

THE SPECIFIC OF SMES INNOVATING ACTIVITIES IN REGIONAL CONTEXT. STUDY CASE ROMANIAN'S DEVELOPMENT REGIONS

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Globalization and competitiveness have affected how businesses engage in innovation, especially for small and medium enterprises (SMEs). According to the European Commission (2013), 99% of businesses in Europe are SMEs. SMEs worldwide are regarded as the lifeblood of economies. The importance of this research is justified by the predominance of SMEs that are most enterprises in Romania (90%). SMEs help create jobs and increase economic competitiveness, especially in times of crisis. This study aims at identifying the specificity of innovational activity in SMEs and the main barriers to carrying out these activities. It was developed also a case study for Romania's Development Region 2 South East (SE).

Keywords: SMEs, innovation, innovational activities, development region, investments in innovation

JEL Code: O32

1. Introduction

Small and medium enterprises (SMEs) represent a large portion of all businesses in the economy of a country. Concern for studying innovation activities of SMEs is crucial for a better understanding of the conditions that affect positively or negatively the business and therefore the global market and the competitiveness of countries.

2. General structure of SMEs in the developing regions of Romania

Our research has primarily taken in analyzing the structure and organization of SMEs in Romania, both from the point of view of their lifetime, their distribution in the developing regions of Romania, organization size, legal form and operating branches activity they work.

Given the age of SMEs (Fig. 1), most of the companies that were the subject of research have 5-10 years (34.28%), followed by enterprises older than 15 years and those established in the last 5 years (24.86%), last standing businesses 10-15 years old (16%).

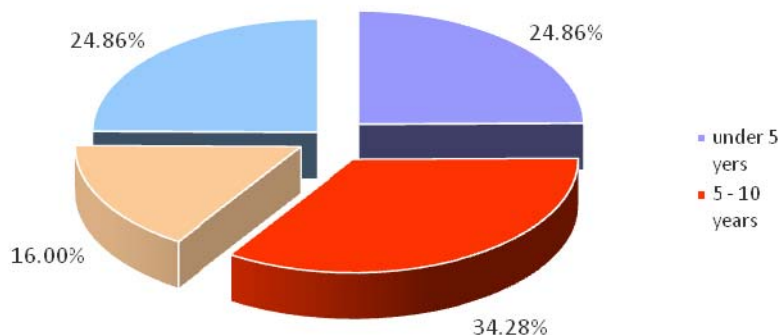


Fig. 1 Structure of the sample depending on the age of the firms

Source: White Paper on SME's Bucharest 2013

The distribution of small and medium-sized companies on **development regions** of Romania is: Bucharest-Ilfov - 28.11%, South - 20.84%, South West - 19.31%, North West - 11.54%, the region

Center - 10.07%, the South East - 6.18%, the North East - 3.31% and the West Region - 0.64%. See Fig. 2.

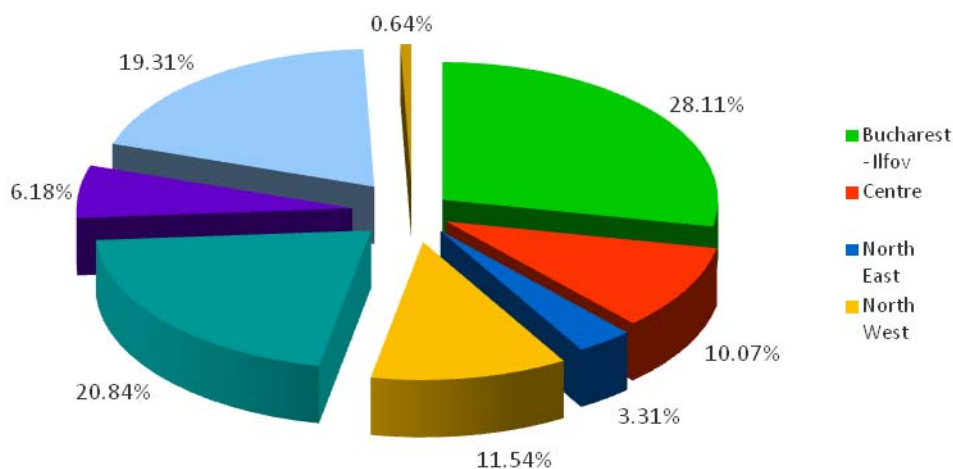


Fig. 2. Structure of the sample on development regions

Source: White Paper on SME's Bucharest 2013

Considering the size of the organizations, as shown in Fig. 3, micro firms is 79.09% of the SMEs surveyed, small businesses account for 16.51% and midsize companies have a rate of 4.40%.

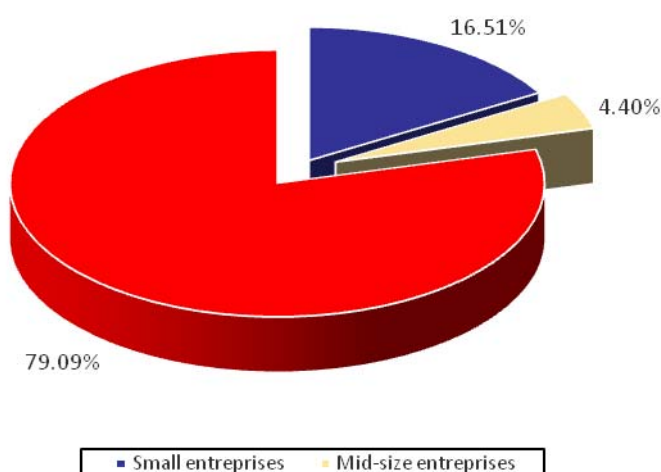


Fig. 3. Structure of the sample depending on the size of the organizations

Source: White Paper on SME's Bucharest 2013

As regards the legal form of SMEs, 88.46% of companies are limited liability companies, 9.50% of businesses have different legal forms, and 2.04% of companies are joint stock companies. See Fig. 4.

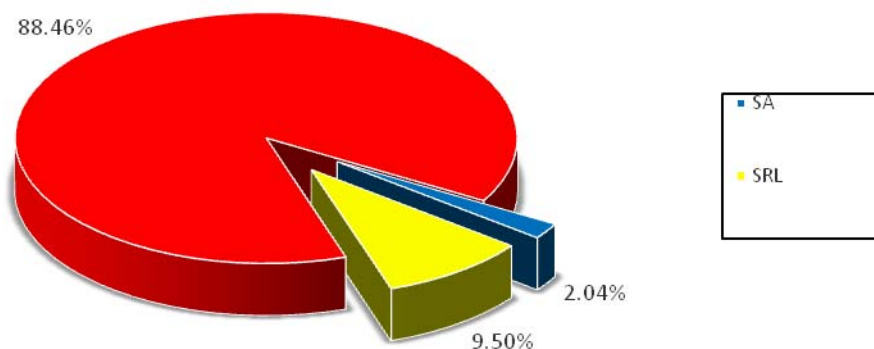


Fig. 4. Structure of the sample depending on the legal form of SMEs

Source: White Paper on SMEs Bucharest 2013

If enterprises are classified by industry branches, SMEs sample is as follows: 36.27% of the companies belonging to the services sector, 34.35% of organizations active in trade, 20.08% are industrial companies, 4.27% of economic entities operating in construction, 2.74% operates in transports and 2.29% of the entities are from tourism. Many businesses cover several fields, because it focuses on identifying and capitalizing on business opportunities, which is a basic feature of SMEs both in Romania and other countries. Note that for each firm was considered CAEN code of main activity area. Graphical representation of the distribution of the companies by industry branch is done in Fig. 5.

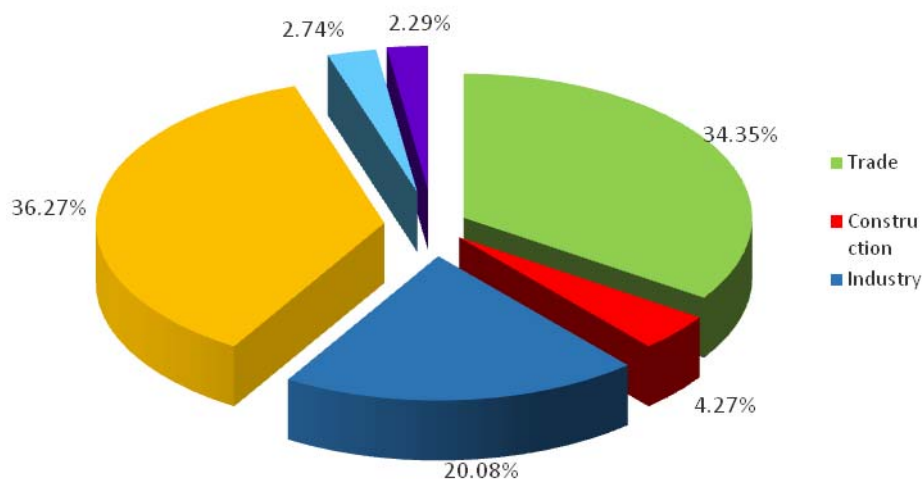


Fig. 5. Structure of the sample by industry branch

Source: White Paper on SME's Bucharest 2013

1. Innovation activities and their specificity to SMEs

In order to form an overall picture on SMEs in Romania, knowing **the nature of innovation activities** carried out inside these enterprises has a special significance. The research revealed that innovation efforts in SMEs focused mainly on **new products (40.22%)**, **new technologies (22.94%)**, **new managerial and marketing approaches (22.37%)**, **upgrading computer system (4.97%)**, and **human resources training (4.97%)**. Also we point out that in one of four companies is recorded **absence innovative approaches (26.39%)**. See Figure 6. It should also be noted that there is a

positive trend over the previous year - decrease by 11.26 pp the share of SMEs indicating no concerns innovation (a reduction of approx. 43% compared to 2012). From a structural perspective, we find the following significant changes: (1) increasing the share options from new technologies (+6.49 pp), new products (+2.99 pp) and new managerial and marketing approaches (+2.86 pp) and (2) reduced propensity to invest in upgrading the computer system (-2.62 pp).

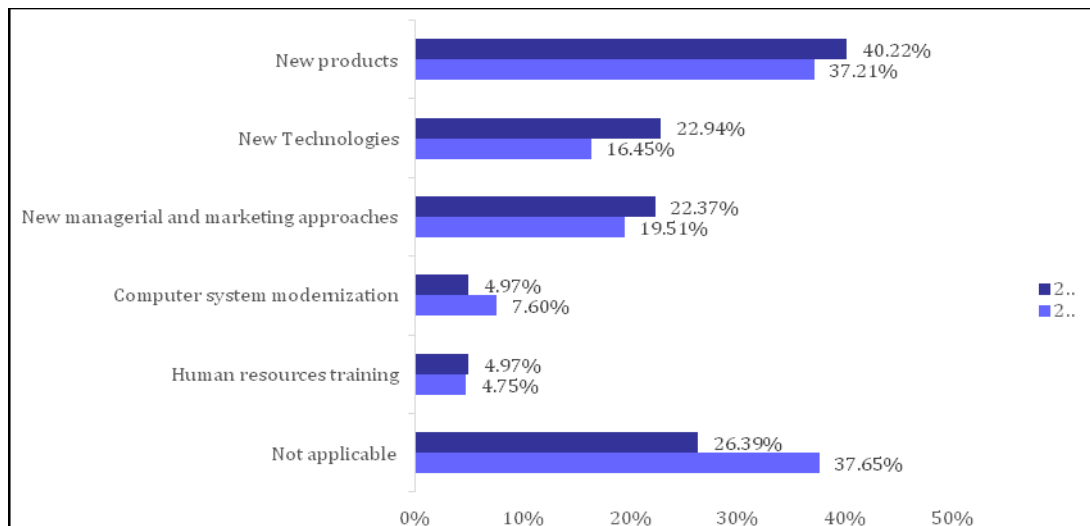


Fig. 6. Nature of innovation activities in SMEs

Source: White Paper on SMEs Bucharest 2013

Analyzing the innovation efforts of SMEs according to their age, it shows the following:

- ◆ there is a positive correlation between the ages of SMEs and the frequency with which they indicate the computer system modernization: a rate of 6.67% of the companies with age over 15 years have indicated this option – 1.73 times higher (+2.82 pp) compared to the level of newly established companies;
- ◆ the component of start-ups requires higher rates of SMEs indicating focus innovation focus efforts on human resources training (5.64%) and low percentages of those mentioning new technologies (19.23%);
- ◆ 5-10 years companies are characterized by high frequencies among businesses targeting new marketing and managerial approaches (26.21%) and lower in the case of entities mentioning new products (36.99%);
- ◆ 10-15 years businesses recorded higher percentage of entities indicating new products (42.23%) and technologies (31.08%);
- ◆ businesses for over 15 years recorded lower percentages of organizations indicating new managerial and marketing approaches us (16.41%) and training of human resources (4.62%);
- ◆ companies that have shown the absence of innovative approaches are found more frequently among the entities of 5-10 years (28.44%) and less frequently among those aged 10-15 years (22.71%). Further information is contained in Table 1.

Table 1. Differentiation of the innovation object depending on the age of SME's

No	Nature of innovation activities	Age of businesses			
		Under 5 years	5 – 10 years	10 – 15 years	Over 15 years
1.	New products	41,54%	36,99%	42,23%	42,05%
2.	New technologies	19,23%	20,45%	31,08%	24,87%
3.	New managerial and marketing approaches	23,85%	26,21%	21,12%	16,41%
4.	Computer system modernization	3,85%	4,28%	5,58%	6,67%
5.	Human resources training	5,64%	4,65%	5,18%	4,62%
6.	Not applicable	27,18%	28,44%	22,71%	25,13%

Source: author's processing from White Paper on SMEs Bucharest 2013

Considering the territorial affiliation of small and medium enterprises we note the following main elements:

- ◆ companies mentioning focus on new technologies are found more frequently among entities in South West (35.97%) and less frequently among those in North West (8.84%);
- ◆ SMEs indicating focusing innovation efforts on achieving new products have higher rates for organizations in the South (53.82%) and lower among those in the North West (16.02%);
- ◆ organizations pointed out new managerial and marketing approaches record higher percentages among SMEs located in the North West (44.20%) and lower for those in the Southeast (7.22%);
- ◆ businesses that highlight the innovative potential of the computer system modernization recorded higher frequencies of entities in North East (9.62%) and much lower in terms of firms in the Central region (1.90%);
- ◆ SMEs mentioned human resources training have higher rates for organizations in the North West (8.84%) and lowest among those in the Center (2.53%);
- ◆ companies that have shown the absence of innovative approaches are found more frequently among entities in South West (31.35%) and less frequently among the South East (21.65%).

Further information is contained in Table 2.

Table 2. Differentiation of the innovation object depending on territorial affiliation of SMEs

No.	Nature of innovation activities	SMEs ordered by development regions						
		North East	South East	South	South West	North West	Center	Bucharest - Ilfov
1.	New Products	38,46%	45,36%	53,82%	41,91%	16,02%	31,65%	41,72%
2.	New Technologies	19,23%	27,84%	25,08%	35,97%	8,84%	17,09%	19,95%
3.	New managerial and marketing approaches	11,54%	7,22%	11,62%	20,13%	44,20%	30,38%	24,94%
4.	Computer system modernization	9,62%	8,25%	3,06%	5,28%	6,63%	1,90%	4,99%
5.	Human resources training	7,69%	5,15%	4,59%	7,26%	8,84%	2,53%	2,72%
6.	Not applicable	26,92%	21,65%	22,94%	31,35%	28,18%	29,11%	24,04%

Source: author's processing from White Paper on SMEs Bucharest 2013

Given the impact of firms size on the innovative efforts (Table 3), we found significant the following:

- ◆ there is a positive correlation between the size of SMEs and the frequency with which they show new products, new technologies, modernization of information system and training of human resources;
- ◆ there is a negative relationship between the size of companies and their propensity to direct their innovation efforts towards new managerial and marketing approaches, registering a 13.04% frequency for medium organizations - 1.60 times lower (- 7.81 pp) compared to the level due to small entities and 1.78 times lower (-10.17 pp) compared to the micro-entreprises;
- ◆ the percentage of firms that indicated the absence of innovative approaches is negatively correlated with the size of SMEs: 28.77% of the micro does not undertake innovative actions - a rate of 1.49 times higher (+ 9.46p.p.) compared to the level due to small entities and 2.84 times higher (+18.63 p.p.) compared to the medium organizations.

Table 3. Differentiation of the innovation object depending on the performances of SMEs

No	Nature of innovation activities	Company's performance in 2012 compared to 2013				
		Much better	Better	Identical	Lower	Much lower
1.	New products	58,82%	40,00%	38,78%	45,21%	25,00%
2.	New technologies	58,82%	35,56%	21,34%	15,34%	16,25%

No	Nature of innovation activities	Company's performance in 2012 compared to 2013				
		Much better	Better	Identical	Lower	Much lower
3.	New managerial and marketing approaches	11,76%	22,22%	24,63%	20,00%	15,00%
4.	Computer system modernization	2,94%	6,30%	4,39%	4,11%	11,25%
5.	Human resources training	5,88%	11,48%	3,78%	2,19%	7,50%
6.	Not applicable	5,88%	17,41%	27,32%	29,59%	41,25%

Source: author's processing from White Paper on SME's Bucharest 2013

4. Main obstacles to innovation activity

Regarding the main barriers to conduct the research, development and innovation activities, SMEs indicated the following: the high cost of research-development and innovation (48.63%), insufficient equity (40.09%), uncertainty related to the demand for innovative products (35.37%), lack of public schemes for financing/co-financing of research and development and/or rigidity of the eligibility criteria (28.11%), difficult access to relevant information on markets (marketing research, statistics, etc.) (28.04%), difficult access to relevant information on new technologies (19.69%), the difficulty of finding partners for cooperation on research and development (14.53%), lack of medium- and long-term forecasts on the evolution of sectors (11.47%) and the lack of adequate human resources (11.03%).

5. Conclusions

Encourage and support the development of innovative capacity of SMEs requires actions in the following directions:

- Making of one/several national database of information and knowledge which they will find all results of scientific research contracts financed from public sources (state budget and / European funds) and offering it/them to the SMEs;
- ◆ Achieving a strategy of evaluation and exploitation of intellectual property assets held by public authorities in order to direct its use by SMEs;
- ◆ Creating and developing a network of cooperation between SMEs, universities, research institutes, continue training organizations ;
- ◆ Including in the major axes and areas of intervention of 2014-2020 Operational Programmes system of new elements to ensure coverage of role, specificity and potential of SMEs;
- ◆ Development of new forms of labor organization forms specific for "smart economy" (clusters, competitiveness poles, industrial parks, business incubators, industrial platforms etc.);
- ◆ support for the adoption of European and international standards for SMEs (technological, product, organizational etc.).

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