

## **RESEARCH CONCERNING THE POTENTIAL OFFERED BY THE COLLABORATIVE WORKING ENVIRONMENT EXPLORING FOR THE SMEs OPTIMIZATION AND BUSINESS SUPPORT**

**Irina Rădulescu<sup>1</sup>, Ioan Pițurescu<sup>2</sup>, Ana Maria Onu<sup>3</sup>, Constantin Rotaru<sup>4</sup>,  
Cătălin Dobrea<sup>5</sup>, Alexandru Valentin Rădulescu<sup>6</sup>**

<sup>1</sup> S.C. ICTCM S.A. Bucharest, [irena\\_sandu@yahoo.com](mailto:irena_sandu@yahoo.com),

<sup>2</sup> S.C. ICTCM S.A. Bucharest, [pituresc@ictcm.ro](mailto:pituresc@ictcm.ro),

<sup>3</sup> INIMM Bucharest, [ana@inimm.ro](mailto:ana@inimm.ro),

<sup>4</sup> INIMM Bucharest, [rotaru.constantin@inimm.ro](mailto:rotaru.constantin@inimm.ro),

<sup>5</sup> ASE Bucharest, [razvan.dobrea@man.ase.ro](mailto:razvan.dobrea@man.ase.ro),

<sup>6</sup> University POLITEHNICA Bucharest, [varrav2000@yahoo.com](mailto:varrav2000@yahoo.com)

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**Abstract:** Micro, small and medium enterprises have an important role in the economy, because they are a source of entrepreneurial skills and an opportunity to create new jobs. The SMEs study and classification give relevant information on: better access to new technologies, better cooperation for innovation, public procurement, access to structural funds, access to markets, legislation related to the field. This paper shows both the facilities and the difficulties faced by SMEs after the Romanian access to the European Union and it shows the SMEs problems in the current economic climate.

### **1. INTRODUCTION**

SMEs represents the most numerous and important sample of firms and companies, with their characteristics and functions, at a reduced scale. Their multitude gives them power and importance, at macro-economic level.

Micro, small and medium enterprises have an important role in the economy, their share in the GDP achievement is over 74%. Because they work in all activity areas, they are an entrepreneurial skills source and a new jobs creation source, [1].

Some of their advantages may include:

- SMEs generate the largest GDP share; in 2007 their percent was 67.5%;
- They provide jobs to over 60% of the employed population;
- SMEs constantly generate new jobs, so they have the highest vitality, in this direction;
- they generate the most powerful application source for the economy innovation;
- SMEs produce the greatest products variety, at the lowest possible cost;
- they represent the most flexible production company level, correlated with market requirements.

Therefore, the SMEs support is a priority for the European Commission, for economic growth, job development, social cohesion and economic performance.

Although Romanian SMEs have 90% share of all officially registered companies and they provide 70% of collected taxes count to state, their condition is critical, [2].

For carrying out different tests and situations, both internally and internationally, it was necessary to adopt a common expression language, an ontological one, which is represented by a SMEs classification on various criteria, mutually agreed by European Union countries.

This classification provides the basis for preparing a wide range of statistics (production, inputs, capital formation and financial transactions) of these units. It was adopted a more detailed SMEs classification, by activity field, using the 4-digit CAEN Code (on sub domain, in general areas). The study adopted another classification, according to SME status: autonomous administration, stock companies, unlimited companies, other

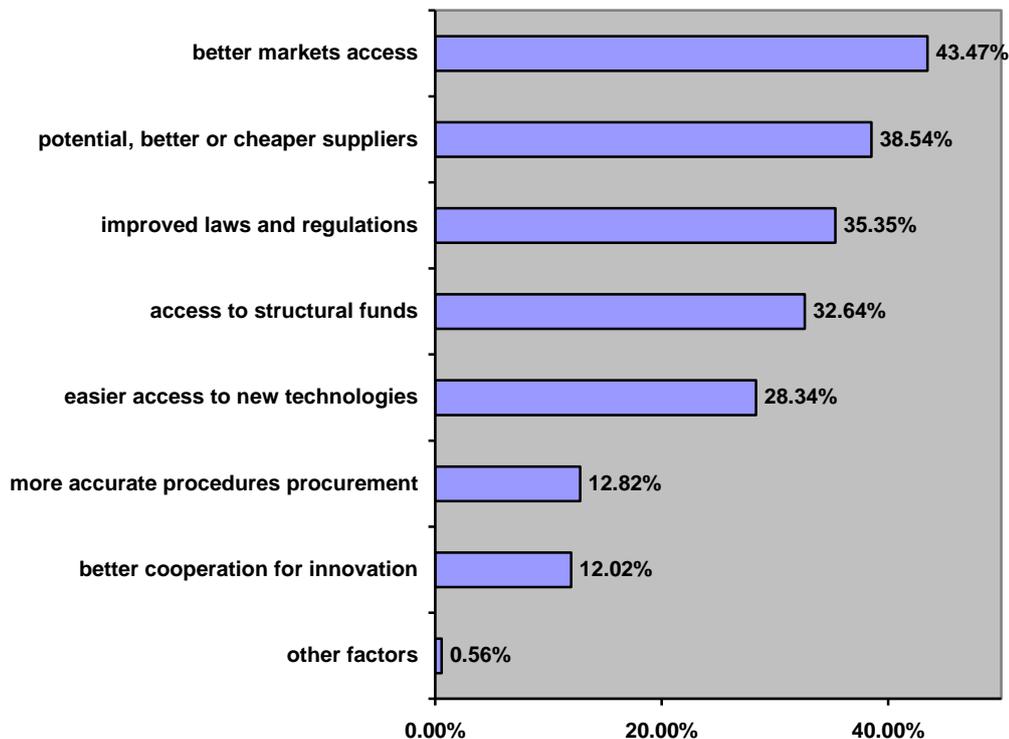
forms of organization, co-operative societies. The goal is to classify information to give an orientation for traders, on various categories of interest, [3].

## 2. THE POSITIVE IMPACT OF ROMANIA'S EUROPEAN UNION ACCESSION ON SMES BUSINESS

There are inherent difficulties in European standards alignment process, but European Union Romania's adhesion will be a positive influence, in the coming years, concerning a big number of SMEs activities.

Survey results reveal that the European integration generated factors, considering the largest positive impact on the Romanian SMEs sector, are: better markets access (43.47% of companies), the existence of potential, better or cheaper suppliers (38.54%), improved laws and regulations (35.35%), access to structural funds (32.64%), easier access to new technologies (28.34%), more accurate procedures procurement (12.82%) and better cooperation for innovation (12.02%), [1].

Figure 1 presents the structure of the positive effects of EU adhesion on Romanian SMEs.



**Figure 1. The structure of the positive effects of EU adhesion on Romanian SMEs**

There are some observations concerning the firms classification by region of development, higher rates than average are recorded by:

- the SMEs of Bucharest, where it is a better access to markets (57.87%);
- the companies from the South East region, where are better and cheaper suppliers (48.13%);
- the companies from the South region, concerning the improved legislation (42.03%);
- the North West region enterprises, considering the access to structural funds (40%);

- the operators in the South West region, considering a better access to new technologies (43.16%);
- the companies and firms in North Center – East region, considering the more accurate public procurement procedures (20.29%) and a better cooperation for innovation (17.29%), [1].

Table 1 presents differentiation of the European Union accession positive effects on Romanian SMEs, according to the located region.

**Table 1. Differentiation of the European Union accession positive effects on Romanian SMEs, according to the located region**

No.	The positive impact of Romania's accession to the European Union :	SMEs grouped by region of development :							
		North – East region	South East region	South region	South West region	West region	North – West region	Center region	Bucharest
1	Better access to markets	29.70%	34.38%	38.41%	40.00%	48.44%	45.71%	43.48%	57.87%
2	Improved legislation and regulations	37.59%	28.13%	42.03%	36.84%	35.94%	34.29%	31.88%	34.77%
3	Better and cheaper suppliers	35.71%	48.13%	39.13%	42.11%	26.56%	47.14%	30.43%	37.31%
4	Better cooperation for innovation	17.29%	3.13%	6.52%	15.79%	6.25%	15.71%	7.25%	14.21%
5	Better access to new technologies	30.83%	37.50%	26.81%	43.16%	18.75%	34.29%	24.64%	21.07%
6	More accurate public procurement procedures	14.66%	12.50%	17.39%	15.79%	10.94%	15.71%	20.29%	7.87%
7	Access to structural funds	31.95%	30.63%	30.43%	28.42%	29.69%	40.00%	33.33%	34.77%

SMEs study concerning size classes reveals a proportional increase with SMEs dimension, concerning the criteria: the share of firms which indicate a better access to new technologies, a better cooperation for innovation, more accurate public procurement procedures and access to structural funds. Regarding the evidence of a better access to markets and improved legislation, there are mentioned with a higher percentage the micro enterprises, the small firms show a smaller proportion, [2].

Taking account of the positive influence factors depending on the firms' activity, the highest percentage is recorded at:

- transport sector organizations, considering a better access to markets (48.93%) and the existence of better and cheaper suppliers (50.27%);
- SMEs in the tourism sector, considering the improved legislation and regulations (47.37%);
- structural funds access (44.74%) and a better cooperation for innovation (23.68%);
- companies from construction domain, considering a better access to new technologies (38.71%) and more accurate public procurement procedures (35.48%).

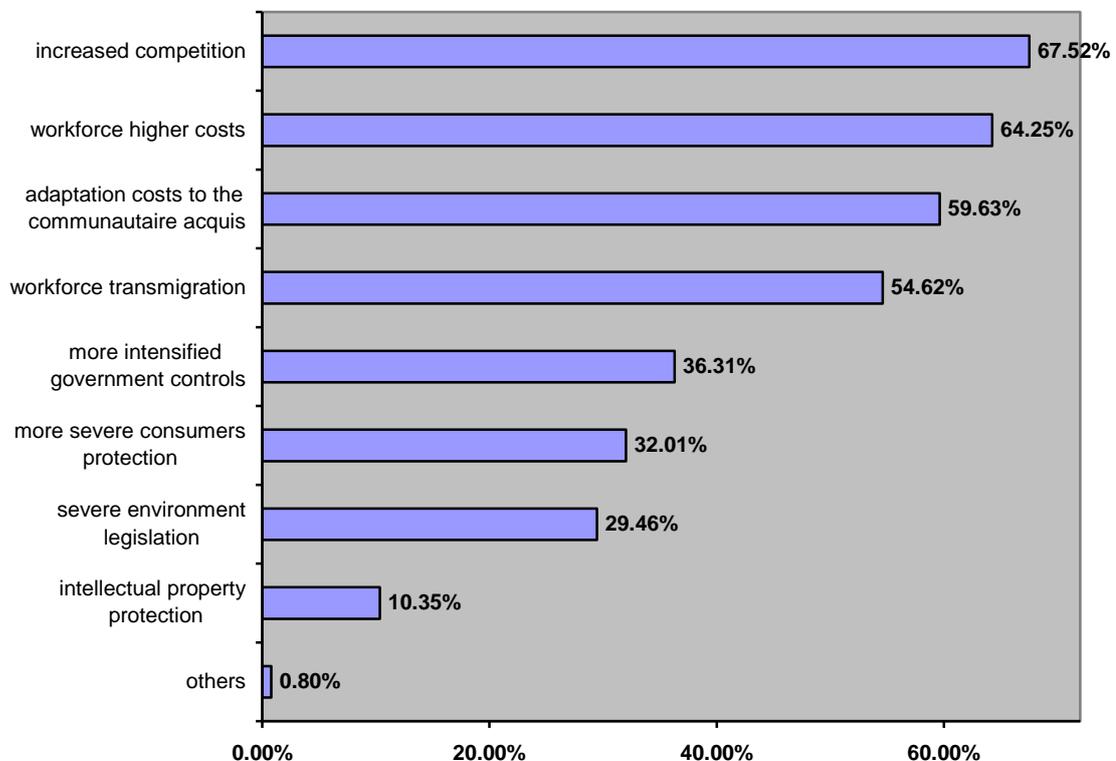
### 3. DIFFICULTIES FACED BY ROMANIAN SMEs AFTER EUROPEAN UNION ACCESSION

The level of information about the regulations introduced with Romania's European Union accession is high (full information) in 15.80% of SMEs and medium (partial information) in 76.49% of companies.

Economic units with a high degree of information are more common in SMEs over 10-15 years old (18.45%), in the South West region companies (21.88%), in medium-size businesses (20.56 %), in Action Societies (22.45%) and firms from the services sector (20.43%).

Better access to markets (indicated in 43.47% SMEs), the existence of potential better and cheaper suppliers (38.54%), the improved legislation (35.35%), the access to structural funds (32.64%) and new technologies (28.34%) are the main positive effects of Romania's EU accession on SMEs.

Romania's EU accession has led to difficulties to small and medium entreprizes, most frequents are: the increased competition (in 67.52% companies), the labor costs (64.25%), the adaptation costs to the communautaire acquis (59.63%), the labor migration (54.62%), more intensified government controls (36.31%), more stringent consumer protection (32.01%), more severe environmental legislation (29.46%) more severe intellectual property protection (10.35%). Most SMEs are faced with increased competition due to the entry of EU competitors on Romanian markets; there are, also, greater human resources expenses, mainly generate by the qualified and experienced workforce reduction and a necessity to maintain existing staff, [1], (Figure 2).



**Figure 2. The frequency of the major difficulties faced by SMEs with Romania's EU accession**

The companies market competition intensified the search, finding and developing of solutions to overcome the competitors. Information has an essential role. Market analysis

and offered opportunities are made based on manager information, on the processing and interpretation way, [3].

It became a gradually conscious and consistent effort to adapt to the new step of market requirements, leading to knowledge-based economy and its proper management. It is important for traders, who produce products or services, to succeed in a competitive market using the anticipation, identification and rapid adoption of ideas.

The optimism and creativity are stimulated by the success perspective; it is a must the concern for efficiency and profit maximization, in order to lead to a better satisfy of the requirements of consumer needs.

Constructive - technological innovation, the changing speed of device production, function the new orientation of scientific and technical progress, are decisive factors in economic progress.

#### **4. GENERAL DESCRIPTION OF COLLABORATIVE SYSTEMS. DEVELOPING AN ARCHITECTURE FOR A COLLABORATIVE WORK ENVIRONMENT**

Collaborative systems represent an interdisciplinary field located at the intersection of economics, computer science, management and sociology. Using IT technology developed collaborative opportunities for the electronic products and services market. Collaboration implies organizations having a common mission and joint to form a new structure. Firms and companies work together to achieve a common goal and have a great need to interact with one another, sharing information, changing requests, etc.

Collaborative systems assume the existence of components and interactions between them (exchange of messages and activities). They are based on the use of collaborative web applications. The main advantage is their very special accessibility, especially for SMEs, working groups or independent persons. Approximately 80% of the functionalities offered by traditional groupware applications are addressed in a generic way, allowing users to keep their autonomy to a certain owner or another system, [4].

Organizations need to solve complex problems by dispersed working groups, distributed business units and interrelated retail chains. To meet this requirement, it is manifested an orientation on the technologies and processes that promote collaboration. At the heart of collaborative experience is human interaction.

It was developed a Service-Oriented Architecture (SOA) as an IT architecture, in which business component has a central role and it is integrated as linked activities or services. This type is a way to improve the organization capacity to adapt more quickly to changing business environment, [5].

Service Oriented Architecture enables organizations to reply quickly and effectively, with low cost, to the business requirements; these ones are actually the main demands on processing systems or on distribution channels, they are continuously changing and they become increasingly more complex and difficult to solve.

IT and SMEs policy makers must decide what business functions and fundamental and base processes will be provided, improved or replaced by the Service-Oriented Architecture. Often, it became a project that specifies all the details on the technical, economic, financial, aspects and this project is presented to business stakeholders. At this stage, the SME establish the project team, the objectives, the deadlines and the results to be obtained.

The objective is to create a map that combines the business and IT efforts; this one will be approved by both decision makers and IT. Best practices for starting a Service Oriented Architecture include:

- creating an operational map, involving both decision makers and IT;
- effort adopting / guidance by the enterprise architecture respondent team;
- company key personnel inclusion into project team;
- clearly defining business objectives, plans and financial information;
- ensure a balanced and non-subjective opinions from a systems integrator, to identify benefits;
- use all available resources, best practices in the area;
- setting feasible / reasonable project limits, generally between 8 and 24 weeks.

Plan implementation has two components:

- *projects*: teams perform projects, in the order described on the map and they build infrastructure needed to provide new business development capabilities;
- *Leadership and organization*: teams implement parallel measures to enable SOA effective project implementation.

Teams should review the Service Oriented Architecture implementation plan, at regular intervals and they should modify the map, whenever it has been a major change, [6]. It is important to explore the potential offered by the Collaborative Working Environment for the SMEs optimization and business support. This concept is a working methodology that creates a collaborative environment of components teams, in order to achieve a goal. The collaborative environment accomplishes a communication system that allows teams to identify information system components, to simplify them, to link them, to automate their processing and to control the information access to obtaining the goal.

## 5. CONCLUSIONS

Authors believe that changes made by the Collaborative Working Environment will have impact not only in attitudes and working methods, but also in the information system, especially in the following directions:

- the collection, analysis and interpretation of data, information and knowledge concerning decision-making environment,
- the recognition of economic criteria and decision alternative;
- the economic and mathematical models, methods and techniques election, which are specific to the analyzed decision situation;
- the variant solutions establishment and the adoption and implementation of final solution, in a participatory manner.

Collaborative Working Environment will lead to the defining and achieving of an Integrated Platform to support SMEs, which will have the primary function - the SME operators' interest vectors coupling, on various information categories, related to the technological and organizational specific, with Web information. The Integrated Platform will be itself, the SMEs Collaborative Working Environment.

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