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The Impact of Economic Crises on the Activity of SMEs in Romania

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Abstract

Never before the future of economic recovery and development, both in Romania and in Europe has depended so much as today on the SMEs sector evolution, because, in the current context, SMEs are the most dynamic factor in economic development and social inclusion, because of their potential for competitiveness and innovation and the ability to create and maintain jobs. Economic successes and failures of the enterprises in Romania are determined, to a large extent, by managerial skill, work quality of the personnel employed, structure of production, final product, the originality of products, economic activities, the number of employees, labor occupation structure, the turnover of enterprises and local units, gross and net investments of businesses, etc. This research paper represents a blueprint for the SMEs sector and also an analysis of the changes in the evolution of active SMEs in Romania due to the impact of the economic crisis of recent years on their activity.

Keywords: SMEs, economic crisis, economic development, economic competitiveness.

Evolution of the active SMEs in Romania due to the impact of the economic crisis

The share of SMEs in the total non-financial economy of enterprises can be seen in table no.1, which presents the distribution of enterprises by size classes and economic sectors, according to data from the balance sheet registered at the beginning of 2012. Regarding the share of the SME sector reported to large enterprises, it registers values greater than 97% in all economic sectors, except the energy sector (93.8%). This overwhelming preponderance of SMEs as opposed to large companies must be understood exclusively through the number of enterprises.

Trade remains the main economic sector in which SMEs operate, with a share of 37.5%. 163781 small and medium sized enterprises have performed their activity in 2011, in Wholesale and retail trade; repairing vehicles and motorcycles. Among them, microenterprises are the most numerous (149382), representing more than 90% of the total. At the same time there are a considerable number of 1415 medium sized enterprises, respectively 17.5%, operating in this sector, amidst activity fields trade was ranked first among small enterprises, with a number of 12984. In the professional, scientific and technical activities' sectors a total number of 49046 SMEs are operating (11.2%), most of which are microenterprises (95.2%). This sector of activity ranks 2 only in the case of microenterprises (12.2%), not as regards of small and medium sized enterprises, which account for 4.62%, respectively 3.19% of this sector.

Table no. 1. Distribution of enterprises by size classes and economic sectors for 2012

Sector	**Micro**	**Small**	**Medium**	**SME**	**Large enterprises**	**Total enterprises**
Agriculture	12353	1806	204	14363	31	14394
Mining and quarrying	739	236	49	1024	17	1041
Manufacturing industry	30724	9820	3118	43662	738	44400
Production and supply of electricity and	602	98	29	729	48	777

gas						
Water supply, sanitation,waste management	1741	475	137	2353	69	2422
Sector	**Micro**	**Small**	**Medium**	**SME**	**Large enterprises**	**Total enterprises**
Constructions	34002	6412	1108	41522	128	41650
Wholesale and retail trade, repairing vehicles and motorcycles	149382	12984	1415	163781	148	163929
Transport and storage	28176	2707	435	31318	96	31414
Hotels and restaurants	18876	2995	254	22125	27	22152
Information and communication	14711	1253	246	16210	56	16266
Real estate transactions	11264	571	55	11890	8	11898
Professional, scientific and technical activities	46718	2077	251	49046	55	49101
Activities of administrative services and support service activities	12578	1737	588	14903	147	15050
Public administration and defense	59	13	11	83	2	85
Education	2488	285	14	1787	1	2788
Health and social assistance	7709	676	80	8465	14	8479
Arts, entertainment and recreation activities	3223	168	20	3411	-	3411
Activities of private households as employers	28	3	1	32	-	32
TOTAL	***384014***	***44939***	***8089***	***437042***	***1588***	***438630***

Source: Developed by the author based on Data from enterprises balance sheet at 01/01/2013; RNI of Statistics January 2013

Manufacturing industry is the third activity field representative for SMEs. Thus, the industry SMEs sector accounts for 10%, following the Service sector (39%) and the Trade sector (37.5%). In the manufacturing industry there are pronounced differences between size classes. It is notable the fact that this economic sector is most representative for medium sized enterprises. A percentage of 38.6% of medium sized enterprises (with more than 50 employees) are present in the industrial sector. The SMEs in industry are larger as opposed to those involved in other activities such as, for example, the service sectors in which microenterprises are predominant. Also, small enterprises have an important share in the industrial sector (21.8%), which rank 2 after trade. Instead, microenterprises have a reduce share, of only 8%, in the manufacturing industry, corresponding to the low technological capacity of this category of companies.

The *Constructions* sector has a significant share in the overall structure of SMEs, although it has experienced the most torsion dynamic over the years, reaching in 2011 a percentage of 9.5%. Microenterprises from Constructions include 34002 enterprises and represent 81.9% of the total number of active enterprises in this sector.

In *Transport and storage* the average number of SMEs is 31318, representing a share of 7.2% of the total. In this sector the distribution on the three size classes is more uniform compared to other economic sectors; thus 7.3% are microenterprises, 6.0% are small enterprises and 5.4% are medium sized enterprises.

Another important area for the presence of SMEs is the Hotels and restaurants sector, with an average share of 5.1%. The small enterprises class has a share above average, of 6.7%, and microenterprises account for 4.9%. Fewer medium sized enterprises operate in tourism, respectively only 254, representing a rate of 3.1% of the total.

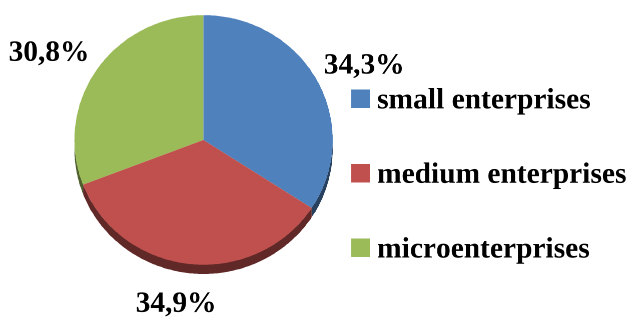
Agriculture becomes an increasingly significant sector for SMEs, registering an increase as regards to the total number of active enterprises (14363). The average share is 3.29%, however small enterprises, with an average number of 10 and 49 employees, register a higher share of 4%.

Regarding the evolution trend, after two consecutive years of rebound, the turnover of SMEs registered a real average growth of 2% in 2012 compared to 2011.

In most economic sectors, SMEs register a turnover higher than large enterprises. Exceptions are the sectors concerning industry and energy, mining and communications, where SMEs are unable to compete with large scale economic operators, national or transnational, which are dominant in the market (Soros, 2010). SMEs contribute with more than 58% to the total turnover of the non-financial economy. According to data from the balance sheet of enterprises active in the non-financial economy, at 01.01.2012 the value of the turnover achieved by SMEs was 589256 billion lei, while the turnover of large enterprises was 4262456 billion lei.

As regards to turnover distribution between the three sizes classes of SMEs, very close shares can be observed, however microenterprises have a lower contribution compared to large enterprises. This characteristic of SMEs in Romania is kept for several years, noting that in 2012, the small enterprises class increased its share in the total turnover.

Fig. no. 2. Turnover in SMEs by size classes, 2012



Source: Developed by the author based on Data from enterprises balance sheet at 01/01/2013; RNI of Statistics January 2013

As illustrated in figure no.1, microenterprises contribute with 30.8% to the total turnover achieved by SMEs, small enterprises with 34.2% and medium sized enterprises with 43.9%. Small enterprises stand out in terms of turnover as the class with the highest growth potential between Romanian SMEs.

According to the latest data of the balance sheet regarding the situation of enterprises, a number of 238212 SMEs reported profit for 2012. As a percentage, this means more than 54.5% of small and medium sized enterprises active in non-financial economy. The total net profit registered in 2012 by SMEs was 29240 billion lei, representing 5% of turnover. In figure no. 2 is presented a comparison between the profit and turnover on enterprises' size classes – micro, small and medium sized.

It can be observed a different distribution of profits compared with turnover in the three size classes. Thus, from the balance sheet data, result the following observations:

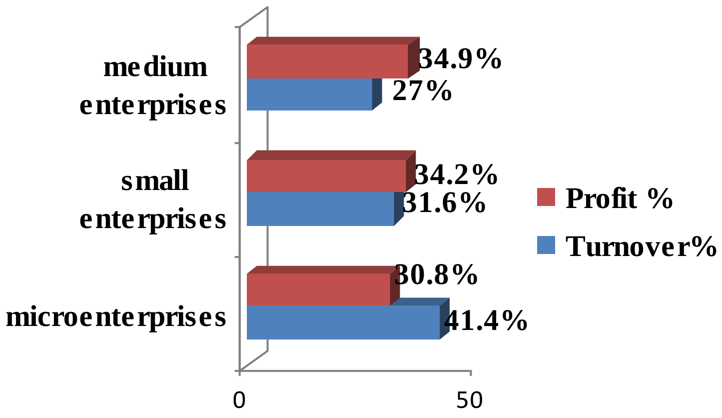
- Microenterprises class, although it has the lowest percentage of turnover (30.8%), achieved the highest level of profit, respectively 41.4% of the total value on SMEs.
- Small enterprises class registers the most balanced situation, contributing with 34.2% to the total turnover of SMEs and obtaining a profit at the rate of 31.6% of total.
- Medium sized enterprises class, with the highest turnover (34.9%), reported the lowest level of profit, with a percentage of 27%.

These findings show the existence of an inversely proportional relationship between size of enterprises and mass of profit, in the general classes of SMEs. However, assessing profit by highlighting its mass at a given time is insufficient to draw conclusions on the profitability of SMEs.

The highest level of profit is obtained by SMEs active in services, which cumulate 31.6% of the total mass. However, it is noteworthy that the share of profit is below the weight of the number of enterprises in this sector (figure no.3) (Schumpeter, 1982).

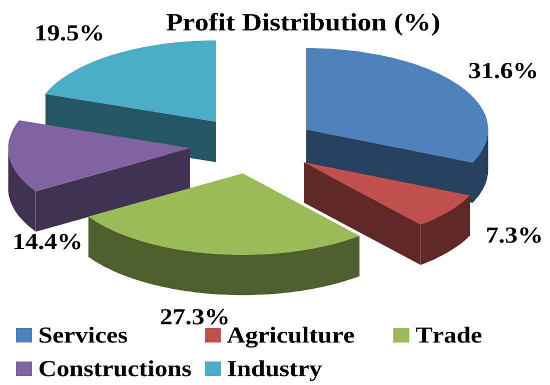
SMEs in *Trade* obtain a percentage of 27.3% of the total profit of SMEs, value which is also situated well below the percentage of enterprises active in this sector (37%). In industry is achieved 19.5% of SMEs' profit, while the percentage of active enterprises is only 11%. SMEs in Constructions also manage to generate a superior profit percentage (14.4%) compared to the number of enterprises in this sector (10%).

Fig. no. 3. Net profit vs. Turnover in SMEs, by size classes, 2012



Source: Developed by the author based on Data from enterprises balance sheet at 01/01/2013; RNI of Statistics January 2013.

Fig. no. 4. Profit distribution of SMEs in main activity sectors, 2012



Source: Developed by the author based on Data from enterprises balance sheet at 01/01/2013; RNI of Statistics January 2013

SMEs in Agriculture appear with the best ratio between profit weight and the share of number of enterprises, that is 7.3% share of the total profit and 3.3% in number of enterprises.

Impact of the post-crisis period on the productive potential of enterprises and their performance level

Currently, increasing the performance of SMEs in terms of economic efficiency and competitiveness is a constant concern at European Union level, which is also illustrated by the SME policy and strategic lines of actions to support their development. SMEs' economic efficiency can be expresses using several economic indicators, among which the most relevant is labor productivity (defined as the ratio between turnover and the number of employees) and profitability (Atanase, 2010).

The level of labor productivity and its growth rate depends on a number of influence factors, such as number and level of qualification of the personnel and the technological level of production and organizational processes in companies. In many cases, reducing the number of employees is a direct factor of influence for increasing productivity, but the positive results can be expected only if the restructuring is accompanied by personnel training and qualification as well as renewal of the technological factors (Teresa da Silva Lopes, 2007).

Developments in recent years in the average number of employees, in Romanian SMEs, were determined primarily by the difficulties of the economic crisis and have led to conjectural reductions rather than strategic ones. At the same time, the reduction in the number of employees in SMEs took place while the turnover diminished, resulting in a decrease of SMEs performance in 2009-2010, with a slight recovery in 2012. SMEs are important to the economy for contributing to Gross Domestic Product creation, but in recent years marked by the effects of the economic crisis are increasingly appreciated as the main generator of employment in Europe. The average number of employees per enterprise at SMEs level is 5.8 in Romania, higher than the European average of 4.2 times. On each class of enterprises the situation is as follows: in microenterprises the average number of employees per enterprise is 2.1; in small enterprises the average is 19.6 employees per enterprise; in medium sized enterprises there are 101.7 employees per enterprise. By activity sectors, in Industry we find the largest number of employees/enterprise (14.2); in Constructions there are 7.7 employees/ enterprise; in Agriculture 5.9 employees/enterprise; and the lowest average values are in Services (4.5) and Trade (4.2) employees/ enterprise. The average value of labor productivity in SMEs, calculated by the average turnover per employee is 233434.2 lei, compared to the value of labor productivity in large enterprises which is 323215.4 lei.

The sectoral labor productivity analysis indicates the highest value in the Trade sector (404264 lei), above the average in SMEs, explainable by the specific of this activity that runs large turnovers with a small number of personnel. SMEs in Agriculture are noted with 258163.3 lei level of labor productivity, above the average value of SMEs. This result can be interpreted in the general positive trend of SMEs in this sector, which has developed through new investments stimulated by constant financial aids.

In Industry, SMSs have a level of productivity of 185216 lei, below average, which indicates an inadequate level of technology in SMEs in the manufacturing sector. In Constructions and Services is found the lowest labor productivity, the achieved turnover is reduced in relation to the large number of employees.

Profitability is another analyzed indicator regarding the evaluation of business efficiency, which measures the contribution of personnel to the achievement of economic and financial performances. Thus, the efficiency of Romanian SMEs, in terms of the ratio between the profit obtained and the average number of employees in 2012 had an average value of 11583.5 lei/employee. The analysis of the data from the balance sheet for the three size classes and main economic sectors reveals the following general issues:

- The most favorable situation appears in microenterprises, that have the highest profitability per employee at the level of the entire class, respectively 127% average value per SME;
- Small enterprises have a share of profitability per employee of 90% compared to the average value, and medium sized ones of only 83%;
- The personnel from the enterprises working in Agriculture has the highest contribution to profit, which ensures a profitability rate two times higher than the average on SME (25219.5 lei/ employee);
- SMEs in Construction have the second highest profitability (13104 lei/employee) between economic sectors; in Service and

Constructions were recorded values close to average, respectively 12191 lei/employee and 11660 lei/employee;

- In terms of profitability, SMEs from Industry present the weakest performance with a level of only 8410 lei/employee.

Conclusions and proposals

Never before the future of economic recovery and development, both in Romania and in Europe has depended so much as today on the SMEs sector evolution. In the current context, SMEs represent the most dynamic factor in economic development and social inclusion, through their potential for competitiveness, innovation and the ability to create and maintain jobs in society.

The number of economically active SMEs remained practically at the same level, of about 437000, in 2011 and 2012, but compared to 2008, before the crisis, this number is reduced by 14%. It can be concluded that approximately 71000 active SMEs in 2008 disappeared from the Romanian economic environment during the crisis.

The size class structure of SMEs registered in 2011 a slight increase regarding the small enterprises class representing 10% and the middle sized enterprises class with a share of 2%; these evolving structure movements occurred due to the SMEs sector reconfiguration following the dissolution of a large number of microenterprises.

Regarding specialization, small and medium sized enterprises in Romania are predominantly oriented in Services, being predominantly also in the Wholesale and retail trade and repairing vehicles sector, with a share of 76.5% of total.

Determining the optimal period to renovate productive equipments is a multi-iteration problem; in the optimal decision-making processes, separately for each stage, the manager adopts a series of consecutive decisions. Every decision is optimal for the given iteration; all decisions are directed towards the achievement of the ultimate goal – maximum income, profit or minimum costs, expenses; at each stage of solving the problem the manager usually uses the one and the same optimization criteria; the problem of determining the optimal period of equipment refurbishment can be solved only for separate periods of time; the problem must be decomposed into a set of optimization sub-problems for each period; the set of solutions for optimization problems is presented by a sequence of values of the function-purpose; solving optimization problems for each period is done by algorithms developed for each problem depending on its specificity, starting with the last period; the optimal solution for each period examined separately is optimal in all periods.

The problem of determining the optimal assortment, technologies used to manufacture finished products can be resolved only after examining all possible options; the optimal solution of the problem can be attributed to the decision-making system and other business services; the optimization criteria is not about principle, it can be modified depending on the specificity of the problem, and it can be replaced with minimal cost and maximum profit.

Under the conditions of post-accession to the EU, the enterprise faces several main problems: the price stability of the enterprises' products is not given by the company, but by the market. The reduced prices of the enterprises' products can aggravate its economic status. In this context, the company is required to minimize as much as possible its productive efforts. This can be achieved only by using the analytical potential of mathematical programming (planning). The enterprises' manager must know the potential of analytical methods, and set up groups of experts to address issues related to strategic management.

Enterprises in Romania operate in an open economic environment, they are engaged in an economic competition with EU member state, and the material, financial, labor resources, including qualified labor are limited. The productive potential of enterprises is determined by a number of exogenous and endogenous factors: technological progress, innovational level, availability of fixed capital, its efficiency, the specific resource consumptions (per unit of product), demand and supply in the Romanian market, as well as EU; economic policies of the enterprise, of the country and of EU. Actually, the enterprise cannot operate effectively on the basis of programs (plans) developed intuitively, the situation requires to fully use all the possibilities to become an enterprise of the future.

The investment distribution (of productive accumulations) between businesses of a company is a dynamic programming problem, for which in the technical literature can be found a number of resolving methods. The problem solving procedures, very mathematical, remain inaccessible for the managers of several companies.

Financial crises have accompanied the economic development of mankind throughout its existence, only the dimensions were more reduced, sometimes local. Economic practice argues the statement:

financial and economic crises are more "a rule", than deviations from the "rule".

The turnover of SMEs represents more than 58% of the total turnover achieved in the economy. The average increase in the turnover obtained by SMEs in 2012 compared to 2011 was +2% in real terms, and at the level of size classes, the highest increase was registered by the small enterprises class (+8.6%), followed by the medium sized enterprises class (+0.9%). Only microenterprises have diminished their turnover in real terms, in 2012 compared to the previous year, respectively with -3.3%.

At SMEs level, the average number of employees per enterprise is 5.8 in Romania, higher than the European average which if 4.2 employees/enterprise. The average number of employees/enterprise is 2.1 in the case of microenterprises, 19.6 in small enterprises and 101.7 in medium sized enterprises. From the activity sector's perspective, the highest number of employees per enterprise is engaged in manufacturing (14.2) and the lowest in trade (4.2).

The average labor productivity in SMEs represents 72% of the labor productivity in large enterprises. The productivity values registered in SMEs in Romania are in the range of specific values for SMEs in EU 27, respectively between 32000 Euros for microenterprises and 59000 Euros for large enterprises.

The analysis of the three indicators – number of enterprises, number of employees and turnover in SMEs – reveals several main aspects that characterize SMEs in Romania:

- there is a directly proportional relation between these three indicators, in the evolution of each size class;
- microenterprises were the most vulnerable in conditions of instability and difficulty brought by the economic crisis, being the only ones with loss in turnover;
- the small enterprises class had the best evolution in all analyzed indicators.

The general radiography of enterprises in Romania, six years after integration in the European Union and under the impact of the global crisis, reveals a series of inabilities and vulnerabilities of small and medium sized enterprises that appear insufficiently prepared to compete successfully in the domestic market of the European Union.

SMEs limitations related both to the general and the particular characteristics of each size class or activity sector were aggravated during the generalized crisis, Romanian enterprises being forced to evolve in an unfriendly economic environment, characterized by structural imbalances, instability of the tax system and a banking system reluctant to crediting small enterprises. The magnitude of the crisis and the extension of its effects over several years translate into a reduction of the number of SMEs in Romania and related job losses starting with 2009.

The negative macroeconomic context was reflected in the performance of SMEs economically active, as well as in the demographic trends in business, registered during the 2008-2012 period. The balance sheet data at the beginning of 2012, although they indicated a slight positive return of the main indicators, shows us that SMEs in Romania are in a turning point, with a fragile stability that manifests differently in size classes and economic activity sectors or from one region to another.

The assessment of the economic potential of the commercial enterprise with the purpose of formulating some proposals for strengthening its viability in terms of the financial and economic crisis have led to some *recommendations*.

Given the persistence of the global economic crisis, are required more than ever strategic governmental measures and coordinated actions to support the economically active enterprises in the increasingly fierce competition in the single market of the European Union, and to stimulate businesses and the creation of new businesses. For labor productivity growth is necessary that the state solves the following problems: stimulate the creation of perfect markets; exclude monopoly from the market; ensure economic competition through institutional acts; implement methods that will ensure the comprehensive development of all Romanian counties; update the professional training systems of labor resources; motivate work quality, performance studies; ensure social security of distressed labor resources; determine the priority sectors that are successful generators in increasing labor productivity; elaborate regional development programs for all counties, cities, rural communities; develop mechanisms to drive private capital in educational processes; develop productive infrastructure; develop the national electronic database in the profile of counties, municipalities, cities, villages.

Following the model of the countries with the highest economic performance, it is recommended that the decision maker from the governmental sector, academic and business environment, nationally as well as regionally, to collaborate together to create a comprehensive support model for spin-off and high-tech companies in production and services based of advanced technology and research.

The economic potential of Romanian enterprises can be amplified if they will allocate substantial budgets for programs and dedicated funding schemes, that provide direct financial support to small and medium sized enterprises oriented towards innovation, creating prerequisites for the establishment, in Romania, of a critical business mass with growth potential in areas of high technologies or based on transfer of research results.

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