

## SME Management in Contemporary Knowledge Society, in Romania

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Romanian emerging economy is strongly influenced by important factors as: the transition to the free-market economy, the EU accession process and the developing of global knowledge society.

In this context, the focus of the paper is on SMES (Small and Medium-sized Enterprises). The development of SMES, the ideal actors for the free-market competition, should be one of the priorities – hence, the role of the government.

On the other hand, the contemporary knowledge society, more and more global, assumes – as far as business management is concerned – professional managers and professional management training. Hence, the role of universities and management training organisations.

There is a cause-effect chain: in order to access the EU and to comply with the *acquis communautaire*, Romanian economy must satisfy quality standards and Romanian SMES, the most dynamic economic sector, should perform alike and have performant management.

The paper presents some results of the research conducted by the author on specific characteristics of SME managers and management.

### FROM KNOWLEDGE SOCIETY TO KNOWLEDGE ENTERPRISE

'Knowledge society' is more than a fashion and not only 'information society' as one might think. It is a higher conceptual level, as 'knowledge' is more comprehensive than 'information'. As Fleming said (1996):

1. A simple data collection is not *information*.
2. A simple information collection is not *knowledge*.
3. A simple knowledge collection is not *wisdom*.
4. A simple wisdom collection is not *truth*.

Market value	Intellectual capital	Structural capital	Organizational intellectual capital	Innovation and development intellectual capital
				Process intellectual capital
		Market intellectual capital		
		Human intellectual capital		
	Financial capital			

Figure 1: The structure of the market value

We are far from pretending to clear up all misunderstandings and claim the possession of supreme truth, but we are trying to understand the difference between *data* and *information*. It is important to agree that information means data plus understanding the existing relations between different pieces of data. Similarly, *knowledge* means *information* plus the relations between pieces of information, which is a formal system (Dumitrache et al. 2002).

Information (information society) is, more or less, quantitative accumulation, the result of technology progress,<sup>1</sup> while knowledge (knowledge society) is all that *plus* qualitative understanding of the whole.

The same philosophy applies to ‘knowledge economy’ and ‘knowledge enterprise’. New related notions or concepts are permanently registered: it is not uncommon to talk about *knowledge management* or *knowledge marketing*.

The knowledge enterprise (as well as the whole knowledge society) relies on its most valuable asset, the *intellectual capital*. The market value is financial capital *plus* the intellectual capital (Edvinsson 1997). Rather difficult to assess (and, therefore, to protect) – because of its intangibility – the intellectual capital is structured according to Skandia Model<sup>2</sup> as presented in Figure 1.

E-BUSINESS POLICIES FOR SMES IN THE EU

The united Europe is fully aware of the globalisation process, the importance of knowledge in society and the new knowledge-driven economy. The EU is strongly committed to achieving the strategic goal set in Lis-

bon, March 2000: *By 2010, to become the most competitive and dynamic knowledge-driven economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion* (Commission of the European Communities 2000).

In terms of information society, the European Commission designed a clear strategy (Commission of the European Communities 2002). According to this strategy ('eEurope 2005: An information society for all'), by 2005, Europe should have:

- modern online public services (e-government, e-learning services, e-health services);
- a dynamic e-business environment; and, as an enabler for these;
- widespread availability of broadband access at competitive prices;
- a secure information infrastructure.

*A key component of this strategy is to develop entrepreneurship and SME sector.* The Multiannual Programme for Enterprise and Entrepreneurship 2001–2005 provides the framework of actions to support the objectives. This Programme continues the 3rd Multiannual Programme for SMEs in the EU (1997–2000) which had six main headings:

- simplify and improve the administrative and regulatory business environment;
- improve the financial environment for enterprises;
- help SMEs to Europeanise and internationalise their strategies, in particular through better information and co-operation services;
- enhance SME competitiveness and improve access to research, innovation and training;
- promote entrepreneurship and support target groups;
- improve SME policy instruments.

Compared to the 3rd Multiannual Programme for SMEs, the Multiannual Programme for SMEs in the EU has a better focus on five main objectives and its budget is significant (see Table 1):

1. Promote entrepreneurship as a valuable and productive life skill, based on customer orientation and a stronger culture of service.
2. Encourage a regulatory and business environment that takes account of sustainable development, and in which research, innovation and entrepreneurship can flourish.
3. Improve the financial environment for SMEs.

Table 1: The cost breakdown of the Multiannual Programme for Enterprise and Entrepreneurship 2001–2005 (in 1000 euros)

No.	Programme objective	Year					Total
		2001	2002	2003	2004	2005	
1.	Promote entrepreneurship	2,700	2,700	2,700	2,700	2,700	13,500
2.	Encourage regulatory and business environment	1,500	1,500	1,500	1,500	1,500	7,500
3.	Improve financial environment for SMEs	26,000	17,200	16,300	16,650	16,300	92,450
4.	Enhance the competitiveness of SMEs	2,900	2,900	2,900	2,900	2,900	14,500
5.	Ensure business support networks and services	19,500	18,500	18,700	18,500	18,700	93,900
6.	Other	2,400	0	2,600	400	2,500	7,900
	Total	55,000	42,800	44,700	42,650	44,600	229,750

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4. Enhance the competitiveness of SMEs in the knowledge-based economy.
5. Ensure that business support networks and services to enterprises are provided and co-ordinated.

The activities developed by the European Commission under the Multiannual Programme are used to:

- Support policy development through identification, exchange and implementation of good practice.
- Ensure that the needs of SMEs are fully taken into account.
- Develop statistical and technical understanding of the needs of businesses, especially SMEs, in support of policy.
- Distribute and diffuse studies and information in support of the above.
- Ensure the information support for SMEs.

The World Bank and other important international financial institutions offer technical and financial assistance for the knowledge economy purposes, mostly to developing countries and/or the EU accession countries (World Bank 2002).

## SMES IN ROMANIA

There are over twenty million SMES in the EU. And only about half a million in Romania! This means that the number of Romanian SMES should double in the future in order to balance the EU average. As for the size, the percentage of SMES is considerably higher (96.9%). As for the legal form, most of SMES are limited liability firms (77.2%).

According to previous research performed (Scarlat 2001; 2003), we may say that:

- the number of SMES in Romania – even though not very high – has been growing permanently;
- SME rate of success is higher than the average figure;
- as for the number, SMES represent the majority of companies in Romania.

The SMES are vital for a healthy market economy, especially for the economies in transition. SMES are economically, socially and politically important for several reasons:

- highly motivated, flexible and adaptable market economy motor factors;
- jobs generators;
- important tax-payers;
- base for the middle-class (and voters!);
- base for large companies.

SMES are perfect actors and most dynamic factors of the market economy. Consequently, any government that aims at the economic growth cannot avoid the SME issue and must take concrete actions to support SME development.

Any economic system can be described by a bi-dimensional matrix model (Scarlat 1994; 2001; 2003), characterized by types of *ownership and company management* – as Figure 2 shows. Market economy has advantages mostly because private ownership means *motivation* and decentralized company management generates *flexibility*.

Validity of the matrix model's assumptions is proved by the fact that all important types of economic systems are described in detail. While the association 'private ownership' and 'decentralised management' is typical to the democratic countries' 'market economy' (quarter 1), the association 'state ownership' and 'centralised management'

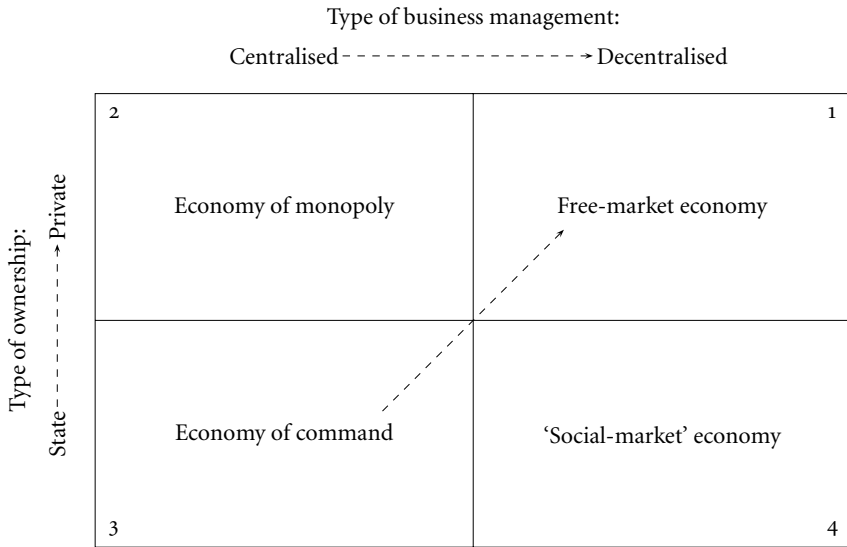


Figure 2: The transition to the free-market economy means simultaneous *privatisation* and *decentralisation* of the business management

defines ‘the command economy’ or centrally planned economy of the communist/socialist countries (quarter 3). Analysing the model with combinatorial techniques, two more associations are shown: ‘private ownership’ and ‘centralised management’ (quarter 2), defining the economy of monopoly and ‘state ownership’ and ‘decentralised management’ (quarter 4), introducing the so-called ‘social-market economy’.

The proposed model also allows investigating the transition process (the transition from economy of command to the free-market economy). The fundamental problem is choosing and justifying the optimal strategy, defined by: *duration and pace of transition* (‘shock’ or ‘gradual’ transition); *transition path (trajectory)*; *privatisation techniques* – as an essential component of the transition and economic reform; *transition management and strategy* – as a result of all the above.

The proposed model allows analysing all these aspects. *Transition of the Romanian economy from ‘the command’ to ‘the free-market’ implies transition in both fields of ownership and in decentralisation (Figure 2).* The adopted legal acts in Romania (*the Reorganisation of the State Owned Enterprises Act, the Corporations Act, the Act of Land*) target all transition aspects mentioned above.

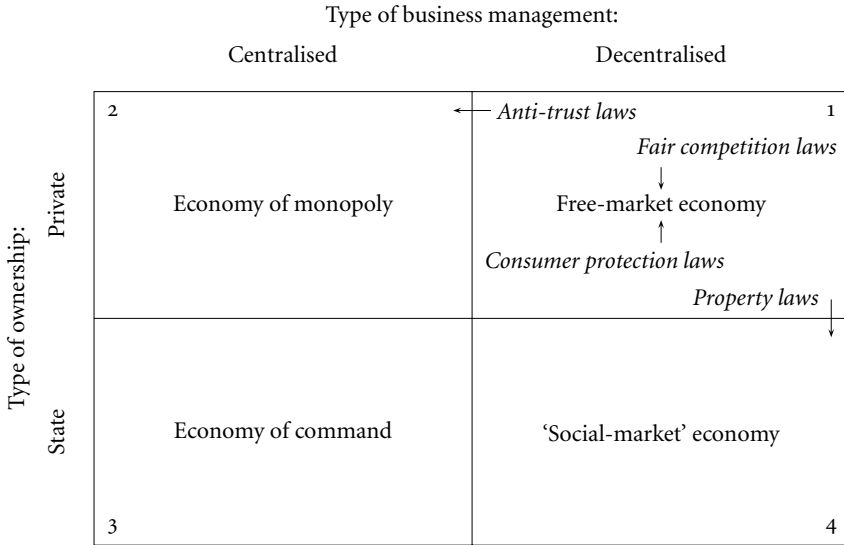


Figure 3: The role of government: The legal environment development and protection

As the EU accession is a transition process itself, Romania – like other ex-communist countries – has been in transition twice. Together with the role of the transition manager, the government must play an essential role: the guard and the guarantor of the free-market economic system. Finally, the economic state stability should be protected by four kinds of measures (Figure 3):

- ‘antitrust’ regulations (antimonopoly) in order to discourage the movement to quarter 2;
- laws for property protection and limitation of nationalisation processes that should not allow a deeper access to quarter 4;
- fair competition legislation;
- laws for consumers’ protection.

Justification of those measures lies in the fundamental principles of the free-market economy: open competition, balance between the demand and supply, and company autonomy.

In spite of all the problems confronting the industry worldwide, the IT&C industry represents a field with a great developing potential in Romania. Because of the technologies used and of the high degree of personnel specialization, the indicator (net sales/employee) is a good one compared to other industrial sectors. The 60–100% profit rates in the

Table 2: SMEs and e-economy

Type of business:	IT&C is used to facilitate:				
	Business process	Business communication	Commerce	Marketing-promotion	...
IT&C SMEs	Application software	e-mail; the Internet	e-commerce	Web pages	...
Other than IT&C SMEs	Application software	e-mail; the Internet	e-commerce	Web pages	...

software industry, and up to 200% in Internet companies, are factors that could lead to:

- opportunities for well-paid jobs, offering real career developing possibilities for the graduates of higher technical education;
- identifying market niches that the newly created firms set up by the young engineers could benefit from.

Not only IT&C SMEs are part of the e-economy but all other SMEs that use IT&C to facilitate different business functions (some such examples are presented in Table 2). A crucial point in high-tech SME development is technology transfer – in general – and particularly the transfer of technological knowledge.

THE ROLE OF UNIVERSITIES TO SUPPORT SME DEVELOPMENT

As life-long education stresses, universities should support the development of entrepreneurial spirit and education, at highest level. The contemporary knowledge society, more and more global, assumes – as far as business management is concerned – professional managers and professional management training, hence the role of universities, and management training organisations.

Although the university (a generic name) is a not-for-profit organization, it must be managed following the principles of strategic management.

According to Mintzberg (1998), the ‘entrepreneurial school’ is one of the most dynamic contemporaneous styles of strategic management, characterized by *vision*. The Romanian universities probably possess this vision.

University ‘Politehnica’ of Bucharest (UPB) – the biggest and oldest institution of higher technical education in Romania – which is a good ex-



ample, offers support services for SME development, through three major university departments: Management Department (MD), Postgraduate School for Academic Studies in Management (SAM) and Center for Business Excellence (CBE).

1. MD offers formal education to students in engineering. Beside courses of *Management* and *Marketing*, MD started to offer new courses such as:
  - the *Entrepreneurship* course taught to students in their final year, as an option;
  - the *Entrepreneurship and Management of Small and Medium Enterprises* a compulsory course, taught at the beginning of the academic year 2001/2002. *It is the very first course of entrepreneurship taught in the UPB.*
2. SAM opened its doors in 1997 and currently offers two types of post-graduate courses:
  - MBA-type two-year-courses with several specialisations: *SME Management*, *Marketing*, *Business Strategy*, *Operations Management*, *Quality Management*;
  - three-month-courses on: *Business Management*, *Marketing*, *Human Resource Management*, *Business Communication*, etc.
3. CBE began its activity in October 1991, within UPB, as a project co-financed by the USAID (United States Agency for International Development), as part of the *Management Training and Economics Education Program* for Romania. Currently, CBE is integrated in UPB's Human Resource Continuous Education Centre as a business research, training and consulting center and entrepreneurial assistance. CBE is organizing business plan contests and currently running projects such as: *EDUCAT*, *Technology Transfer Project*, *IT Business Incubator*.

#### *Business Plan Contest*

During the academic year 2001/2002, CBE organized, in cooperation with the Harvard Business School, Massachusetts, the *Romanian–American Seminar: 'Investing in Romania, Investing in Entrepreneurial Education'*. At this Seminar, the final phase of the *First Business Plan Contest organized in the UPB* also took place, after the Harvard Business School

model. At the pre-selection phase, over 50 business plans have been presented. During the final phase, the panel of independent expert evaluators included representatives of the academic, business and financial community (Harvard Business School, ASEBUSS, Ministry of Small and Medium Enterprises). This year, the contest is in its second edition and attracts the same amount of interest and enthusiasm from the students and the same support from the National Council for Higher Education Scientific Research from Romania (CNCSIS) and the business community.

### *The EDUCAT Project*

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Being convinced of the driving force behind the entrepreneurship, and the advantages (not only economic, but also social) that the development of small and medium size enterprises generates, the CBE team proposed and implemented the project called EDUCAT – *Developing the entrepreneurial spirit and EDUCATION in the Technical higher education, based on the research of the needs of the labor market.*

The EDUCAT research project has been thought as a three-year-study (2002–2004), funded by the CNCSIS.

The project has a triple objective:

1. Developing the *entrepreneurial spirit of the young graduates of higher technical education*, so that these may best correspond to the new requisites of the *labor market*, in the conditions of the *economy of knowledge*.
2. To help them adapt to a functional market economy in Romania (as managers or entrepreneurs, responsible for, and capable of team work).
3. To become professionals internationally accepted (based on the *credit transfer system*).

For the first year of the EDUCAT project (2002), the research focused on the Pilot Study: *Survey on the needs of the labor market from the point of view of the entrepreneurial abilities of young graduates of higher technical education, limited to the electronics and software industrial sectors in the Bucharest area.*

The objectives and the activities proposed in the work plan for the first year of the implementation phase are presented in Table 3.

In order to reach this objective, the researchers used the following methodology:

Table 3: The objective and activities of the EDUCAT Project

Objective	Activities
<i>Identifying the needs of the labor market (from an entrepreneurial point of view), as they are perceived by firms in the electronics and software industrial sectors in the Bucharest area, as well as determining the measure with which graduates of higher technical education adapted to these needs.</i>	A1 Identify the target population of the research.
	A2 Develop the questionnaire for the identification of the labor market's needs (perception of the managers).
	A3 Develop the questionnaire for the identification of the graduates' abilities (perception of the graduates of higher technical education).
	A4 Round table with specialists in this field.
	A5 Pre-test of the questionnaires.
	A6 Create the final version of questionnaires.
	A7 Write the activity report, including the survey results.

- *Secondary research* – gathering of information, creating the frame-list of the organizations relevant for the study. This list includes 260 firms from the electronics and software industry, active in the Bucharest area, most of them SMEs. Choosing the IT, electronics and communication industrial sectors for pre-testing the questionnaires was not carried out randomly.
- *Applied primary research* – survey, questionnaire-based, of the labor market's needs, as well as of the measure in which graduates of higher technical education adapted to the needs of the labor market.

The round table (activity A4) has been projected using group interview as a research technique. Based on the initial version of questionnaires, comments have been made and new questions added, so that the questionnaires represented a coherent measurement tool of the managers' perception about the managerial-entrepreneurial side of the education received during higher technical education.

The project management used as a tool logframe matrix of the EDUCAT Project, with the aim to integrate the objectives and activities proposed for the first year for the whole general structure of the project.

#### SOME CONCLUSIONS STEMMING FROM THE EDUCAT PILOT STUDY

By dividing the frame-list in areas of Bucharest, interview operators invited firms to fill in a number of questionnaires necessary for running a pre-test (10% of the target population). Based on the analysis of the GM

(general managers) and MGHTE (managers – graduates of higher technical education) type questionnaires, several interesting conclusions have been arrived at (Scarlat and Simion 2003).<sup>3</sup>

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1. The respondents to the survey hold the present managerial position for a relatively short period of time (1–3 years): 38.5% for GMS and 54.2% for MGHTEs.
2. The managerial experience of firm directors is richer than that of technical managers: 50% of the first previously held other directing positions, compared to 12.5% – the percentage of technical managers.
3. 76.9% of the GMS foresee their future career to be related to the development of the firm they run, while 32% of the MGHTEs wish to develop a technical career and 12.5% of them have entrepreneurial objectives (wish to create a new firm).
4. About the behavior inside the firm, GMS prefer honest employees (53%), that experiment new things (53.8%), are good organizers (92.3%), decently dressed (84.6%) and devoted to the company (65.4%); MGHTEs consider (when expressing their options about the same set of characteristics) that a manager should be efficient (79.2%), should impose his/her point of view (79.2%), to experiment new things (70.8%), be a good organizer (87.5%), decently dressed (62.5%), and devoted to the company (87.5%).
5. Among the factors necessary for increasing personal performance, both GMS and MGHTEs mentioned the funding sources (45.5% and 30.4%, respectively), the possibility to take advantage of opportunities (27.3% and 21.7%, respectively), authority and firmness (27.3% and 17.4%, respectively).
6. Regarding the weaknesses of the employees, and of the colleague graduates, GMS incriminate the lack of entrepreneurial qualities of their employees (initiative spirit – 34.8%, organizational spirit – 30.4%, diplomacy – 26.1%), while MGHTEs mentioned diplomacy (25%), trust in their own forces (20%) and experience (20%).
7. Both general managers and technical managers interviewed consider managerial-entrepreneurial courses taken during the university as being helpful and having a rather different importance during the graduation year (some of the subjects did not take the respective courses).

8. A small proportion, both of general managers and technical managers participated in managerial-entrepreneurial training courses after graduating, mainly in fields like: organizational management, marketing, selling technique, managing conflicts.
9. The majority of respondents declared their readiness to further training in the managerial-entrepreneurial field through programs like:
  - specialised courses: 55% of GMS, 35% of MGHTEs;
  - short term postgraduate studies: 25% of general managers, 30% of technical managers;
  - master and PhD programmes: 10% of general managers, 35% of technical managers.
10. Regarding the chosen major, first place was given to management (45% GMS and 40% MGHTEs), followed by project management (30% and 20%, respectively), marketing-sales (30% and 30%, respectively) and entrepreneurship (10% and 15%, respectively).
11. Most appreciated parts of training courses by general and technical managers are: curricula, experience of trainers and modern, innovative approaches.
12. Unlike general managers, who would be willing to invest in a training course less than 20 Euro/person/day (61.5%), technical managers are willing to pay between 20–50 Euro/person/day (80%).

The EDUCAT Project will continue for another two years (2003–2004) with mostly two groups of activities: analysis of academic curricula within Romanian technical universities (2003) and results dissemination (2004).

This type of research might be continued in two directions (Table 4):

1. geographical extension (from the Bucharest area to the country-size) and
2. university-type extension (from technical universities to other types of universities – law, arts, etc).

As a major conclusion, we may say that universities play a key role in:

- Entrepreneurial education and training service for IT&C SMEs as market is booming, both in magnitude and diversity.
- Specific entrepreneurial education and training methods should be tailored according to the clients' needs. Modern teaching and learn-

Table 4: Possibilities to extend the research

Graduates of:	Geographic area (population)		
	Bucharest	...	Romania
University Politehnica of Bucharest	EDUCAT	----->	
Technical universities			
...			
All universities	↓		Higher qualified labour market

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ing methods (such as case studies, distance learning and IT&C) should be used.

- The best framework to provide entrepreneurial education is the university environment.
- Entrepreneurial training of young people is a top priority.
- The training curricula should be developed in conjunction with prestigious European universities and joint certificates awarded to the participants.

CONCLUSIONS

The EDUCAT Project identifies the needs of the labor market with regard to the managerial-entrepreneurial training side of graduates in higher technical education, ‘gathering evidence’ in favour of transforming the classical university into an entrepreneurial university – because of which the *entrepreneurial education* is a must.

The current evolution of the society towards knowledge society transforms more and more the university into a very important *knowledge and economic* system. In order for the university to become entrepreneurial it is not enough to create some entrepreneurial structures like the ones presented, but it must also change its attitude and conceptions regarding the mission of university within the society.

It is up to us to learn one from another, nationally or internationally, and to determine the transformation pace of change from classical university to entrepreneurial university or, in other words, the university of the 21st Century.

## NOTES

1. This explains the 'inflation' of e-notions.
2. Per Swedish Company Skandia's name, which initiated the development of the model.
3. This paper only presents a part of the research's conclusions. The results of this study will be disseminated by being published in the *CBE Collection – Research in Business Management*, no. 10.

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