

IMPORTANCE OF SMALL AND MEDIUM-SIZED ENTERPRISES IN ROMANIAN ECONOMY

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Abstract:

The market economy has reduced the number of large enterprises and has determined the emergence of a special class like small and medium-sized enterprises. Those companies play a special role in the national economy, especially through the fact that attract about 65% of employees in Romania, makes significant investments, takes approximately 30% of gross value added in the national economy, operates mainly in services activity, are flexible, concerned with development and have the ability to adopt new technologies. The SME sector has been affected by the crisis, but not in the same measure as large enterprises. This fact is demonstrated by the economic and financial indicators that I have analysed, in 2011 SME being able to overcome the crisis and to achieve higher performance than in the years before crisis. The SME sector is considered the most active sector of the modern economy, plays a important role in the economic structure of our country, helping to ensure economic and social development as it is shown by the strong bond that exist between the GVA in SME sector and total GVA added to the national economy, demonstrated in the calculations that I have made in this study.

Key words: *small and medium-sized enterprises, investment, efficiency, gross value-added*

JEL Classification: *D20, E00, O10*

1. Introduction

Small and medium-sized enterprises are an important factor of economic growth that generates into economy multiple positive effects such as creating new jobs, increasing investment, improving the competitive environment, stimulating regional development, adjustment of supply to consumer demands, continuous innovation.

Activity in the Romanian economy is dominated by small and medium-sized enterprises. Romania's accession to the European Union has been influence on SMEs which have improved activity at least in the following areas: human resources, the quality requirements and competitiveness, ethics in business. In addition to these issues, SMEs in our country are strongly influenced by the economic, political and social fields in the country, but also by the situation in European and world level. SMEs activity was strongly affected by the financial and economic crisis perceived in particular by reducing the number of employees, lower turnover and investment and even shutting down a significant number of enterprises. Statistical analysis shows that starting from 2011 this sector of activity follows an upwards trend, but it is still necessary to use a new management system in the companies, achieving a organisational culture as a result of the dynamism of the external environment that requires major changes at the level of enterprises (Gănescu Cristina, 2011, p.25), increasing entrepreneurial skills through specialized courses, increasing the capacity of SMEs to raise European funds and the accomplishment of a crops in this respect, and also support from government through financing programs.

2. Analysis of the dynamics, structure and indicators in the Romanian SME sector

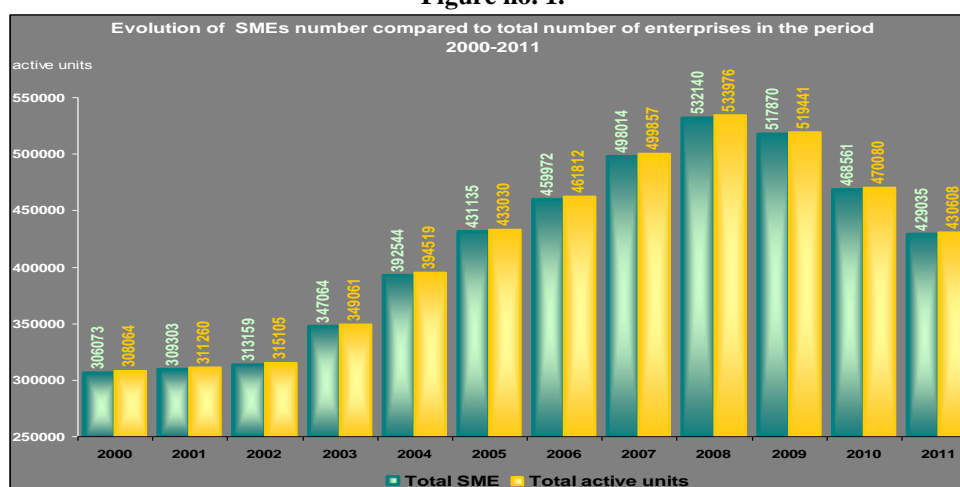
The transition to a market economy has meant to Romania on the one hand the privatization of state-owned enterprises and, on the other hand, the emergence of new private enterprises, as a result of private and independent initiative. Both actions have had strong repercussions on the labor market. Thus, while privatization has reduced the number of jobs, boosting unemployment, the new private sector has created most of the new jobs. Most new enterprises created are small and medium-sized enterprises (SMEs) they absorb most of the labor force and also contributing to the creation of a new generation of employers and employees. SMBs, by their nature, are characterized by a great flexibility and ability to adapt to new, representing a remarkable driving force of economic progress in Romania (Popa Lucia-Ramona, 2013, p.33).

Table no. 1. The number of active enterprises by size class in the period 2000-2011

Year	Indicators	of which size classes by number of employees					Total active enterprises
		Micro, small and medium-sized enterprises				Large enterprises	
		0-9	10-49	50-249	Total SMEs	250 and over	
2000	No. of units	270,843	28,085	7,145	306,073	1991	308,064
	% of total	87.9	9.1	2.3	99.3	0.7	100.0
2001	No. of units	271,713	29,888	7,702	309,303	1957	311,260
	% of total	87.3	9.6	2.5	99.4	0.6	100.0
2002	No. of units	274,674	30,418	8,067	313,159	1946	315,105
	% of total	87.3	9.7	2.6	99.4	0.6	100.0
2003	No. of units	305,024	33,581	8,459	347,064	1997	349,061
	% of total	87.4	9.6	2.4	99.4	0.6	100.0
2004	No. of units	348,881	34,823	8,840	392,544	1975	394,519
	% of total	88.5	8.8	2.2	99.5	0.5	100.0
2005	No. of units	383,892	38,175	9,068	431,135	1895	433,030
	% of total	88.7	8.8	2.1	99.6	0.4	100.0
2006	No. of units	408,160	42,510	9,302	459,972	1840	461,812
	% of total	88.4	9.2	2.0	99.6	0.4	100.0
2007	No. of units	441,791	46,536	9,687	498,014	1843	499,857
	% of total	88.4	9.3	1.9	99.6	0.4	100.0
2008	No. of units	476,395	46,112	9,633	532,140	1836	533,976
	% of total	89.3	8.6	1.8	99.7	0.3	100.0
2009	No. of units	465,885	43,673	8,312	517,870	1,571	519,441
	% of total	89.7	8.4	1.6	99.7	0.3	100.0
2010	No. of units	419,082	41,697	7,782	468,561	1,519	470,080
	% of total	89.2	8.9	1.6	99.7	0.3	100.0
2011	No. of units	375,479	45,221	8,335	429,035	1,573	430,608
	% of total	87.2	10.5	1.9	99.6	0.4	100.0

Source: made by author based on data from the Romanian Statistical Yearbook, 2012 Edition

In the period 2000-2011 the share of SMEs in total enterprises tends to increase so that in 2010 they represented 99.7% of the total active units, while the share of large enterprises has recorded decreases from 0.7% in total businesses in 2000 to 0.3% of the total active units in 2010 (table 1). Evolution of the sector of small and medium-sized enterprises has two stages in the period under consideration. Thus, during 2003-2008 the number of active enterprises in the Romanian economy grew by over 50%, i.e. from 349,061 enterprises in 2003 to 533,976 enterprises in 2008.

Figure no. 1.

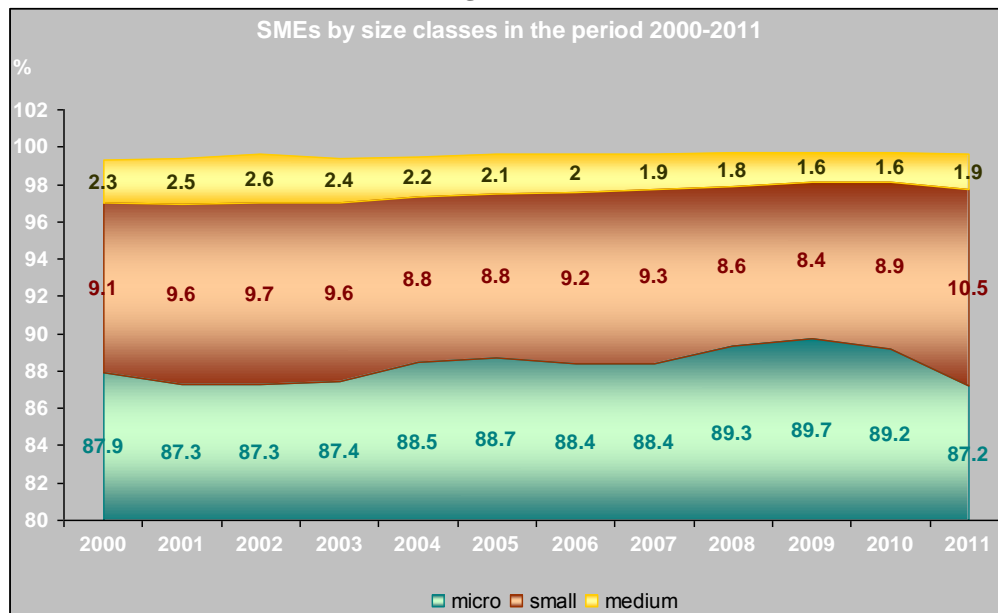
Source: made by author based on data from Table no.1

In 2008, SMEs are predominant in the Romanian economy, representing 99.7% of all enterprises (533,976 active units), were substantially contributing to gross domestic product (GDP) and to creating jobs. Installing the economic crisis since 2009, has determined for the first time after a relatively long period of uninterrupted growth, the decrease of the number of active SMEs. In 2009 there has been a downward trend in the number of small and medium-sized enterprises compared with 2008 by -2.7%. The downward trend was accentuated in the years 2010 and 2011, so that in 2011 the number of economically active SMEs decreased by 19.4 percent compared to 2008, reaching 429,035 enterprises. However, in the analyzed period, SMEs have represented the backbone of the Romanian economy, registering notable results.

If we consider the distribution of *SMEs by size classes*, it is found that in the period 2000-2011 the ratio between the weights held by micro, small and medium enterprises remains approximately constant, fluctuating around the value of + / -1% to level each of the three classes in all enterprises in our country.

The large share of micro enterprises in the SME sector is determined by many factors, including low level of domestic capital, reduced entrepreneurial skills, the legislation in force, fiscal policies and measures which have encouraged setting up new companies instead of development and consolidation of the existing ones. By 2010, micro enterprises have benefited from some facilities in terms of taxation as well as preferential taxation in quantum of 1.5-3% of turnover, as compared to the single tax rate of 16% for the other size categories.

Figure no. 2



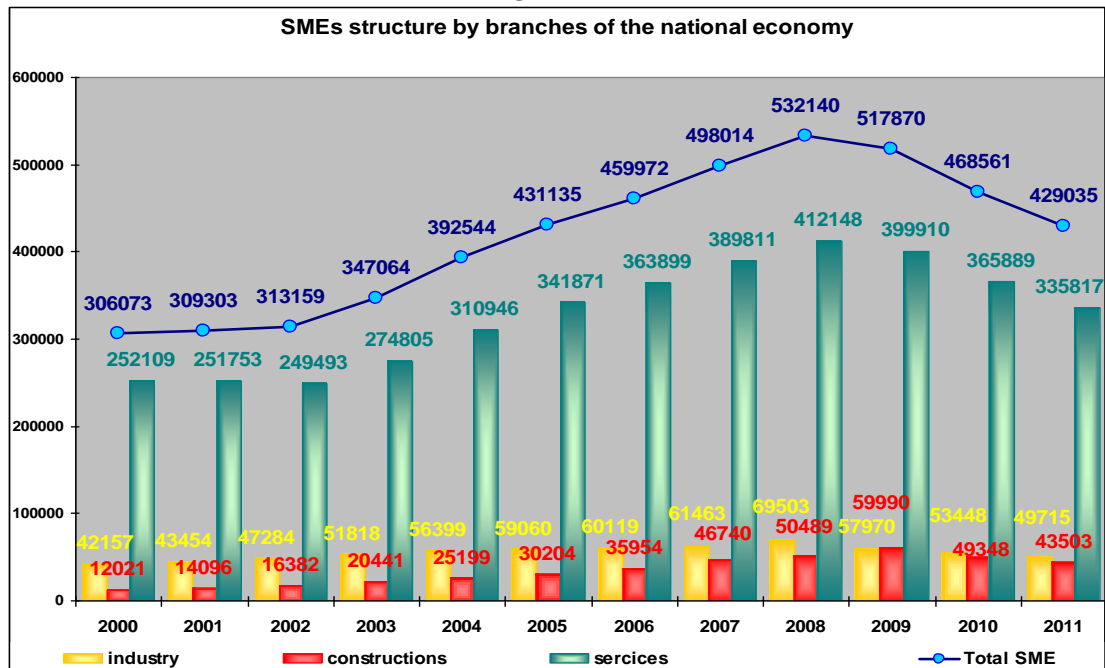
Source: made by author based on data from Table no.1

The analysis of *SMEs structure by branches of the national economy* in the period 2000-2011 shows the following aspects:

- SMEs in the industry have seen an upward trend in the period 2000-2008 from 42,157 active units in 2000 to 69,503 active units in 2008, then they have registered a downward trend up to 49,715 active units in the year 2011.
- SMEs from construction branch have registered a significant development in the period from 2000 to 2009, from 12,021 active units in 2000 to 59,990 active units in 2009 (that represent an increase of about 5 times). This significant development of SMEs in construction branch is a consequence of several factors, among which is highlighted: extending urban and residential infrastructure as a result of the development of real estate sector, industrial and road infrastructure works (construction of highways, construction of new roads and repair the existing ones), construction for water supply to rural areas, works for the commercial sector of retails chains, in tourism and socio-cultural sectors. It should be noted that this sector has been affected by the crisis only since 2010 and reducing the number of active units has not been as pronounced as in the case of other sectors of activity (43,503 active units in the year 2011).
- Services sector activities take place mainly in SMEs, their number being considerably larger than of those in industry and construction. Thus, in this sector, the number of SMEs has increased from

252,109 active units in 2000 to 412,148 active units in 2008, then decreased of 18.5 percent, reaching the 335,817 active units in the year 2011. SMEs in services are more flexible, most of them fits in micro enterprises class.

Figure no. 3



Source: made by author based on data from the Romanian Statistical Yearbook, 2012 Edition

SMEs are a dynamic sector with a high adaptability to the market requirements, that had created jobs and had absorbed *labor force* after the restructuring of large enterprises. Thus, in 2008 in Romania was registered 532,140 active SMEs in which carried out its activity an average number of 3.747.427 employees, representing a share of 65.7 percent of all employees at national level. Even during the crisis, under the conditions of massive restructuring in large enterprises and public institutions, the SME sector has attracted the surplus of the labor force, so that in 2011 in 429,035 active SMEs were working 66.4% of employees in Romania (4,085,608 employees). In mining and quarrying and electricity and thermal energy, gas and water the share staff employed in SMEs is low (13.5% in 2011 of total personnel employed in these fields), due to the fact that those two sub-branches of industry are owned mainly by the state, and the work is carried out in the large enterprises. For other activities of national economy is recorded high percentages of personnel working in SMEs. Thus, 76.4% of employees in construction, 84.2% of employees in trade, 88.4% of employees in hotels and restaurants, 72.6% of staff engaged in real estate transactions are operating in SMEs.

SMEs have developed well at all their *economic and financial indicators*, which shows that the sector is profitable and positively contribute to the formation of national income. The increasing trend of these indicators is observed for the entire period from 2003 to 2008, follows a slight decline in 2009 and 2010, 2011 being the year in which some indicators reach up pre-crisis level. Analysis of financial and economic indicators by size classes of enterprises, has determined the following comments:

- ✓ In the period 2003-2011, the best results are achieved by *micro enterprises*.
 - so, micro achieved the highest *turnover*, ie 62.5% of total turnover of all SMEs in the country in 2008, 64.7% in 2009 and 63.1% in 2011.
 - the *value of investments* made in the period 2008-2011 for the purchase of goods from third parties or on its own is superior in micro. Although the absolute value of investment in micro enterprises has decreased from 57,448,000 lei in 2008 to 33,406,000 lei in 2011, relative value remained at a high level (considering reducing investment in other categories of SMEs), representing 70% of total investments made by SMEs in 2008 and 63.8% in 2011. Investments made by micro show their concern for development and for adoption of technologies for high-performance, reflected in the profit achieved which is three times higher than in medium-sized enterprises and 6 times higher than the profit of small businesses. Thus, 68% of the profits from the SME sector is done in micro.

- also, *gross value added* of micro is maintained around 60% of GVA of the SMEs sector in the period 2008-2011. Against the background of GVA reduction in SME sector, the share of GVA of micro grow in 2010 and representing 61,1% of total GVA by SMEs sector and decreased in 2011 up to 58,2% of the total GVA by the SME sector.
- the analyses of *exports* shown that micro ranks the second place after medium-sized enterprises with a share of approximately 30% of total exports by the SMEs sector. This indicates that the products and services carried out by micro are addressing to local or national market, rather than external market. The main causes are: difficulties to access foreign markets as well as the production capacity of small-scale distinguish micro enterprises from being unable to produce quantities required for export. On the other hand, a large share of the total micro performs retail activities which usually operate only locally.

Table no. 2. The main economic and financial indicators of small and medium-sized enterprises in the period 2008-2011

-current prices, million-

Class size, by number of employees	Turnover			Gross investments			Direct exports			Gross value added		
	2008	2009	2011	2008	2009	2011	2008	2009	2011	2008	2009	2011
0-49	363476	333975	367311	57448	30480	33406	9510	8054	14133	70966	63118	60935
50-99	90441	74353	84266	10701	7278	6546	4895	6028	6876	18339	16180	17560
100-249	127969	107856	130521	14017	10230	12384	14482	13037	21322	27305	24043	26145
Total SME	581886	516184	582098	82166	47988	52336	28887	27119	42331	116610	103341	104640

Source: Romanian Statistical Yearbook, 2012 Edition

- ✓ **Medium enterprises** ranks second in terms of:
 - *turnover* represents 22.4% of total turnover obtained in the SMEs sector in 2011;
 - *gross investments* had a share of 23.6 % in total gross investments in the SME sector in 2011. As regards their evolution in time, there is an increase in the share of investment by medium-sized companies from 17.1% in 2008 to 23.6% in 2011 due to lower investments by micro and small enterprises. Thus, if in the case micro gross investment decreased in absolute value with 24,042 million lei in 2011 compared with 2008, in case of medium-sized enterprises gross investment fell by only 1,633 million lei during the same period;
 - *gross value added* performed by medium-sized enterprises represented 24,9 % of total GVA of the SME sector in 2011, a slight increase compared to the previous period (23.4 % in 2008);
 - approximately 50% of total SMEs *exports* are made of medium-sized enterprises in the period 2008-2011. There is an increase in the exports value of all three classes of SMEs, however medium -sized enterprises increase their exports during the crisis with approximately 6,840 million lei from 14,482 million lei in 2008 to 21,322 million lei in the year 2011.
- ✓ Economic and financial situation of **small enterprises** is more difficult, they recording:
 - reduced *turnover* of approximately 84.266 million lei in 2011, representing 17.4% of the turnover of the SME sector;
 - *gross value added* of 16.7% of the total SME sector;
 - declining *investment* from 10,701 million lei in 2008 to 6,546 million lei 2011;
 - low *exports*, which accounted for 16.2 percent of the total SMEs sector exports in the year 2011.

Higher values of economic and financial indicators recorded by micro-enterprises are determined by the large number of units, i.e. 375,479 active units in 2011, compared to the number of medium-sized companies (8,335 active units) and small enterprises (45,221 active units). Thus, if we think about the average economic and financial results of micro-enterprises, it is found that the values are below those recorded by a medium-sized enterprise.

However it is noted that small enterprises have been the least affected by the crisis, keeping approximately constant the share of the economic and financial indicators throughout the period 2008-2011.

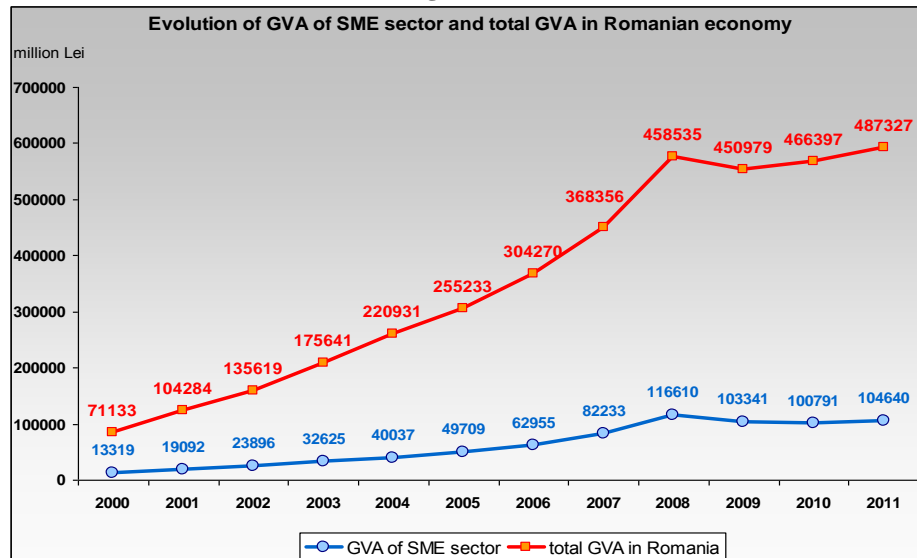
The main problems SMEs have faced in the crisis and which have determined their decline include: decreasing in domestic demand due to reducing revenue companies and individuals; reducing exports; excessive taxation; difficult access to credit; employment, training and retaining employees while reducing wages; the relative instability of the national currency; delays in collecting bills from both private companies and public institutions that determined financial blockage of SMEs; increasing the competition from imported products, which are often cheaper than products made in Romania; rising prices of raw materials, energy and food; inflation; instability of legislative framework, bureaucracy and administrative barriers on SME activity; low

level of absorption of the European funds; insufficient measures to support SMEs during the crisis; excessive controls of central and local government; poor quality infrastructure. These problems have affected all categories of enterprises, causing closure, temporary cessation or restriction of activities by a significant number of SMEs.

3. Analysis of the correlation between gross value added of SMEs and gross value added in the national economy

The SME sector that is considered the most active sector of the modern economy plays a very important role in the economic structure of our country and contributes to economic growth and sustainable development. In this regard were adopted a series of regulations at world level, European and national to meet the needs of the SME sector and to contribute to the development and improvement of its activity.

Figure no. 4



Source: made by author based on data from the Romanian Statistical Yearbook, 2012 Edition

From the above analysis it should be observed that in the Romanian economy SME sector creates important added value. Accordingly, I have made an analysis of the connection between gross value added of SMEs and gross value added in the national economy. The intensity of the connection between the two variables is determined by using one of the non-parametric methods for determining the relationship between phenomena, i.e. the Spearman correlation coefficient, which involves the specific ranks for each variable separately (Mihaela Savu, 2013, p 304). I have considered that gross value added of SME sector is the independent variable (denoted by x) and gross value added in the national economy is the dependent variable (denoted by y). To calculate the Spearman coefficient were analyzed statistical data on the two indicators in the period 2000-2011, thus determining the sample size $n = 12$ and d (the difference between the order of each pair of measurements).

It should be noted that in this calculation appear equal ranks, so it is necessary to apply a different formula, i.e. equal rank correction formula which is recommended to be applied when both variables have equal rank (Opariuc-Dan Cristian, 2011, p. 19-26).

$$\rho = \frac{n(\sum r_x r_y) - \sum r_x \times \sum r_y}{\sqrt{n \sum r_x^2 - (\sum r_x)^2} \times \sqrt{n \sum r_y^2 - (\sum r_y)^2}} \quad (1)$$

where r_x and r_y are the ranks of the two variables

Table no. 3. Ranks calculation for x and y variables

x	y	r_x	r_y	$r_x \times r_y$	r_x^2	r_y^2
13319	71133	1	1	1	1	1
19092	104284	2	2	4	4	4
23896	135619	3	3	9	9	9
32625	175641	4	4	16	16	16

40037	220931	5	5	25	25	25
49709	255233	6	6	36	36	36
62955	304270	7	7	49	49	49
82233	368356	8	8	64	64	64
116610	458535	12	10	120	144	100
103341	450979	10	9	90	100	81
100791	466397	9	11	99	81	121
104640	487327	11	12	132	121	144
		$\Sigma = 78$	$\Sigma = 78$	$\Sigma = 645$	$\Sigma = 650$	$\Sigma = 650$

Source: calculations made by the author based on data from the Romanian Statistical Yearbook, 2012 Edition and Figure no.4

Substituting into the formula (1) the data in Table no. 3 we get the Spearman coefficient:

$$\rho = \frac{n(\sum r_x r_y) - \sum r_x \times \sum r_y}{\sqrt{n \sum r_x^2 - (\sum r_x)^2} \times \sqrt{n \sum r_y^2 - (\sum r_y)^2}} = \frac{12 \times 645 - 78 \times 78}{\sqrt{12 \times 650 - (78)^2} \times \sqrt{12 \times 650 - (78)^2}} =$$

$$= \frac{7740 - 6084}{\sqrt{7800 - 6084} \times \sqrt{7800 - 6084}} = \frac{1656}{\sqrt{1716} \times \sqrt{1716}} = \frac{1656}{1716} = 0,97$$

so

$$\rho = 0,97$$

To determine the significance of the rank correlation coefficient, I compared the size of the coefficient ρ that I have obtained from calculations performed with the reference values published in special tables. Studying the GVA of SME sector and the total GVA in the national economy over a period of 12 years, I have achieved a rank correlation coefficient of 0.97. In the reference values table for $n = 12$ it is noted that in order to be significant to a significance level less than 0.05 the coefficient ρ must have at least 0.587, at a threshold of significance less than 0.02 the value of this coefficient must be greater than 0,671 and a threshold less than 0.01 the coefficient must exceed the amount 0,727. So, the value of the correlation coefficient obtained in the investigated case is 0.97 that is higher than 0.727 at significance level of less than 0.01. Thus, it is possible to say that there is a strong link between the two variables at a significance level of less than 0.01, the GVA of SME sector significantly affecting the GVA in national economy.

In calculations performed, $n = 12$ so it is necessary to test the significance of the Spearman rank correlation coefficient using t distribution. For this purpose I used the formula:

$$t = \rho \sqrt{\frac{n-2}{1-\rho^2}} \quad (2)$$

Substituting the values in the formula (2) we obtain the following:

$$t = 0,97 \sqrt{\frac{12-2}{1-(0,97)^2}} = 0,97 \sqrt{\frac{10}{1-0,94}} = 0,97 \sqrt{\frac{10}{0,06}} = 0,97 \sqrt{166,7} = 12,52$$

T-test value for a number of $12-2 = 10$ degrees of freedom must exceed 1,812 at a threshold of significance less than 0.05 and 2.764 at a threshold of significance less than 0.01. I've got a $t = 12.52$ which is higher than 2.76, so the coefficient of correlation $\rho = 0.97$ is significant at a threshold of significance $p < 0.01$.

The hypothesis is confirmed, so between the GVA of SME sector and the total GVA in the national economy is a strong connection, the result being a correlation coefficient $\rho = 0.97$ for a total number of 12 elements, and the value of the t test being 12.52 (these two results show that between the two variables is a strong bond at a significance level of less than 0.01).

4. Conclusions

The SMEs are the most active sector of the modern economy that determined technological progress and innovations; SMEs activity brings economically and socially benefits to our society. A strong, dynamic and innovative SME sector causes sustained economic growth and sustainable development. SMEs play an important role in the economic structure of Romania, through its considerable number, turnover, investments and gross value added of all types of enterprises. The SME sector is the only sector that can bring economic recovery, entrepreneurs being the key of economic recovery that stimulate the SMEs' potential to contribute to growth in difficult times. Although affected by the crisis SMEs were able to overcome the disturbances in economy, as is demonstrated by the economic and financial indicators of SMEs sector, which fell down during the crisis less than similar indicators of large enterprises. Thus, from 2011 it appears that SMEs have achieved higher performance than in the years before crisis.

It can be concluded that the SME sector plays a very important role in the Romanian economy, helping to get economic and social sustainable development, as it is evidenced by the strong bond established between GVA of SME sector and total GVA in the national economy, as was demonstrated by the calculations above.

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