0.001'**' ; 0.01'*' ; 0.05'.' ; 0.1' '.
Source: Authors' own research

However, regarding the distribution of responses, there is a notable imbalance, namely, 1417 of the respondents claim that they would not start their own business, while only 298 would consider the option of starting the business. Thus, the class of potential entrepreneurs is observed to be under-represented, compared to the class of non-entrepreneurs, with less information regarding the individuals who answered "Yes". The presence of such an imbalance in the distribution of the response variable can lead to a

misclassification, but also to a displacement of the classifier in terms of its performance. A resampling technique will be applied, in order to balance the answers offered by the questioned individuals.

The ROSE package in R contains functions that can be applied to solve the problems of binary classification in case of unbalanced classes. Through a technique called bootstrap, some artificial units are generated, which contribute to a better estimation and evaluation of the accuracy of the classifier in the presence of the poorly represented classes.

Following the application of this technique, the situation of the answers becomes the following one: 1039 negative answers, while 659 of the respondents will be considering following the entrepreneurial path. Thus, a fourth binomial logistic regression model is estimated using the data set on which the re-sampling was performed.

Table no 5. Estimated coefficients of the Logit 4 model

Terms	Log(odds)	Std. Error	z value	Pr(>|z|)	Significance	Odds ratio
(Intercept)	-1.310	0.140	-9.329	2e-16	***	0.269
GEMWORK3Not working	-0.310	0.192	-1.616	0.106		0.733
GEMWORK3Retired students	-0.686	0.231	-2.963	0.003	**	0.503
suskillYes	1.404	0.135	10.357	2e-16	***	4.071
knowentYes	0.866	0.126	6.830	8.51e-12	***	2.379
fearfailYes	-0.578	0.126	-4.572	4.83e-06	***	0.560

Note on Significance codes: 0'***' ; 0.001'**' ; 0.01'*' ; 0.05'.' ; 0.1' '.
Source: Authors' own research

The last estimated model considered the application of a resampling technique, obtaining a balancing of the poorly represented class. According to Table 5, we can draw the following conclusions. People looking for a job are almost 37% less likely to start a business. A similar situation corresponds to retirees or students who have less chances of becoming entrepreneurs. Confidence in entrepreneurial skills increases the chances of individuals to launch their own companies by up to 4 times more.

The fact that the respondent knows an entrepreneur increases his chances of launching a business with almost 137%. Interaction with another entrepreneur facilitates the exchange of information, as individuals can become aware of the different business opportunities. Contacts in the business environment can prove to be real advantages for the future entrepreneurs. Entrepreneurs can also share their experience and serve as role models for young people at the start of their business journey.

We note that even in Romania, the fear of failure has a negative impact on the entrepreneurial intention. Respondents who are afraid of failing have a 44% less chance of becoming entrepreneurs compared to the basic category. This finding is in line with numerous other studies that have offered similar conclusions. Fear of failure leads to the individual's perception that he does not possess the skills needed to run a business, that he does not have the ability to handle adverse situations that he might face in his activities. Fear of failure causes the entrepreneur on the one hand to act in a cautious manner but when taken to the extreme, can lead to the loss of collaborations, partnerships or different opportunities.

In order to evaluate the performance of the estimated models, three indicators will be calculated namely: the area under the ROC curve, AIC and Pseudo R^2. Performance will be

evaluated for those models with statistically significant coefficients. We will thus give up calculating the performance of the first model, which corresponded to coefficients lacking statistical significance.

Table no 6. Performance indicators

Model	Calculated AUC	AIC	Pseudo R^2
Logit2	0.75	1535.8	0.86
Logit3	0.79	1328.1	0.91
Logit4	0.81	1078.1	0.93

Source: Authors' own research

The AUC (area under ROC curve) is a useful tool in measuring the performance of different models regarding classification problems. We note according to Table 6 that the model with the highest degree of accuracy is the Logit 4 model, estimated after the rebalancing of the 2 samples. It is also observed that the performance of Logit3 model is higher than that of the Logit2 model, in this case the estimation is made following the partitioning of the data set into a training set and a test set. To evaluate the goodness of the three models, two other indicators can be analyzed: R^2 according to McFadden and AIC (Akaike's informational criterion), the values calculated for each model can be found in Table 6.

The value of Akaike's informational criterion (AIC) is useful when it comes to choosing the best model, compared to other estimated models. The selection of the best model involves identifying the smallest value for the calculated AIC. We notice that the minimum value of AIC is obtained for the Logit 4 model. Another indicator that allows the evaluation of the reliability of a logistic regression model is Pseudo R^2, most often this measure being used according to McFadden (1974). Its values are in the range (0,1). Values close to 1 indicate a high performance. The highest value of this indicator is also recorded for the Logit 4 model, equal to 0.81 which denotes a very good performance of the classifier.

Conclusion

The present paper aimed to identify an entrepreneurial profile at the level of Romania, having as a starting point a series of indicators made available by Global Entrepreneurship Monitor (GEM). It was thus sought to identify how certain factors influence the decision of 1698 respondents to start or not their own business. The research methodology involved the application of a binomial logistic regression thus four different models were estimated.

Initially, a regression model was estimated using all the 8 selected variables. It has been observed that at the level of Romania, factors like income category, age, gender and educational level do not influence the decision of individuals to become entrepreneurs. Therefore, for the previous mentioned variables there are no significant differences between their categories. These variables were subsequently eliminated from the analysis. However, it was found that from the point of view of the occupational status, but also of the attitude towards entrepreneurship, expressed through the perception of having the entrepreneurial skills and the fear of failure, the preference of the respondents to become or not entrepreneurs can be explained. It was also noted that those respondents who are familiar with entrepreneurs have a much higher chance of starting a business compared to those who do not have such knowledge. To improve the logistic regression model, the data set was partitioned into two subsets, and then, in the attempt of a new improvement, a re-sampling

technique was applied to the initial data set. The performances of the three models were evaluated using three indicators: the area below the ROC curve, the AIC and the R^2 according to McFadden, noting that the most suitable model to explain the intention of the Romanian individuals to become entrepreneurs is the fourth, since the previously applied re-sampling technique solves the problem of the under-represented class, that of potential entrepreneurs.

Furthermore, for a more solid and detailed outline of the Romanian entrepreneur portrait, other elements can be considered. One can consider modeling an individual's intention to become an entrepreneur depending on the sector in which he operates (public or private). Is it possible for employees who work within the public sector to prefer a transition to the private sector, to setting up and running their own business? At the same time, at the level of Romania, the intention regarding entrepreneurship could be analyzed towards the level of taxes or various administrative barriers, such as the bureaucratic phenomenon.

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