Aspects regarding the Romania's position in the global competition of knowledge-based economy

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ASPECTS REGARDING THE ROMANIA'S POSITION IN THE GLOBAL COMPETITION OF KNOWLEDGE-BASED ECONOMY

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Abstract: *The objectives of proposed research are fits into the context of reflecting the level of development reached by our country, developments in information and knowledge-based society. We consider relevant for our research the approach and the diagnosis of our country's position in the global competition of the knowledge-based economy, through representative models of strategic analysis. Taken into account the fundamental importance of information and communication technology (ICT) for supporting the development of our country towards the knowledge society and its integration into EU research, the research aims at achieving a "radiography" of ICT sector.*

Key words: *competitive advantage, ICT, competitiveness, knowledge, development*

1. INTRODUCTION

The development of knowledge-based society seems to be the only viable explanation for, and a solution to what Romanian economists called "the paradox of the Romanian economy". The paradox is determined by developments of the country for the past 150 years (except make the period after 1989), through the development stages during the centenary growth's cycle - considering the global cycle and/or European - and the contradiction of development during descendent phases which was small. Economic gap has expanded constantly (under the influence of performance criteria), as the gap of productivity and standard of living gap.

A possible explanation of this paradox is that the Romanian economy has always focused on the least innovative products. This has provided only a temporary competitive advantage, in the short term. This vicious circle can be broken only through investment in implementing the knowledge-based economy, which depends on new factors pf production like inputs, such as knowledge and the transition to a real competitive advantage, as this concept was defined by Michael Porter (1998).

Modern theories clearly describe the relationship between knowledge management and competitive advantage of organizations (Draghici G., 2006). Knowledge management is a complex activity that has two categories of influence in organizations: making the connection between intellectual capacity of organizations - in the form of explicit and tacit knowledge - and directly influence its economic growth (Barclay & Murray, 2000); its fall entirely on strategies, policies and practices at all levels of the organization because of the explicit approach of the activities' knowledge component (Van Der Bly, 2005).

The cognitive substantiation of the activities is finding again at macroeconomic level. The new online economic world is supported by an exponential development of knowledge (Harangus D, 2008).

2. METHODOLOGY

The SWOT analysis can be done in a qualitative or in a quantitative manner, which quantize the position in the space of two axes. In the following analyse is presented the relationship between internal medium and - quantitative external SWOT medium in case of Romanian ICT branch. Quantitative SWOT approach involves the following steps:

1. Listing the main internal factors;
2. The granting of share of these factors, so that the weights should be 1;
3. The granting of scores on a scale which has "0" as a median. Scores "-" means that the internal factor considered represents a weakness of the organization and the "+" have the contrary meanings;
4. The calculation of the total score as sum of the multiplications between considered factors' scores and their weight. The result represents the co ordinate's resultant on SW axis.

$$p_j = \frac{\sum_{i=1}^{20} K_{ij}}{\sum_{j=1}^{20}(\sum_{i=1}^{20} K_{ij})} \quad (1)$$

$$x = \sum_{j=1}^{20} p_j \times n_j \quad (2)$$

The quation (1) represents the calculation's formula for weight of each factor and the equation (2) represents calculation's methodology for coordinate on Ox axis .

5. Listing the main external factors;
6. The granting of share of these factors, so that the weights should be 1;
7. The granting of scores on a scale which has "0" as a median. Scores "-" means that the internal factor considered represents a threat and the "+" have the contrary meanings;
8. The calculation of the total score in a manner similar to the point 4. The result represents the coordinates' resultant on OT axis.

$$p_j = \frac{\sum_{i=1}^{9} K_{ij}}{\sum_{j=1}^{9}(\sum_{i=1}^{9} K_{ij})} \quad (3)$$

$$y = \sum_{j=1}^{9} p_j \times n_j \quad (4)$$

The quation (3) represents the calculation's formula for weight of each factor and the equation (4) represents calculation's methodology for coordinate on Oy axis .

The two numbers resulted to point 4 and 8 permit to determine the position of the industry through their signs, in one of the four dial, suggesting a certain type of strategy. The size of that right segment, joining the origin point and the founded point, and its inclination give us an indication regarding the particular strategy from dial's typology.

3. RESULTS OF THE RESEARCH

The results of applying the SWOT analysis model for ICT sector are the following.

3.1. Strengths

- Highly qualified human resources, internationally recognized - more than 115 university with over 60 faculties with this specialty (computers, telecommunications, electronics);
- The convergence of communications and information technology in the new ICT sector: strong, coherent, integrated;
- The ICT's community began to get more "personality" by increasing the involvement of ICT companies, experts and professional associations in their efforts for the development of ICT sector in Romania;
- The capacity of companies to adapt quickly at modern technologies;
- Possibility of rapid development of the sector due to the development of ICT' solutions "from scratch";
- Quick recovery of investment in the field; introduction of ICT solutions increase the value of organizations;

3.2. Weaknesses

- There were strategies which have had a strategic control (causes: inappropriate control systems, conventional thinking, fear of change, inability to allocate resources, hide results unfavorable);
- ICT teams at central and local organizations are still poorly prepared because of weak access to new technologies;
- High level of piracy in the use of IT (approximately 70%)
- Over 62% of organizations with activities in retail sales, telecommunications, finance and public sector have not adopted any measures against fraud on the Internet;
- ICT is not used sufficiently in the public domain (for example, the concept of "outsourcing" for IT services);
- The average salaries of ICT's professionals is small (an average of $ 503 per month) compared with developed countries (between $ 4000 per month and $ 10,000 per month);

3.3. Opportunities

- The trend shown worldwide for building Information Society and the knowledge-based (reducing the technological gap - the digital divide, etc.);
- There is a huge demand for specialists in this field in developed countries (access to leading technology, some of the leave becomes true "ambassadors" of Romania and are living testimony to the high level of preparedness of ICT professionals Romanian);
- EU imposes some conditions that require the development of ICT sector;
- There are numerous international funds dedicated to the implementation of Information Society in developing countries;
- Financial aid for SME's projects on e-commerce, support for companies that develop e-commerce applications.
- Technological progress makes possible the convergence of communications channels.

3.4. Threats

- There is a huge demand for specialists of this field in the developed countries (approximately 30,000 specialists). The departing of Romanian specialists abroad, mainly due to the difference in income and living standards;
- Use of alternative infrastructures require additional investment for operators;
- Competition exists in this area on other markets;
- Increasing crime through electronic means decreased consumer confidence in the use of such means.

4. CONCLUSIONS AND PROPOSES

Based on the methodology previously presented, was presented a graphic version of strategic ahead for the ICT sector so as to support Romania's progress and development of knowledge-based society (figure 1.).

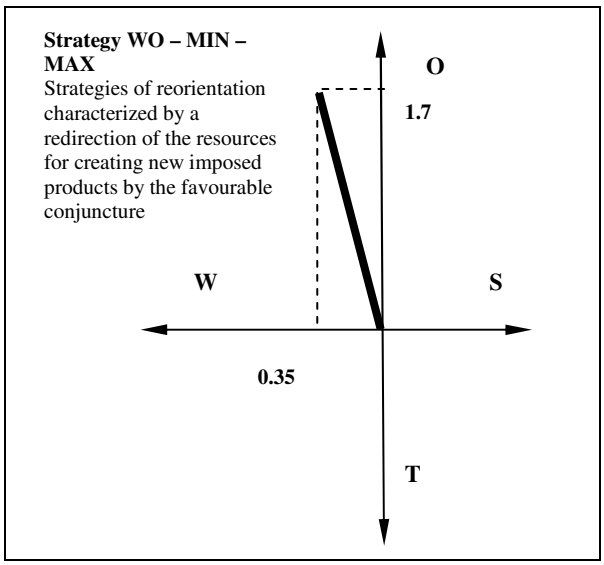

Fig. 1. Determining the future strategic direction based on the SWOT model of analysis (SWOT profile)

Strategic direction to be followed is possible to be implemented by receiving a high level score on Oy axis, which proves the existence of a "volume" and a substantial opportunity for ICT domain in Romania, which is able to support the progress in the knowledge-based economy.

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By the strategic adopted direction must be overcome the weaknesses in the field of ICT by the fructifying of existing opportunities. The threats are those items which could be reduced through better capitalization of the "strengths", presented above. Such a strategy has become apparent that should be adopted by the resort ministry, as a result of the application of quantitative SWOT analysis. In fact, the strategy is a shift one and is characterized by a redirection of resources in creating new products imposed by the favourable situation of EU accession.

In future researches we will look for new solutions for reducing or even eliminating the weaknesses of the Romanian ICT sector that were outlined in the results of current analyse.

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