
A BAROMETER OF ENTREPRENEURIAL DYNAMICS ABOVE THE CRISIS¹

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Abstract

In this paper, the analysis is performed for Romania where, after 50 years of communism, the free market economy, based on the free initiative of entrepreneurship, has been returned. The implementation of a scientific management generating performances that can lead the sector of SMEs to the requests of the Lisbon Strategy, cannot be completed without the existence of well-trained entrepreneurs, capable to improve their skills in modern management, thus leading to competitive results in a highly competitive market. Therefore, we consider in our paper some relevant indicators such: the evolution of new founded enterprises, the entrepreneur's socio-professional profile, the entrepreneur's level of education and new enterprise foundation rate. The analysis performed by this research allows us to formulate, synthetically, strengths and weaknesses in the entrepreneurial evolution for the period 1995-2011. Also, this study reveals the dependency between the economic growth, measured by GDP, and the rate of newly founded enterprises. The dynamic of new companies provides information both on the crisis ending and the resumption of economic growth.

Keywords: entrepreneurs profile, new founded companies, NACE, regression models

Applying a modern management in the context of a knowledge-based society and the current financial crisis cannot be featured without “manager-entrepreneurs” with a solid professional preparation and natural managerial abilities, consolidated through a continuous process of training.

In order to describe the managerial capacity of the new entrepreneurs, we realized an analysis of the main characteristics of the newly founded enterprises as well as of the new entrepreneurs. This image offers us a possible explanation of the way the economy is going as a whole and also some perspectives on the evolution of the entire sector of the SMEs.

The main primary data were obtained based on an investigation carried out by the National Institute of Statistics, an investigation EUROSTAT harmonized.

1. With reference to the development of SMEs in Romania

In 2010, 128,855 new enterprises were founded, and were still active in September 2011; moreover in 2011 140,083 were newly founded companies.

The comparisons are made relative to the existent number in 1995, which were 388,180 enterprises, the rate of development of 36.1%.

Subsequently, we perform an analysis of the new entrepreneurs profile in Romania in order to find some enlightenment for the companies' economic performance.

The number of new created enterprises

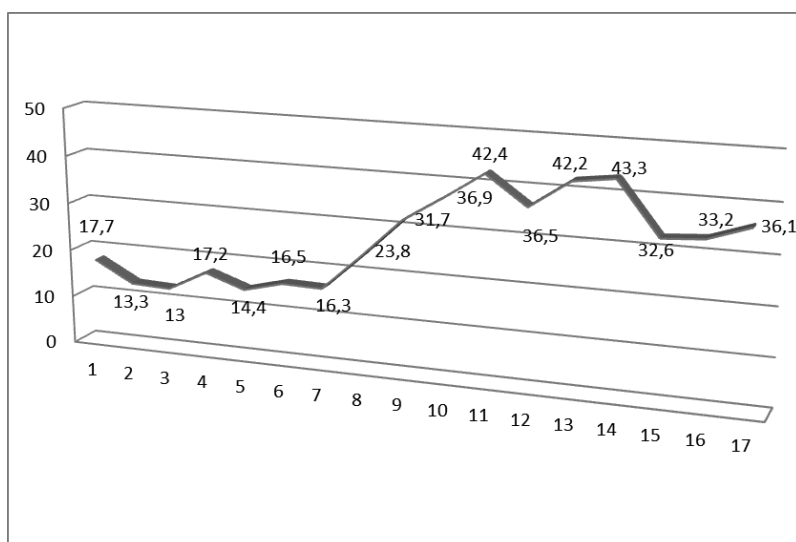
Period	Number of enterprises	Period	Number of enterprises
Stock – January 1995	388,180	2003	123,178
1995	68,772	2004	143,411
1996	51,684	2005	164,466
1997	50,516	2006	141,822
1998	66,841	2007	163,845
1999	55,852	2008	167,910
2000	63,941	2009	126,368
2001	63,383	2010	128,855
2002	92,595	2011	140,083

Source: *New enterprises and the profile of the entrepreneurs in Romania, NIS, Bucharest, 2013*

The foundation rate, calculated by comparison to the existent number in January 1st 1995, is placed in the field 13%-17% until 2001, afterwards registering a significant growth, due to the improvement of the business environment, also leading to a growth of the national production expressed through the GDP. The number of the new companies, founded after 2003, is exceeding 100,000, with a maximum in 2005 and decreased further.

Figure 1 presents the foundation rates calculated by division of the newly founded enterprises to the existent number in January 1995. The absolute values of the new enterprises, from table 1, next to the rates illustrated in figure 1, highlight a dynamic trend, especially after the year 2000, which reflects a entrepreneurial environment more and more favorable, and if we correlate this fact with the age of the new entrepreneurs, mainly young people, we can appreciate the consolidation of the entrepreneurial market in Romania.

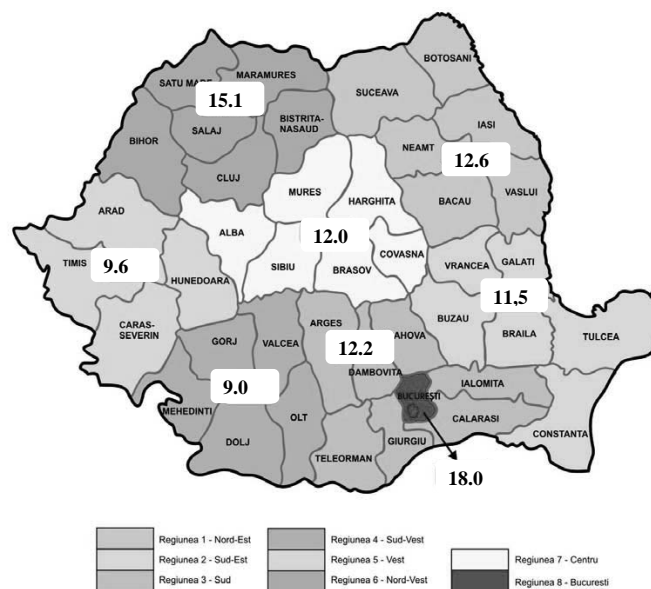
The new enterprises foundation rate in the period 1995-2011



The regional dimension of the new enterprises foundation

From the administrative point of view, Romania is organized in 42 districts and 8 regions. By regions, the partial rates indicate a maximum dynamic of the Bucharest-Ilfov region (9.6%) in 2007, but only 6.2% in 2010, while the North-Western (5.0%), North Eastern (4.1%), South Eastern (3.8 %) and South Western (2.8%) regions register minimum dynamics. In the analyzed period, a certain diminution took place concerning the regional discrepancies, although the differences remain high. Thus, in 2001 the foundation rate was 2.9 % in the North-Eastern region while 1.3% in the Western region, which implies the necessity to apply in a different manner the policies for the activation of the regional economic environment. The weights by regions of development indicate high values in Bucharest-Ilfov, North West and the Center regions (details in Figure 2). From the regional dynamics point of view, the situation for the last three years concerning the foundation of new enterprises is as follows: North-East 141.4%, South-East 131.1%, South 266.6%, South-West 280.0%, West 238.5%, North-West 277.8%, Center 238.9%, Bucharest-Ilfov 258.3%. Between years 2001 and 2010, the distinguished dynamics contributed to a certain reduction of territorial discrepancies.

Territorial Distribution of the Newly Created



Except for the Bucharest-Ilfov region, which is in a special situation, we can observe an increased dynamics in the regions that still have low weights in the national total (South-West, West and South), which can be interpreted as an efficient response to the economic development stimulation actions, and to the private initiative in the less developed regions.

From the point of view of **the judicial status** of the newly founded SMEs, 43.9% were trade companies, while 56.1% were individual. In the year 2001, the weights were: 53.4% and respectively 46.6%. The new enterprises are mainly newly initiated businesses, thus in 1995 prevalent were the newly founded ones (97.1%) while only 1.1% were created through other methods, while in 2007, the size of the newly founded decreased to 98.4%, and 1.6% were created through privatization, divisions or other methods. In the last year, the newly founded enterprises were the majority - 98.9 %.

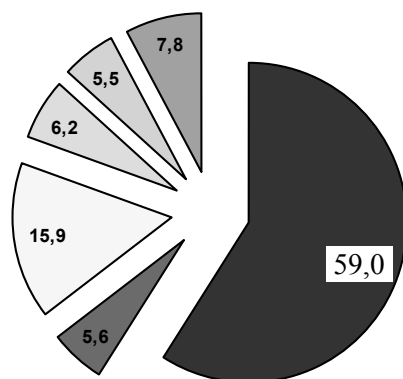
By **size category** we can observe after 1995, a tendency towards small enterprises rather than micro enterprises. However, the process meets some powerful fluctuation each year, thus in 2006 the largest weight of newly founded enterprises (53.4%) was held by medium sized enterprises, while micro enterprises only had 45.95 of the total. Now, as the expression of less favorable economic environment, the micro enterprises were the dominant (67.4%).

Between 1995 and 2011, the number of micro enterprises increased by 15%, while the number of newly founded small enterprises decreased by 20%.

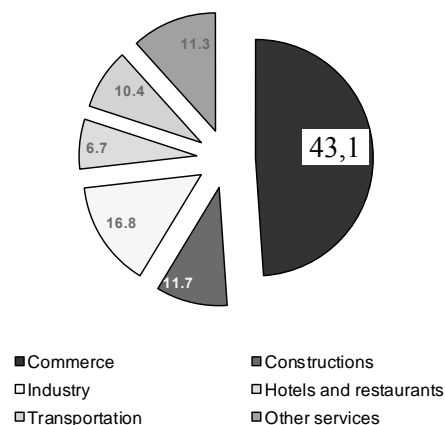
By **activity location**, an aspect that reflects the economic strength of an enterprise, the main modification is represented by the decrease of the weight of new enterprises which operate in an independent headquarters (-51.0%) and the increase of the weight of those which have the headquarters in the manager's house (+106.4%). This change in weights in favor of newly founded enterprises located in the house of the manager is a negative signal concerning the dimension and evolution of the activity of the new enterprises. This structure is also an expression of the difficulties within the national economic environment.

Another important aspect is the **structure of the enterprises by sectors of activity** (figure 3), the main changes being represented by: the decrease in the weight of the enterprises which have a commercial activity (from 59% in 1995 to 48.9% in 2009, respectively 43.1% in 2011); almost constant has remained the proportion of the new founded industrial enterprises (15.9% in 1995 and 14.5% in 2009, respectively 16.8% in 2011); the increase of the share for "other services" profile (from 7.8% in 1995 to 11.3 % in 2011).

The structure of the newly founded enterprises by sectors of activity in 1995



The structure of the newly founded enterprises by sectors of activity in 2011



The orientation of the new entrepreneurs towards the services sector is remarkable, this fact resembling the structure of the Romanian economy to the economy of developed countries, at least as tendency.

Socio-professional characteristics of the “new entrepreneur”

The image of the newly founded enterprises must be completed with some characteristics regarding the entrepreneur of these new businesses, such as: the staff status, the entrepreneur’s age and gender, his educational level, the occupation prior to the new business.

Comparing to 1995, the weight of employers remained roughly constant 43.0% to 43.4 % in 2011, the number of full-time employees increased from 40.9% to 49.1%, and the weight of other employment forms faced a significant decrease from 13.9% to 2.0% This is also a signal regarding the consolidation of the SMEs sector, an employees-based organization form giving the possibility of practicing a version of management superior to the “employer-manager” one.

Regarding the **founder-manager’s age** we observe a growth in the weight of young initiators (under 30 years old), from 19.9% in 1995 to 35.4% in 2005, and 20.0% in 2011, respectively of those between 30 and 39 years old, from 30.1% to 37% in 2011, simultaneous to the decrease of the weight of founders between 40 and 49 years old. Moreover, the new entrepreneurs under the age of 40 represent almost 50% of the total, which generates a plus in dynamics and competitiveness for the SMEs sector.

An equally remarkable fact is the growth in the weight of **female-entrepreneurs**, from 29.1% in 1995 and 37.9 % in 2001, respectively 40.5% in 2010 to 37.6 in 2011. By regions of development, the lowest weights of female-managers were registered in 2011 in Center – 40.9% respectively 30.7% in Bucharest-Ilfov, while the highest were registered in South West – 49 % however, the considerable fluctuations from year to year do not allow us to identify a specific trend.

The distribution of newly founded enterprises by **educational level of the manager-founder**, correspond to a structural change in the periods 1995-2000 respectively 2001-2011. Up until 2001, the weight of new enterprises founded by entrepreneurs with a primary education was around 5% (6.4% in 1999, respectively 0.8% in 2010), with a vocational education approximately 30% (34.8% in 1999 and 12.3% in 2011) while the weight of entrepreneurs with secondary-school education was around 30%, and with high school and university education around 55%. Since 2001, the primary educational level had weights around 1% or 2%, the vocational one under 20%, secondary-school approximately 35% and high-school and university levels around 50%

The values for the high-school and university levels of education are distributed between 55% at a national level and 74.8% for the Bucharest-Ilfov region, respectively 39.9% during 2011 in the South East. This aspect can also explain, in part, the differences of regional performance between SMEs.

The socio-professional category of the new entrepreneur is another important dimension. At a national level, the weight of entrepreneurs, whom previously had management positions, fluctuated from 0.5% in 1995 to 6.8% in 2001, 4.7% in 2009 and 4.8% in the year 2011, while the weight of unqualified workers, from 70.2% in the year 2000 to 33,2% in 2010. Meanwhile, 15% of the new entrepreneurs had a technical professional status, increasing to 27.4% in 2011.

This fact is an aspect which highlights the potential of a superior management in the newly founded enterprises. In table 2 it is presented the distribution of new enterprises by regions of development according to the founder's previous socio-professional category.

The distribution of the newly founded enterprises by the founder's previous socio-professional category (%)

Year/Region	Management positions	Technical occupations	Qualified workers	Unqualified workers
<i>North-East</i>	0.8	31.0	41.8	26.4
<i>South-East</i>	3.3	18.1	36.5	42.1
<i>South</i>	4.3	18.7	40.9	36.1
<i>South West</i>	1.2	31.0	40.4	27.4
<i>West</i>	5.1	24.1	39.6	31.2
<i>North West</i>	2.9	32.6	22.7	41.8
<i>Center</i>	4.5	37.1	26.4	32.0
<i>Bucharest-Ilfov</i>	12.8	46.6	11.4	20.9
National average	4.8	27.4	31.7	36.1

Source: New enterprises and the profile of entrepreneurs in Romania, NIS, Bucharest, 2013

The high weight of unqualified workers in the total number of new entrepreneurs, who, along with the qualified ones represented 83.0% in 1995, 85.3% in 2005, respectively 67.8% in the year 2011, can explain, in part, the financial situation and performances of the SMEs, when correlated to the absence of specific managerial courses. Differences between regions regarding professional categories can also explain, in part, the inter-regional differences in the economic performances of the SMEs.

The rate of economic growth

Using the rate of economic growth, as a barometer for the economic environment, we determine the number of active enterprises, founded more than five years after the reference year, with at least one employee, who achieved average annual economic growth of more than 20% for a period of three years. In most European countries, in the last four years has been recorded a strong variation. Thus, in Finland has registered an increase of almost 190% in 2005 and only 79% in 2009, while in Latvia it was a negative trend (-100%) in 2007. In Romania the value was between 100.3% in 2005 and 17.6% in 2009, the strongest variation was registered in the construction sector (5% in the same period of analysis).

In paragraphs 2 and 3 of this article was analyzed the foundation of new enterprises in Romania, starting with 1995, at the national level and in the regional profile. In the following, we are going to measure the impact generated by the foundation of new companies on the dynamics of GDP. We use

the information contained in table 1 (the number of new businesses established annually since 1995) and revealed in Figure 1 (annual rates of new business creation) respectively the GDP growth relative to year 1995, for the 1996-2011 interval (dynamic percentage).

For the regression analysis, we chose as dependent variables the GDP increase rate vs. 1995 (*IPIB_1995*), while the proposed independent variable is the rate of new enterprise foundation (*RATA_CREARII_DE_FIRME*). To decide which explanatory factors are included in an econometric model proposed for estimations, we computed the correlation coefficients in order to test the statistic significance of the connections between independent variable and the proposed dependent variable. The significance threshold chosen to test hypotheses is $\alpha = 0.05$.

The correlation coefficient of the possibly explanatory variables is presented in the table below, along with the value for the t-test and its significance threshold.

Correlation coefficient	0.89
t-Statistic	7.17
Probability	0.0000

The equation we used is:

$$IPIB_{1995} = C + b RATA_CREARII_DE_FIRME + \varepsilon$$

The results of the calculus (figure 4) lead to the estimated equation:

$$IPIB_{1995} = 72.99 + 1.73 RATA_CREARII_DE_FIRME$$

The estimated equation results show that the coefficients of the variable responsible for the foundation rate, as well as the intercept, are statistically significant, the probabilities associated to the t-test being inferior to the significance level (prob. $0.00 < \alpha = 0.05$). The value of the estimated parameter for the explanatory variable is 1.73, which means that an increase of 1% in the enterprise foundation rate leads to an average increase of 1.73% in the GDP increase rate vs. 1995.

Results of the regression model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	72.99637	7.217796	10.11339	0.0000
RATA_CREARII_DE_FIRME	1.732115	0.241707	7.166176	0.0000

R-squared	0.797993	Mean dependent var	120.9067
Adjusted R-squared	0.782454	S.D. dependent var	22.58707
S.E. of regression	10.53503	Akaike info criterion	7.670855
Sum squared resid	1442.829	Schwarz criterion	7.765262
Log likelihood	-55.53141	Hannan-Quinn criter.	7.669849
F-statistic	51.35408	Durbin-Watson stat	0.618153
Prob(F-statistic)	0.000007		

The adjusted R-squared is 0.78 which means that nearly 80% of the dependent variable variation is explained by the variation in creating new private companies. The F-statistic value validates the model as a whole, the associated probability being lower than the significance threshold (prob. $0.00 < \alpha = 0.05$). The Durbin-Watson statistic (DW), which tests the null hypothesis (Gujarati 2003) according to which the errors are not auto-correlated is 0.62. The values regarding the lower and upper limits for a DW test, considering a number of 17 observations ($n=17$), two parameters ($k=2$) and a significance threshold $\alpha=0.05$ are $d_1=1.11$ and $d_2=1.36$.

Comparing the statistics determinant in order to select the best model, respectively the adjusted R-squared (0.78), the F-statistic (51.35), the Akaike criterion (7.67) and Schwarz criterion (7.77), and considering the statistic significance of the regressors' contribution to the dependent variable (Schwarz 1978), we can state that the best model, of the four previously estimated, is the last one, revealed in our paper, because the R-squared as well as the adjusted R-squared and the F-statistic value are higher, situation that confirmed the validity of our regression model.

Conclusions

The implementation of a scientific management generating performances that can lead the sector of SMEs to the requests of the Lisbon Strategy, cannot be completed without the existence of well-trained entrepreneurs, capable to improve their skills in modern management thus leading to competitive results in a highly competitive market.

The information contained by the tables and graphs presented in this paper allow us to formulate some strengths and weaknesses in the entrepreneurial evolution after the year 1995.

The significant correlation between the creation of new companies and the growth in GDP gives an action directive to generate economic growth by stimulating the private environment and encourage the foundation of new companies.

Moreover, we organize the weaknesses and the strengths, identified in the analysis undertaken in the development of the private sector in Romania after 1995 and the profile of the new entrepreneurs. The aim is also to identify the ways and the methods in order to encourage the development of SMEs in Romania.

Strengths	Weaknesses
<p>- The partial diminution of the regional discrepancies regarding the dynamic and structure of the newly founded enterprises</p> <p>- The new entrepreneurs prefer trade companies as judicial form when founding a new enterprise as against to individual parties, thus implying bigger economic power and various managerial options. This option fluctuates.</p> <p>- After the year 2000, there was registered a shift in the options of new entrepreneurs, from micro enterprises to small and medium-sized enterprises;</p> <p>- The tendency to shift the object of activity toward the sphere of services, as well as the decrease of trade-related activities, against pure trade activity, which was characteristic for the first few years after 1990, when it started the development of free initiative</p> <p>- The change of the staff structure in the newly founded enterprises, by reducing the weight of employers in favor of the employees (the employees used to represent 40.9% of the staff in 1995, respectively 49.1 % in 2011), which allows the implementation of a different type of management</p> <p>- Increase of the share of employment in established enterprises with foreign capital from under 3% in 1996, to about 20% in 2011</p> <p>- The significant correlation between the rate of new founded companies and the growth of gross domestic product offers a trend for achieve development of economy by the economic growth and by supporting the private sector</p>	<p>- The Bucharest-Ilfov region remains in the top of the business implementation rates as well as in the top of the structure of the existent volume (approximately 20 % in the total of new enterprises in the year 2010)</p> <p>- In the period 1995-2011, the dynamic in the foundation of new enterprises was approximately 260% in the Bucharest-Ilfov region, while in the South-East region, only 130%;</p> <p>- There is a decrease of the weight of newly founded enterprises which activate in an independent headquarters, and an increase of the ones activating in the house of the manager</p> <p>- The existence of a yet high weight of the new entrepreneurs with poor professional education (almost 46% of the new entrepreneurs in 2011 had primary, vocational and secondary education), considerably reducing the chances of implementing a scientific management;</p> <p>- The occupational status prior to founding the new business is still poor (67% of the new entrepreneurs are unqualified or qualified workers), thus narrowing the chances for a successful management, as well as competitive economic results</p> <p>- A significant share of the newly established companies (over 22% in 2011) are inactive a year from creation (32% inactive and waived), which indicate a top mortality in the European entrepreneurial demography</p> <p>- The activity of the newly established companies NACE is still poor because about 50% of the new companies stand for trade activity (12% trade, 10% construction, 12% other services) and this is still far from the European model of entrepreneur profile.</p>

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