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TRENDS AND CHALLENGES IN HUMAN RESOURCE MANAGEMENT AND ORGANIZATION PERFORMANCE

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Abstract: *In recent years, organizations have focused on developing human resources, on the management systems that enable them to achieve their strategic goals. The success of such systems is given by organizational culture, philosophy and mentality of people in the organization. The modalities of human resource management within the organization is the principal aim of our research, by identifying human resource practices in Romanian organizations and the impact on organizational performance results. We discuss the orientation function of human resources in organizations in Romania based on statistical and empirical data. The findings suggested that the incentives, training and information technology are strong related to organizational performance.*

Key words: performance appraisal, training, incentives, knowledge, technological innovation

JEL classification: M 12, M 53.

1. Introduction

Human resource management faces the challenge of bringing in the trained professional organization that meets their expectations and needs regarding work, but equally, to meet the requirements of organizational performance. Thus, there is a constant concern of managers to develop new ideas and concepts to improve human resource strategies and develop new perspectives that can be helpful in obtaining better results and improve organizational performance (Vigoda and Cohen, 2003). The relationship between human resource management and organizational performance has received wide attention from researchers in recent years (Sanchez Jimenez, Carnicer and Perez, 2007; Lin and Chen, 2007). As Mayo points out, 'people are a unique type of capital, they loan their human capital, their individual capability and commitment and their personal knowledge and experience to the firm,' adding, thus, value to themselves and, at the same time, affecting firm's performance (Diamantidis and Chatzoglou, 2011).

The purpose of our paper is to show which are the trends and challenges in human resource management and organization performance, taking into consideration the movements in social and economical framework generate by the global crisis. Also, it must be discuss which are the impact of the crisis at organization level and how can be used the organizational resources to obtain the competitive advantage to the market.

Our research **objectives** are:

- a. Shaping a state of knowledge in human resource management and report the performance of organizations, our research will be based on literature review, national and foreign country, which will justify our analytical approach and enable comparisons.
- b. Identify relationships between human resource management function and the relationship with the performance criteria.
- c. investigate whether certain components of human resource management, such as training, motivation, performance appraisal, incentives and information technology influence firms' performance.

The research is based by the statistical data from Eurostat, European Commission, National Council of Small and Medium-sized Private Enterprises from Romania.

2. Conceptualization of Human Resource Management

Numerous studies have shown that there is a positive relationship between human resource management and organizational performance in terms of profitability, net sales and market share (Huselid, 1995, Schuler and Jackson, 1987). Theories on human resource strategies, financial and organizational implications on performance, economy and psychology studies (Becker and Huselid,

1998) have contributed to the development of major scientific movement aimed at highlighting the main interrelations between human resource management practices that can achieve organizational performance. Each of these theories has provided strong arguments for developing a universalistic perspective on human resource management practices and positive impact on organizational performance (Pfeffer, 1994, Delery and Doty, 1996).

Theory of strategic resources provides an important support for the universalistic approach to human resources. Difficulties tried economies in recent years have been felt in terms of implementing human resources strategies. Organizations must understand that their actions aimed at exercising control over the financial and material capital (equipment, raw materials, technology), but especially on human resources. Interest in these internal variables contributed to the development of theories of organizational resources (Wernerfelt, 1984). Organization's competitive advantage could be obtained only through optimal use of organizational resources and generate new values, rare and inimitable. They could only be the result of valuing the human resource organization (Barney, 1991; Pfeffer, 1994; Hisrich et al, 2008). Thorpe et al. (2005) showed that organizational performance is strictly related to the ability of entrepreneurs or managers to integrate knowledge from the perspective of the consumer market, supplier and stakeholder. Gold et al. (2001) showed that the organizational infrastructure, such as technology, structure and culture with knowledge acquisition, conversion, application and its protection are essential organizational capabilities with performance. They believe that these key infrastructures are able to lead to maximizing capital. Technological dimensions of knowledge management are part of the organization and include business intelligence, collaboration, distributed learning, knowledge discovery, as well as generation opportunity security.

Choy and Lee (2002) and Keskin (2005) have emphasized that human resource strategies are imperative for large organizations, while small organizations should strive for simplicity and to maintain a performance measurement system organizational focused and simple (Ali, 2003). Power of small organizations consist in human resource motivation, knowledge, skills, informal communication, less bureaucracy, better market orientation and production (Nootemboom, 1994). To perform competitive market, small organizations need a supportive culture, the sharing of knowledge and innovation assets. Human resource management and firm performance have become the foundation of a new era of managing diversified workforce in a globalized world. Hornsby and Kuratko (2003) believe that human resource management is a large firm phenomenon. Various researchers imply that small firms make less use of human resource practices than larger firms because of lack of time, financial resources, and the absence of HR experts (Bayo- Moriones and Merino-Diaz de Cerio 2001; De Kok and Uhlander 2001; De Kok, Uhlaner and Thurik 2002).

3. Organization performance

One of the objectives of our study is to investigate whether some components of human resources such as training, motivation and performance measurement, information technology have impact on organizational performance. The answers to these questions could have relevant implications on business growth and market value of firms.

Performance can be interpreted as the bottom line of profit, to do better than competitors, increase efficiency of company and the specific objectives of the organization. Laitinen (2002) defines performance as the ability to produce a result based on a given dimension in relation to a target. Managers refer increasingly more firm performance as the key variable for obtaining competitive advantage in the market (Punick, 2005).

The concept of performance is reflected in the literature as successful result of an activity, action, and in economic field, with the meaning of profitability, productivity, efficiency.

In accordance with Annual Report on EU Small and Medium Enterprises on 2010/2011 (European Commission, 2011), the effects of crises are not equal across all Member States and, to explain these effects at the organizational level (on SMEs) must grouping the states. So, it can be categorized as follows:

- a. The *old* versus the *new* Member States;
- b. The *crisis* versus the *non-crises* countries.

If for the first group it is not necessary to make a discussion, for the second group to define crisis and non-crises countries merits some explanatory remarks. The crisis countries present a stagnation of economy and negative GDP growth, unemployment rates, government debt as well as financial assistance package. The states with negative GDP growth rates for the last two consecutive

years and with external assistance to stabilize the economy include (in April 2011) Greece, Ireland, Romania, Latvia, Portugal and Spain. But, the specific performance of the SMEs sector was considered and Romania left the group. Despite a negative GDP growth of Romania in 2010 (-1.3 percent forecasted by Eurostat in the European Economic Forecast – Spring 2011), was registered an increase of GVA and employment in the SME sector. The GVA of Romanian SMEs grew by 5.8 percent in 2010, while the microenterprises recorded 6.5 percent in the same period. In terms of employment, the sharpest growth was registered during 2010 in real estate, renting and business activities, 9.5, 7.2 and 9.2 percent respectively.

In conclusion, it should be noted that the small and medium enterprises represent the *engine* of the European economy during the crises and explain the capacity to maintain and develop internal strategies to use optimally the organizational resources.

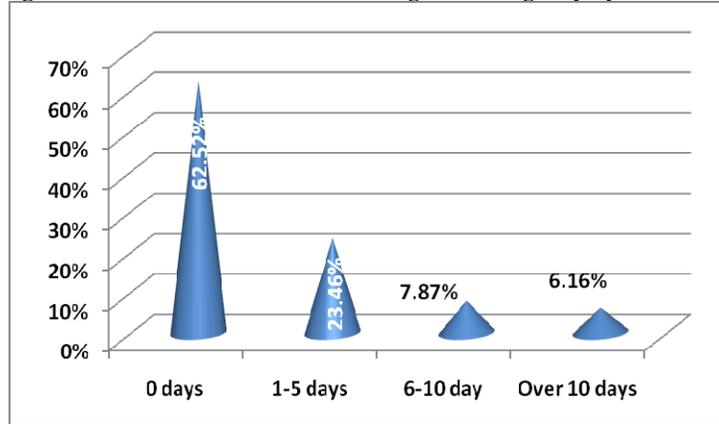
4. Training and motivation of employees, technological innovation and organizational performance

Human resource management is an area that is concerned with policies, practices relating to employee behaviour, attitudes and performance (Noe, Hollenbeck, Gerhart and Wright, 2006). An important role is held by the issue of training and professional development of employees. Training is a planned and systematic effort to modify and develop knowledge, skills, competencies and attitudes to learning experiences for a flexible and efficient labour (Buckley & SLG, 2004). Research has shown that employee training provides knowledge and skills necessary to perform work and, later, will contribute to organizational performance (Drummond, 2000). However, Peter Drucker (1995) stated that training is an expensive way to try to increase employee productivity. Effective training of employees contributes not only to acquire new knowledge and skills of the employee but also the organizational goals, satisfaction and productivity.

Therefore it can make the following hypothesis: *employee training is positively correlated with the performance of organizations.*

For Romanian SMEs training of employees is not a priority. Due to financial constraints faced by SMEs in Romania, employees access to counselling and specialized training is almost nonexistent, resulting in employee de-motivation and high mobility of labour (see figure 1 and figure 2). Innovation is stimulated when select skilled employees are given greater autonomy of action. But, the lack of financial resources constitutes an obstacle for the Romanian managers in order to sustain the training programs for their employees (even if in Romanian Labour Code is stipulated that the professional training is an obligation for the employers and must be respected). With workers unprepared to respond to all duties, without motivation and implication, cannot discuss about performance in organization. The results are de-motivation, a great mobility of work force and non-performance at the organisation level, but, also, at individual level.

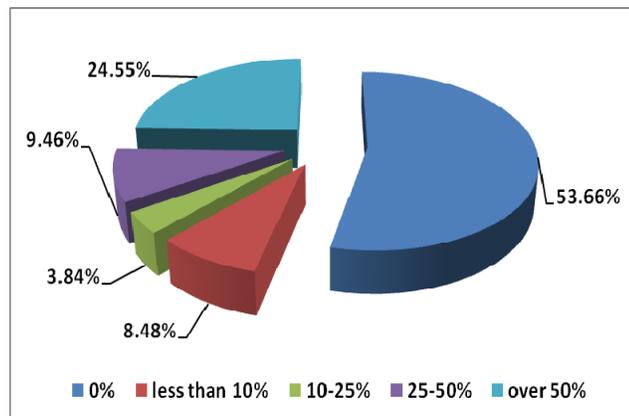
Figure 1: Structure of SMEs in the length training employees



Source: National Council of Small and Medium-sized Private Enterprises (2011). White Charter of SME in Romania, p. 232

The training programmes for employees constitute the way to develop skills, attitudes and behaviours to attend the organisational and individual performance.

Figure 2: Percentage of firms that provided training programs for employees

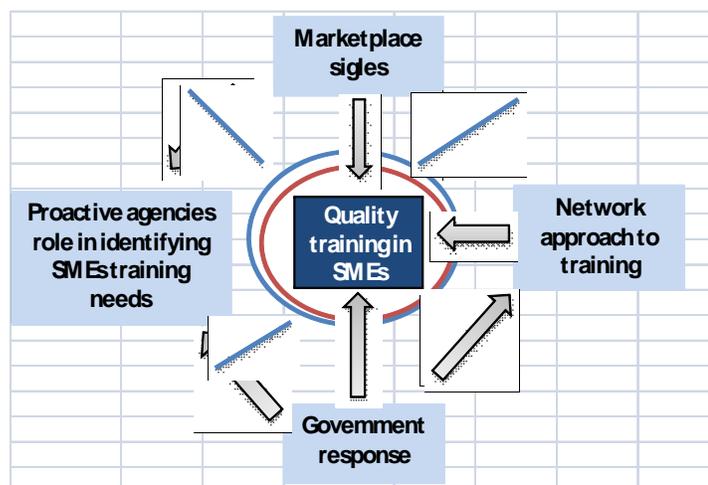


Source: our processing under the data give by National Council of Small and Medium-sized Private Enterprises (2011). White Charter of SME in Romania.

Despite the importance of maintaining knowledge and skills of the workforce, more than 50% of SMEs in Romania did not provide employee training programs (see figure 2). This is explained by the fact that small firms lack the resources (financial and human) to achieve a quality human resource management. This lack of resources may explain why small firms involved in a little training activity, while large firms do. Another reason for small firms participate less in training is that they fear competition to train for employees, because, then, to leave the organization.

At the European level, the quality training in SMEs is measures by market movements explained by new technologies, innovation, and knowledge. Governments must respond with public policies, strategies at national, regional and local levels, to sustain training and to identify the needs of SMEs and the expectation of stakeholders (figure 3).

Figure 3: Quality training in SMEs



Source: European Centre for the Development of Vocational Training (CEDEFOP), Research paper No. 4, Quality in VET in European SMEs, 2010, p. 102

Another important report highlighting human resource management and organizational performance is motivation. Harsanyi (1969) indicated that human behaviour can be analyzed by two components: economic gain and social acceptance. These two dominant interests is in fact an incentive for employees of organizations. Incentives are a complex arrangement to express and maintain working relationships between employees and employers. Armstrong's research (2001) show that incentives motivate people to achieve a level of performance and be more productive. Ian, Jim and Haper (2004) believe that incentives should be included in the strategies of the organization. In this context, the hypothesis can be formulated as follows: *using incentives for employees determine the performance of organisation.*

The remuneration of employees includes the following components (de Kok et al., 2011):

- Fixed wage: this includes any specific payment arrangements for overtime, working in shifts, working at night, working during holidays, etcetera.
- Performance-related payments: wage payments that are related to the performance of individual employees, groups of employees or the company as a whole, where performance may be measured either objectively (through observable measures of production) or subjectively (through evaluations).
- Employee (or fringe) benefits: various non-wage benefits for employees, for example employer-provided housing, health insurance, day care facilities and educational funding.

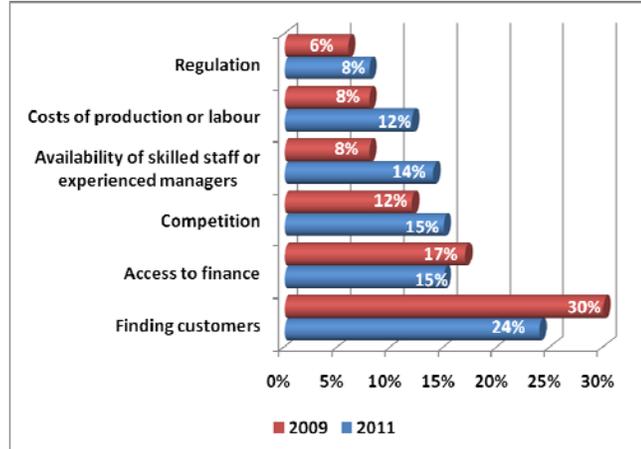
In accordance with the European Company Survey (2009) identifies establishments with performance-related pay schemes where wages are related to the performance of individual employees or groups of employees (team or department). The results show that the share of enterprises with such performance-related pay schemes in place increases from around 33% for enterprises with 10 to 19 employees, to 57% in enterprises with 500 or more employees. In smaller establishments, the schemes are more often applicable to the whole workforce, whereas in larger establishments they are more often limited to a specific share of the workforce.

Technological innovation is considered as a success factor in development organizations in achieving competitive advantage in the market. Technological capabilities of enterprises have long-term influence on firms (Hitt, Hoskinsson and Kim, 1997). Dave and Wayne (2005) have shown that people are able to identify new technologies and improve their efficiency and effectiveness in an effort to influence organizational performance. However, the favourite orientation of the organization to achieve results will lead to a low level of technological innovation in order to avoid uncertainty (Mumford, 2000). It can make the assumption that *information technology can be positively correlated with firm performance.*

As we show before, the innovation was the successful key to *extract* Romania from the crisis group countries, because the positive GVA and employment growth in 2010. The potential for

innovation in SMEs has been hindered by some pressing problems, as: access to finance, cost of production and labour, regulation, a shortage of qualified personnel and limited resources (see figure 4). Also, the innovation was block for SMEs by the inability to adopt and make use of training support. It is necessary to promote the continuous firm based training for lower skilled workers.

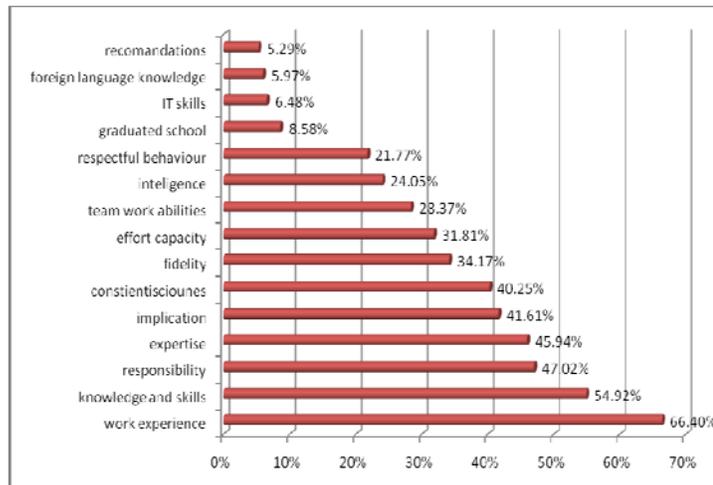
Figure 4: Most pressing problems of the firms



Source: ECB and European Commission, SMEs’ Access to Finance Surveys, 2009-2011

The individual and organizational performance assessment criteria analysis is the relationship between human resource management and performance of organizations. Careers and career development objectives of the employees are defined in the organization in accordance with the aims and objectives of its performance. Lecky (1999) defined performance appraisal system as standard setting performance-based, specific tasks, identify and assess current performance. The result of performance evaluation is carried through into wage increases, promotion and advancement in office management planning. System performance evaluation of individual employees is a merit rating which should highlight the benefits for both the employee and employer. Evaluation criteria should be reviewed constantly to the organization's purpose, and expectations of employees. An incorrect evaluation of individual performance will lead to employee dissatisfaction and consequent negative effect on organizational performance. Hypothesis can be raised is: *evaluating employee performance is positively correlated with organizational performance.*

Figure 5: Criteria for assessing the performance of employees



Source: processing under the data give by National Council of Small and Medium-sized Private Enterprises (2011). White Charter of SME in Romania.

The criteria used by Romanians managers to measure the level of employee's performance are shown in figure 5. Work experience is the most evaluated criteria in recruiting and selection process, also, during the professional life of person (66.40%). Is followed closely by the knowledge and skills criteria (54.92%); for SMEs managers means reduced costs with specialised training programmes and short time to obtain positive results and to be productive. The responsibility, fidelity and expertise of an employee define the implication and motivation and constitute the criteria to maintain or to fire an employee.

The positive results for the organisation can be obtain if these criteria are known, explain and correctly applied to all employees and if the decision to promote or to fire a person was taken in accordance with the results of performance appraisal systems in organisation.

5. Conclusions and limits of research

Our research indicates that there is a significant relationship between human resource management and organizational performance, theoretical approaches are highlighted and confirmed by analysis of the statistical data provided by the European Commission, Eurostat and the National Council of SMEs in Romania. Theoretical assumptions made were supported by statistical data analysis and interpretation. Organizational performance can be sustained only by a well trained human resource. Lack of financial resources and a coherent strategy regarding the organization's investment in human capital lead to poor labour productivity and our performance in SMEs in our country. Incentives are an essential part of the remuneration and have very high importance on employee motivation. As revealed in January et al. (2004), incentives are technique of human resource management in order to obtain better performance.

Innovation and technology are essential in obtaining performance information. As technology increases the efficiency and time to carry out tasks is shorter. Mullin (2002) believes that training and assessment is a key element in developing and maintaining an organization's competitive advantage. For SMEs in Romania use performance analysis in terms of human resource management practices, such as training, use of incentives, motivation, information technology and innovation, entrepreneurs show a concern for real low labour utilization. Financial and legal factors are most difficult to overcome; as a result, the potential human is a key objective for managers of SMEs in Romania.

The limits of our research are determined by the failure of data to analyze the relationship between human resource management organisation performances in terms of indicators taken into account.

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BEST PRACTICES FOR CREATING AN EFFICIENT EXECUTIVE BOARD IN TIMES OF ECONOMIC CRISIS

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Abstract: *When listing a company it needs to transcend to a public company (for its shareholders) and a new decision making problem appears: implementing the strategy to maintain or to grow the new public company. How can the shareholders select the people that could represent their interests by creating the executive board and implementing a strategy for the long run considering the actual economic turmoil? In this research paper the selection process of an executive board will be designed and the case of Facebook's executive decisional system is represented as a particular case for the future development of a new-age company.*

Key words: efficiency, corporate governance, IPO, executive board

JEL classification: D21, G11, G32, G34, M11.

1. Introduction

The efficiency of a board is correlated with the aggregate abilities of the directors, but also with their powerful personalities that bring independence in the decision making process. The personality of a member of the executive board is molded through years of experience and genetic and epigenetic skills. The more experience brought to the board by its members, the bigger the chances to get reelected.

At a macro level, the board must contain an optimal mix that reconfirms the company's mission. As an example there could be offered the board of a new bank developed in a town with a population of 100.000, the members of the board must be *visible* individuals for the community, the same is valid for a healthcare insurance company that must include in its board medical doctors, administrative employees from near sited hospitals and auditors for creating the best ecosystem for the patient/client and a system that could be molded onto the company's development strategy (Colley et al., 2003; Bodislav, 2011). For a visible company at a national or regional level, it must include other chief executive officers (CEOs) from companies that are in the same industry and should bring an outside-in oriented approach to implement global solutions, but at specific level. A particular case is the case of not for profit organizations and their boards that are built to create trust for the financiers by keeping a high level of integrity and following the organization's mission. The board must assure a 360 degree experience for the company to reach its purposes and objectives.

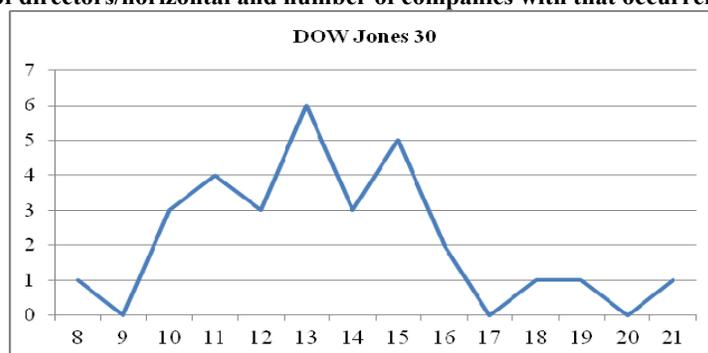
The double sided advantageous exchanges must be inserted in the board's strategy and must be part of the character of the individuals that are board members to ease the solving of possible crises. Because the fact that shareholders give to the board of directors the full authority and the governance of the company, they must be selected based on their character, ethics and business sense brought to the company. They must bring to the company an added value for efficiency, attracting new clients, increasing productivity or implementing new governance methods in the company, but with how much personality is brought to the board, the bigger the gap between their place as market leader then the followers.

1.1. The standard board structure

To validate a model for a board there was created a pool of companies from the 30 that are indexed in DJIA (Dow Jones Industrial Average) and 25 companies that are included in the S&P 500 index. This choice was made from the desire to validate a standard structure that includes the exponents of the innovation engine for global corporate governance, the United States of America, but demographic and geographic development created a standard that could be globally scaled. On the

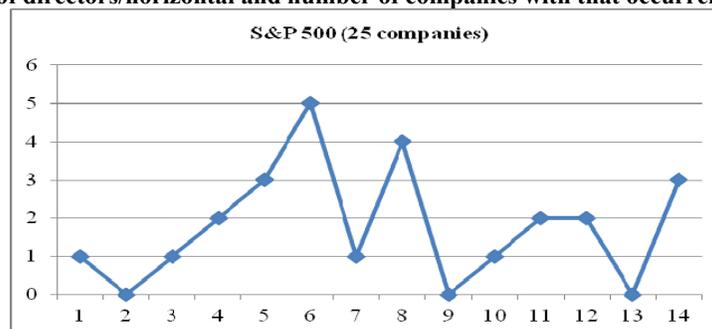
board sizes for the two groups of companies (DJIA or S&P 500) the results were similar, the most observed size for boards was between 9 to 16 members. In figure 1 (DJIA) and figure 2 (S&P 500) there is a graphic representation for the situation when the economy was in optimal parameters before the dot.com crisis and the actual economic crisis that started in the year 2007, the representation being for the year 2000 (Colley et al., 2003). The choice for the year 2000 was done by not simulating the actual board's selection from the companies that are indexed in the DJIA and S&P 500, boards that have as main purpose navigating through the crisis and maintaining market share, and in table 1 there is represented the average pay in the industry for 2011, year that is similar with the year 2000.

Figure 1. DOW Jones 30 board structure distribution
(number of directors/horizontal and number of companies with that occurrence/vertical)



Source: Dow Jones database 2012

Figure 2. S&P 500 (25) board structure distribution
(number of directors/horizontal and number of companies with that occurrence/vertical)



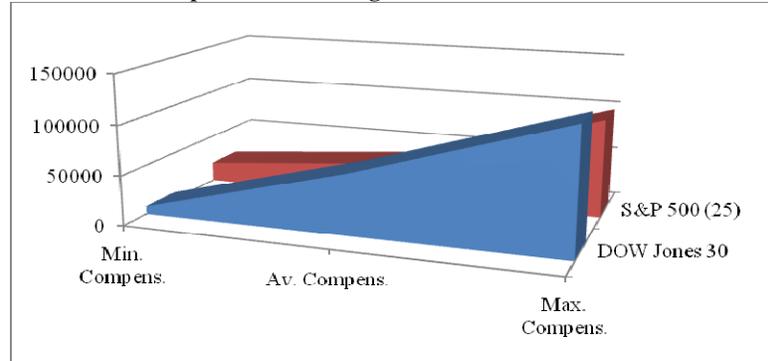
Source: S&P database 2012

Table 1. Compensations offered in the DOW Jones 30' and S&P 500' indexes

Compensations	DOW Jones 30	S&P 500 (25)
Min. Compensations	8000	20000
Av. Compensations	61233	37409
Max. Compensations	125000	100000

• Average pay in U.S. dollars

Source: S&P database & Colley, Doyle, Logan, Stettinius, 2003

Figure 3. Evolution of compensations through the DOW Jones 30' and the S&P 500' indexes

Source: data modified by the author (average pay in U.S. dollars).

1.2. Creating an efficient board

After creating a board it must implement some simple communication principles with the middle management, and the absorption of talented people represents one of the strategic tasks needed for the companies' advance in human capital. The resulted performance of the new board has a short term validation period when the company goes through turbulent times, that is why quarterly performances can create pressure or built a not too clear image for the long term goal of the board when filtered with the shareholder's eyes. The only indicators that must be considered are those that stress the industry's general performance in which the company activates, and the trend line of the company must be near or above the general trend and on the medium term it must surpass the human capital's trend, the board has as purpose utilizing the available financial capital, be it by reinvesting it, be it by offering dividends to shareholders (Goldman Sachs, 2011).

2. Board selection

2.1. The independence of board members

Efficient boards are created with non-managing directors because they have as main job description protecting the interests of the shareholders, while the managing-directors are working for the shareholders, but they can directly benefit from the taken measures, because they aren't independent in taking decisions (Goldman Sachs, 2010). As a result, there should be created a board with two thirds non-managing members and one third managing members. Board members' independence isn't based only on the idea that they aren't non-managers, but they also follow the corporate governance' standards created by the New York Stock Exchange (NYSE) in 2002 through which close relatives that worked for a company in the last 5 years do not have the label of independent in the board of a company (S&P, 2012).

Board independence is quantified through the ratings and auditing resulted purposes and theoretical work efficiency of a CEO and as a 2nd tier effect on calculating compensations and evaluating performance in executive non-synchronizing between top and middle management. In case of takeover or acquisition, board independence becomes a critical factor, and some aspects aren't quantified, warming the return on investment or return on equity during process. In this moment, the non-independent board could be fired as a result of the conclusions taken by the executors and implementers of strategy, the top management of the company, and if the shareholders are in tune with the top management then the company is on the brink of vision or strategy' incapacity. These process problems and goal seek problems aren't found in companies with an independent board.

2.2. The interest of board members

Choosing external board members is directly connected with their motivation. Non-managing members from American companies own small parts from it and growing the company is in tune with their personal perspective and this vantage point is supported by their reputation, their social status given by their results and by... fear of intended processes (Hambrick, Johnson, 2000). Regarding actual times, the real business people selected as board directors are the ones that have a long term sustainable vision, but their number is decreasing and the available time is limited and expensive, so they must be financially supported to remain mentally *engaged* for the company, this way they are following the same interests as the shareholders. As a plus in their involvement in the company, when

they are selected they should invest a large sum of money to validate their good intentions, and when they sign the contract they should have stock options as a bonus.

Another component that must be clarified from the beginning is the procedure for keeping a CEO that reached the retirement age (around 70 to 75 years old). The advantages would be that an old CEO has superior know how in front of other candidates and he already owns a large stocks package, this way he is more motivated to grow their value. As a disadvantage there is the strong connection with the management level and this way there are some predispositions to cover their mistakes. A transition compromise was reached between the new CEO and the old CEO that consists of keeping the old one for another year after his mandate ends, the sole exception being that when a CEO has the stock majority, because if he leaves the company, he could destabilize it.

2.3. Choosing board members

Choosing executive board' members should be based on the fact they must remain in those positions on undefined terms, but they are released from duty after being caught in a position of conflicts of interests, committing illegal acts or they discredited their image or their company's image. Despite these causes, they could be fired on economic assumptions, by not fulfilling their individual or board level tasks, through periodic direct audit. The economic situation in their business field is an important factor because a good director could be fired for exogenous reasons, their positions being filled by persons that thrive during economic crisis.

Board members' crossed evaluation could create hierarchical tensions. An alternative approach is of creating a board that is nominated for a finite number of years, but there could be created hidden costs because of the problematic selection if some members do not fit the positions well or the mandatory regulated replacement of a member that is efficient and this lose is expensive and hard to repair, to which there is added the cost for in depth know how of the new directors, the minimum lost period of time is of one year (for the prepared selected members). The most efficient procedure to keep or fire a board member is the one by collective cross evaluation which is validated through the governance necessities had by the company and that moment's economic situation. The efficiency problem of the board should have the possibility to resign from the board, before they are fired.

Selecting new board members must be based on transparency and independence from the internal games. This selection must be made for the good of shareholders, but in an objective way, because they could allow the selection to the actual CEO and this could be a not so wise decision. These practices aren't observed from outside, but they create pressure from the company's top management by not supporting the board and this way the corporate governance cannot be executed. For this problems to cease to exist we should rely on the nomination committee, which is responsible for offering a viable solution for new members that must stress high importance and morality.

For an efficient selection a pool of needed skills and gained experience should be created as minimum requirements for the candidates, and these must be in tune with the needs for development, consolidation, dimensioning or shifting of the company's business, to which is added the classical needs based on accounting, financing, marketing, operations and branch expertise were the company has its core-business, but if a board imports its CEO from other companies, he or she must come from another position if the company is from the same industry or from the same position if the company is in the same field.

After creating a candidate' pool, those candidates are filtered depending on the needs that need to be filled for creating a better board or for creating a better future strategy of the company that needs people with experience and skills different from the actual employees. The nomination committee will choose the right people and those will be filtered by the already validate members of the board.

The nominating committee of a big company (with big financial resources) is used to use headhunters, but during time the best solution was observed to be the one based on recommendations from the actual members of the board or other business partners, like: bankers, lawyers or clients. After the list is composed, the candidates are controlled after the tasks they fulfilled in their previous positions, to which is added the analysis of work relations with the supervisors, subordinates and colleagues from the companies where they were previously employed. After this control, a new list is created, those candidates on the new list are interviewed and evaluated for their implications in the business or social environment, to underline the fact that if they can bring media attraction for the company. Not for last, they are validated for the short list and those that own a part of the company or

are related with the founders of the company, they are validated for the short list too, but if they are selected as board members they must promise that they will protect the interests of all shareholders, not only the interests of the interest group that they represent. After this process is checked, all candidates on the short list are placed in order depending on their status, the company's needs and the economic situation. All the recruiting process that is executed until that moment is done on a low profile, but with transparent principles (Colley et al., 2003).

2.4. Due Diligence

The next step is to investigate the situation, the status, the quality and if he or she could fill the position of board member, before signing the mandate contract. This procedure includes an interview of the candidate by the board members for all the names on the short list, to which is added an interview with the company's CEO. Due diligence is a parallel process with recruiting and is executed with the candidates agreement, after his or hers acceptance on this practices, but also to evaluate his or hers position on the board for a possible future conflict of interests (Colley et al., 2003).

Recruiting possible candidates could be done from various perspectives, but in most cases, the ones proposed have the support of an actual member of the board and it could be seen as a campaign for the position of board member of the candidate through formal meetings with top and middle managers and informal meetings with the actual board members. During these meetings the candidate learns the company's strengths, weaknesses, opportunities and threats and an offer made for him or her for taking part in the board, in the meantime his or hers profile is evaluated to see if he or she is suitable for the position. After these meetings, the candidate must research the niche of executive management that must be filled for the company, what he can deliver for the company in exchange for the offered benefits, if the position has perspective or is created by the outside environment (if the company needs a new strategic approach because its negative trend in market share and the foresee of a future bankruptcy) and if he or she isn't in a conflict of interests from his or hers possible new position of board member (Bragg, 2011). If he or she accepts the application offer, he or she must pass the election process.

Directors' effective election is taken during the General Gathering of Shareholders (GGS) that is annually held. The shareholders choose the directors – members of the executive board, the elected ones are charged with legal liability to follow the interests of shareholders. In the case of interim directors, they are named by the board until the next GGS. Until the next GGS, the nominating committee and the actual board members develop a list with candidates equal in number with the vacant positions in the board, this way the election process is transformed in a validation process for the board position. The number of positions available is created by the bylaws, and the board positions must be created with specific terms, from 1 to 3 years and from the desire to easily get rid of those board members that aren't efficient (the procedure consists of a resignation), that is why the board selection process is important and must be done without skipping any steps of the recruitment process (Bragg, 2011; Colley et al., 2003).

2.5. Maintaining the board's efficiency on the long run

Corporate governance is executed starting from the strategy developed for the long run and that is why the executive board changes could create shocks in the companies. Powerful boards evolve from a culture that is based on leadership and on efficient recruiting processes (identifying, recruiting, election/validation of proposal). Weak boards are represented by a CEO with a powerful personality, that dominates, with an exceptional leadership that has total control, and the board becomes only an expression of the theoretical needs presented in the statute and in the bylaws, the objectivity of a board cannot be estimated or forecasted, but the selection process sieves exceptional individuals from the ones that are just well connected, and this sieve doesn't stand just as a responsibility of the nominating committee, but also a responsibility of the top management and of the auditor, but also in the financial component: they are the main beneficiaries from direct compensations and from the created stocks flow (here including the takeovers of other companies or being under a takeover from another company).

An intangible component that could create advantages or disadvantages in the company, it is represented by the dominant personality. Some companies that benefit from having on board these types of personalities that transform the companies according to their personalities. On NASDAQ are listed more than 5000 companies, which have CEOs that have an average run of 7 years, but each year

700 CEOs are replaced, so it results that a CEO recruiting process is started 3 times during a working day. Most CEOs pass through the life of a company by being mediocre or by keeping the general trend line of the company and of the economy (muddling through), but there are some deviations from the average, the ones that fail in the CEO position (by fraud or incompetence) and the ones that transcend into superstars: they lead the company to new peaks (Steve Jobs – Apple), they bring stability and above average growth on the long run (Warren Buffet – Berkshire Hathaway), they reestablish corporate governance for an extraordinary company, but that cannot face the economic turmoil (Alfred P. Sloan – General Motors Company, Allan Mullaly – For Motor Company), they strengthen the vision or the company's position (Jack Welch – General Electric) and have an approach of main engine for economic growth (Michael Eisner – Disney, Steve Jobs – Pixar). Through their results above the initial possibilities of the company, by using ruptures in leadership and innovation, they become the board, being responsible for strategic movements, like finalized acquisitions, selling suboptimal used assets (before they transform into liabilities) or by planning the successor selection (the case of Jack Welch, Steve Jobs and Warren Buffet).

Another way to take over the board is the one through which the CEO brings into the board his supporters on which he can rely when a vote is needed. This fact can lead to dictatorship in the company, which cannot be stopped by the shareholders, a perfectly legal situation that appears often in the United States because there aren't procedures that could allow cancelling more than one director or board member at the same time. The sole procedure is the legal one and the one founded on a takeover by lowering the company's value through the measures taken by the board, but the one that involves a takeover isn't valid if there are stipulated measures like the "poison pill" in the company's bylaws (Colley et al., 2003).

The dominant personality of a CEO leads to capturing the entire executive power from a company. Until now there were presented cases met in open, listed companies, but there are some companies that are *quasi-public* companies that are controlled by a private company, but it is audited and framed by a state owned company. In this case there are met the pre IPO companies (before their Initial Public Offering) when a part of their shares are sold to some investors or offered to employees, as example we have Facebook's case, which before its listing, this way a pseudo-valuation is created for the company. Another method is that through which a private company wants to become public, but through a merger with a listed company, this way it lists itself without an IPO, but the owners of the private company transform into the majority shareholder of the new entity created through merger.

A quasi-public company can be considered a company led by a CEO that has the power to select some members of the board, this way assuring himself the decisional majority (this procedure is called *entrenchment*), this way the entire decision on the future strategy of the company depends on the CEOs business sense (Bragg, 2009; Colley et al., 2003).

The studies done on this phenomenon of quasi-public companies are few and do not have a common conclusion, but about their boards it is known the fact that small boards (with maximum 10 members) that are formed by non-managing directors (outsiders) are subordinated to the companies that they represent or from where they are imported. Facebook has before its IPO 7 members in the executive board, 2 of them are outsiders, but the real situation is that the entire development strategy is executed by only one person (the company's CEO and main shareholder, Mark Zuckerberg – 28,4 % of the company). In the quasi-public companies we have board members that follow long term development and they have small paychecks and non-significant stock options (the case before an IPO). For the directors that are members in an executive board the financial stimulants (incentives) are not real because they are already rich, but the company as an entity could represent an agenda on the long term.

3. Creating shareholder and board' structure for Facebook – the IT&C IPO with the biggest valuation in history

Participating as an investor on the Facebook IPO, is actually a bet on the best behavior, the flair and morality of its CEO, Mark Zuckerberg.

The Facebook company is valued at 75 to 100 billion dollars with a listing price of 50 billion dollars (5 billion dollars for 10 % of the company), but the deal structure for the corporate governance system shows a corporate dictatorial system. According to the IPO documentation listed at the Securities and Exchange Commission, the CEO, Mark Zuckerberg, will have total control over one of the biggest companies listed on the New York Stock Exchange. The proprietary shareholder system is

a dualist system, the shareholders created from the listing will own Class A shares, each having the voting power of 1 vote per share. Facebook employees and pre-IPO investors own Class B shares that have 10 votes per share (S.E.C., 2012).

Mark Zuckerberg owns after 8 years from creating the company 28,4 % from the company in Class B shares, through them he can partially control the company, but total control is achieved through the fact that he is authorized by the co-founder of Facebook, Dustin Moskovitz and by the first president of the company, Sean Parker, this way he adds another 28,7 % of voting power. After listing the company, the CEO will have 57,1 % voting power with the tendency of growing his control because some of the investors will exit the business or already did their exit on the secondary market (S.E.C., 2012). In the future any changes done in the company must be done only with Zuckerberg's agreement as acting CEO. Other differences from an already listed company are the ones that involve the selection system created for the executive board. Facebook doesn't have in the corporate structure of the executive board a nomination committee and this way the independent character of the board doesn't exist, because through voting power, the CEO can fire any director/board member at any time, and the CEO has in his job description the role of nominating committee.

Going back to Facebook's shares, if shareholder that has Class B share transfers them (sells or donates them) then they are automatically converted into Class A shares, this way the CEO, Mark Zuckerberg, can reach a voting power of 80 – 90 %. Even if Mark Zuckerberg sells a part of the shares owned, if he holds 9,1 % from his Class B shares he can control the board with this small ownership, so from here we can foresee a long period of ruling the company for Zuckerberg as CEO.

This problem of shareholder corporate governance created in a dualist system is met at another IT&C corporation, the Google' company, where the founders Sergey Brin and Larry Page implemented a similar voting structure, but at Google there are two individuals with complementary personalities that rule the company. In the year 2011 other companies from IT&C sector listed, like Groupon, Zynga or LinkedIn that have a similar shareholder structure, a dualist system. The control is executed in these companies as following: 19,7 % for Groupon, 37,4 % for Zynga and 21,7 % for LinkedIn, but these companies are not valued at the same level with Facebook.

In 1986, when the Microsoft Corporation was listed, Bill Gates owned 49% of the shares, but the shareholder structure is a simple one, and selling shares influenced in a direct manner his voting power in the company.

Facebook is going to transform after its IPO into one of the biggest companies in the world, above Amazon, Kraft Foods and Goldman Sachs, companies that needed years, decades or hundreds of years to reach this level of valuation in their industries.

In Facebook's case we talk about an active CEO/player, that solely controls the corporation, this fact isn't a bad thing, because his vision was the one that led the company from 0 to 50 billion dollars. The situation before the IPO is the following one (Trefis, 2012):

Figure 4. Facebook Income Structure & Market Capitalization



Source: data processed by the author using Trefis database and Goldman Sachs reports

4. Conclusions

In brief, American corporate thinking on board structure can be summed up to:

- Best boards are formed with directors that are shareholders too (the bigger the share owned, the bigger the attention offered to the company);
- Best boards are the ones that have a long term strategy to grow the company's value for the shareholders;
- The board must understand the company's economic standing (inside-out and outside-in) and it needs to evaluate if they can maintain, sell or reorganize a business unit, but by considering the long term vision, not only the regarding the moment's demand and supply of shares on the stock market;
- Recruiting talented people must be a high priority for the board, and the company's and shareholders' interests must be protected by redeeming large packages of shares, but not by offering stock options, that do not have any risk attached to them for the employee, but by direct redeeming from the stock market;
- Capital distribution and performance control are the evaluating factors that frame and determine the performance of the company's governance and the performance of its creator, the board of directors.

For how long the company keeps its work procedures for corporate governance simple and transparent, it will function at an optimal level. The companies with the best performance are the ones that align the interests of shareholders with the board's interests. Listed companies have a corporate governance system different from the quasi-public companies or from the private ones because they have to face different problems, but those problems can be solved by maintaining the mission statement and its goals, by aligning the management and the governance in tune with the shareholders' interests.

Control and power of a board are created through pathways:

1. Through the bylaws that specifies the number of members that form the executive board, the path to approach a decision in the board and for what situations are needed simple voting or super-majority voting procedure;
2. Who influences who and the coalitions created inside the board are based on premises (internal or external) or on an interest group? What directors have the decisional control, the internal ones (or the managing directors) or the outsiders (imported from other companies or non-managing director), and if they impose their vantage points through force, personality or by offering/abolishing favors.

These kinds of corporate politics are often met in executive boards and determine the efficiency of the board from the financial perspective, but also in maintaining legal requirements on the stock market, in front of their regulators (S.E.C., as example) and in front of the shareholders.

5. Acknowledgments

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ASPECTS REGARDING MATHEMATICAL MODELS FOR DETERMINING THE LINK BETWEEN PRODUCTION, STOCK MANAGEMENT AND LEAD TIME

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Abstract: *Organisations are continuously in search of solutions to manage the supply chain successfully, aiming to obtain competitive advantages. The paper presents a mathematical model, which uses three functions (lead time function, stock function and production function) as input data, to determine the so called "equilibrium point". This point represents the balance between the three functions and creates one of the competitive advantages.*

Key words: mathematical models, stock optimisation, triangle, production, lead time

Jel classification: M 01

1. Introduction

Throughout the history of mankind wars have been won or lost through logistics strengths and capabilities. It has been argued that the American War of Independence was lost by the British since they did not have proper supply lines and relied heavily on Britain. This resulted in poorly equipped and demoralized troops.

Logistics is the management of the flow of goods between the point of origin and the point of destination in order to meet the requirements of customers. Logistics involves the integration of information, transportation, inventory, warehousing, material handling and packaging, and often security. (wikipedia)

There are still some companies that reduce cost and improve profit margins at the expense of supply chain partners. These companies do not realize that they are simply transferring costs upstream and downstream and this does not make them any more competitive. All costs incurred by intermediaries will ultimately be reflected in the price charged from the end-user. The leading logistics companies recognize the fallacy of this conventional approach.

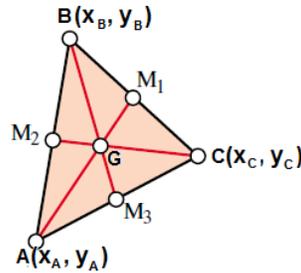
Logistics management is simply the management of flows of materials within the organization but supply chain management recognizes that this is simply not enough and linkages with external supply chain partners upstream and downstream is essential.

2. Determining the coordinates of the three points for the triangle

The companies, besides the linkages with external supply chain partners, have to minimize lead time, to minimize stocks and to maximize production. So, we obtained three functions - one which has to be maximized and two which has to be minimized.

The mathematical model was achieved using the similarity of the three functions with the peaks of a triangle.

Figure 1: Centre of mass of a system consisting of three points.



The starting point of the mathematical model was to determine the three functions. In order to determine the leading time function it was used the Data Fit programmer. The input data for the programme were collected from organisation which operates in the field of automotive industry. From 600 companies active in 2012 for Cluj county only 8 agreed to participate at the conducted study.

The model was determined considering the following assumptions:

1. Loading and unloading of goods is done automatically, using a forklift
2. Weather conditions are neglected
3. When the order is received, it is believed to be sent for preparation
4. Ordered products are in stock
5. The delivery costs were not take into consideration
6. Product goods are transported in pallets
7. Transport is done by trailers
8. Intermediary firms are excluded, transport is realized from supplier to manufacturer

We obtained the function:

$$T = 0.57x_1 + 2.063x_2 + 1.85x_3 + 0.804x_4 - 3.809x_5 + 0.202x_6 + 196.016 \quad (1)$$

where

x₁=distance, [km]

x₂=car capacity, [kg]

x₃= preparation and discharge time, [min]

x₄= rest time, [min]

x₅= quantity, [kg]

x₆= rejected products.[pieces]

T=lead-time [min]

The parameters of the formula were obtained with the help of the studied organisations, the used instrument being the questionnaire.

Any organisation has a competitive advantage if the lead time is as minimal as possible.

The next formula has for the production, formula which has to be maximized.

Production at the enterprise level is obtained by summing the quantities of products manufactured in production divisions. Production in conventional units is obtained using the relationship: (www.biblioteca-digitala.ase.ro).

$$P_k = \sum_{i=1}^n P_{ki} \cdot C_{ki} \quad (2)$$

Where:

P_k – the production output from the group "k" in conventional units;

n - number of homogeneous groups that compose the product group k;

P_{ki} - production volume of product "i";

C_{ki} - transformation coefficient of the product "i" into the product "k", obtained using the relationship:

$$C_{ki} = \frac{m_i}{m_k} \quad (3)$$

where:

m_i – time per unit of product i ;

m_k - time per standard unit of product k .

Next it will be presented the formula for stocks.

In order to determine the optimal control of supply, we used some hypothesis, such as:

1. The stock level is known;
2. The sales history is also known;
3. The level of placed orders and not received are also known;
4. The delivery time is calculated;
5. The cost of the process is not taken into account.

The stock level is represented by the difference between the size order and the products that have been delivered from the order. (Ciupan, 2011)

$$S = [\theta \cdot C_{s_{med}} \cdot d - (St + Cd)] - P \quad (4)$$

Where:

(θ) represents the trend

(d) represents the lead time

(St) is the stock level at time of order placement

(Cd) is the order in progress

(P) are the number of products (generated by the production function)

$C_{s_{med}}$ is the medium consumption

Because of the fact that any point in OXY plan is represented by the coordinates x and y , the formula for production, stock management and lead time had to be modified.

So, formula (1) becomes:

$$T = t_a + 0.57d \quad (5)$$

Where:

d is the distance

t_a are the auxiliary times

The formula (2), for production, remains the same, because it has two parameters.

The formula for stock management (3) becomes:

$$S = M - P \quad (6)$$

Where:

M is the order size

P is the production

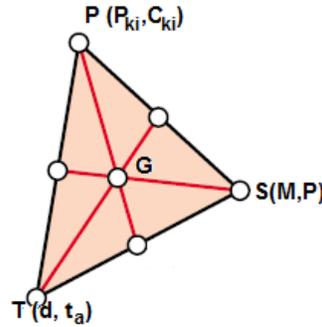
S is the stock level

M represents the command size and the formula for it is:

$$M = [\theta \cdot C_{s_{med}} \cdot d - (St + Cd)] \quad (7)$$

Having the three formulas we can define the point of the triangle.

Figure 2: Representation of the triangles and its functions



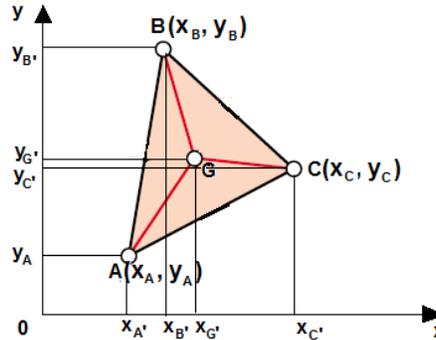
Given the definition of the mass centre, the G can be defined as the equilibrium position for the three functions. We believe that this is necessary to have a fixed position, regardless of the function variation for the company to operate under conditions of high efficiency.

In order to do that, if one of the points is changing his position, the other two must also change their position.

3. The mathematical model of optimisation the three functions

The best way to see if a point has changed its position is to see if the projection is unchanged. We determined the projection both for x axes but also for y axes.

Figure 3: Representation of the triangle's projections



The domain is:

$$D = \Delta ABC = \{(x, y) \in R^2 / x_A \leq x \leq x_B, y_{AC} \leq y \leq y_{AB}\} \cup \{(x, y) \in R^2 / x_B \leq x \leq x_C, y_{AC} \leq y \leq y_{BC}\}$$

.....

(8)

$$Ix = \iint_D x dx dy = \int_{x_A}^{x_B} x \left(\int_{y_{AC}}^{y_{AB}} dy \right) dx + \int_{x_B}^{x_C} x \left(\int_{y_{AC}}^{y_{BC}} dy \right) dx$$

.....

(9)

$$= \int_{x_A}^{x_B} x(y_{AB} - y_{AC}) dx + \int_{x_B}^{x_C} x(y_{BC} - y_{AC}) dx$$

.....

(10)

$$= \int_{x_A}^{x_B} x \left[(y_B - y_A) \frac{x - x_A}{x_B - x_A} + y_A - (y_C - y_A) \frac{x - x_A}{x_C - x_A} - y_A \right] dx + \int_{x_B}^{x_C} x \left[(y_C - y_B) \frac{x - x_B}{x_C - x_B} + y_B - (y_C - y_A) \frac{x - x_A}{x_C - x_A} - y_A \right] dx$$

$$\begin{aligned}
 &= \frac{y_B - y_A}{x_B - x_A} \int_{x_A}^{x_B} (x^2 - x \cdot x_A) dx - \frac{y_C - y_A}{x_C - x_A} \int_{x_A}^{x_B} (x^2 - x \cdot x_A) dx + \frac{y_C - y_B}{x_C - x_B} \int_{x_B}^{x_C} (x^2 - x \cdot x_B) dx - \frac{y_C - y_A}{x_C - x_A} \int_{x_B}^{x_C} (x^2 - x \cdot x_A) dx + \\
 &\frac{y_C - y_B}{x_C - x_B} \int_{x_B}^{x_C} (x^2 - x \cdot x_B) dx - \frac{y_C - y_A}{x_C - x_A} \int_{x_B}^{x_C} (x^2 - x \cdot x_A) dx + (y_B - y_A) \int_{x_B}^{x_C} x dx \\
 &= \left(\frac{y_B - y_A}{x_B - x_A} - \frac{y_C - y_A}{x_C - x_A} \right) \left(\frac{x^3}{3} - \frac{x^2}{2} x_A \right) \Big|_{x_A}^{x_B} + \frac{y_C - y_B}{x_C - x_B} \left(\frac{x^3}{3} - \frac{x^2}{2} x_B \right) \Big|_{x_B}^{x_C} - \frac{y_C - y_A}{x_C - x_A} \left(\frac{x^3}{3} - \frac{x^2}{2} x_A \right) \Big|_{x_B}^{x_C} + (y_B - y_A) \frac{x^2}{2} \Big|_{x_B}^{x_C} \\
 &= \left(\frac{y_B - y_A}{x_B - x_A} - \frac{y_C - y_A}{x_C - x_A} \right) \left[\frac{x_B^3 - x_A^3}{3} - \frac{x_A}{2} (x_B^2 - x_A^2) \right] + \frac{y_C - y_B}{x_C - x_B} \left[\frac{x_C^3 - x_B^3}{3} - \frac{x_B}{2} (x_C^2 - x_B^2) \right] - \frac{y_C - y_A}{x_C - x_A} \\
 &\left[\frac{x_C^3 - x_B^3}{3} - \frac{x_A}{2} (x_C^2 - x_B^2) \right] + (y_B - y_A) \frac{x_C^2 - x_B^2}{2} \\
 I_x &= \left(\frac{y_B - y_A}{x_B - x_A} - \frac{y_C - y_A}{x_C - x_A} \right) (x_B - x_A) \left(\frac{x_B^2 + x_A x_B + x_A^2}{3} - \frac{x_A x_B + x_A^2}{2} \right) + \\
 &+ \frac{y_C - y_B}{x_C - x_B} (x_C - x_B) \left(\frac{x_C^2 + x_C x_B + x_B^2}{3} - \frac{x_C x_B + x_B^2}{2} \right) - \frac{y_C - y_A}{x_C - x_A} (x_C - x_B) \left(\frac{x_C^2 + x_C x_B + x_B^2}{3} - \frac{x_A x_C + x_A x_B}{2} \right) \\
 &+ (y_B - y_A) \frac{x_C^2 - x_B^2}{2} \\
 &= (y_B - y_A) \frac{2x_B^2 - x_A^2 - x_A x_B}{6} - \frac{(y_C - y_A)(x_B - x_A)}{x_C - x_A} \frac{2x_B^2 - x_A^2 - x_A x_B}{6} + (y_C - y_B) \\
 &\frac{2x_C^2 - x_B^2 - x_C x_B}{6} - \frac{(y_C - y_A)(x_C - x_B)}{6(x_C - x_A)} \frac{2x_C^2 + 2x_B^2 + 2x_C x_B - 3x_A x_C - 3x_A x_B}{6} + (y_B - y_A) \frac{x_C^2 - x_B^2}{2} \\
 &= (y_B - y_A) \frac{-x_B^2 - x_A^2 + 3x_C^2 - x_A x_B}{6} + (y_C - y_B) \frac{2x_C^2 - x_B^2 - x_C x_B}{6} - \frac{y_C - y_A}{(x_C - x_A)} \frac{1}{6} [2x_B^3 - x_A^2 x_B - x_A x_B^2 - 2x_A x_B^2 + x_A^3 + x_A^2 x_B + 2x_C^3 + \\
 &+ 2x_B^2 x_C + 2x_B x_C^2 - 3x_A x_C^2 - 3x_A x_B x_C - 2x_B x_C^2 - 2x_B^3 - 2x_C x_B^2 + 3x_A x_B^2 + 3x_A x_B x_C] \\
 &= x_A^3 + 2x_C^3 - 3x_A x_C^2 \\
 &= x_A^3 - x_A x_C^2 + 2x_C^3 - 2x_A x_C^2 \\
 &= x_A (x_A^2 - x_C^2) + 2x_C^2 (x_C - x_A) \\
 &= (x_C - x_A) (2x_C^2 - x_A^2 - x_A x_C) \\
 &= (y_B - y_A) \left(\frac{-x_B^2 - x_A^2 + 3x_C^2 - x_A x_B}{6} \right) + (y_C - y_B) \frac{2x_C^2 - x_B^2 - x_C x_B}{6} + (y_C - y_A) \frac{2x_C^2 - x_A^2 - x_A x_C}{6}
 \end{aligned}$$

$$\begin{aligned}
 &= \frac{y_A}{6} (2x_C^2 - x_A^2 - x_A x_C + x_B^2 + x_A^2 - 3x_C^2 + x_A x_B) + \frac{y_B}{6} (-x_B^2 - x_A^2 - x_A x_B + 3x_C^2 + x_B^2 - 2x_C^2 + x_C x_B) + \\
 &\frac{y_C}{6} (2x_C^2 - x_B^2 - x_B x_C - 2x_C^2 + x_A^2 + x_A x_B) \\
 &= \frac{y_A}{6} (x_B^2 - x_C^2 + x_A x_B - x_A x_C) + \frac{y_B}{6} (x_C^2 - x_A^2 + x_C x_B - x_A x_B) + \frac{y_C}{6} (x_A^2 - x_B^2 + x_A x_C - x_B x_C) \\
 &= \frac{y_A}{6} (x_B - x_C)(x_A + x_B + x_C) + \frac{y_B}{6} (x_C - x_A)(x_A + x_B + x_C) + \frac{y_C}{6} (x_A - x_B)(x_A + x_B + x_C) \dots\dots\dots (11)
 \end{aligned}$$

After solving the integral solution was obtained:

$$I_x = \frac{x_A + x_B + x_C}{6} [y_A(x_B - x_C) + y_B(x_C - x_A) + y_C(x_A - x_B)] \dots\dots\dots (12)$$

For the y axes, following the same steps, we obtained:

$$D = \Delta ABC = \{(x, y) \in R^2 / y_A \leq y \leq y_C, x_{AB} \leq x \leq x_{AC}\} \cup \{(x, y) \in R^2 / y_C \leq y \leq y_B, x_{AB} \leq x \leq x_{BC}\}$$

$$\begin{aligned}
 I_y &= \iint_D y dx dy = \int_{y_A}^{y_C} y \left(\int_{x_{AB}}^{x_{AC}} dx \right) dy + \int_{y_C}^{y_B} y \left(\int_{x_{AB}}^{x_{BC}} dx \right) dy \\
 I_y &= \frac{y_A + y_B + y_C}{6} [x_A(y_C - y_B) + x_B(x_A - x_C) + x_C(y_B - y_A)] \dots\dots\dots (13)
 \end{aligned}$$

The obtained equations are:

$$I_x = \frac{x_A + x_B + x_C}{6} [y_A(x_B - x_C) + y_B(x_C - x_A) + y_C(x_A - x_B)] \dots\dots\dots (14)$$

$$I_y = \frac{y_A + y_B + y_C}{6} [x_A(y_C - y_B) + x_B(x_A - x_C) + x_C(y_B - y_A)] \dots\dots\dots (15)$$

The coordinates of the G point can be determined with the formula:

$$x_G = \frac{I_x}{I} \dots\dots\dots (16)$$

$$y_G = \frac{I_y}{I} \dots\dots\dots (17)$$

Where:

$$I = \iint_D dx dy = \frac{1}{2} \begin{vmatrix} x_A & y_A & 1 \\ x_B & y_B & 1 \\ x_C & y_C & 1 \end{vmatrix} \dots\dots\dots ($$

18)

$$= \frac{1}{2} |x_B y_C - x_C y_B - x_A y_C + x_C y_A + x_A y_B - x_B y_A|$$

$$= \frac{1}{2} |x_A (y_B - y_C) + x_B (y_C - y_A) + x_C (y_A - y_B)|$$

$$= \frac{1}{2} |y_A (x_C - x_B) + y_B (x_A - x_C) + y_C (x_B - x_A)| \dots\dots\dots ($$

19)

Replacing in equation 16 and 17, we obtained:

$$x_G = \frac{I_x}{I} = \frac{x_A + x_B + x_C}{3} \dots\dots\dots ($$

20)

$$y_G = \frac{I_y}{I} = \frac{y_A + y_B + y_C}{3} \dots\dots\dots ($$

21)

The coordinates of the equilibrium point are:

$$G\left(\frac{x_1 + \Delta x + x_2 + x_3 + \Delta x}{3}, \frac{y_1 + \Delta y + y_2 + y_3 + \Delta y}{3}\right) \dots\dots\dots ($$

22)

As seen from previous relationship, it is only possible simultaneous change of two points of the three ones.

4. Conclusion

The mathematical model obtained from simulation show that there is a close connection between the three functions. Thus, while the centre of gravity remains unchanged, the three functions are inversely proportional.

If we want to increase, for example, three units of production, the other two functions must also decrease with three units. So, or the lead time may be reduced by three units, or stock of goods may decrease also with three units or both together can drop with three units.

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FUTURE DIRECTIONS IN THE PROLIFERATION OF CHANGE MANAGEMENT IN ROMANIA SME'S

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Abstract: *In the context of increased globalization and the growing interest shown to change management, which again tends to be a "fashionable concept", this area of management is in continuous expansion in the past decade gaining significant scale among theorists and practitioners in management science and enjoying the attention of the visible and administrative bodies and public sector in developed countries, considering the large volume of human, financial and material given to this sector.*

This paper aims to investigate how to change used in the Romanian firms by selecting a representative sample of firms in terms of size, number of employees, scope of business, etc., To determine best practices, the causes that have led to failures in the implementation of organizational changes and determine how to improve future practices in the field. For this, we developed a research based on their experience in management consultancy, which comes to facilitate the work of entrepreneurs, managers, management consultants, and generally of all promoters of change in the company.

KEYWORDS: management, change management, innovation management, organizational development, system, system change, change management model, systemic vision, managing change, typology of change, the internationalization of economic activities, economic efficiency, social efficiency, determinants of change, typology of changes, the need for change

I. Literature review

Change management domain is characterized by lack of empirical research both nationally and internationally, and existing research is based largely on intellectual activity and researchers perception, and less on practitioners perception. This research was broadly inspired by paper works of Lewin [Kurt Lewin, 1997], Adizes [Adizes, I., 1979], Marian Nastase [Năstase Marian, 2003], Clarke [Clarke, L. 2002], Beckhardt [Beckhard, R., 1987], Kotter [Kotter J., 1996] etc. Basic postulates of the theory of Adizes are the following: first, the organization development he considers similar to the development of any living organism. The author believes that one of the limits of this analogy is that the inevitability of death of living organisms is not valid for organizations. Second, each stage of development researcher believes that it will face potential problems that divided into a) unavoidable disease of growth (early death, trap founder, entrepreneur unrealized or premature aging) and b) organizational pathologies they consider as "problems occurred due to progression 'growth disease' ". Difference he sees between American researcher diseases and pathologies organizational growth is that growth if disease were not treated when they, in time, turn into pathologies of the organization it is very difficult to treat without external assistance . Thus, it is concluded that the task organization management is to minimize the risk of medical conditions.

Another models considered by me in developing this research are that of Larry Grainer [Grainer, L.2002], Schein [Schein E. H., 1999] Gary Johns [Gary, Johns, 1998], showing that as the company grows and expands its activity, it passes through five stages of development - evolution and revolution cycles. Greiner model proposed changes in structure, strategy, culture caused by the shift to a later stage of development, believing that most firms do not learn how to adapt, or at least do not do the time. Greiner model shows the characteristics of each stage of development and proposes a useful scheme for successfully passing crisis management is especially useful for running any company faced with change. Steps that distinguish them are:

- Stage 1: developing creativity (crisis management);
- Step 2: developing the leadership crisis (autonomy);
- Step 3: development by delegation (global control);
- Step 4: Development in coordination (global bureaucracy);

- Step 5: collaborative development (crisis?).

The model proposed by L. Grainer can be used to determine where they stand currently undertaking the development curve, which allows discussion of issues that can be anticipated in the future, can be diagnosed as character development organization's management system Another is that it demonstrates the need for change in different stages of business development

Unlike the models above, which treats the problem of large companies, with real financial and managerial capabilities to manage the change, this study aims to address the issue and the small and medium firms, known for reduced volume of material, financial, human and information, and "perishable" to changing their domestic and international environment.

In this research we intend to bring an important contribution in terms of both theoretical and pragmatic aspect in the study. Research aims to highlight the current state of change management and innovation in Romania, management tools used in managing the change process, the particular process in our country and how the proliferation of the phenomenon in the future, from a series of criteria established after discussions conducted with researchers in the field. A major challenge for this research is the relative lack of clarity of some of the concepts used in the perception of respondents, with a special definition of terms and abstract ideas. Starting from the fact that this concept is highly subjective, this creates ambiguity in perception "clear definition of concepts is very difficult to achieve due to the broad scope of the field.

The reason that we consider to be useful this research topic is due by the current context of economic and social change generated by the crisis at the national, regional and global levels. The first and most affected organizations in this context are companies that must seek and find quick solutions out of this impasse, because their survival depends on the short, medium and long term. Maintaining competitive advantages, market share, skills and capacities to cope with possible future threats is achieved through the implementation of change management activities at companies of all types, becoming a permanent condition of the market organizations the business sphere, but not only. In these circumstances, implementing change management takes specific measures and uses multiple meanings of the various challenges regarding its application just social, cultural and ecological potential to exploit pragmatic actions in the field of human activity as different.

This paper aims to investigate how to change used in the Romanian firms by selecting a representative sample of firms in terms of size, number of employees, scope of business, etc. ,to determine best practices, the causes that have led to failures in the implementation of organizational changes and determine how to improve future practices in the field. For this, we developed its own model of change management based on their experience in Management Consultancy, which comes to facilitate the work of entrepreneurs, managers, management consultants, and generally of all promoters of change in the company.

In the context of increased globalization and the growing interest shown to change management, which again tends to be a "fashionable concept", this area of management is in continuous expansion in the past decade gaining significant scale among theorists and practitioners in management science and enjoying the attention of the visible and administrative bodies and public sector in developed countries, considering the large volume of human, financial and material given to this sector.

II. Objectives and research hypotheses

In order to obtain valid information regarding the use of change management in the Romanian SME's we have undertaken an investigation among them. The survey was based on a questionnaire administered to managers or entrepreneurs of analyzed companies .

This research aims five major objectives:

Objective 1: Identify the current state of change management and innovation in Romanian companies;

Objective 2: Identify the types of change favorite by Romanian companies;

Objective 3: Identify the management tools used in the process of change;

Objective 4: Identify features on change management processes and innovation in the companies analyzed and their role in business problems;

Objective 5: Identify of future proliferation directions of change management in Romanian companies.

The investigation identified a number of major obstacles in achieving research objectives, including:

- lack of significant research in Romania literature and abroad;
- lack of adequate knowledge of the surveyed organizations to support research;
- increased reluctance among representatives of the companies analyzed to provide data related to them.

III. Sample

Geographical area of investigation included in addition to Bucharest-Ilfov Region – as a main economic centre representative for the research (25% of investigated companies), North-West Region (42% of investigated companies) and North-East Region (33% of all) with diverse and balanced economic profile. Details of the territorial structure of the companies investigated are presented in Table 1.

Territorial distribution of sample

Table 1

No.	Counties	Companies number	%
0	1	2	3
1.	Bucharest	39	22%
2.	Ilfov	5	3%
3.	Suceava	15	9%
4.	Iași	20	11%
5.	Vaslui	16	9%
6.	Bacău	7	4%
7.	Bistrița- Năsăud	6	3%
8.	Maramureș	7	4%
9.	Cluj	42	24%
10.	Bihor	17	10%
11.	Satu Mare	1	1%
Total		175	100%

Source: own research

IV. Results

Based on field research we emphasize fields of interest in change management presented below:

a) Influence of macro and micro-environment into generation of organizational change

The success or failure of companies is determined significantly by micro and macro factors of influence on SME's activities. Thus, economic and financial policy, credit policy, foreign policy of the state, exchange rate changes, interest rate movements, the influence of supply and demand—all of which can promote or limit the activities of companies. In turn, managers react to these changes by assessing their consequences, adopting positive or negative adjustment decisions in running various organizational processes.

In a continuously changing environment, managers must continually define factors with a high degree of influence on the process of organizational change and act accordingly.

For a more detailed analysis, external environmental factors have been separated into macro and micro factors specific to the organization. It is obvious that, in reality, pressure exercised by them is very complex and dynamic, sometimes direct, sometimes indirect and appreciated by different respondents (objective or subjective). A single external factor can affect different companies differently (major or minor influence in their view) and obviously in a positive or negative manner (threat or opportunity).

After analyzing responses were defined different levels of perceived influence by responding companies as is seen in Table 2.

Table 2

External environmental	The influence on the company to persuade it to change
------------------------	---

factors	High	Medium	Low
Macro environment			
Economic	121	54	-
Managerial	98	45	32
Demographic	34	58	83
Ecological	54	57	64
Legal	79	89	7
Political	120	55	-
Socio- cultural	31	65	79
Techniques and technology	42	77	56
Microenvironment			
Suppliers	122	52	1
Customers	147	28	0
Intermediaries	79	68	28
Competition	99	74	2

Source: own research

It is clear that various factors require different changes, their summary and concomitant changes driving the revolutionary character. Evaluating the overall results table is easily seen that the most influential factors positive to change are from microenvironment- suppliers, customers and from the macro environment-economic, political and managerial. This shows a balanced approach of managers and shareholders for these two areas of the business environment. If in terms of suppliers, customers and economic factors and managerial responses lies in an economic sense, captures high-impact vulnerability in our case that the political factor has on the generation change at the firm level. This shows that the government through its agencies involved too much in the economic life of the companies that gained market economy status to Romania does not have a counterpart in reality. Regulatory factor is also considered high importance, bringing interviewees as an argument the lack of protection of domestic firms, there are many contradictions between the various legal provisions, legal framework, low predictability etc..

Socio-cultural has been recognized as largely insignificant in determining the need for change in the company. Thus, elements such as polarization of society, changes in the system of values and aspirations of the people, corruption, social dispersion of the population are not considered relevant by respondents. The same logic we find in the answers to environmental factors and technical and technological responses are, in my opinion, a reflection of the structure of the sample, where the number of manufacturing companies is low.

Of the total sample 88% of organizations consider that consumer requirements are a major catalyst for change, because their customers required changes in product assortment, price, quality level, changes in working methods, etc. Domestic competition and consumers are highly appreciated and influence of this factor by 57%, respectively by 42% of respondents.

b. The determinants of change

Analyzing the results in Table 3. we can found out that, most often the most important determinants of change are owners-52 % (most often and often),because they are interested in business success. The most intense internal catalyst for change is the new ideas of senior managers: 80% .The data are presented below:

Table 3

Internal environment factors	Appear as determinants of change									
	Very often		Often		Sometimes		Very rare		Never	
Changing interests of owners	44	25%	47	27%	35	20%	22	13%	27	15%
High labor turnover	27	15%	88	50%	20	11%	26	15%	14	8%
Newcomers in the company	7	4%	9	5%	21	12%	15	9%	123	70%
Creative potential of employees	25	14%	38	22%	46	26%	39	22%	27	15%
New ideas of senior managers	94	54%	46	26%	25	14%	7	4%	3	2%
New ideas of middle and lower managers	21	12%	34	19%	73	42%	36	21%	11	6%
Changes imposed y the company life cycle	35	20%	38	22%	37	21%	39	22%	26	15%
Liquidity crises and/or success	53	30%	42	24%	32	18%	26	15%	22	13%

Strategy and company policies	31	18%	25	14%	21	12%	57	33%	41	23%
Psychological conflicts between different categories of company internal stakeholders	35	20%	38	22%	41	23%	34	19%	27	15%

Source: own research

Crisis is a very powerful catalyst for change, as a mitigating factor we analyzed depending on the level of drama: the crisis of liquidity, success crisis and the strategic crisis [Sabu, G.,2000]. Considering the urgency of this factor, organizations included in the questionnaire answered: for 30% of them was a common determinant for 24% - sometimes (in certain periods), from 13% - very rarely. With a higher manifestation of the economic crisis, many companies found themselves forced assessed the danger, then some of them out of the crisis, while others were exposed to this danger, the crisis back again in mid 2011. The data obtained allow us to conclude that the danger it brings a present or potential crisis even if there is such dramatic nuance that the solvency crisis, yet it is frequently determined and considered by many organizations. Often, errors made in trying to get out of a crisis conditional on a chain reaction that can hide new problems and dangers. Conflicts as a internal catalyst, can be both constructive and destructive with repercussions on organization activities, depending on the size of the actors involved in it because the more influential on changes.

Spectrum of conflicting subjects can be very varied: the conflict between management and employees and between organization subdivisions, conflicts between owners and company employees, between company management and owners, between insiders and outsiders, between majority and minority shareholders, etc.. The fact that these conflicts are not resolved, even more neglected, is a big mistake, because they are only symptoms of deeper and more important issues. Organizational changes, by their nature, require domestic energy consumption and mobilization efforts of all members of the organization, but a series of conflicts that arise during the process, wasting much needed energy to achieve change. Must not forget that reduces dynamic power struggle conflict any organization that is at times when you need to take quick decisions and not to solve conflicts arising. Conflicts between founders: 20% of respondents stated that they determine the frequency, 20% - sometimes 19% - rarely, and 15% - often claim that was not the determining role ever (have a single owner or two who agree). In those organizations where the shares are dispersed, the likelihood of conflict is high, shareholders are numerous and different interests and therefore are not interested in measures that would increase the company's long-term effectiveness. Trying to formulate an explanation of the answers obtained, we note that, in our opinion:

- Decision to carry out major changes in the conflict is born, but can be stopped or delayed in time by a conflict between founders;
- The organization's ownership dilution is higher, the likelihood of conflict between them is higher (especially if they have antagonistic interests: e.g. profit is distributed on dividends or invested);
- Conflicts frequently have repercussions on the management team, resulting in layoffs, promotions, hiring, etc.

Another catalyst is the fluctuation of domestic employees: is common in many organizations in the context of compliance change was noted in 15% of the organizations investigated, 50% - often showing the importance attached to this social phenomenon, namely interest to its magnitude. With reference to lower level managers and workers respondents noted that they have a minor role in initiating new ideas, the situation is explained by passivity, indifference and their lack of motivation.

c. Areas affected by change

Table 4

Areas affected by change	Changes frequency									
	Very often		Often		Sometimes		Very rare		Never	
Working technology (machinery, equipment, etc...)	35	20%	34	19%	38	22%	35	20%	33	19%

Products / services (modernized, updated etc.)	53	30%	43	25%	45	26%	32	18%	2	1%
Working methods	36	21%	31	18%	27	15%	35	20%	46	26%
Human resources (increase / decrease of employee's number, career management, motivation, etc...)	54	31%	32	18%	31	18%	37	21%	21	12%
Strategy and company long-term objectives	13	7%	45	26%	49	28%	42	24%	26	15%
Organizational structure (increase / decrease the number of hierarchical levels, changes in formal relations of procedural and structural organization, etc..)	44	25%	31	18%	41	23%	33	19%	26	15%

Source: own research

The extent to which **technology** has been affected by the change can be seen from the following distribution of responses: 20% - very often, 19% - often 22% - sometimes, very rarely- 20% and 19% - never. Possibility of changes in technology depends very much on the financial potential of the company and the urgency of this need. Among the companies included in the research group are some whose work requires frequent upgrading of equipment and technologies (production companies or construction), but not all afford to make such investments. However, the above listed group of companies with higher financial potential assigns a higher volume of financial resources for upgrading, compared with firms in trade or services sectors, where technology is not considered a priority issue.

Substantive changes are made to the **products / services** as resulting from the distribution of responses: very often-30%, 250% - often 26% - sometimes, and 18% - very rarely. The changes relate to the quality of products / services, as well as quantity. The responses of firms surveyed are relevant to the structure of the questionnaire, most companies working in the tourism, trade and services where such changes are relatively easy to perform with low costs.

Above issues are closely linked with the **working methods** used in the process of change in sample companies. Attempts to implement new systems, methods and management techniques involve differently certain changes in volume and structure of tasks and methods of achieving them because otherwise they would not have been possible for these changes to be made at a satisfactory level. Survey results show the following: 21% - have said frequent changes in this area, 18% - sometimes, very rarely- 20% and 26% - never. A question that arises in this context is whether the changes started to set the rules of behavior otherwise it automatically runs the risk of reaching the initial situation, before starting to change.

Most consistent changes in the sample analyzed refer to **human resource** concerns. In addition to staff cuts (author identified 314 persons fired in 2008-2010 period - savings generated by the change) here have included aspects of training employees. Analyzing the answers to this question we find that: 31% of respondents made frequent changes in the human resources, 18% - have held that common, more changes in the number of employees, 18% - sometimes, 21% - very rare and 12% - never. The explanation comes from the complexity of change, because when faced with resistance to change sample firms resorted to drastic measures - dismissal. Large companies usually characterized by high financial power turned to keeping employees, while small firms can't afford it. International crisis worst the situation, because sample companies invest incomparably less in staff training, especially during the implementation of organizational changes, without acquiring new knowledge necessary to comply the new requirements. Among the personnel receiving training with priority are top-level managers, middle managers and sometimes, selectively, are elected lower level managers and specialists from departments with a high impact on the process of change.

Organization's strategy is elaborate in order to adjust the organization to internal and external environmental constraints in which the organization operates. Proactive management strategy change leads to change to achieve strategic objectives clearly defined, but does not exclude reactive management - adaptation, survival and development in the short term, and may take the form: shifting strategy, develop a new product concept, market. The fundamental change in the concept of value again - created regional shift, forming strategic alliances.

The extent to which organizational strategy generates changes depends on: degree of macro and micro uncertainty, type of ownership of the organization, the stability of company managers, professional competence, clarity and definition of quality objectives and older strategies. So, 28% of respondents noted that only sometimes changes were made and 24% - very rare. Strategic objectives,

which are usually established, may refer to: increase revenue, reduce production costs, increase production, improve product quality, improving utilization of production capacity, etc.

Regarding the **organizational structure** as an area affected by change, reflected by changes in the place and role of each department in the organization, a new division of tasks, changes in formal and informal relationships between departments, changes in job descriptions, organization chart, rules of organization and operational decision makers of companies analyzed had the following structure of responses: 25% - said they have also made changes very often and 23% - sometimes.

d. The success of implemented changes

Whatever the nature of organizational change to be implemented it may be: conscious, planned, conducted and completed. When you find that you completed a program of change, obviously you need to specify how it was completed: how well or how badly.

Organizations analyzed have started different types of major and minor changes. As shown in Figure 5 only 10% of respondents were very positive in assessing the results of change programs, 63% having a negative view of the results change, this underlining the difficulties encountered by companies in Romania in an attempt to introduce change and suggests also that variations in the mode of action during transformational processes, of the 175 analyzed organizations (and others) can be crucial to the success of change operations. It would be good to note that there is a big difference between a mediocre and a final successful outcome, as confounding factors for companies in Romania: the lack of incentives for the owners and management team errors in managing the change process, poor management, superficially optimistic scenarios of the future, lack of change in organizational culture.

Table 5

Variants	Each time	Often	Sometimes	Very rare	Never
Respondents	17	14	33	111	-
%	10%	8%	19%	63%	-

Source: own research

e. Association of change on employees categories

Table 6

Association	Employees categories			
	Senior managers (%)	Mid- level managers (%)	Lower level managers (%)	Company employees (%)
Danger (more negative aspects)	37	40	56	58
Opportunity (more positive aspects)	63	60	44	42

Source: own research

If you generalize, we can say that by their very nature, people actually do not like change, but would be a mistake not to add that, at the same time, in particular, everyone has different reactions depending on age, personality and circumstances. This is required to specify and what we like or do not like change, the obvious negative reaction when we lost one of enthusiasm when change means opportunity.

Any process of change from something old into something new and therefore requires a waiver must be able to give, and if not, learn to quit when you deal with change. Very few people have seen changes during start changing opportunity and many of them continues the same line of conduct to date. When change conduct to personnel reductions, or required to meet a higher volume of work, that requirement was imposed on the formation of new skills and possession of new knowledge, so many have reacted negatively to a change involving actual or potential danger. In time, however, some have switched positions, while others have remained firmly on the previous positions.

Seeing an opportunity to change awareness means that you can get benefits, but will have to put some efforts. However, mere awareness of the importance of change and action not always mean to make some changes. Figure 1 see that changing in a positive light is seen by more senior managers and partly by the mid-level managers and lower level employees have seen the rest and see the change in risk priority.

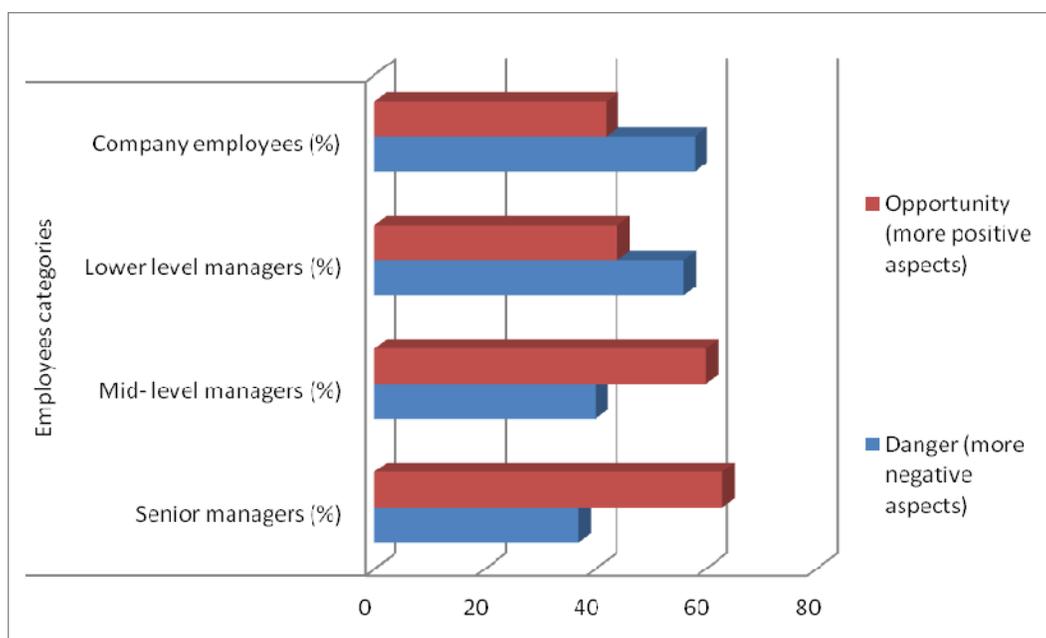


Figure 1. Association of change with danger and opportunity on employee's categories

Source: own research

In an attempt to generalize the information obtained we faced difficulties in succession to several persons in leadership positions in the period and low age-related difficulties of some of the companies investigated. Some organizations have reached a state of decline under the same manager-owner, while others led to four or five managers.

Even if the association has responded positively to change, however, in my opinion, means that in the best case, the investigated companies just think change offers opportunities, but they lack something very important- commitment, so necessary to achieve change.

Replies in an attempt to associate change show that:

- 60% of middle managers have positive reactions to change, the remaining 40% involving change with danger;
- 56% of lower level managers have negative associations with change while only 44% associated with positive actions and results;
- Employees- in 58% of cases had negative opinion regarding change, only 42% associate change with opportunities.

From the results we can easily realize how many social problems faced by reformers group (few in number) generated by the number of people with negative attitude.

e. Measurement of resistance to change on employee's categories

Resistance to change is something very specific to human being; its intensity is different for different people in different time periods. It is particularly difficult to enforce people to change when things are relatively normal, making it a little easier when it is understood that the crisis requires accepting and implementing the change.

Resistance to change is high for all categories investigated, according to the respondents "success key to a program of change being only to general manager". In my opinion, the issue of resistance to change in Romania cannot be detached from the social aspects and cannot be addressed without being seen through the past, on the one hand and future perspective on the other.

Following dialogue with people who were part of a group of reformers, we tried to formulate some conclusions:

- often, resistance to change increases in intensity from top to down;
- there is a direct dependence between age and strength, making it difficult to educate a new attitude to the elderly;
- if they have positive results on short and medium term, then resistance to change decreased and increased the number of people who look change with sympathy;

- you can't create something new without touching pride of those who are convinced that there may be something better than what they have created. Thus, very often NEW can be interpreted as a personal attack on the elderly.

From senior managers 19% were sometimes reluctant to change, even if they acknowledge its necessity, 43% - very rarely, and 3% any time (see Table 7). These reactions were formed depending on the personal ambitions, organizational and personal perspectives they can bring by change. If changes have been implemented due to resistance of top management, it was possible as consultants or some mid-level managers convinced top management to change its opinion.

Is important to note that 24% from middle manager always had a negative reaction to change, 33% - sometimes, 39% and very rare - position dependent of age, interests, personality, level of flexibility, will and enthusiasm again.

It's easily to see that as we descend to the lower echelons of the organizational management the number of those who resist is growing: 30% of people in lower echelons have always been hostile to change, and 35%-sometimes, while employees are putting resistance to change out of of 89% (continuous or discontinuous resistance).

Table 7

Categories of employees	The extent of change resistance			
	Permanently	Sometimes	Very rare	Never
Senior managers	34	59	76	6
Mid- level managers	42	58	68	7
Lower level managers	52	62	61	0
Employees	67	89	19	0

Source: own research

f. Investigated subjects perception of the difficulties encountered in each of the stages of change

Organizational change processes involve a sequence of stages. In this research we have for evaluation, a scale (from very difficult to very easy) to change their model of management, drawing upon research conducted by K. Lewin, J. Kotter, Beckard, Lundberg etc.

Steps have been made under the theoretical analysis, presenting an overview of popular models in the literature. In the process of research directly resulted from discussion with the respondents and the response options chosen by them in the questionnaire, they confirmed that these thirteen steps (Table 8) are needed to go, but said that sometimes "jumped "over some of them or made them superficial (e.g. communication of changes proposed and motivation), which further undermined the possibility of obtaining better results.

Table 8

Stages	Evaluation scale				
	Very difficult	Difficult	I do not know / no answer	Easy	Very easy
Identification of diagnosis organization need to carry out change	46	52	2	43	32
Setting objectives and scope of the study	71	54	5	34	11
Preparation of diagnosis and training reform team	53	49	0	11	1
Data collection and identification of significant symptoms	75	65	0	18	17
Data analysis	55	68	0	45	7
Establishing weaknesses, strengths and recommendations for achieving organizational change	49	78	0	34	14
Develop plan and program of organizational change	51	58	0	39	27
Communication and motivation proposed changes	11	32	0	126	6
Introduction of changes	89	65	0	21	0

Institutionalization of organizational changes made	75	79	0	21	0
Achieving quick results	89	64	0	22	0
Monitoring and evaluation of changes implemented	55	67	0	32	21

Source: own research

V. Conclusions and future directions of change in Romanian companies

The research conducted aims, among others objective, to emphasize a number of future directions applicable to change management based on previous experiences of entrepreneurs and managers. The most important concern:

1. Reconsider to a larger extent (by managers and other staff) of the role of change management on functionality and development of the company

Current business environment is characterized by increased dynamism, the situation tends to increase phenomenon as globalization intensifies, the unprecedented development of information technology and telecommunications and increasingly free movement of resources of any kind. In the research conducted we showed that there was still a lack of knowledge of the concept of change, its forms of expression and the role that it fulfils the company, items highlighted during the interviews and questionnaires organized. In this sense it requires better training of managers by attending various training programs and individual study, a number of topics that also include aspects of human resources and, in particular, the organizational culture. Notification impact of organizational changes on firm performance can be promoted through the development of diagnostic tests, as part of research to focus on the correlation between organizational change and firm performance.

2. Is important that managers approach organizational change as a method to influence attitudes and behaviours exhibited by the staff organization

Organizations create certain mechanisms whose function is determined by the validation results which they produce. Those that survive over time are transmitted to newer employees as a standard to interact with those around them. For managers to be successful in using these mechanisms is important to demonstrate that they fall under accepted rules of conduct, or that need to be promoted within it.

3. Increased staff motivation in the process of change

An important aspect revealed by research is that we should not lose sight of that in any organization, change is a social construction. It highlights certain expectations from employees, show staff how to shape their business environment around him to ensure survival and overall development of the community concerned.

4. Conduct organizational change process based on an action plan and programs well structured.

Is necessary a complex approach of organizational change process in order to obtain success. In this respect it is advisable to establish some very clear objectives, modalities of implementation of changes, resources, deadlines and interim executive and primary responsibility, organizational subdivisions involved, resources, etc.

5. Organize of professional training courses which include separate training modules in organizational change.

The phenomenon of globalization, free movement of resources across borders, development of information technologies, telecommunications, imperative to know, first, of their organizational characteristics, as well as consideration of specific of other persons or entities in different geographical areas.

6. The use of specialized consultants to implement organizational changes

The change process involves activities time-consuming for staff of an organization, particularly for senior management. These activities can be realized by teams of specialists from the company analyzed, but there is great danger that team members can be so used to a few things that do not notice them or exaggerate their importance on research results and thus be erroneous. Specialists in change are neutral and less affected by internal influences of the firm, so that results obtained through their involvement shows a much higher degree of realism, and their authority is likely to provide guarantees for the personnel involved at the analysis and organizational change processes.

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A HYBRID MODEL FOR THE ASSEMENT OF THE ORGANIZATIONAL CULTURE AT COMPANY LEVEL, ADAPTED TO THE ROMANIAN BUSINESS ENVIRONMENT

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Abstract: *The study aims to present a hybrid, complex model to assess the organizational culture of a company, by taking into consideration the influence of societal and organizational values, a tool better adapted to the Romanian business environment. The assessment instrument has to be able to determine the employee's societal values and the organizational culture of the company providing the link between those behaviours and attitudes which increase the social and economic performance of the organization. The results have to highlight how the difference of perception between peoples' values and behaviours influences the performance of the organization.*

Keywords: organizational behaviors, organizational culture and climate, societal values, organizational culture assessment instruments.

JEL classification: A13, D23, M14

1. Introduction

Research conducted worldwide show that there are cultural patterns specific to each nation. These cultural patterns are determined by history, culture, education, but also by religion or beliefs and will be reflected in thinking and acting of people, stressing their perceptions on the values of the society they belong to. (Hofstede, 2001). Gerry Johnson believes that "history, religion and even the climate can explain these differences" (G. Johnson, 2008, p. 224).

Studies conducted by different worldwide research project highlighted differences of perception between peoples' societal values, regarding the importance that people grants to work, leisure, family, social status, etc. Some patterns were identified and allow us to define a series of cultural dimensions that characterize individual companies. These cultural dimensions are related to: the degree of accepting inequality among people, aversion or tolerance to situations of uncertainty, the existence of differences between male and female roles in society, role of the individual within the group where he/she belongs, the degree to which society rewards collective action and reallocation of resources, the perception of present and future.

Professor Geert Hofstede gives us an explanation in his book "Software of the Mind - Management of multicultural structures" (1996): "Each individual is the bearer of patterns of thinking, feelings and actions acquired during his lifetime. Many of them have been acquired during childhood, when the individual is able to learn and assimilate. [...] Because some thinking pattern were deeply embedded in a person's mind, learning something different is heavier than their initial learning" (translation from Romanian edition, Hofstede G. 1996, p. 20).

In this article we intend to present the theoretical framework of a new tool for assessing the organizational culture of a company, an instrument better adapted to the Romanian business and social environment, by measuring simultaneously the individual cultural values modeled by the society that he belongs to and the cultural values modeled by the company where he is working. Such a model will provide an easy understanding of societal values' influence on organizational culture of the company, and of the discreet way in which organizational culture positively or negatively affects employee performance and, ultimately, the company itself.

2. Characteristics of organizational culture in Romania

2.1. At Society level

The GLOBE research (Global Leadership and Organizational Behavior Effectiveness) was a sophisticated project at global scale, which involved considerable human and material forces. The project lasted 10 years and included 62 companies, aiming to measure the nine so-called fundamental attributes or dimensions of organizational culture, and then evaluate how they shape the leadership in analyzed companies (Bibu N., Brancu L., 2008). The results grouped the countries in ten "clusters", based on cultural proximity. The following clusters were identified: British Europe, Eastern Europe, German Europe, Latin Europe, Northern Europe, Latin America, Sub-Saharan Africa, Middle East, South Asia and Confucian Asia (Grove, 2005).

Regarding the space that we are interested of, namely the European continent, GLOBE study results show that, in terms of organizational culture, Europe can be cut into two areas: the Northern area, which includes states that are above an imaginary line joining the UK and Austria and Southern area, which includes the entire South of the continent, from Portugal to Georgia, including Central and Eastern European countries in this subspace. (House, R. J. and others, 2004)

A significant difference compared to Hofstede model for example, is that each of these dimensions was measured in two ways: how is the society at a certain moment in time (called "societal practices" aspect by GLOBE scientists) and how the society wishes to be like (called "societal values" aspect by GLOBE researchers). Research conducted in different countries showed that the most difficult to change is societal culture, stressing the obvious differences between the values that society seeks and the current, real values of society at a certain moment.

Thus, those studies showed that the Romanian society tolerates unequal distribution of power easily, is rather collectivist, and encourages individualism and aggressive attitude in social relationships, with male and female values that interpenetrate and with a high level of tolerance leading to uncertainty, great resistance to change and avoiding risk by non taking responsibilities. In terms of orientation, the Romanian society is poorly oriented towards future and mainly focused on present time rather than the future, on short or medium term rather than long term. Regarding indulgence versus restraint, Romania is characterized by low to medium degree of indulgence, which shows that Romanians allocated, often constrained by the need to meet security needs, more work and less time for leisure. As regards the last indicator, Monumentalism, Romania is characterized by average scores, showing flexibility and a certain inclination towards modesty.

It is also worth noting that significant differences in societal values are found even in different regions of Romania (Neculăesei A. and others, 2008), which can be explained knowing the way in which the three provinces have developed in time. Also, if we continue segmentation, one can see that there are differences within the same region between village and city, between individuals with different degrees of education or training, etc..

This last remark leads us to claim that within each company there is a sui generis mix of individual organizational culture, influenced blend of education at home and at school, nationality, grade and type of training, the career paths of each individual.

These differences of organizational culture at society level are translated at the level of organization in a cultural conditioning of values, attitudes, perceptions, behaviors and rules specific to each individual. Furthermore, over these societal cultural differences overlap each individual characteristic values (regional specificities, education, training, experience, etc.) and values and norms imposed to the organization by its leaders. The result of these interactions is a sui generis mixture, specific to each organization, of values, beliefs, attitudes, norms and rules, rituals and symbols that form the organizational culture. Thus we can explain why an organization's culture differs from other similar culture in terms of industry, ethnic composition of employees, size of turnover, number of employees, training them, etc..

2.2. At organization level

Each company is a social group by itself, with its own values derived from both the mission and vision of stakeholders, and the interactions among employees. Thus, each company will have an organizational culture driven both by leaders and employees. Education at home and at school, geographic area, urban-rural differences, previous work experience, age, etc., are all factors that determine individual variations in organizational culture. These differences, sometimes major ones, other times relatively minor, ultimately modulate the organizational culture of each company. All

these values acquired or learned during lifetime, shape the individual behaviors and further the behaviors of the organization. (Nastase, 2004)

In the international literature, there are described several tools for evaluating organizational culture, but they are focused on organizational culture at society level (Hofstede, GLOBE, ETC.), or organizational culture at company level (Human Synergistics OIC, Denison, OCAI, etc.). According to research conducted by Human Synergistics in Romania, the organizations culture in our country is dominated by the Aggressive-Defensive styles, mainly Competition and Power.

Regarding secondary dominations, we note the orientation towards Constructive style, especially, Self-actualizing and Achievement styles, as well as passive defensive styles such as Dependent and Avoidance orientation.

In our opinion, these results can be explained by the influence of cultural features at society level on the culture of the organization. We appreciate that high scores for dependent styles found in many Romanian companies are caused by the influence of high power distance traits, a cultural dimension specific to Romanian society.

Regarding negative orientations, we note the effects determined by the secondary dominant orientation such as fight power and internal competition over resources. These traits determine a hierarchical and non-participating organization and a structure that is influenced by the positions occupied by employees and their status. In such an organization decisions are taken centrally and the fight power is a common behavior for achieving higher positions and status. The competitiveness of the company is negatively affected and employees are determined to do just what they are told and check every decision with their superiors. The performance is diminished by the lack of individual initiative, spontaneity, flexibility and taking necessary decisions in due time. These organizations, while rewarding success (the influence of constructive styles, as well as orientation towards competitiveness), penalize mistakes more than necessary, which causes employees to transfer their responsibilities to others. Also, in these organizations employees are rewarded for competition between themselves. People are working in a "win-lose" environment and consider that in order to be noticed it is better to work (rather) against their colleagues than together.

We noted that regardless of the size of the organization, its turnover, field of activity, or human resources capabilities, there is a certain pattern of behavior and attitudes of the organizations that we find, in varying proportions, within all companies in a given society. Unlike the internationally ideal culture, where constructive styles are dominant, in the case of Romanian companies the ideal organizational culture is a balance of constructive and aggressive defensive style (with higher scores for the opposition, competitive and power orientations) and passive aggressive styles (with higher scores for dependent orientation). In our opinion, these differences regarding the organizational culture of Romanian companies determine different behaviors, perceptions and attitudes of the Romanian employees. These differences can be explained by taking into account the influence of the societal values in modeling the organization culture at company level.

For this reason, a full analysis of organizational culture at company level must determine all these influences that shape the organizational culture of each individual, based on the values of the society in which the respective individual was raised and educated and reaching to the values of the company where he operates. (Cercel, 2011)

In our opinion, in the case of Romania there are some societal values whose features play an important role in managing employee performance and building an organizational culture focused on performance. These are: distance to power, masculine vs. feminine values, degree of individualism and, respectively, tolerance to uncertainty.

A high index of distance to power determines a poor communication within the organization, withholding information, finding subterfuge in the procedures.

A high degree of tolerance to uncertainty determines aversion towards the structures, rules, clear norms and procedures, staff always looking to avoid them. A typical Romanian employee feels comfortable in situations of uncertainty, "is resourceful," refuses to take responsibility thus not being sanctioned, formally respects hierarchy, but informally applies the principle "say as the boss says and do as you like".

Although masculinity index vs. femininity is not directly associated with economic and financial performance of the organization, there are indirect influences. A high index value for feminine values contribute to increasing employees satisfaction, by improving the workplace climate and organization's involvement in CSR projects and therefore a high degree of motivation and loyalty,

while a high index of masculinity is associated with rewarding results, recognition of merit, challenge and competition.

Also, a high degree of collectivism, Romanians' strong attachment to the group to which they belong (family in the broad sense) leads to a weak connection with the organization, lack of loyalty and responsibility. Experimental studies have shown that rich countries consistently record high values of individualism index, collectivism being associated with rather low developed states.

We believe that for companies operating in the business environment in Romania, it is essential to quantitatively diminish the influence of these factors on the organization's culture, to encourage the establishment of a true dialogue between management and employees, in order to increase accountability of employees and to foster the development of thinking "outside the box".

3. Proposition of a hybrid model for assessing the Organizational Culture of Romanian companies

A full analysis of organizational culture at the company level must determine not only the organization's climate and staff behaviors and attitudes, but must investigate in depth, trying to highlight the societal values of all members of the organization (especially when we are in a multicultural environment). In our opinion, a complete analysis at the company level must determine all influences that shape the organizational culture of each individual, starting with the values of society in which he was raised and educated up to its company's values. Thus, we used the results obtained in research to build a hybrid, complex model, able to provide a detailed image of the organizational culture, adapted to the business environment in Romania. This model brings together societal values of employees and their organizational values.

The model that we are proposing use a bottom-up approach, respectively from organizational culture values of individuals to determine organizational culture of the whole, as a result of individual societal values and organizational behavior existing at the company level.

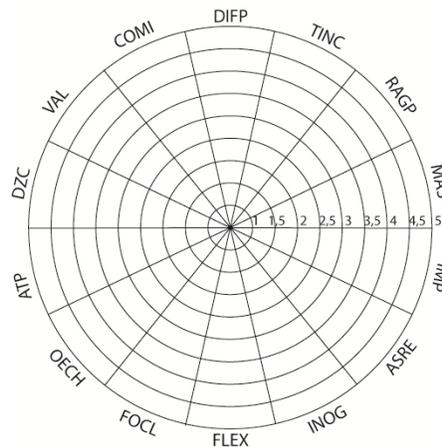
The model must be able to provide a quantitative assessment (based on survey, by interviewing a representative population, selected on the basis of probability) of employee perceptions about societal values of individuals and groups and the organizational culture of the respondents.

To meet these requirements, the model aims to measure separately societal values and indicators present in the organization culture of the organization.

Thus, the societal values that we believe are relevant for the Romanian business environment are as follows: distance to power (DIFP), tolerance to uncertainty (TINC), reporting to the group/family values (RAGP), Masculine vs. feminine values (MAS).

In terms of cultural indices, we consider that the following have the ability to capture those details relevant to the organizational climate in Romania: Assuming responsibility (ASRE), Flexibility (FLEX), Empowerment (IMP), Organizational learning (INOG), Customer orientation (FOCL), Team orientation (ORECH), Skills development (DZC), Participatory Attitude (ATP), Competitiveness (COMI), and Fundamental values (VAL).

The graphical representation of results can be built as a circumplex in such a way so as to bring societal values of employees and the climate of the organization under the same picture (Figure 1). Such an image becomes a tool that provides an overview of organizational culture, easily interpreted by managers, so that they can understand the influences of organizational culture on performance and quickly discern levers on which action must be taken within a cultural transformation process.

Figure 1: The ECORG circumplex

Within the quantitative and qualitative research we identified a number of societal values that have a direct influence on organizational culture of the Romanian employees. Although Geert Hofstede does not recommend his model for characterizing organizational culture at the individual or organization level, we believe that multiculturalism of organizations and various professional experiences of employees impose the necessity of analyzing, at this level of company, the societal values that characterize the individuals from that respective company. Such an analysis allows, in addition to assessing the culture traits at the organization level, to identify certain specific societal values that shape behaviors in the whole group.

Taking in consideration all the results above, we proposed a new instrument – that we called ECORG (Evaluation of the Organizational Culture), a hybrid organizational culture assessment model, which puts together the analysis of societal values and evaluation of the organizational values of employees.

Thus, the ECORG model attempts, through 14 indexes, to assess the organizational culture of the respondents by using four indexes to quantify their societal values and ten indexes to quantify their organizational values. The 14 indexes were inspired from Hofstede model (regarding the societal values) and partly from Denison and Human Synergistics model (concerning the organizational values), to which we added our own indexes (Participatory Attitude, Assuming Responsibilities and Flexibility). Also, following discussions in focus groups we reduced to four the number of statements which determine each index. Thus, we believe that the indexes proposed by the ECORG model have borrowed only the name of the above mentioned models – the questionnaire, the statements necessary to determine each index and their numerical formula, are the researcher's own contribution.

Regarding research methodology, we chose to test the model via LinkedIn web platform. The online respondents were selected from about 35 000 people across the country, with various age, gender, education and professional background, and working in organizations of different sizes and from all sectors. Also, the sample comprises both respondents who are in management positions and simple employees.

Given the research limitation (sample formed by 66 respondents), we can't define a model benchmark. For that reason we choose to test the capability of the model to describe the organizational culture by analysing the data obtained through different segmentations and to compare the results to the previous studies realized for Romania (Hofstede and GLOBE for societal values and Human Synergistics for organizational values)

The results are shown in the following graphic representations:

Figure 2: The Ecorg results, segmented by gender

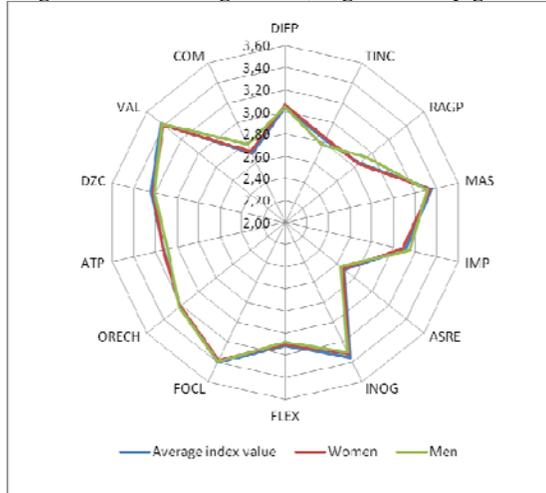
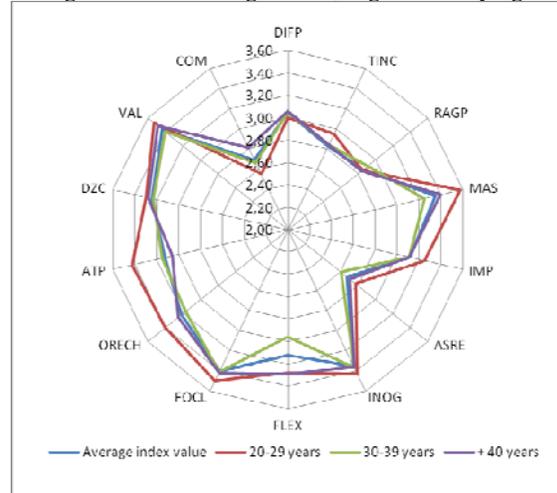


Figure 3: The Ecorg results, segmented by age



According to figure 2, we can affirm that there are no differences in terms of organizational culture between men and women. Figure 3 shows that young employees are more willing than the average to contribute to the common effort of the company. They understand probably better that the success of their organization means a better future for themselves. Also, they are more willing to work as a team compared to their older colleagues.

The figure 4 illustrates that the new employees are more enthusiastic to develop new competencies; they are more inclined to listen the organization’s customers and to take into consideration their comments. The segmentation through the position in the organization (Figure 5) shows that the managers have a more developed sense of organization’s values; they are more inclined to pay attention to the clients and more interested to develop the team work.

Figure 4: The Ecorg results, segmented by age within the same organization

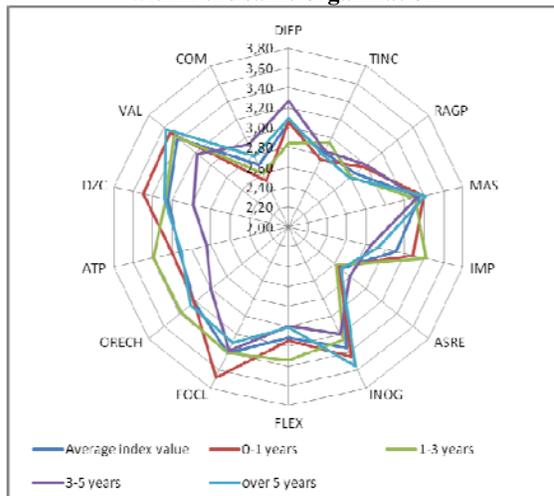


Figure 5: The Ecorg results, segmented by position within the company

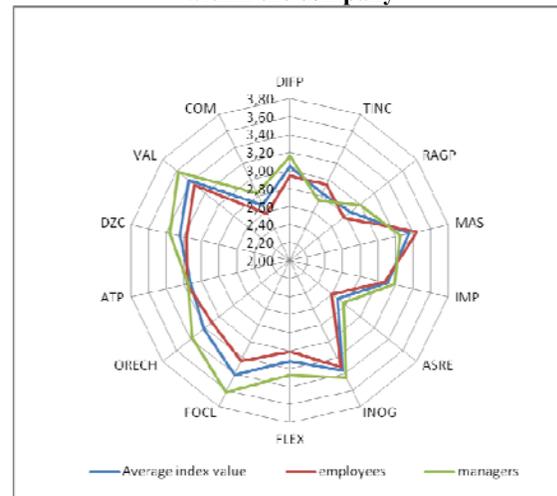
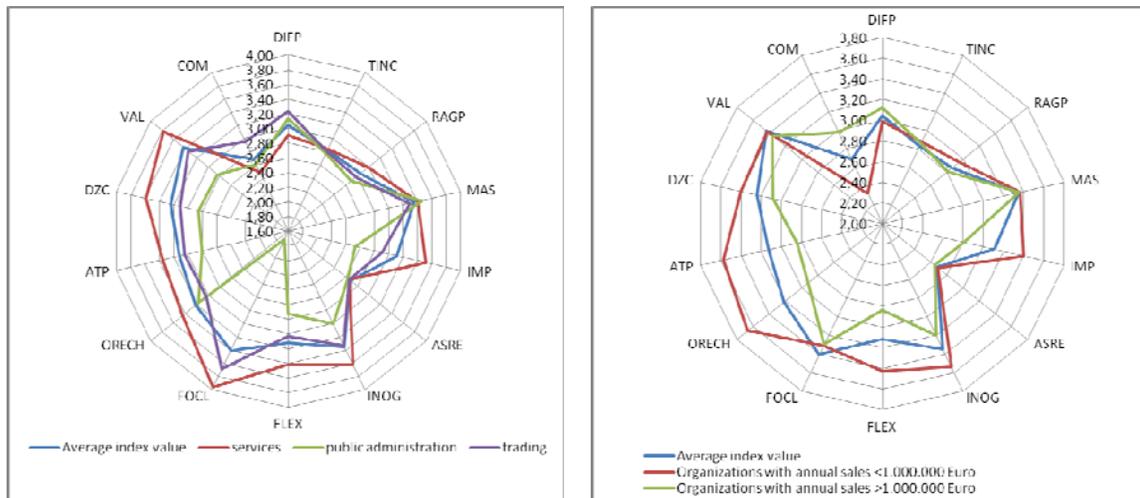


Figure 6 points up that the companies which are acting in services industry are more eager to hear their clients, while this concept is almost unknown for public organizations. Figure 7 shows that employees from small and medium companies (companies with sales lower than 1.000.000 Euro) are more flexible that the bigger ones, are more willing to promote the team work and to they are aware that the good results of their company are directly linked to their own welfare.

Figure 6: The Ecorg results, segmented by activity sector

Figure 7: The Ecorg results, segmented by annual sales



The results obtained are in line with previous research studies for Romania, mainly Hofstede, Globe and Human Synergetics. We can conclude that the proposed model is able to seize the intimate aspects of the organizational culture at company level. Nevertheless, further test should be carried on larger samples.

For the sample formed by 66 respondents we calculate, only for model illustration, some percentiles. The percentiles bellows are not relevant because of the size of the sample and its unprobabilistic selection, but it shows how the model can be used to compare a future assessment result with the results registered into the existing database.

Table 1: The Ecorg benchmark

	DIFF	TINC	RAGP	MAS	IMP	ASRE	INOG	FLEX	FOCL	OECH	ATP	DZC	VAL	COMI
Percentile 25%	2,50	2,50	2,50	3,25	2,50	2,50	3,00	2,56	2,75	2,50	2,56	3,00	2,81	2,25
Percentile 50%	3	2,75	3	3,25	3,25	2,75	3,5	3,25	3,75	3,25	3,25	3,25	3,5	2,75
Percentile 75%	3,43	3,19	3,25	3,5	3,75	3	3,75	3,75	4	3,75	3,69	3,94	4	3,19

4. Conclusions

We think that the ECORG tool provides more information to a manager about the organizational culture of the assessed company, allowing the measurement of employees' organizational values, or otherwise verify the consistency between the vision required by its leaders and the organizational culture of its employees, and the societal values of individuals in the organization. This way, the ECORG circumplex allows us to anticipate the influence of societal values of employees on organizational culture or on a future process of cultural transformation.

In our opinion, the results obtained during the test phase are promising, the tool was able to capture the societal characteristics of Romanian employees, consistent with the results of scientific studies conducted using Hofstede and GLOBE models, and characteristics of the culture at organization level, highlighted within our research using Denison and Human Synergetics models.

To conclude, the test of the ECORG tool on a sample of 66 respondents gave conclusive results on the evaluation of organizational culture. Given the research limitations (small sample sizes and non-probabilistic selection of respondents), we cannot state that these results validate the proposed instrument, however it was a first step, promising for further research by increasing the sample and ensure its statistical representation across the country. Also, increasing the sample will allow us to better define the benchmark of the model, which will mainly include Romanian companies.

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DIGITAL DEVELOPMENT AND QUALITY OF LIFE IN ROMANIA: A NUMERICAL CHARACTERIZATION

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Abstract: *Starting from the idea that any economic growth must also generate better living conditions, a range of statistical indicators were developed for evaluate standard of living and quality of life. As the Gross Domestic Product (GDP) is the most recognized indicator, we have tackled its evolution, in spite of the recent criticism in the literature around GDP usage that is made by researchers focusing on finding more complex indicators. These indicators should accurately reflect changes in the standard of living (and especially in the quality of life) generated by expansion of a new kind of economy called digital economy. In this study, it is conducted an exploratory research using historical data for seven representative indicators to characterize the digital development and the resulting expression on the quality of life of a country. The statistical characterization uses dispersion indicators within a numerical range, using quantiles computations in deciles. We have pointed out the current Romania's rank in a decile intervals and the place on the performance profile (and the advance or decline of this position when compared with 2000); also interesting is highlighting the convergence performance in what regards the analyzed indicators and the distribution of values of some countries of interest (obviously, Romania is of primary interest) in data sets of several indicator expressing the digital development.*

Key words: quality of life, standard of living, deciles, digital economy, Romania

JEL classification: C22, I39

1. Introduction

Since the 1960s, the theme of life quality and living standards has known a rapidly development as a reaction to the crisis of abundance in developed countries. Starting from the idea that any growth must also generate better living conditions, not only to an end by itself, a range of methods and indicators of living standards were developed.

The concept of *quality of life* can refer both to the overall evaluation of life and to evaluate various conditions or spheres of life: quality of work, quality of the environment, quality of interpersonal relationships, quality of family life and others. The concept of life quality is not identical to the standard of living despite having some common elements. *Standard of living* is the material welfare level of an individual or family. In economic analysis is considered that the standard of living is determined by the quantities of goods and services consumed (including time and space). Terms like economic welfare level, of utility or real income are used with the same meaning. To measure living standards, most commonly used is the Gross Domestic Product (GDP) per capita.

Criticism of GDP made researches focus on finding more complex indicators which could accurately reflect changes in the standard of living (and especially of life quality) by expansion of a new kind of economy called *digital economy*.

Starting in 1970-1980, when information technology began to be used in more applications, discussions and debates have focused on measuring the impact of ICT on economic growth and life quality, on the "*information gaps*" between developed and developing countries, on inequalities regarding availability of new information technologies at both the individual and macro level, between countries and regions (digital divide), on evaluation of digital skills, etc..

In this context, the paper aims to examine Romania's position in relation to the countries of the world both in terms of a number of indicators support to the development of digital economy and life quality.

2. Literature review

Measuring the digital development and its impact on life quality or standard of living has become an important research topic in recent years. International institutions, forums and specialty bodies elaborate reports using various indicators and methods of measurement and try to continuously improve them to increase the efficiency and effectiveness in evaluation. There are many articles in professional journals, project reports, books and websites describing various aspects of measuring ICT impact on living standards, positive and negative respectively, but also methodologies applied to measure these effects, such as energy consumption, transport, pollution, waste, materials efficiency, etc.

The problem of measuring the impact has several aspects. The first one concerns the correct sizing of the digital economy, respectively that of its performance.

Although the GDP was designed to measure economic growth, it is increasingly used as a measure of national welfare. Previous research indicates that, beyond a certain threshold, GDP growth may have a negative effect on welfare. A recent report (Stiglitz et al, 2008) emphasizes the growing need for alternative measures of progress, appropriate for a sustainable economy, and highlights the options to better reflect current national welfare. New researches suggest four alternative measures of progress and quality of life (World Bank, 2008; UNDP, 1990; UNDP, 2010; United Nations, 2011):

- *Indices that correct GDP* – an example is *Genuine Progress Indicator - GPI* (or former *Index of Sustainable Economic Welfare - ISEW*).
- *Indices that do not use GDP* - instead of measuring economic activity, they measure the environmental, social and human capital. An example is the *EF - Ecological Footprint*, which is used to evaluate whether an economy uses environmental assets rather than ecosystems that can regenerate them (Rees, 1992) and *Gross National Happiness - GNH* created in Buthan or *European Quality of Life Survey*, a survey developed by Eurofound on European life quality, first published in 2005 and appearing every four years.
- *Composite indexes, including GDP* - they combine GDP, or variants of GDP, with environmental and social indicators. An example is the *Human Development Index-HDI* (which combines life expectancy, literacy, education and access to a decent living), *Sustainable Development Index - SDI*, developed by the United Nations Sustainable Development Commission, and *Happy Planet Index - HPI*, an index of human impact and environmental welfare, introduced by the New Economics Foundation (NEF) in 2006.
- *Set of indicators* - they do not try to combine different indexes, but report a number of indicators and then guides the user to interpret them. An example is "UN Millennium Development Goals and Indicators" developed by the United Nations (2011), which defines 48 indicators to measure progress in achieving the eight goals set.

The big number of indicators and indexes does not definitely solve the problem of economic development assessment and it is considered that they do not answer the current needs generated by the exponential growth of the digital economy.

Regarding evaluation of the digital economy, we can mention a number of individual or composite indicators (World Bank, 2007; World Bank, 2011; ITU, 2011) such as: R&D and IT expenditure intensity, knowledge intellectual business services, volume of e-commerce, number of Internet and mobile users, ICT infrastructure investments, ITU Digital Opportunities Index.

Peña-López (2010) realises a qualitative analysis of the 55 different models (including composite indices) that were defined, applied and/or used, between 1995 and 2009, to describe and measure digital development in recent years. In his research the author tested the assumptions that the institutional interests and lack of data led to fragmented measuring models for digital development which determine distortions in policy formulation. On the other hand, there are numerous studies which have confirmed the positive relationship between ICT and economic growth (Bongo et al., 2005). These technologies have also been viewed by governments and international health and educational organizations and create economic opportunities for less privileged population groups (Jensen, 2007; Reisman et al., 2001).

World Bank report entitled "2006 Information and Communications for Development" also considers ICT as a crucial factor for reducing poverty.

Late beneficiaries of ICT revolution are represented by developing countries. It is estimated that if these countries would stimulate the adoption of ICT, as industrialized countries do, then they would benefit from the same technological potential as developed countries. Successful exploitation of technological potential is of paramount importance in reducing economic disparities between developed and developing countries by accelerating economic development. An report of EIU (2004) revealed a key point in obtaining a positive effect by using ICT applications for economic growth in developed countries, not in developing countries. This study highlighted the fact that significant growth can be achieved only if it is assured a minimum level of ICT penetration and usage. In other words, if there is a digital divide between developed and developing countries, then there will be considerable differences in economic development. Investment in ICT and its effective application will not necessarily lead to economic progress for developing countries. Ochieng (2000) notes that ICT strategies must be linked to provide for the poor basic needs. Also, investments in ICT may prove costly, may not bring immediate expected effects due to inconsistent market demand, resulting in an increased recovery time of the invested capital and thus a possible deepening of the public debt.

Bankole et al. (2011) investigates the impact of ICT investment (i.e. hardware, software, domestic spending and investment in telecommunications) on living standards by taking into account three indicators, namely: GDP per capita (standard of living), literacy and schooling (for education) and life expectancy (for health). The authors make a synthesis of the most important work that explores the relationship between ICT, life quality and standard of living.

Making an overview on the literature Androniceanu (2011) conclude that the authors are explaining the living standard concept depending on the perspective considered more or less important by them and, until recently, the concept has been explained based on an economic approach mainly.

The evolution of digital economy and quality of life/standard of living remains an important research topic. On the other hand, international institutions, forums and organizations issue reports on the digital economy opportunities and threats (especially ICT industries) and on sustainable development (ITU, 2008; ITU, 2009), suggest approaches to analyze the relationship between them and make recommendations to improve dialogue and cooperation.

3. Methodology of research

In this study an exploratory research is conducted using historical data on ICT development and human development. Characterization will use indicators of values dispersion within a numerical range, using quantiles computing in the form of deciles. The nine deciles divide the data series in ten equal frequency intervals of 1/10, the size of one decile being calculated with the following formula:

$$D_n = x_n + \frac{\frac{n}{10} \left(\sum_i n_i + 1 \right) - n_{cn-1}}{n_n} \cdot k \quad (1)$$

Where:

x_n is the lower limit of the decile n ;

n_{cn-1} cumulative frequency (i.e. the sum of the previous frequencies) to the interval n ;

n_n is the frequency of interval n ;

k is the size of the range where decile D_n is situated.

The place of one decile D_j is given by the following relation;

$$I_{D_j} = \frac{j}{10} \left(\sum_{i=1}^k n_i + 1 \right), j = 1, \dots, 9 \quad (2)$$

What we aim to emphasize is Romania's current positioning in a top decile of the performance profile (and the advance or decline of this position when compared with 2000); also interesting is highlighting the convergence performances in what regards the analyzed indicators and the distribution of values of some countries of interest (obviously, Romania is of primary interest) in data sets of an indicator of the digital economy.

Table 1: Description of the digital economy indicators (including year of collection and the source)

Index name - abbreviated form	Index name and year	Characterization and source
Number of INTERNET users (per 100 people)	Internet users (per 100 people) (2010)	Internet users are people with access to the worldwide network. <i>Sources:</i> International Telecommunication Union, World Telecommunication/ICT Development Report and database, and World Bank estimates.
Number of mobile subscriptions (per 100 people)	Mobile cellular subscriptions (per 100 people) (2010)	Mobile cellular telephone subscriptions are subscriptions to a public mobile telephone service using cellular technology, which provide access to the public switched telephone network. Post-paid and prepaid subscriptions are included. <i>Sources:</i> International Telecommunication Union, World Telecommunication/ICT. Development Report and database, and World Bank estimates.
Support indicators of the digital economy		
Adult literacy rate	Adult literacy rate (%) (2009)	Adult literacy rate is the percentage of people ages 15 and above who can, with understanding, read and write a short, simple statement on their everyday life. <i>Sources:</i> United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics. Catalog Sources World Development Indicators.
R & D expenditures (% of GDP)	Research and development expenditure (% of GDP) (2008)	Expenditures for research and development are current and capital expenditures (both public and private) on creative work undertaken systematically to increase knowledge, including knowledge of humanity, culture, and society, and the use of knowledge for new applications. R&D covers basic research, applied research, and experimental development.
Public expenditure on education (% of GDP)	Public spending on education, total (% of GDP) (2008)	Public expenditure on education consists of current and capital public expenditure on education includes government spending on educational institutions (both public and private), education administration as well as subsidies for private entities (students/households and other private entities). <i>Sources:</i> United Nations Educational, Scientific, and Cultural Organization (UNESCO) Institute for Statistics. Catalog Sources World Development Indicators
Support indicators for economic growth and quality of life		
GDP/capita (current prices USD)	GDP per capita (2010)	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. <i>Sources:</i> World Bank national accounts data, and OECD National Accounts data files.
Human development index (HDI)	HDI (Human Development Index) value (2011)	A composite index measuring average achievement in three basic dimensions of human development - a long and healthy life, knowledge and a decent standard of living. <i>Source:</i> UNDP (2011), Human Development Report 2011, Sustainability and Equity: A Better Future for All

4. Obtained results

In what follows is exemplified the statistical analysis of Romania's position in relation to a large sample size (216 states for data base indicators like WDI - World Development Indicators) and 169 for those in HDR (Human Development Report). Frequencies are calculated for the number of countries included in the limits given by the value of deciles and are calculated the values for the range of interquartile (Q3-Q1) and interdecile (D9-D1). Through the calculations carried out we aim to evaluate the restriction of the dispersion values within the two intervals and the possible advance of Romania in terms of the difference between percentiles that characterizes the position between 2001 and the latest assessment.

4.1. Calculation for Number of INTERNET users

In 2010, Romania is part of the range described by the 6th decile (with a value of 36 Internet users per 100 inhabitants, together with other 21 countries) and the 7th decile (with a total of 22 countries and with an average of 45 Internet users per 100 inhabitants); Romania has a value of 40.02 mobile service users per 100 inhabitants, a position value which situates Romania better than 62.70% of the remaining countries, part of the sample of 216 countries - figure 1.

From the distribution for 2010 year, we can remark a fairly balanced distribution on the 10 intervals described by deciles, except the group of 44 countries that do not report the indicator or fall of more than 1 user/100 individuals (Table 2).

Table 2. Numerical processing to calculate deciles for *Number of INTERNET users (per 100 people)*

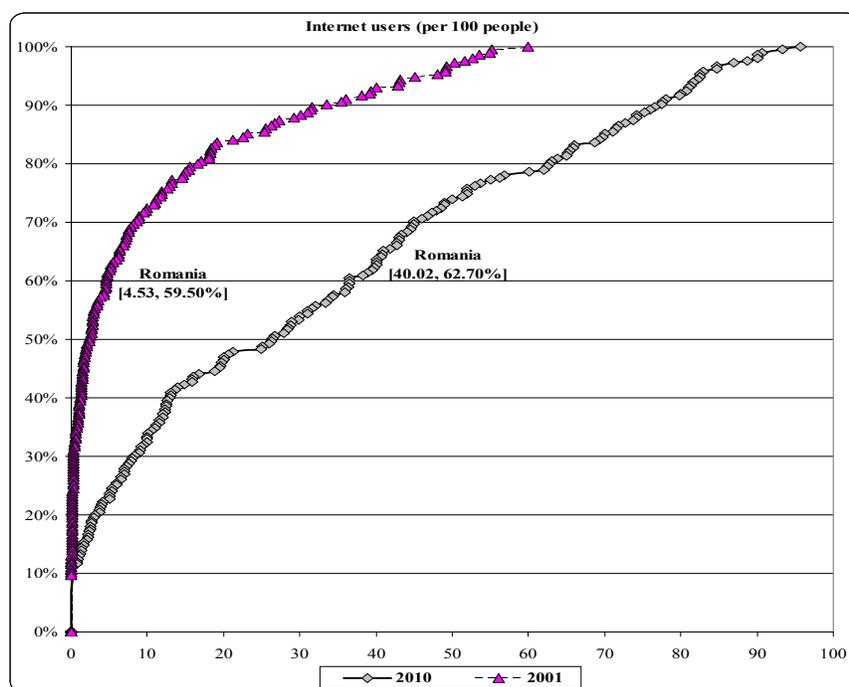
Number of deciles	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	0.00	44	44
D2	3.13	21	65
D3	8.18	22	87
D4	12.90	21	108
D5	26.39	22	130
D6	36.50	21	151
D7	44.99	22	173
D8	62.81	21	194
D9	77.04	22	216

Between 2001 and 2010, dramatic increases of the indicator over the entire sample of countries can be observed, most states (80%) increased to approximately double than the value from 2000 (D9-D1 value increased by 136%) and 50% of the countries increased by almost 300% (Q3-Q1 to 297%). Romania has been increasing in value from 4.53 Internet users per 100 people in 2000 to 40.02 in 2010 and gained 3.2% in the performance profile curve for the analyzed indicator - Table 3.

Table 3: Range between deciles, quartiles and rank of Romania for Number of INTERNET users/100 people

	2001	2010	Progress between 2000 and 2010
Interdeciles interval	32.57	77.04	With 136.53%
Interquartiles interval	11.59	46.07	With 297.49%
Median value	2.38	26.39	
Maximum value	59.98	95.64	
Position for Romania	59.50%	62.70%	3,20%

Figure 1: Representation of distribution for Number of INTERNET users (per 100 people) for 2001 and 2010



Source: Author compilation based on WDI Indicators

4.2. Calculation for Number of mobile subscriptions

Romania is part of the range described by the 7th decile (with a value of 114 users of mobile telephone services per 100 inhabitants, together with other 22 countries) and the 8th decile (with a total of 21 countries and with an average of 125 users per 100 inhabitants) - figure 2).

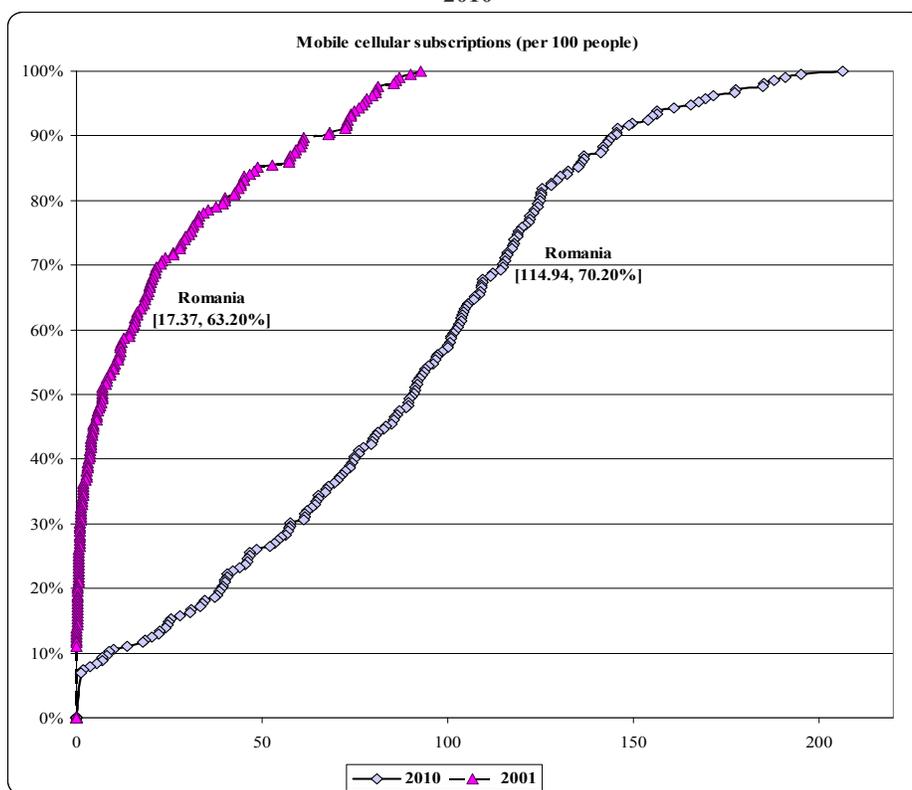
Table 4: Numerical processing to calculate deciles for *Number of mobile subscriptions (per 100 people)*

Number of decile	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	8.59	44	44
D2	39.21	21	65
D3	57.68	22	87
D4	74.93	21	108
D5	90.57	22	130
D6	102.18	21	151
D7	114.93	22	173
D8	124.80	21	194
D9	144.73	22	216

Source: Author compilation based on WDI Indicators

From the value of 17.37 in 2000, in 2010 Romania registered a value which situates it better than 70.20% of the remaining countries that are part of the sample of 216 countries. From the study of actual distribution, there is a fairly balanced distribution on the 10 intervals described by deciles.

Figure 2: Representation of distribution for Number of mobile subscriptions (per 100 people) in 2001 - 2010



Source: Author compilation based on WDI Indicators

Between 2001 and 2010, dramatic increases of the indicator over the entire sample of countries can be observed, most states (80%) increased by 110.74% from 2000 (value D9-D1) and 50% of the countries increased by almost 142% (value range (Q3-Q1). Romania won 7% in the performance profile curve for the analyzed indicator - table 5.

Table 5: Intervals and positioning for Number of mobile subscriptions (per 100 people)

	2001	2010
Interdeciles interval	64.60	136.14
Interquartiles interval	29.83	72.40
Position for Romania	63.20%	70.20%
Progress		7%

4.3. Support indicators for the digital economy

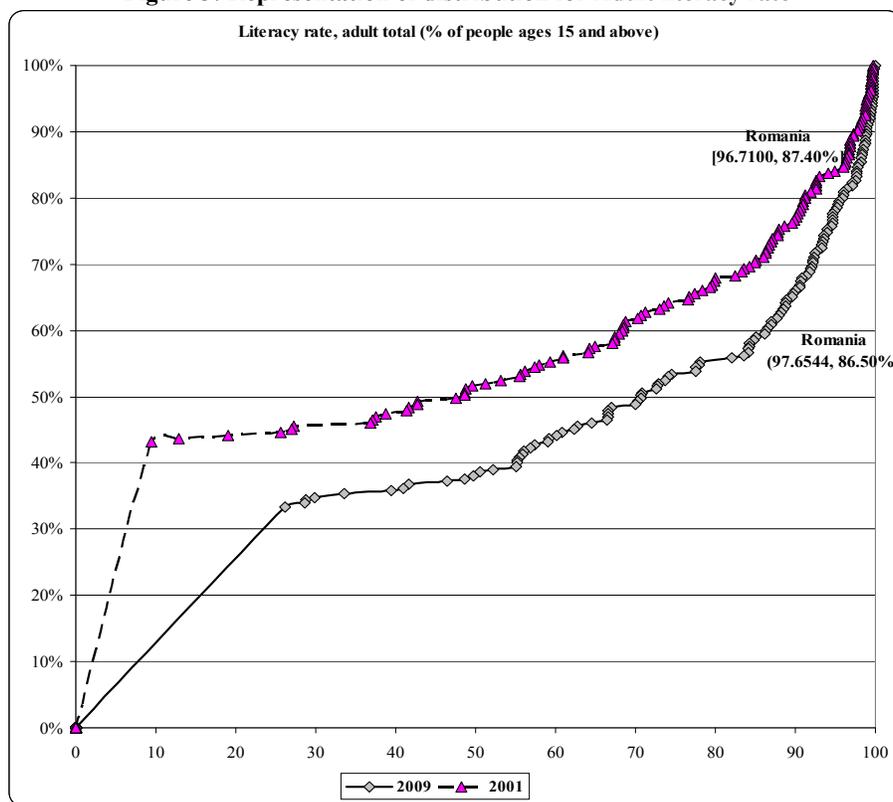
Calculation for the adult literacy rate

Table 6: Numerical processing to calculate deciles for *Adult literacy rate*

Number of decile	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	0.00	72	72
D2	0.00	0	72
D3	0.00	15	87
D4	55.23	21	108
D5	70.67	22	130
D6	86.36	21	151
D7	92.11	22	173
D8	95.94	21	194
D9	98.87	22	216

Romania is part of the range described by the 8th decile (with a value of 97.65% literacy rate, along with 21 other countries) and the 9th decile (with a total of 22 countries and an average of 99%); in 2009 it recorded a literacy rate which positioned Romania better than 86.50% of the remaining countries that are part of the sample of 216 countries - figure 3.

Figure 3: Representation of distribution for Adult literacy rate



Source: Author compilation based on WDI Indicators

In the above distribution, there is a very unbalanced distribution on the 10 decile intervals, first located in the ascending order of percentage, about 60% of countries not reporting or recording data values below 55% (table 6).

Regarding progress indicator during 2001-2009 (the latest reporting year) small-scale increases of the indicator over the entire sample of countries can be observed (explained by the specific of the education indicator), most states (80%) increased by 1.34% in 2000 (value D9-D1) and 50% of the countries increased by about 6.04% (Q3-Q1 interval value). Romania lost about 1% in the performance profile for the analyzed indicator - table 7.

Table 7: Intervals and positioning for Adult literacy rate (% per 100 people)

	2001	2009
Interdeciles interval	97.53	98.87
Interquartiles interval	87.884	93.92
Position for Romania	87.40%	86.50%
Progress		-0.9%

Calculation for percentage of GDP for R&D expenditure

Romania occupies a very bad position regarding the percentage of GDP spent on research and development expenses and is part of the range described by the 7th decile (with a rate of 0.17%, with another 22 countries) and the 8th decile (with a total of 21 countries and at a rate of 0.37%); it recorded a value of 0.52% positioning it better than 79.80% of the remaining countries that are part the sample of 216 countries - figure 4. From the study of distribution, there is a very unbalanced distribution on the 10 intervals described by deciles, 112 states are in the first period due to lack of data or because of the very small values, about 50% of the countries forming the sample of 216 countries recording values below 0.17% (table 8).

Table 8: Numerical processing to calculate deciles for R&D expenditure (% of GDP)

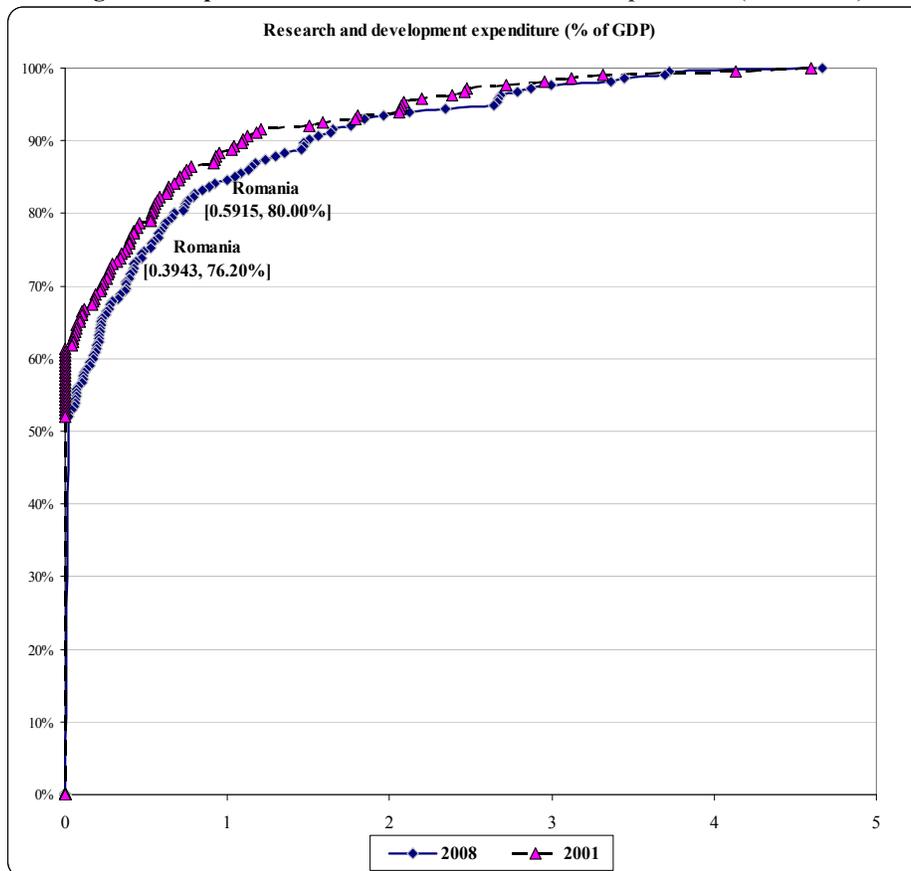
Number of decile	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	0.00	112	112
D2	0.00	0	112
D3	0.00	0	112
D4	0.00	0	112
D5	0.00	18	130
D6	0.17	21	151
D7	0.37	22	173
D8	0.67	21	194
D9	1.49	22	216

Regarding the indicator evolution over the period of 2001-2010, small-scale increases of the indicator at the entire sample of countries (explained by the specific indicator of government investment), most states (80%) increased by 0.4% to 2000 (value D9-D1) and 50% of the countries increased by about 0.12% (Q3-Q1 interval value). Romania gained about 1.80% on the performance profile curve for the analyzed indicator - Table 9.

Table 9: Intervals and positioning for R&D expenditure

	2001	2010
Interdeciles interval	1.09	1.49
Interquartiles interval	0.37203	0.4950
Position for Romania	75.80%	77.60%
Progress		1.80%

Figure 4: Representation of distribution for R&D expenditure (% of GDP)



Source: Author compilation based on WDI Indicators

Calculation of public expenditure on education

Romania occupies a very bad position and is part of the range described by the 7th decile (with a rate of 3.79%, together with other 22 countries) and the 8th decile (with a total of 21 countries and with a rate of 4.85%); it recorded a rate of 4.27% which positioned it better than 74.40% of the remaining countries that are part of the sample of 216 countries - figure 5.

From the study of distribution there is a very unbalanced distribution on the 10 intervals described by deciles, first ones located in the ascending order of percentage, about 60% of countries recording values below 2.84% (table 10).

Table 10: Numerical processing to calculate deciles for public expenditure on education (%of GDP)

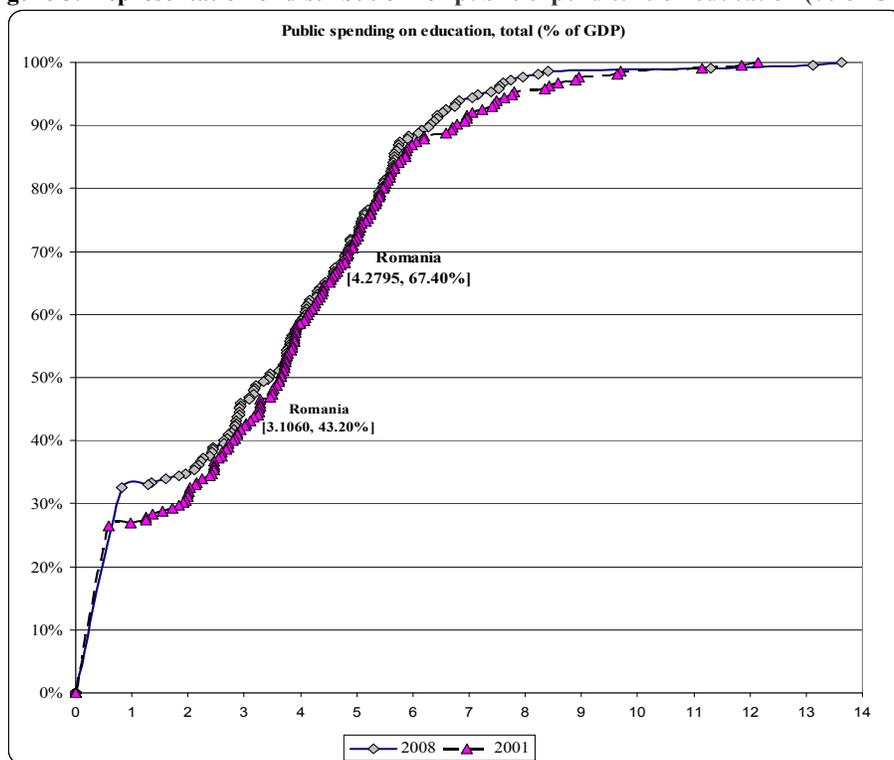
Number of deciles	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D2	0.00	70	70
D3	0.00	0	70
D4	0.00	17	87
D5	2.65	21	108
D6	3.43	22	130
D7	4.08	21	151
D8	4.83	22	173
D9	5.45	21	194

Regarding the indicator evolution over the period of 2001-2010, there are variations in diminishing, however, at a small scale of the indicator at the entire sample of countries (explained by the specificity of government investment indicator), most states (80%) decreasing with 0.45% compared to 2000 (value D9-D1) and 50% of the country increasing by about 1.49% (Q3-Q1 interval value). Romania gained significantly 19.50% on the performance profile curve for the analyzed indicator – Table 11.

Table 11: Intervals and positioning for public expenditure on education

	2001	2010
Interdeciles interval	6.74	6.29
Interquartiles interval	12.14	13.63
Position for Romania	43.20%	62.70%
Progress		19.50%

Figure 5: Representation of distribution for public expenditure on education (% of GDP)



Source: Author compilation based on WDI Indicators

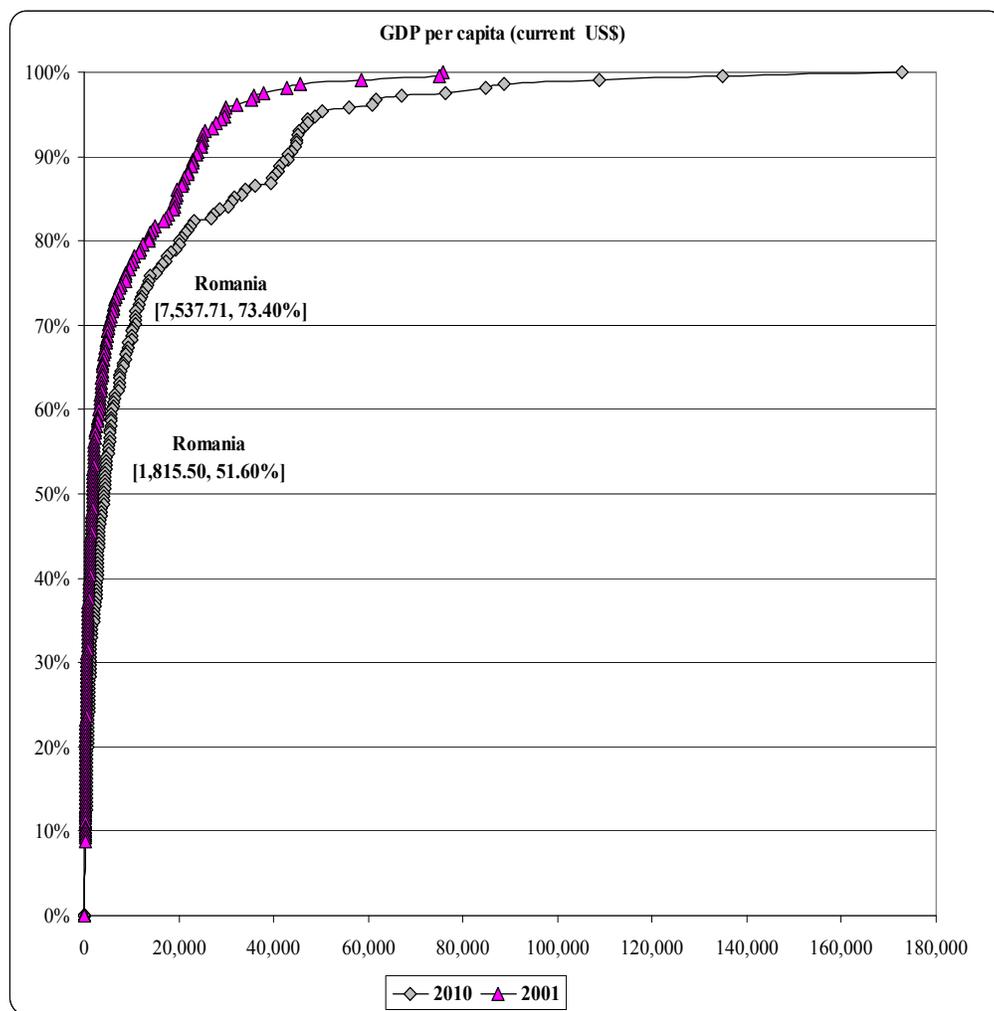
4.4. Support indicators for economic growth and quality of life
Calculation for GDP/capita

Table 12: Numerical processing to calculate deciles for GDP/capita

Number of deciles	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	285.79	44	44
D2	671.43	21	65
D3	1215.37	22	87
D4	2807.59	21	108
D5	4189.11	22	130
D6	6008.90	21	151
D7	10572.16	22	173
D8	20203.53	21	194
D9	43053.16	22	216

Romania is part of the range described by the 7th decile (with an average of 10,572 USD, along with 22 other countries) and the 8th decile (with a total of 21 countries with an average of 20,204 USD. It recorded a value of 7,531.71 USD which positioned it better than 73.41% of the remaining countries that are part of the sample of 216 countries - figure 6.

Figure 6: Representation of distribution for GDP/capita



Source: Author compilation based on WDI Indicators

From the study of value distribution for 2010, there is a fairly balanced distribution on the 10 intervals described by deciles (except the first one which covers the period for which no value is reported in 2010 or there were very small values). Regarding the indicator evolution over the period of 2001-2010, there can be observed significant increases of the indicator at the entire sample of countries, most states (80%) increasing by 19,610 USD, approx. 80% compared to 2000 (D9-D1 value) and 50% of the countries increased by nearly 66% (Q3-Q1 interval value). Romania gained significantly 21.80% on the performance profile curve for the analyzed indicat - Table 14.

Table 13: Intervals and positioning for GDP/capita

	2001	2010
Interdeciles interval	23157.11	42767.37
Interquartiles interval	7524.42	12493.88
Position for Romania	51.60%	73.40%
Progress		21.80%

Calculation for Human Development Index (HDI)

As positioning, Romania is part of the range described by the 6th decile (with an average of 0.73 with 20 other countries) and the 7th decile (with a total of 17 countries and an average of 0.77);

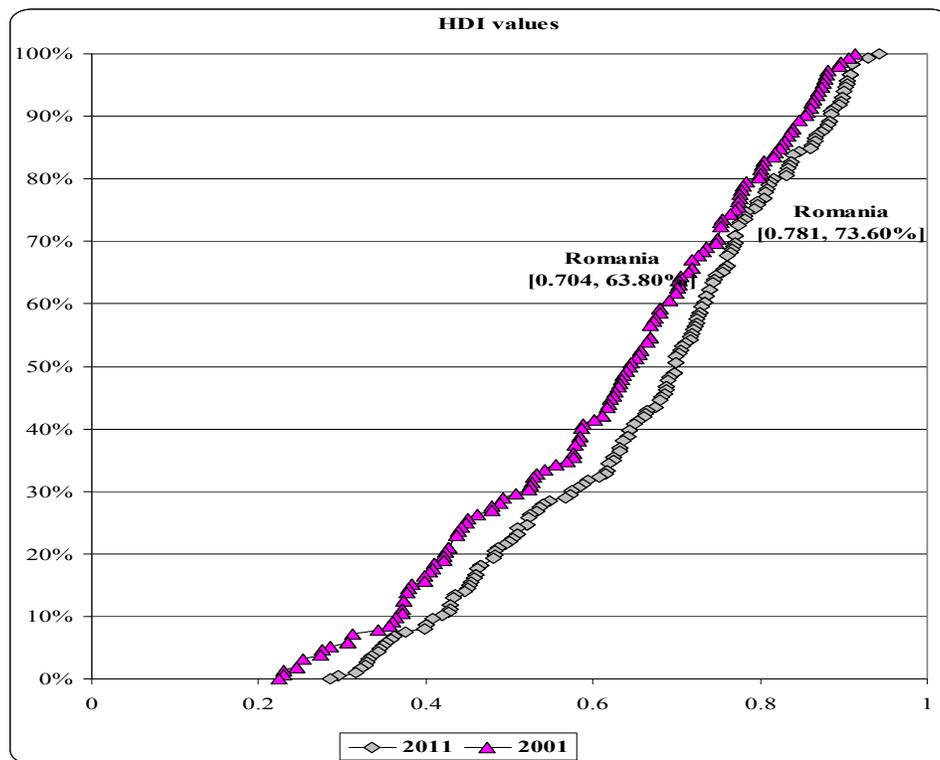
it recorded a value of 0781 which positioned it better than 73.60% of the remaining countries that are part of the sample of 169 countries - figure 7.

Table 14: Numerical processing to calculate deciles for Human Development Index in 2011

Number of decile	Value	Number of observations (relative frequency)	Cumulative number of observations (cumulative frequency)
D1	0.4152	34	34
D2	0.4822	17	51
D3	0.5738	17	68
D4	0.644	18	86
D5	0.698	16	102
D6	0.7314	16	118
D7	0.77	17	135
D8	0.8154	17	152
D9	0.8844	17	169
	0.943	169	

From the distribution, there is a fairly balanced distribution on the 10 intervals (Table 15). Between 2001 and 2010, there can be observed small decreases of the indicator at the whole sample of countries (probably explained by the fact that nature is composite and that it recorded aspects of quality of life and reflects some inertia), most states (80%) decreased with 0.08 from the index value in 2000 (value D9-D1) and 50% of countries fell by almost 0.05 (Q3-Q1 interval). Romania registered an increase of value from 4.53 Internet users per 100 people in 2000 to 40.02 in 2010 and gained 9.8% on the performance profile curve for the analyzed indicator - table 16.

Figure 7: Representation of distribution for Human Development Index



Source: Author compilation based on HDR Indicators

Table 15: Intervals and positioning for Human Development Index

	2001	2011
Interdeciles interval	0.487	0.469
Interquartiles interval	0.322	0.266
Position for Romania	63.80%	73.60%
Progress	-	9.8%

5. Conclusions

Regardless of their level of development, countries have invested and will continue to invest in ICT in the hope of obtaining long-term sustainable development. Research in this area were mainly concerned with the economic impact of ICT, few of them reflecting the impact of ICT investments on the global development objectives, as they are reflected by the concepts related to sustainable human development (for example, education, health, standard of living). Some of the works analyzing ICT investment and sustainable developments treated ICT investments as a homogeneous concept. However, ICT investments have several dimensions, such as software, hardware, telecommunication and organizational expenses. Differential impact of these investments has rarely been analyzed and when done, was considered especially the implications for economic development, not including the evidence related to telecommunications and new models of education.

In this study we aimed to emphasize Romania's current position in relation to other countries of the world and the advance or decline of this position when compared with 2000 (year of reference), for a set of representative indicators to characterize the digital development and quality of life of a country. In the period analyzed the following evolution of performance indicators for Romania was observed: GDP/capita has increased with 21.8% on the performance indicator curve, followed by the increase of education expenditure from public funds (19.5%), improved quality of life as expressed by Human Development Index (9.8%), associated to advanced in digital aspects - number of mobile subscriptions (7%) and the number of Internet users (3.2%), also, the slight increased of R&D expenditure (1.8%); the adult literacy rate is the only indicator where Romania has been reduced with about 1% on the performance profile curve.

Acknowledgements

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THE HUMAN DEVELOPMENT INDEX AND THE EVOLUTION OF THE QUALITY OF LIFE

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Abstract: *The concept of QoL can both relate to the overall assessment of life and evaluate the spheres of life: quality of work, quality of the environment, quality of interpersonal relationships and quality of family life. The human development index is aimed at showing the evolution of the living standards and includes a three-dimensional approach that covers items such as life expectancy, literacy and real per capita GDP. The proposed indicator is an attempt to develop a tool for tracking the evolution of human development, more deeply than other aggregate indicators and even more deeply than a series of statistical indicators.*

Key words: quality of life (QoL), human development, GDP

JEL classification: O15

1. Introduction

One can say that a system of indicators is performing if it allows correlating the social results with the causes on the one hand and the various related aspects of the social life on the other hand.

The systems of indicators used for analyzing the quality of life are formed differently, depending on the development of the respective country. Developed countries use a system of indicators aimed at quantifying the quality and level of investment in human capital, social security, personal security, etc. Developing countries take into consideration those systems of indicators that determine the level of poverty and welfare.

The quality of life can be analyzed at both micro and macroeconomic level.

The subject of quality of life developed rapidly in the '60s as a reaction to the abundance crisis in the developed countries. The basic idea started from the fact that economic growth should not be an aim in itself, but a means of creating better living conditions, of meeting the needs of a particular community. A series of living standard indicators have been developed for assessing the living conditions.

The main types of quality of life indicators are:

- Status indicators of the different components of human life;
- Need or aspiration indicators;
- Complex indicators resulting from relating the status to the needs;
- Perceived quality of life indicators – which determine how the members of a community assess the quality of the different components of their lives by themselves;
- Indicators of the critical symptoms of the quality of life.

Development is a preamble to improving the quality of life and includes both the material elements such as infrastructure, housing quality and the living standard in general and the spiritual elements such as education, freedom of expression and cultural freedom.

"Human development can be defined as a process of enlarging people's capacity of option. Choices can regard different areas: political freedom and participation in community life, being educated and benefitting from freedom of expression, surviving and living a healthy life or enjoying a decent standard of living" (Mahbub, 1996).

2. In what way is affected the quality of life by the human development index?

Sustainable development is a condition for the full social/human development of the future generations, while the quality of life/human welfare is the goal of all these development processes. Of course, this distinction is not always admitted when it comes to measuring: human development indicators or sustainable development indicators, just like other social indicators, are often presented together with the quality of life indices. In turn, social development indicators include quality of life

and sustainable development measures and many authors consider that they need to be focused on the results, not on the inputs into the social system (Barnett, 1988).

The human development index was first introduced in the summer of 1990. The aim was to provide an indicator of a country's level of development, which had to be more complete than the simple measurement of its national product. UNDP justified its attempt by the need to provide an informative value exceeding the strict quantitative aspects (UNPD, 2011).

The proposed indicator is an attempt to develop a simple tool for tracking the evolution of human development, much more deeply than other aggregate indicators and even more deeply than a series of statistical indicators (McGillivray; White, 2006).

In this context, the concept of human development is considered to be "a process that broadens the range of possibilities offered to the individuals", whose fundamental requirements are lifetime and health, knowledge accumulation and possession of resources that enable them to benefit a decent life. These elements are expressed by the following three variables: life expectancy, education level and income.

According to the opinion of the indicator's promoters, an authentic development allows individuals to dispose of these options. The development process will lead to a favourable climate which will offer individuals and the communities the chance to achieve their potential and lead productive, creative lives in accordance with their own needs and interests. Human development is converted into two vectors: on the one hand, the consolidation of personal capacities (through the progresses regarding health, knowledge and skills) and, on the other hand, the use that the individual assigns to these capacities, in productive or cultural, social or political purposes, during work or leisure.

The indicator tends to be a more significant assessing tool than the per capita income. Indeed, the income is a means of reaching human development, not an aim. By considering the strictly material dimension as one of the determinant factors of the living standard, although not reaching a comprehensive measurement of all its theoretical premises, the human development indicator assesses a country's level of development from a qualitative point of view.

The Human Development Index is constructed as an average of three indicators: life expectancy at birth, education level and the standard of living, measured by the real GDP per capita. The Human Development Index can range between 0 and 1 (UNPD, 2011).

Human development indicators have the following components:

- Human Development Index: life expectancy at birth, adult illiteracy rate, combined illiteracy rate, income per capita (PPP);
- Development indicators by gender: life expectancy at birth by gender, adult illiteracy rate by gender, combined illiteracy rate by gender, income per capita (PPP) and distribution of working income on women and men;
- Human development indicators for developing countries: the percentage of people with life expectancy under 40 years, adult illiteracy rate, percentage of people without access to running water, the percentage of people without access to health services, the percentage of children suffering of malnutrition;
- Human development indicators for industrialized countries: the percentage of people with life expectancy under 60 years, adult illiteracy rate, percentage of people living in poverty, long-term unemployment (12 months and more).

The Human Development Report Office strives at including as many UN member countries as possible in the HDI. To include a country in the HDI we need recent, reliable and comparable data for all three dimensions of the Index. For a country to be included, statistics should ideally be available from the relevant international data agencies.

Table 1: Human Development Index

	27 EU members	Human Development Index (HDI)	Life expectancy at birth	Mean - years of schooling	Expected years of schooling	Per capita GNI Const. 2005 PPP\$	Per capita GNI rank minus HDI rank	Non income HDI
HDI rank								
VERY HIGH HUMAN DEVELOPMENT								
1	Netherlands	0.910	80.7	11.6	16.8	36,402	9	0.944
2	Ireland	0.908	80.6	11.6	18.0	29,322	19	0.959
3	Germany	0.905	80.4	12.2	15.9	34,854	8	0.940
4	Sweden	0.904	81.4	11.7	15.7	35,837	4	0.936
5	Denmark	0.895	78.8	11.4	16.9	34,347	3	0.926
6	Belgium	0.886	80.0	10.9	16.1	33,357	2	0.914
7	Austria	0.885	80.9	10.8	15.3	35,719	-4	0.908
8	France	0.884	81.5	10.6	16.1	30,462	4	0.919
9	Slovenia	0.884	79.3	11.6	16.9	24,914	11	0.935
10	Finland	0.882	80.0	10.3	16.8	32,438	0	0.911
11	Spain	0.878	81.4	10.4	16.6	26,508	6	0.920
12	Italy	0.874	81.9	10.1	16.3	26,484	6	0.914
13	Luxembourg	0.867	80.0	10.1	13.3	50,557	-20	0.854
14	Czech Republic	0.865	77.7	12.3	15.6	21,405	14	0.917
15	United Kingdom	0.863	80.2	9.3	16.1	33,296	-7	0.879
16	Greece	0.861	79.9	10.1	16.5	23,747	5	0.902
17	Cyprus	0.840	79.6	9.8	14.7	24,841	2	0.866
18	Estonia	0.835	74.8	12.0	15.7	16,799	13	0.890
19	Slovakia	0.834	75.4	11.6	14.9	19,998	8	0.875
20	Malta	0.832	79.6	9.9	14.4	21,460	4	0.866
21	Hungary	0.816	74.4	11.1	15.3	16,581	11	0.862
22	Poland	0.813	76.1	10.0	15.3	17,451	7	0.853
23	Lithuania	0.810	72.2	10.9	16.1	16,234	10	0.853
24	Portugal	0.809	79.5	7.7	15.9	20,573	1	0.833
25	Latvia	0.805	73.3	11.5	15.0	14,293	12	0.857
HIGH HUMAN DEVELOPMENT								
26	Romania	0.781	74.0	10.4	14.9	11,046	20	0.841
27	Bulgaria	0.771	73.4	10.6	13.7	11,412	14	0.822

Source: UNPD, Human Development Report 2011, Sustainability and Equity: A Better Future for All

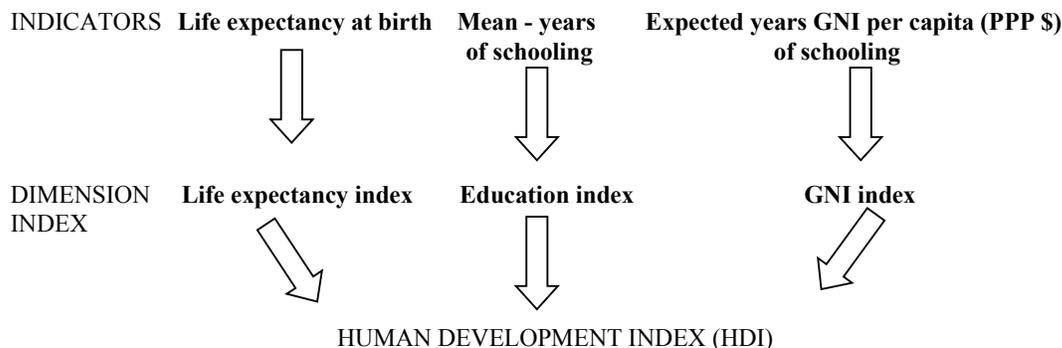
The Human Development Index (HDI) is a measure of human development. It measures the average achievements in a country in three basic dimensions of the human development: a long and healthy life, access to knowledge and a decent standard of living.

The HDI is a geometric mean of normalized indices measuring achievements in each dimension.

The graphic method of calculating the Human Development Index is the following:

Figure 1 – Calculating the Human Development Index – graphical presentation

DIMENSION	<u>Long and healthy life</u>	<u>Knowledge</u>	<u>A decent standard of living</u>



Source: UNPD, Human Development Report 2011, Sustainability and Equity: A Better Future for All

3. Conclusions

The HDI remains a composite index that measures progress in the three basic dimensions—health, knowledge and income. Under the previous HDI formula, health was measured by life expectancy at birth; education or “knowledge” by a combination of the adult literacy rate and school enrolment rate (for the first - university years); and income or standard of living by GDP per capita at purchasing-power parity (PPP US\$).

The human development indicator (HDI) is calculated in order to show the evolution of people’s quality of life. It includes a three-dimensional approach that covers items such as life expectancy, literacy and real per capita GDP. Highlighting the developments in the three areas is done by using associated indicators, such as: life expectancy index, education index and the GDP index.

The life expectancy index measures the performance of a country in this respect, starting from the average life expectancy at birth in relation to the minimum level considered (25 years). The maximum level considered is 85 years.

The education index is composed by the aggregation of two items: adult literacy and school enrollment at the three levels of education. For each of the two an index is determined. The two indices are combined using a two-thirds share for the adult literacy index and a one third share for the school enrollment index.

The PIB Index includes the gross domestic product per capita expressed at purchasing power parity.

The HDI is calculated as a simple average of these three indicators, its values indicating the degree of development in reverse order.

Based on these methodological issues one can see the fact that the HDI is a very slight representative tool for highlighting the developments in the area of quality of life improvements. It covers too few and too large areas in order to be able to elaborate conclusions regarding the aggregate evolutions of human development. These areas are not necessarily related and complementary, which could create an overview of the indicator much closer to the aim pursued. For example, a high degree of literacy and school enrollment does not necessarily imply a high value of the real GDP per capita index.

Moreover, the HDI also includes a component which is dominated by chance. While literacy and school enrollment are measurable, life expectancy can only be estimated. Environmental conditions, genetic aspects and lifestyle influence this indicator decisively. In such circumstances it is possible that life expectancy is higher in countries with an underdeveloped medical and health insurance system. Or the latter are relevant items of a country’s level of human development.

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THE IMPACT OF LATEST IT TECHNOLOGIES OVER THE EFFICIENCY OF A KNOWLEDGE-BASED ORGANIZATION MANAGEMENT IN ROMANIA

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Abstract: *This Paper aims to focus its scope towards understanding the impact of latest IT technologies over the attitude and decision issues within the economic organizations and business domain. In this aspect, the Paper performed an explorative research among the IT responsible of representative companies in Romania. Both quantitative and qualitative research's results revealed new insights in the companies' responses to the latest dramatic changes in the informational technologies, in order to cope with the persistence of the global economic crisis and to assure increase of organizational efficiency and profit.*

Key words: knowledge management, knowledge organisation, information technology, IT transformation

JEL classification: O33 - Technological Change: Choices and Consequences; Diffusion Processes

1. Introduction

You will find below a series of statistics that underline the unprecedented increase of the information technologies, and especially the consumerisation of the IT services, to support the approach of this Paper:

a) We are witnessing a real data explosion: large amount of data bytes are produced every day. This volume is so huge, that 90% of the global data were created during the past two years. The volume, the variety and the frequency of the information available on digital sources (such as social networks, among traditional sources – sales and market researches) represent actually the most important challenge that the companies have to face. The difficult part consists in how the huge data volume is analysed to extract useful information, and also in the efficient use of these pieces of information, that must lead to the improvement of products, services and quality of business decisions. Thousands of data terabytes are created every year around the world. We count here documents, images, videos, mass-media broadcasts and other similar categories. The pieces of information categorized as services provided by journalists, accountants, doctors, consultants, etc., are not included here.

b) Due to social media, any user can now become an editor, a broadcaster or a critic. Facebook has over 845 million of active users at the end of December 2011 (according to Facebook), and each user posts about 90 announcements per month. Twitter users send over 140 million messages every day. In 60 days, the 490 million YouTube users provide more video content than what has been created by the three important American TV stations in 60 years. Modern companies use social networks to communicate (56% of the executives consider social networks an important communication channel), but face difficulties in obtaining relevant information from the many unstructured data provided by clients and potential clients.

c) 2/3 adults use social networks such as LinkedIn, Facebook or Twitter; there are 135 million active members on LinkedIn, and more than 80% are decision makers in their company; we can also say that a big number of companies and organizations are present in these networks, creating and offering relevant and official information; in 2011, 14.4 million used social media to find a job; 88% of the employers consider that references on social media are the best source of high qualified employees;

d) An average social media user accesses the applications from a PC or from the mobile devices and is connected to around 80 pages, events or groups;

e) There are many new devices, from smartphones to PC and tablets. The mobile e-commerce is expected to reach 31 billion dollars by 2016, representing an annual increase of 39%, between 2011 and 2016. In the same time, the tablet market is expected to reach 70 million units on a global level by the end of the year, with an increase up to 294 million of units by 2015.

f) The market is changed by the influence of new generations, with different access points and information consumption. Companies need to adapt their strategies and to answer the new Millennium's generation's requirements.

This unprecedented development of IT technologies has led to different changes in the business environment: the appearance and development of knowledge-based organizations, and of the knowledge-based management within the organizations. Within the total resources of a knowledge-based organization, the informational resources register a spectacular dynamic, both in terms of components and kits. The IT resources are now becoming the engine of successful enterprises, representing not only the operational base, but also the means for marketing and communication strategies.

The knowledge-based organizations are able to extract, label, organize, file, apply and share knowledge, experiences and surveys to make superior performances possible. This can be translated in: better business solutions and decisions, a better collaboration and share of information, more capable and qualified jobs.

The knowledge-based management is mainly based on information technology, human resources, strategy and organizational behaviour. This type of managements considers both clear and implicit knowledge as important strategic resources and aims to ensure within the company a better use of knowledge in terms of individual, team or organization as a whole. The result is positive: extraordinary results in innovation, product and service quality, cost decrease and continuous update, according to the market's requests.

In order to face new challenges, the companies must improve their digital and technological knowledge and capacities, in spite of all financial restraints. At the same time, organisations must review the relevance of knowledge management to operational managers within. The consequences of taking a knowledge-based view of the organisation over the different process types are extended.

2. The main characteristics of informational resources within knowledge-based organizations

The high volume of information that a company has, coming both from endogenous and exogenesis sources, is in continuous change, with multiple positive effects on the business. The result is that most of the employees (especially in big and middle companies) take special studies in the approach of information and the management of informatics equipment (program operators, analysts, system engineers), together with the increase of knowledge and informatics abilities in the entire team. Dedicated digital applications are developed, and in the same time they are included in complex integrated systems.

One must keep in mind the fact that modern digital integration is based on the principle of consistency that ensures the functional compatibility between all the business tasks: data collection, transcription, processing and deposit. The complexity degree of the applications is in continuous change and is integrated in modern data banks.

The importance within organization of the unstructured, pure information obtained by the stakeholders, and first of all the knowledge-based employers increased. Most of the time, they are seen as tacit knowledge with a major role in the company's functionality and performances.

Transmission, processing and receiving of information between the enterprise's employers or between several companies' employers, within a short period of time, or in real time significantly increased; as a result, the data is more valuable, with multiple positive effects for all the users of the organization.

The company's informatic resources are connected to those external, through different methods: email, Internet, websites, portals resulted to the fact that the stakeholders have access to more and more informatic resources.

There is a major decrease of the costs that are necessary to obtain and use the information, due to cheaper but more performing informatics equipment, and also due to the appearance and implementation of upgraded digital applications that can save and process big data in a quick and efficient manner.

There is the possibility to adapt the information according to specific requirements of the enterprise's main stakeholders and therefore, the quality of their decisions, actions and activities will develop.

At present, companies must handle more tasks than before. They need to administer a higher data volume coming from separate sources, to understand and relate more informed clients, to apply and adapt to upgraded complex instruments and technologies, without forgetting the company's financial resources.

At the same time, there are deep progresses in the informatic hardware and complex systems. An increase in usage and availability of email and other online means of communication resulted in a quick communication within the enterprise and between more enterprises. The rapid development of strong intranet systems ensured a quick functioning of the informational system, easy connection to multiple professional information providers, as well as informatic, management and economic connection with other enterprises, clients, providers, banks, etc.

We can assist a deep transformation of PCs in a platform for finding, saving and sharing information with other persons. The advanced IT technology makes possible to extract, process and use information in different fields, such as: human language analysis in social media, the analysis of consumers' feelings to create competitive advantages for the enterprise.

The technology world has changed dramatically during the last decade. The main changes referred to the fact that 80% of the world's information is unstructured. Therefore, raw computational power is enormously growing. At the same time, access to information has been democratized, as the information is (or should be) available for all. In the new era, the companies need to improve their traditional IT approaches with technology that allow enterprises to benefit from the big data era. The big data era will be led by the enterprises that could have at their disposal new platforms containing: exploration and development toolsets, visualization techniques, native text analytics, machine learning, cloud computing, virtualization and mobility, all based on enterprise stability and security, among other requisites. In the 1990s, many organizations used different data management systems to store and search their critical data. Later, in 2000s, more sophisticated technologies using XML allowed the enterprises to gain key advantages by using the widespread of e-mail, accumulation of back-office content. Organizations seeking to find a better way of differentiating themselves from their competitors is taking advantages of these information and technologies in order to improve their competitiveness, efficiency, profitability, brand awareness, and many more.

To address the enterprise needs, this paper explores the way of how companies approached this modern problem and embrace the new technologies, as foundation of their success.

As an example, an IBM study, in which over 1700 marketing directors from 64 countries and 19 industrial sectors took part, has shown that most of the marketing directors admit a relevant and on-going change in the way we interact with clients. In the same time, the research shows that the methods used to evaluate the marketing process are also continuously changing or updating. Almost two thirds of the participants consider that by 2015, the performance of marketing investments will be the main tool to measure the efficiency of marketing strategies. Among successful enterprises, the majority of the participants do not feel ready to offer exact data. The IBM research has shown that while 82% of the marketing directors want to increase the usage of social media instruments in the next 3 up to 5 years, only 26% constantly read blogs, 42% follow independent analysis and 48% read consumers' analysis, to change the marketing strategies.

The point of inflexion created by social media represents a permanent change in the approach with clients, according to the study. Almost 90% of the information in real time created now is unstructured data. The marketing directors that use this new source of relevant information are in a very good position to increase the income, to reinvent the relationships with the clients and to create a new brand value. Clients share their experiences in online, providing increased control and influence over brands. This changed balance of power from enterprises to clients also requires new approaches in the marketing process, new instruments and new challenges, in order to stay competitive. The marketing directors are aware of this change, but they try to find solutions. Over 50% of the participants in the IBM study consider that they are not ready enough to administer the new important market forces, from social media to a better client understanding and relationship, indicating the fact that they will need to change completely the traditional marketing instruments to promote brands and products.

The fact that all clients' categories use social media instruments represents a good opportunity for marketing directors to obtain increase in income and brand value and to reinvent the nature of the relationship between enterprises and buyers. The marketing directors that are open to getting relevant

information from social media will be much more prepared to anticipate future changes in the market and technology.

New software applications accelerate the decisional process in this big data era. Important IT companies announce the launching of new software applications that offer clients a complex method to decrease the big data volume and to speed up the business processes, by making it easy to obtain useful information. The new software applications access, compress and constantly analyse the data, so that the IT department can deal with more important tasks, such as big data or business analytics. In the last years, hundreds of experts from many innovative companies have worked together to develop new software applications. In big data era, enterprises want to get useful information from big data volume to transform business operations and to remain competitive in their area of activity. The challenge is aggravated by new advanced application that require instant access to new types and high volume of data generated by social networks, sensors and mobile devices, as well as the exponential increase of data within business applications. The new applications help the companies to find answers ten times faster and to free the storage space, and they also split information from past, present and future, in order to eliminate high costs of codes.

By using new software applications, the companies can access big data for relevant information. The integration of big data and real time data analysis helps to extract useful information from high-unstructured big data faster, such as those generated by social media or mobile devices. The information from the systems can be easily integrated with the help of real time analysis of unstructured data and this allows a faster and better decisional process.

The business processes could be accelerated and the data administration costs reduced also – the new developed systems compress the information immediately, to make it easier for the applications to use and save. This compression accelerates and administrates the data in a more efficient manner, in order for analytics applications to be applied. New software applications automatically evaluate the data frequency need and transfer them on different storage systems, which are more cost efficient. The enterprises could analyse past and future to improve the decisional process – the present software applications allow an easier data access anytime. The continuously increasing data volumes make it more difficult for the clients to access the information in the right moment.

Therefore enterprises should implement new advanced technologies and storage systems, so that the data administration process can be done automatically and information can be split easier than before. With this help, the decision factors and IT department can focus on the development of the company.

For example, the clients in bank sectors need instant access to the accounts, both in online and through mobile devices. New database applications allow answering these needs and help to solve the networking issues, to avoid any lack of service. The new applications also allow the compression of the existing data with about 77%, which means that we use less financial and time resources to administer and save the data.

On the other side, the democratization of information and the unprecedented explosion of social media usage have changed the companies perform their business. Whether we talk about comments posted on special media networks such as: Twitter, Facebook, LinkedIn, the companies are very careful with what they have to say. The companies understand that the comments or complaints are public. Through social networks, the posts can be read, distributed and reposted by thousands of persons. In the same time, they also know that a new client can cost seven times more than keeping an existing client, and that is why they intend to use technology to understand social media discussions and to improve their services.

The companies study the posts from social networks and measure their influence. This is a proof that companies start to pay an increased attention to the voices that can influence. In the same time, they offer equal attention to the “feelings” tendency, to predict the consumer’s opinion on a shopping season, for example. Social media is a tool of an increased importance, very relevant when it comes to creating a brand, having a relationship with clients, and increasing clients’ loyalty. All these factors can be combined to increase brand awareness and create new business.

“Social culture” is more and more talked about, and the culture and management of change represent the base of a real transformation of a business. Many companies organize a special agenda for social media, by preparing an integrated plan to be more competitive and to have a measurable ROE.

The social component is included in business processes. For a good evolution, enterprises must encourage social behaviour of thinking and technology within the company's strategy, in areas such as client service, human resources, marketing, operations. Many companies hire a strategist for the social media zone. This very important person acts like a lawyer of social media, and works with the employers to make them understand the importance of social mass media. They are also responsible for the brand protection in the online environment.

The idea is for a company to develop activities in those fields that are interesting and important for the community. There is such an increased activity in social media, that it can be very difficult for the CEO to pay attention to the company's relationship with the customer in social media. Just like people tend to use more and more social media in their personal lives, companies must include these communication channels in their plans, to allow their clients to discuss about – and with – brands in a real dialogue.

Because of Twitter, 140 small characters can make a huge impression. The new technologies could turn the tweets in relevant information – an index for social feelings. The “social feelings index” is an initiative that uses Twitter. With an estimated value of 155 million tweets per day (in 2011), the micro-blogging platform is an excellent tool for „feeling analysis”. The index uses the IBM Analytics technology to process millions of public tweets, with the aim to create in real time public opinion. They transform 140 characters from rough unstructured data into valuable perspectives, feelings and tendencies on many subjects from sport, retail, entertainment, including important events, such as World Series, Super Bowl and Academy Awards. These tools can be used by many industries and companies, especially by retail and sport franchises, for a better understanding of consumers' opinions towards products and services. By analysing data in real time, new perspectives within organisations can appear, and product marketing can use social media to improve the way the brand is seen by the consumer.

3. IT projects and implementations in large Romanian enterprises

The indubitable fact is that companies are looking to transform and improve their IT processes and operations, which are involving increasing levels of complexity. For example, IT organizations have started by taking a concerted approach to rolling out collaborative or mobile technologies across the enterprise, to managing their portfolio of applications, also progressing to data center consolidation and migration to cloud-based services.

Following the deep budget cuts of the past years and the persistence of the global economic crisis, IT decision-makers have emerged into a world of flat or declining investment, in which demands from the business continue to grow. For many IT organizations, increasing efficiency, adding improved business value, reducing costs and enhancing business-IT alignment have become the permanent core mission.

Despite substantial evidence that IT can transform organizations and the industries in which they operate, management behavior towards IT can differ within an organization and between organizations. The aim of this paper's research is to find what external, strategic issues managers believe to be important with regard to their organization's use of IT and their attitude and behavior towards those issues.

In order to underline the way that companies invest in new IT technology projects, this survey was conducted on 25 IT professionals with responsibility for IT in large companies in Romania, in the following industries: computer technologies, telecommunications, financial industry, retail. The survey was conducted via face-to-face interviews, during the first quarter of 2012. All respondents work for companies with more than 1,000 employees.

The interviews of these IT professionals revealed the fact that they have already launched large IT projects, or plan to do so in the future. The findings of this survey of IT decision-makers working for some of Romania's largest companies confirm the existence of significant IT efforts right across the country.

The survey consisted in the following questions:

1. Have you started or planned IT initiatives/ projects within your company this year?
2. Which aims your IT budget is spent on?
3. What are the main goals of your IT ongoing or future projects?
4. Do decision-makers in your company share an understanding of what's implied by these IT projects?

5. Please describe the main obstacles to delivering IT programs in your organization.
6. Please describe from “not important”, “quite important”, “important” or “very important” for your company, the followings: adopting public/ private cloud services; data center consolidation; introducing business collaboration technologies; analyzing social media content related to your organization; adopting mobility technologies.
7. Is your company’s strategy aligned with your IT projects and budgets?
8. Have you implemented/ plan to implement IT trainings for your non-IT employees with concern to modern IT technology in communication/ sharing of work and Intranet portals?
9. Do you measure the performance of IT processes by KPI’s (Key performance indicators)?
10. Have your company defined “critical success factors” in IT (applications, infrastructure, people, and information) for your lines of business?

For the first question: “Have you started or planned IT initiatives/ projects within your company this year?” 75% of respondents said that their organisations have launched IT projects. Also, 19% say that future projects will be launched within one-two years. Only 6% of respondents have not IT initiatives. These responses fully indicate that Romanian companies understand the importance of computer technology in their success and profitability.

For the second question: “Which aims your IT budget is spent on?” respondents said that on average their organization’s IT budget is now devoted to one or more IT initiatives, such as:

- reducing OPEX
- implementation of mobile and collaborative applications
- improving delivery of new IT services
- data center consolidation
- migration to the cloud
- application portfolio management
- implementation of big data technology.

In Romania, inside large companies, IT programs are receiving significant levels of attention. A very high proportion of the organizations for which our respondents work have indicated: application portfolio management (80%), migration to the cloud (55%), better mobility/collaboration across the business (45%) and implementation of big data technology (20%). In order of importance, respondents ranked their objectives as follows: reducing OPEX (89%), improving delivery of new IT services (88%) and data center consolidation (85%).

They also indicated that the economic crisis has brought the need for more improvement projects, even they have been requested by the business side to implement such projects in more innovative ways and with lower budgets.

The main challenge for the companies is the reducing of their innovation budgets. Budgets are easily approved for day-to-day operational tasks, than for large implementations. At the same time, according to a recent study performed by IBM, two thirds of the IT projects are behind the timeline and also they exceed the allocated budgets, at the same time. It clearly seem that the ability to conclude an IT implementation project in time in line with the approved budget is an important task for IT decision makers in the Romanian companies.

For the third question: “What are the main goals of your IT ongoing or future projects?”, respondents said that on average their organization’s IT budget is now devoted to one or more aims, such as: reduce IT operating and maintenance costs – 92%; improve ability to deliver better services to the customers – 81%; empower IT to drive strategic value generation – 78%; consolidate IT landscape – 79%; improve mobility/ collaboration across the business – 50%; assure survival of the company – 23%.

The main IT projects are about infrastructure, the data center and core applications. As we can imagine, reducing IT operating and maintenance costs emerges as the most important objective of IT projects. Our respondents weighted the importance of three other objectives very similarly. For example, 81% want to improve IT’s ability to deliver new IT services faster. But 78% also want to empower IT to drive “strategic value generation”. It’s hardly surprising that decision-makers envisage IT projects achieving multiple goals. As we have already seen, IT officials tend to think about IT projects in terms of core infrastructure, applications and data centers. By definition, improving IT activities should result in broad and generalized benefits for both IT and the business.

For the 4th question: “Do decision-makers in your company share an understanding of what’s implied by these IT projects? “, respondents indicated a significant level of agreement. The common

idea of these answers was that, if IT initiatives can reduce the costs, some or all of the savings can be channeled into new, potentially more strategic, initiatives. Small savings from big maintenance budgets can finance a significant amount of IT-driven innovation. The attractions of this appear evident to the decision-makers we surveyed. Indeed, if we accept that the most significant parts of IT budgets are devoted to keeping the day-to-day business, it is surely notable that Romanian IT decision-makers are devoting also large parts of their IT budgets to IT improvement projects.

For the 5th question: "Please describe the main obstacles of launching IT programs in your organization", the respondents produced, not surprisingly, a long list of obstacles to delivering IT programs. In large organizations, large application portfolios can contain large fields where the nature, beneficiary and usefulness of specific applications are unclear. Therefore, "confusion over current assets and resources" was presented as an important obstacle. The returns on investment from cloud services continue to be debated. However, deciding which initiative to pursue may involve deciding between working on infrastructure (e.g.: data center consolidation) and rolling out services for the business as a whole (e.g.: expanding business collaboration technologies).

The most frequently mentioned difficulties involved people, both in terms of skills shortages ("staff training") and cultural obstacles ("resistance to change", "adoption", "business management team", "change management with the users"). In addition, "problems with execution" are an important obstacle standing in the way of IT projects, associated with "finding good people".

We need to underline that majority of the respondents indicated "the budget" as the primary constraint. In addition, more IT people specified the challenge of increased demand from business units (which in turn restricts the amount of attention and resourcing available for IT projects).

For the 6th question: "Please describe from "not important", "quite important", "important" or "very important" for your company, the following projects" the results were truly interesting:

- a) adopting public/ private cloud services; our respondents frequently describe migrating to cloud as "very important" (25%) or "important" (45%). However, as seen at the second question, only 55% said they are considering adopting cloud-based services.
- b) data center consolidation; 85% of respondents are consolidating data center resources and also a larger number of respondents (86%) believe that this is "very important" or "important". This indicates the clear demand for data center consolidation.
- c) introducing business collaboration technologies; there is no extreme enthusiasm around efforts to roll out business collaboration technologies (45% of organizations are doing this, but only 38% of respondents regard it as "very important" or "important").
- d) analyzing social media content related to your organization; Even more skepticism surrounds initiatives to analyzing social media content related to the organization and to produce relevant content. Only 18% of respondents regard it as "very important" or "important".
- e) adopting mobility technologies; All of the 25 respondents interviewed regard adoption of smartphones and tablets as "very important" or "important", in order to increase staff efficiency. Despite this, are their organizations encouraging the adoption of smartphones and tablets? Only 5% of IT decision-makers we interviewed have started projects regarding mass-using of smartphones and tablets for accessing core business applications, mostly for security reasons. The most common usage of smartphones and tablets are for email.

For the 7th question: "Is your company's strategy aligned with your IT projects and budgets?" the responses were quite surprisingly: Only 35% of the respondents said "yes", and 30% said "no". A significant part of the respondents - 35% - indicated that they do not have such information, indicating the board of the company as the main body in establishing and approving the strategy. This painfully indicates that aligning the strategy with the main projects, allocating of technical, human and financial resources to various projects, implementing a BSC (Balance Scorecard) are not in place in Romanian companies.

For the 8th question: "Have you implemented/ plan to implement IT trainings for your non-IT employees with concern to modern IT technology in communication/ sharing of work and Intranet portals?" the IT officials responded that their companies have in view such projects within the next 1-3 years, with respect to: technological competencies (28%) and social media skills (25%).

For the 9th question: "Do you measure the performance of IT processes by KPI's (Key performance indicators)?" the responses were as follows: yes - 57%, no - 23%, do not answer - 20%. The respondents also place a relatively high priority on more ambitious (or holistic) objectives,

including IT's ability to drive innovation, generate strategic value and improve business performance. These are measured by metrics like time to market and various SLAs.

For the 10th question: "Have your company defined "critical success factors" in IT (applications, infrastructure, people, and information) for your lines of business?" the responses underlined the following facts. IT decisions makers in companies we reviewed are concerned about the business requirements. Many analysis and projects aim to achieve effectiveness and efficiency of business processes. The IT side of the company should assure confidentiality, integrity and availability of business information. Also, the IT systems should be compliance and reliable.

4. Conclusions

As some conclusions need to be drawn, we could underline that IT projects are quite good, having in view that the budgets remain tight and resources have diminished. The result of our survey is positive. This survey confirms that respondents are confident about the likelihood of success of their IT projects. The answers also suggested that for these companies the expectations of IT projects are extended, and predominantly referred to achieving cost reductions and being able to deliver IT services faster.

Having the view the above, we could conclude that large, innovative Romanian companies fully understand the impact of the new IT technologies like big data, cloud computing, mobility over the general performance of their organizations.

As a strong conclusion, a good correlation exists between organizations that use knowledge management and have an innovative and constructive organizational culture and those which expect ambitious goals of IT projects, including the ability to drive innovation, generate strategic value and improve business performance. This substantial use of company's resources and projects should be about more than cutting costs. It should ultimately lead to a qualitative change in IT's ability to contribute to the business.

In many organisations, IT is no longer a support function; many CEOs and decision makers include the IT into the strategic center of business. Business decisions are supported with information technology, such as business analytics. IT became the competitive advantage in business, which enable a company to make the correct decisions. As data and the information derived from data became more significant and important, inefficiencies arising from traditional IT systems started to become one of the biggest problems. During the last couple of years, major projects were issued by companies in relation to the number of servers, storage, electricity, and management in IT.

At the same time, to capitalize on knowledge, an organization must combine its knowledge management activities with changes in organizational culture, technologies, and techniques. A number of organizations believe that by focusing exclusively on people, technologies, or techniques, they can manage knowledge. However, that exclusive focus on people, technologies, or techniques does not enable a company to sustain its competitive advantages. It is, rather, the interaction between technology, techniques, and people that allow an organization to manage its knowledge effectively.

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CSR INTEGRATION IN CRISIS MANAGEMENT – NEW OPPORTUNITIES FOR ORGANISATIONS

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Abstract: *The present paper tackles the issue of identifying a connection between crisis management and corporate social responsibility, which can also be a recipe option for organizations future success in strategic planning. CSR integration into business values improves the integrity of the organization, its business approach and also builds a capital for managing future crises. The results of this study show a superficial recognition of the role of CSR tools in crisis management shown by the Romanian managers. Nevertheless it provides support at the same time, for the premise that there is relationship between crisis management and CSR.*

Key words: *crisis management, corporate social responsibility, sustainable strategie*

JEL classification: M14

1. Introduction

Due to the economic crisis, all departments in large companies are forced to economize, but an intelligent method of achieving it involves certain responsibility at the same time. Companies that even before the crisis envisioned corporate social responsibility, planned and developed at a strategic level through management systems, had an accurate image of their available resources and how they are used for certain purposes. The economic crisis has had as consequence the review of activity in most companies. Those advocating for CSR who wanted to maintain a constant level have often remained without supporting arguments in the year that just ended.

This happened only in companies where social responsibility did not have a solid basis derived from business objectives. Since social responsibility is seen as a harmonising area between the community welfare in general and companies limited interests, it is important to support CSR through a corporate system having clearly-defined objectives.

Among the arguments that can be presented in favour of social responsibility by the community, environment or even the employees interests do not bring any contribution to the support of CSR activity compared to the counter-arguments of the critics, namely to assist business in achieving objectives.

Thus, there is an increased need for correlation and performance indicators to support the relationship between CSR and the traditional business goals, to be more accurate aspects to prove that personal interest and public interest are not necessarily contradictory concepts. This need has increased due to the financial crisis and control strengthening, but it will certainly not disappear after the period of recession. The truly-responsible leaders that are now facing a problem that those who have held traditional business positions have been trying to solve for decades more or less successfully. It is important for CSR professionals to initiate and develop links with employees throughout the entire organization. The all-encompassing nature of social responsibility justifies not only the collaboration between departments but also the need to assimilate this new science, which to the extent that it has reached a certain degree of development, it has reached an inflection point at the same time.

Experience shows that CSR tools prove to be very useful in certain situations such as loss of confidence, expectations and criticism, lengthy discussions on the business role. Identification and corporate effects management, dialogue with related parties, the ability to make the best of strategic

partnerships are competences that in times of crisis can be much more effective than normal ones, can protect or increase brand value. That particular company and that particular brand that want to build self-confidence can only understand the situation, show interest, listen, react and communicate while social responsibility provides methods and platforms.

2. CSR – a concept in times of crisis

The topic was tackled in serious discussions and adopted in management policy of the 50s despite endless debate. In developed nations, social movements and the principles of social democracy were not only an element of rationality but also a voice for those who felt that big corporations - considered to be the product of the production/mass consumption companies - were also those which set the performance standards in business in a way that distorted not only the reasoning in society but also benefits yielded by the private sector. In the '60s, the interest in CSR-related issues has become increasingly ardent to the extent that activists of all ideological and geographical areas demanded higher standards of government and business performance. The non-profit sector required a fair distribution of profits, while the academic environment was discussing the differences between modern and post-modern organizations.

As Basu and Palazzo (2008) pointed out: "The last three decades have witnessed a lively debate over the role of corporations in society". This point of view showed how CSR standards have been defined by the ideology of each society. Public Relations (PR) practitioners contribute to this ideology, being those who discuss business performance both internally and externally. Critics have pointed out that CSR might become isolated, self-serving and self-affirming- often to the detriment of society where CSR should have brought in social, political, technical and financial benefits. Public Relations can help organizations develop standards and implement them through the activities they perform and statements they make. Freeman and Liedtka noticed 17 years ago: "The idea of corporate social responsibility has failed to help create a better society. Being regarded as the missing link of capitalism by the academic environment and managers, the concept of corporate social responsibility has not kept its promise." Convinced of its failure, Freeman and Liedtka reasoned that this is a "dangerous idea", which led them to agree in principle but not in detail with Friedman (1970).

Friedman has gone through decades of controversy, arguing that the only responsibility of companies is to increase their profits (paradigm of organizational excellence). In order to function effectively, companies should only pay their employees wages and pay their dues. Nowadays Friedman has many supporters whose arguments are based on empirical tests that have failed to find a direct relationship between CSR activities and main indicators of the corporate financial performance within companies, such as profit (for instance: Agle, Mitchell and Sonnenfeld, 1999; Auppede, Carroll, and Hatfield, 1985). Agle (1999) emphasized the methodological challenge: "Corporate social performance is notoriously difficult to quantify." Other authors argue that Friedman's perspectives on the role of companies underestimate the key issues. Thus Stove, Neill and Perkins (2004) were against the traditional interpretation of the "invisible hand" advocated by Adam Smith, placing shareholders wealth in the centre of corporate governance.

Nevertheless at a closer look at the ideas promoted by the English economist highlight "the principle of sympathy" as well as the ability and people's tendency to consider the interests of others. This perspective seems to be closer to the dominant concept of CSR, thus placing the concept of stakeholders in the centre of the idea of corporate governance. If sympathy suggests only philanthropy, we should mention that CSR requires empathy, a certain way of thinking and strategic planning that allows management to reconsider its role in society and upon the impact it has on society in which they run their business. Critics argue that Friedman failed to understand the benefits gained due to CSR: business cost reduction and sustainable profits. Regarding the relevance of the CSR concept, studies have shown that CSR is important for organizational success for two reasons: (1) it increases the organization's reputation, this being morally obligated to display correct behaviour, a rational choice that provides economic benefits to the society (Werther& Chandler, 2006), and (2) it supports the organization's credibility in crisis situations.

3. Identifying correlations between CSR and different variables via SPSS software

In order to test the correlations between CSR and different organisational variables (company size, field of activity, amplitude of the crisis) the following we three hypotheses were formulated:

H₁: Integrating CSR programmes into business management is influenced by the amplitude of the crisis;

H₂: Integrating CSR programmes into business management is influenced by the field of activity in which the company operates;

H₃: Integrating CSR programmes into business management is influenced by the size of the company.

The testing of the above-mentioned hypotheses was facilitated by the use of the chi square method, which is applied in order to determine whether there are significant differences between the expected and the observed frequencies associated to some variables. The use of this statistical method involves the formulation of two hypotheses: the null hypothesis, according to which there are no significant differences between the expected and the observed frequencies associated to the analyzed variables and the alternative hypothesis, which is a negation of the null hypothesis.

The main advantage of using SPSS software applications when implementing the chi square method lies in the opportunity of configuration crosstab tables based the statistical information identified in the program database.

Applying the chi square method in **H₁** hypothesis implies the design of the double-entry contingency table that enables the classification of the observed frequencies (table 1).

Table 1: Contingency table associated to **H₁** hypothesis testing (observed frequencies)

Amplitude of the crisis CSR level of integration	Early stage	Medium stage	Extensive stage	TOTAL
	Unsatisfactory	9	4	4	17
Medium	6	11	8	25
Strong	2	14	2	18
TOTAL	17	29	14	60

The null hypothesis associated to the first hypothesis of the research **H₀₍₁₎** is defined as follows: the integration process of CSR programmes in business management is **not influenced significantly** by the amplitude of the crisis, expressed by its stage of manifestation.

The output corresponding to **H₁** hypothesis testing via SPSS software, after the configuration process of the contingency table by selecting the crosstabs menu, is highlighted in the figure 1:

Figure 1 – Results after testing **H₂** hypothesis by using SPSS software

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
CSR Integration +amplitude of the crises	60	100,00%	0	,0%	60	100,0%

Integration CSR” Amplitude of the crises” Crosstabulation Count

	Amplitude of the crisis			
	Early	Medium	Excessive	Total

<i>Level of CSR integration</i>	<i>Unsatisfactory</i>	9	4	4	17
	<i>Medium</i>	6	11	8	25
	<i>Strong</i>	2	14	2	18
<i>Total</i>		17	29	14	60

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp Sig (2-sided)</i>
<i>Pearson-Chi Square</i>	13,130 ^a	4	,011
<i>Likelihood Ratio</i>	13,164	4	,011
<i>Linear-by-Linear Association</i>	1,394	1	,238
<i>N of Valid Cases</i>	60		

a.3 cells (3,33%) have expected count less than 5. The minimum expected count is 3,97

Thus the value associated to the asymptotic significance level (**Asymp. Sig.=0,011**) is lower than the accepted significance level (0,05), while the value of **Pearson Chi-Square indicator** (13,130) is higher than the value associated to the chi-square index corresponding to the statistical table (9,49) in the context of 4 degrees of freedom. Under these circumstances **the null hypothesis is rejected**, concluding that **there is an association between the two variables included in the H₁ hypothesis** (CSR integration and amplitude of the crisis, expressed by the stage of manifestation and its effects upon the business environment).

Applying the chi square method in **H₂** hypothesis implies the designing of the double-entry contingency table that enables the classification of the observed frequencies (table 2)

Table 2: Contingency table associated to **H₂** hypothesis testing (observed frequencies)

Field of activity / CSR integration level	Commerce	Services	Industry	TOTAL
Unsatisfactory	7	6	4	17
Medium	13	8	4	25
Strong	7	8	3	18
TOTAL	27	22	11	60

The null hypothesis associated to the second hypothesis **H₀₍₂₎** of the research is defined as follows:

CSR programmes integration into the management of organizations is **not significantly influenced** by the field of activity in which they operate.

The result corresponding to **H₂** hypothesis testing via SPSS software, after the contingency table configuration using cross-tabs menu are shown in figure 2:

Figure 2 – Results corresponding to **H₂** hypothesis testing via SPSS software

	<i>Cases</i>					
	<i>Valid</i>		<i>Missing</i>		<i>Total</i>	
	<i>N</i>	<i>Percent</i>	<i>N</i>	<i>Percent</i>	<i>N</i>	<i>Percent</i>
CSR	60	100,00%	0	,0%	60	100,0%

Integration+field of activity						
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Integration CSR "Field of activity" Crosstabulation Count

		Field of activity			
		Commerce	Services	Industry	Total
Level of CSR integration	Unsatisfactory	7	6	4	17
	Medium	13	8	4	25
	Strong	7	8	3	18
Total		27	22	11	60

Chi-Square Tests

	Value	df	Asymp Sig (2-sided)
Pearson-Chi Square	1,283 ^a	4	,864
Likelihood Ratio	1,250	4	,870
Linear-by-Linear Association	,027	1	,870
N of Valid Cases	60		

a.3 cells (3,33%) have expected count less than 5. The minimum expected count is 3,12.

The value associated to the asymptotic significance level (**Asymp. Sig.=0,864**) is higher than the accepted significance level (0,05), while the value of **Pearson Chi-Square indicator** (1,283) is lower than the value associated to the chi-square index corresponding to the statistical table (9,49) in the context of 4 degrees of freedom. Under these circumstances **the null hypothesis is accepted**, concluding that **there is not an association between the two variables included in the H₂ hypothesis** (CSR integration and field of activity of the companies involved in the research).

Applying the chi square method in **H₃** hypothesis implies the designing of the double-entry contingency table that enables the classification of the observed frequencies (table 3).

Table 3: contingency table corresponding to **H₃** hypothesis testing (observed frequencies)

Size of the company Level of CSR integration CSR	Less than 10 employees	Between 10 and 50 employees	More than 50 employees	TOTAL
Unsatisfactory	3	12	2	17
Medium	1	7	17	25
Strong	1	7	10	18
TOTAL	5	26	29	60

The null hypothesis corresponding to the first hypothesis of the research, namely **H₀₍₃₎** is defined as follows: the integration process of CSR tools into the management of the companies involved in the research **is not significantly influenced** by the size of the companies determined by the number of employees.

The results corresponding to **H₁** hypothesis testing via SPSS software, after the contingency table configuration using cross-tabs menu are shown in figure 3:

Figure 3 – Results corresponding to **H₃** hypothesis testing via SPSS software

	Cases		
	Valid	Missing	Total

	<i>N</i>	<i>Percent</i>	<i>N</i>	<i>Percent</i>	<i>N</i>	<i>Percent</i>
CSR Integration +size of the company	60	100,00%	0	,0%	60	100,0%

Integration CSR "Size of the company » Crosstabulation Count

		<i>Field of activity</i>			
		<i><10 employees</i>	<i>10-50 employees</i>	<i>>50 employees</i>	<i>Total</i>
<i>Level of CSR integration</i>	<i>Unsatisfactory</i>	3	12	2	17
	<i>Medium</i>	1	7	17	25
	<i>Strong</i>	1	7	10	18
<i>Total</i>		5	26	29	60

Chi-Square Tests

	<i>Value</i>	<i>df</i>	<i>Asymp Sig (2-sided)</i>
<i>Pearson-Chi Square</i>	13,751 ^a	4	,008
<i>Likelihood Ratio</i>	15,045	4	,005
<i>Linear-by-Linear Association</i>	6,370	1	,012
<i>N of Valid Cases</i>	60		

a.3 cells (3,33%) have expected count less than 5. The minimum expectet count is 1,42.

The value associated to the asymptotic significance level (**Asymp. Sig.=0,008**) is lower than the accepted significance level (0,05), while the value of **Pearson Chi-Square indicator** (13,751) is higher than the value associated to the chi-square index corresponding to the statistical table (9,49) in the context of 4 degrees of freedom. Under these circumstances **the null hypothesis is rejected**, concluding that **there is an association between the two variables included in the H₃ hypothesis** (CSR integration and the size of the companies involved in the research).

4. Conclusion

To conclude, we point out that out of the three hypothesis only one has been validated by applying the chi-square test (correlations between the CSR programmes integration into business management, companies size and crisis amplitude). Moreover in case of testing the correlation between the CSR programs integration into the business management, crisis amplitude and company's field of activity, the null hypothesis has been accepted.

Online research focused on identifying opportunities for managers of companies that have been facing organizational crises is characterized by the ability to transfer answers automatically to SPSS software database, eliminating at the same time the problems related to the management of the collected information. The new web-based technologies and especially PHP programming language managed to fully eliminate the technical limitations of online research, which are used increasingly and more and more globally due to cost-related advantages, opportunities of results analysis and protecting respondents' confidentiality.

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THE EFFECTIVENESS OF PRODUCTION FACTORS USAGE DURING THE ECONOMIC CRISIS. AN APPROACH IN THE SUGAR INDUSTRY

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Abstract: *The purpose of this paper is to analyze the land fund, the human factor and the industrial means used by companies in the sugar industry. Therefore the research will establish the following objectives: analyzing the usage of production factors in the sugar industry taking as an example the sugar beet processing factories in Romania; using the production function in the analysis of the effectiveness of the production factors usage; suggesting an analysis aggregate model for the effectiveness of production factors usage in order to allow the analysis of the production change in accordance with the analyzed factors.*

Key words: production factors, production function, regression equation

JEL classification: D 2, E 10, Q 10

1. Introduction

Factors of production refer to inputs in the production system and in economic activities in general, including necessary and sufficient conditions for the development of a process used to produce goods. (Dobrotă, N. , 1997, p. 209)

During the whole of human society evolution, the concept of factors of production has passed through several stages in its developing, understanding, adapting and implementation.

Much later, in the second half of the XVIIIth century and the beginning of the XIXth, a new and vigorous factor of production appeared and imposed itself – capital.

In the modern era, the three classic factors (work, nature and capital) were accompanied by others due to the process of an enhancement and diversification processes of the resources used in the economic activity, and are called neo-factors of production.

William Petty, in his ‘Treatise of Taxes and Contributions’ speaks for the very first time about production factors. According to the author, the factors of wealth are labour and nature: ‘labour is the father of wealth and nature is its mother’ (Petty W, 1662, p.4)

In his ‘Wealth of Nations’, Adam Smith is the first to create a unitary and coherent concept combining the three factors of production – labour, land and capital, asserting that labour is ‘the true source of wealth ... and land and capital have a special productivity’ (Smith A., 1776, p74).

2. Analysis of the effectiveness of production factors usage by companies in the sugar industry

The capacity of the enterprise to meet the requirements and reactions of the market depends on the insurance of material, human and financial resources while constantly agreeing with the aspects regarding their maximum effectiveness usage.

The main aspects of the analysis of the effectiveness of the production factors usage are:

- The analysis of the effectiveness of the land fund usage;
- The analysis of the effectiveness of the human factors usage;
- The analysis of the effectiveness of the industrial means usage.

The research is based upon a case study that we deemed representative for the theme of our paper: the sugar beet processing factories in Romania, namely S.C. AGRANA Romania S.A., S.C. Zahărul Oradea, S.C. Zahărul S.A. Luduș and S.C. Fabrica de Zahăr Bod S.A., as the only factories processing sugar beet in Romania. At present, there are eight sugar beet processing factories in Romania out of 33 factories that existed before 1989. The other 4 factories that still work today process only raw imported sugar and are not included in the research as it would have restricted it since a significant production factor, namely the land fund, could not have been included in this study.

2.1. Land Fund – analysis of use efficiency

The analysis of use of the land fund is made on the basis of natural expression indicators as well as value expression indicators.

Thus, for the analysis of land fund use in natural expression we shall use the average production per hectare (table 1), and for the analysis of land fund use in value expression we shall use agricultural area performance, calculated on the basis of manufactured production (table 2).

Table 1: Effectiveness of the land fund use based on the average sugar beet production per hectare in sugar beet processing factories in Romania

	Reaped area (ha)			Received sugar beet production (t)			Average sugar beet production per hectare (t/ha)		
	1			2			3=2/1		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
Agrana Romania	4,202	10,003	6,744	78,966	294,548	161,764	18.79	29.45	23.99
Zahărul Oradea	5,028	7,549	5,461	201,980	215,797	167,944	40.17	28.59	30.75
Zahărul Luduș	5,266	7,476	5,122	184,818	203,800	173,786	35.10	27.26	33.93
Fabrica de zahăr Bod	3,254	5,130	4,956	81,102	180,377	157,707	24.92	35.16	31.82
Romania	25,200	39,800	28,700	729,700	1,152,200	748,800	28.96	28.95	26.09
EU	2,245,100	1,867,900	1,807,500	132,292,400	135,511,700	110,409,600	58.92	72.55	61.08

Source: Calculations made on the basis of data published by Patronatul Zahărului and the Statistics Office of the European Union (Eurostat)

The calculations in Table 1 illustrate that the greatest average sugar beet production per hectare was recorded by the sugar factory in Oradea in 2008 while the lowest production was recorded by Agrana in 2008. For the analysis to be relevant, the average productions of the four factories must be compared to the average recorded at national and European level. Thus, by comparing the average sugar beet production recorded by Agrana Romania to the national average production one notices that in 2008 and 2010 the average production recorded by Agrana is situated below the national production. Only in 2009 Agrana records an average production situated above the national production level. The sugar factories in Oradea, Luduș and Bod record sugar beet production/ha below the national production level in only one year, 2009, for Oradea and Ludus companies, and in 2008 for the Bod factory respectively.

By comparing the average production per hectare in our country to the average production per hectare in the European Union one notices a difference of about 29 tons per hectare (51%) in 2008, 44 tons per hectare (60%) in 2009 and 35 tons per hectare (57%) in 2010, a difference that needs to be recovered in order for our country to be competitive on the EU sugar market and to receive subsidies for reaping this plant in the future.

The second indicator that can estimate the effectiveness of the land fund use is the agricultural area performance expressed through manufactured production or net income.

We shall calculate the agricultural area performance based on manufactured production in the three analysed years.

Table 2: Effectiveness of the land fund use based on the agricultural area performance expressed through manufactured production within sugar beet processing factories in Romania

Company	Reaped area (ha)			Manufactured production (lei) (sugar production of sugar beet)			Agricultural area performance (lei/ha)		
	1			2			3=2/1		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
AGRANA Romania	4,202	10,003	6,744	16,384,484	77,933,695	28,961,243	3,899.21	7,791.03	4,294.37
Zahărul Oradea	5,028	7,549	5,461	39,745,155	53,840,580	48,783,237	7,904.76	7,132.15	8,933.02
Zahărul Luduș	5,266	7,476	5,122	30,829,333	39,105,475	40,903,613	5854.41	5230.80	7985.87
Bod Sugar Factory	3,254	5,130	4,956	11,226,327	42,794,979	31,836,127	3450.01	8342.10	6423.75

Source: Calculations based on data published by Patronatul Zahărului

By analysing the data in table 2 one notices a trend of the agricultural area performance calculated on the manufactured production similar to the average production per hectare. Apart from the profitability of the areas where sugar beet is cultivated, its processing performance also contributed to these results.

2.2. Analysis of the effectiveness of the human factors usage

A rational use of the labour force is both a mandatory condition for a full capitalization of all production factors and an outcome of this process. The human factor input in the economic development is a complex process within which occupying and using the labour force as well as the increase of labour productivity are equally essential. Thus, the main generalizing indicators of the effectiveness of the staff usage are the annual average productivity and the profit/employee. In table 3 you will see the dynamics of the annual average productivity, of the average profit/employee and of labour productivity within the sugar beet processing factories in Romania.

Table 3: The effectiveness of the human factors usage based on the annual average productivity and of the profit/employee in the sugar beet processing factories in Romania

No	Indicators	UM	2008	2009	2010
Agrana Romania					
1	Turnover	lei	400,731,821	609,277,389	441,474,213
2	Gross outcome from net turnover	lei	42,919,909	93,764,142	98,565,862
3	Staff expenditures	lei	17,558,439	19,442,239	21,149,389
4	Employee average number	people	704	722	679
5	Labour productivity (1:4)	lei/employee	569,221	843,875	650,183
6	Profit/employee (2:4)	lei/employee	60,966	129,867	145,163
7	Gross average salary/employee (3:4)	lei/employee	24,941	26,928	31,148
8	Salary index	%		107.97%	115.67%
9	Productivity index	%		148.25%	77.05%
10	Correlation index (8:9)	coefficient		0.73	1.50
Zahărul Oradea					
11	Turnover	lei	103,928,25	228,152,713	152,868,642
12	Gross outcome from net turnover	lei	39,541,045	28,679,496	14,306,292
13	Staff expenditures	lei	8,560,613	9,645,749	8,837,972
14	Employee average number	people	304	301	233
15	Labour productivity (11:14)	lei/employee	341,869	757,982	656,089
16	Profit/employee	lei/employee	130,069	95,281	61,400
17	Gross average salary/employee (13:14)	lei/employee	28,160	32,046	37,931
18	Salary index	%		113.80%	118.37%
19	Productivity index	%		221.72%	86.56%

20	Correlation index (18:9)	coefficient		0.51	1.37
Zahărul Luduș					
21	Turnover	lei	45,897,296	45,900,425	42,358,669
22	Gross outcome from net turnover	lei	2,466,093	4,419,566	8,406,266
23	Staff expenditures	lei	5,785,404	6,515,468	6,193,525
24	Employee average number	people	317	304	283
25	Labour productivity (21:24)	lei/employee	144,786	150,988	149,677
26	Profit/employee (12:14)	lei/employee	7,779	14,538	29,704
27	Gross average salary/employee (23:24)	lei/employee	18,250	21,432	21,885
28	Salary index	%		117.44%	102.11%
29	Productivity index	%		104.28%	99.13%
30	Correlation index (28:29)	coefficient		1.13	1.03
Fabrica de zahăr Bod					
31	Turnover	lei	20,601,887	39,994,469	49,659,362
32	Gross outcome from net turnover	lei	3,219,518	-2865571	8006509
33	Staff expenditures	lei	5,785,404	2,892,679	4,530,297
34	Employee average number	people	220	192	256
35	Labour productivity (31:34)	lei/employee	93,645	208,305	193,982
36	Profit (loss)/employee (32:34)	lei/employee	14,634	-14,925	31,275
37	Gross average salary/employee (33:34)	lei/employee	26,297	15,066	17,696
38	Salary index	%		57.29%	117.46%
39	Productivity index	%		222.44%	93.12%
40	Correlation index (38:39)	coefficient		0.26	1.26

Source: own calculations based on the data present in the financial statements of the 4 companies

The calculations (table 3) show that the dynamics of the annual average labour productivity for all the four sugar beet factories recorded an upward trend in 2009 over 2008 and a downward trend in 2010 in comparison with 2009.

By analyzing the rapport between the elements that define the calculation of the annual average labour productivity it can be noticed that the increase of the growing pace of labour productivity in 2009 over 2008 was influenced by the turnover increase along with the decrease of the employee average number of the factories in Oradea, Luduș and Bod or by the growing turnover that surpassed the growth of the employee annual average number that was recorded by Agrana.

In the second period analyzed here (2010 compared to 2009), the decrease of the annual average labour productivity which surpassed the decrease of the annual average employee number for Agrana Oradea and Luduș or the effect of the turnover increase inferior to the increase of the annual average employee number for the factory in Bod.

The turnover increase in 2009 over the previous year was influenced by the growth of the merchandise production as a result of the increase of the sugar beet cultivated area and of the average yield per hectare for Agrana and Bod and as a result of the increase of the cultivated area alone, while the average yield per hectare decreased, in the case of the Oradea and Luduș factories.

The increase of labour productivity has multiple influences and one may assert that it is the main reason for the growth of the merchandise production, having economic consequences on all synthetic economic and financial indicators of the factories' activity. At the same time, the increase of labour productivity is the decisive factor in obtaining the optimum correlations between the basic indicators of economic activities. One of the most significant effects is the correlation between the increase of average labour productivity and average salary. The correlation between the dynamics of labour productivity and the average salary represents a model for emphasizing labour efficiency. The main requirement regarding this correlation is that, irrespective of its representation, the dynamics of labour productivity should surpass that of the average salary.

According to the calculations made in table 3, one can notice that in the first analyzed period (2009 compared to 2008), for the Agrana Oradea and Bod factories, the growing pace of labour productivity surpasses that of the average salary and that as a result the correlation index is sub-unitary, which is considered positive. On the contrary, for the Luduș factory, where a more accentuated increase of the average salary over that of the annual average labour productivity was

recorded, thus generating an over-unitary correlation index, the situation is unfavourable. The size of the generated index shows that with every increase percentage of labour productivity, the average salary increased by 13%.

The second analyzed period reflects a negative situation for all four factories, the increase index for the annual average salary surpassing the increase index for labour productivity, which requires measures to increase the annual average labour productivity, necessary for the next period.

2.3. Analysis of the effectiveness of industrial means usage

The effectiveness and viability of an enterprise on a market based on competition are also ensured by the company's access to technical and material assets that are in conformity with the new requirements on the market economy.

This requires industrial means that are represented by fixed and current assets.

The effectiveness of fixed assets is ensured by the following indicators: turnover per 1000 lei of fixed assets, added value per 1000 lei of fixed assets.

By analyzing the effectiveness of fixed assets use within the sugar beet processing factories in Romania (Table 4), one notices an increase of the dynamics of their yield in 2009 as compared to 2008 and a decrease in 2010 as compared to 2009.

Thus, if in 2008, for each 1000 lei of fixed assets a turnover of 9, 604 lei was obtained by Agrana Romania, 3,961 lei by the sugar factory in 2,004 lei by Ludus, and 1057 lei by Bod, in 2009 there was an increase of 49% for Agrana Romania, of 117% for Zahărul Oradea, of 2% for and of 72% for the Bod sugar factory.

From the perspective of the fixed assets yield, 2010 was a negative year. Thus, in that year, the value of the turnover per 1000 lei of fixed assets decreased as compared to 2009, by 35 % for Agrana Romania, by 32% for Zahărul Oradea, by 17% for Zahărul Luduş and by 4% for the Bod sugar factory.

The other indicator that shows the yield generated by the fixed assets' effectiveness, namely the added value per 1000 lei of fixed assets, followed approximately the same trend as the turnover per 1000 lei of fixed assets (Table 4).

Table 4: Effectiveness of industrial means usage based on turnover per 1000 lei of fixed assets and the added value per 1000 lei per fixed assets within the beet sugar processing factories in Romania

	Indicators	UM	2008	2009	2010	% 09/08	% 10/09
Agrana Romania							
1	Turnover	lei	400,731,821	609,277,389	441,474,213	152%	72%
2	Added value	lei	31,461,986	61,974,232	78,447,631	197%	127%
3	Fixed assets	lei	41,726,141	42,632,372	47,820,414	102%	112%
4	Turnover per 1000 lei of fixed assets	lei per 1000 lei	9,604	14,291	9,232	149%	65%
5	Added value per 1000 lei of fixed assets	lei per 1000 lei	754	1,454	1,640	193%	113%
Zahărul Oradea							
	Indicators	UM	2008	2009	2010	% 09/08	% 10/09
6	Turnover	lei	103,928,252	228,152,713	152,868,642	220%	67%
7	Added value	lei	-5,108,968	24,286,289	24,258,323	-475%	100%
8	Fixed assets	lei	26,234,711	26,584,886	26,365,674	101%	99%
9	Turnover per 1000 lei of fixed assets	lei per 1000 lei	3,961	8,582	5,798	217%	68%
10	Added value per 1000 lei of fixed assets	lei per 1000 lei	-195	914	920	-469%	101%
Zahărul Luduş							
	Indicators	UM	2008	2009	2010	% 09/08	% 10/09
11	Turnover	lei	45,897,296	45,900,426	42,358,669	100%	92%
12	Added value	lei	9,069,155	12,102,247	16,094,752	133%	133%

13	Fixed assets	lei	22,902,648	22,503,262	25,026,154	98%	111%
14	Turnover per 1000 lei of fixed assets	lei per 1000 lei	2,004	2,040	1,693	102%	83%
15	Added value per 1000 lei of fixed assets	lei per 1000 lei	396	538	643	136%	120%
Bod Sugar Factory							
	Indicators	UM	2008	2009	2010	% 09/08	% 10/09
16	Turnover	lei	20,601,887	39,994,469	49,659,362	194%	124%
17	Added value	lei	2,497,452	7,115,371	5,038,112	285%	71%
18	Fixed assets	lei	19,496,096	22,044,872	28,427,415	113%	129%
19	Turnover per 1000 lei of fixed assets	lei per 1000 lei	1,057	1,814	1,747	172%	96%
20	Added value per 1000 lei of fixed assets	lei per 1000 lei	128	323	177	252%	55%

Source: own calculations based on the data present in the financial statements of the 4 companies

3. Proposal for an aggregate model for the analysis of the production factors usage

Applying the models for methods of analysis in using the production factors presented in the specialized literature there is usually used a single factor of production, making abstraction of the other two factors. Since all production factors are interrelated that means the production cannot be obtained through the action of a single factor but by the complex action of all factors of production. Thus, to objectively determine the effectiveness of the use of all factors of production, an aggregate indicator analysis is necessary. To this end proposes I suggest developing a model that combines the influence of all factors of production, based on the method of regressive- interrelation analysis. Within regressive- interrelation analysis it is analyzed how the dependent variable evolves according to the modification of one or more causal variables.

In this case the link factorial equation will yield: $y_{x_1, x_2, \dots, x_n} = a_0 + a_1 x_1 + a_2 x_2 + \dots + a_n x_n$ (1),

Where:

a_0 – the free coefficient of the equation;

a_1, a_2, \dots, a_n – the coefficients of regression, expressing the mean change in the characteristic feature of endogenous y caused by exogenous changes X_i by one, provided that the influence of other factors in the mathematical model is considered and set at the average level;

x_1, x_2, \dots, x_n - independent variables affecting the outcome

The mentioned factorial link equation is also called "production function" as highlights the functional dependence of the factors of production size, which is input into the system and result in the production process (production, income, etc.) that is considered output of the system (Petre D.A, 1996, p. 25-26).

To determine the priority factors the elasticity coefficients are calculated by the following

$$\text{formula: } \varepsilon_1 = a_1 \frac{\bar{x}_1}{\bar{y}}; \quad \varepsilon_2 = a_2 \frac{\bar{x}_2}{\bar{y}}; \quad \text{etc.} \quad (2)$$

They show the percentage each product characteristic will change if the characteristic factor will change by 1%.

The partial coefficients of determinants determine individual significance of each factor included in the model, as they are calculated taken the formula: $d_i^2 = r_{yxi} \beta_i$ (3)

Where:

r_{yxi} – the even correlation coefficient between y and x_i .

$$r_{yxi} = \frac{n \sum x_i y - (\sum x_i)(\sum y)}{\sqrt{n \sum x_i^2 - (\sum x_i)^2} \times \sqrt{n \sum y^2 - (\sum y)^2}} \quad (4), \text{ where:}$$

n = number of subjects in the sample;

$\sum x_i^2$ și $\sum y^2$ are obtained by raising the square and then summing the results

$(\sum x_i)^2$ și $(\sum y)^2$ is obtained by summing all parties x-and y-parties and then raises the result to the square;

$\sum x_i y$ is the total sum of the two variables

The multiple regression and correlation analysis enable us to highlight the factors that appear to change the enormous possibilities of amending the feature outcome. The multifactorial model in order to determine the priority of factors may make their arrangement according to the coefficients determined above, and thereafter determine the average rank factor influence the outcome.

The model was applied to three of the four sugar factories covered by the case study, Oradea Sugar, Sugar Sugar Factory Ludus and Bod, for the period 2004-2010.

If AGRANA Romania factory, could not apply the model because in 2004 the company hadn't processed sugar beet.

In developing multifactorial model to determine the influence of factors to change the indicator result was considered next endogenous characteristic.

y - the production of sugar made from sugar beet (tonnes).

In the mathematical model were included factors that have a significant influence on production manufactured goods, namely:

x1-yield agricultural land (tons beet / ha);

x2 - labor productivity (in tons sugar beet / employee);

x3 – the degree of utilization of production capacity (%).

Processing the information using Excel, for the factory in Oradea, it allowed to be obtained the following regression equation:

$$y = -3.020,68 + 168,90x_1 + 0,95x_2 + 232,48x_3 \quad (5)$$

The regression coefficients in equation obtained shows an increase in the amount of sugar obtained from sugar beet:

- to 168.90 tones, where the yield of agricultural land increased by one tone of sugar beet per hectare;
- with 0.95 tones, where average labor productivity is increased by one tone of sugar beet per employee;
- to 232.48 tones, where utilization of production capacity increases by one unit.

To determine the weight of each factor to the formation of manufactured goods production will calculate the elasticity coefficients using the initial data in table 5.

Table 5: Initial data for the determination of elasticity coefficients and standard deviation

	INITIAL DATA				CALCULATION DATA			
	y	x ₁	x ₂	x ₃	y ²	x ₁ ²	x ₂ ²	x ₃ ²
1	12.080	8,29	51,56	6,39	402.965.476	570,23	675.232,55	6.566,06
2	20.074	23,87	821,73	81,03	245.548.900	729,39	271.375,10	3.676,15
3	15.670	27,01	520,94	60,63	110.019.121	583,88	186.028,90	1.370,54
4	10.489	24,16	431,31	37,02	302.064.400	2.296,22	343.129,33	2.398,75
5	17.380	47,92	585,77	48,98	557.809.924	1.613,71	993.235,16	7.082,62
6	23.618	40,17	996,61	84,16	733.488.889	817,17	1.156.485,9	9.709,63
7	27.083	28,58	1.075,4	98,54	488.852.100	945,77	1.168.960,1	6.939,82
S	22.110	30,75	1.081,18	83,31	2.840.748.810	7.556,38	4.794.446,9	37.743,6
M	136.424	222,47	5.512,94	493,66	405.821.259	1.079,48	684.920,99	5.391,94

Source: own calculations

Such elasticity coefficients calculated on relationship (2) will be:

- For x₁: $E_1 = 168,90 \times \frac{31,7828}{19.489} = 0,2754$
- For x₂: $E_2 = 0,95 \times \frac{787,5631}{19.489} = 0,0383$
- For x₃: $E_3 = 232,48 \times \frac{70,5231}{19.489} = 0,8412$

The elasticity coefficients calculated values allow us to state that:

- increase efficiency by 1% of agricultural land will help increase sugar production by 0.2754%;
- the average annual labor productivity increase of 1% will lead to increase sugar production with 0.0383%;
- increase the use of production capacity by 1% will result in increased production of sugar by 0.8412%.

Applying the formula (4) the following results are obtained for r_{yxi} :

$$r_{yx1} = 0,1878; r_{yx2} = 0,9353; r_{yx3} = 0,9498,$$

and for the partial coefficients of determinants (proportion 3):

$$d_1^2 = 0,1878 \times 0,2758 = 0,0518;$$

$$d_2^2 = 0,9353 \times 0,0473 = 0,0442;$$

$$d_3^2 = 0,9498 \times 0,9327 = 0,8859;$$

The partial coefficients of determinants leads to weight each factor in the formation of manufactured production.

Thus, the yield of agricultural land, average annual labor productivity and utilization of production capacity causes physical change in sugar production by 5,18%, 4,42% and 88,59% (table 6).

Table 6: The participation rate on sugar production factors

INDICATORS	%
The sugar production from sugar beet	100,00
Yield of agricultural land	5,18
Annual average labor productivity	4,42
Production capacity used degree	88,59
Others	1,80

Source: Own calculations

The results obtained (Table 6) show that the largest share of production has achieved a factor x_3 , utilization of production capacity, 88.59% respectively x_1 , yield of agricultural land has led to 5.18% of production.

The annual average productivity is the factor that contributed the smallest proportion of production from, holding a share of 4.42%.

For factory in Ludus was obtained following regression equation:

$$y = 8.369,54 + 31,80x_1 + 17,91x_2 + 49,23x_3$$

The regression coefficients in the equation obtained shows an increase in the amount of sugar obtained from sugar beet:

- by 31.80 tons if the yield of agricultural land increases by a tone of sugar beet per hectare;
- by 17.91 tons when the average labor productivity is increased by one tone of sugar beet per employee;
- by 49.23 tons when the utilization of production capacity increases by one unit.

By applying the same methodology as in sugar factory in Luduș, the coefficients of elasticity are:

- For x_1 : $E_1 = 0,0464$
- For x_2 : $E_2 = 0,4210$
- For x_3 : $E_3 = 0,1506$

The elasticity coefficients calculated values allow us to state that:

- Increase efficiency by 1% of agricultural land will help increase sugar production by 0.0464%;
- Average annual labor productivity increase of 1% will lead to increase sugar production with 0.4210%
- Increase the use of production capacity by 1% will result in increased production of sugar by 0.1506%.

For r_{yx} the following results are obtained:

$r_{yx1} = 0,0242$; $r_{yx2} = 0,7312$; $r_{yx3} = 0,6906$,

And for the partial coefficients of determinants

$d_1^2 = 0,0010$; $d_2^2 = 0,3899$; $d_3^2 = 0,1473$;

thus, the yield of agricultural land, average annual labor productivity and utilization of production capacity determined change in physical production of sugar by 0.10%, 38.99% and 14.73%. (Table 7).

Table 7: Participation rate on sugar production factors

INDICATORS	%
Sugar production from sugar beet	100,00
Return on agricultural land	0,10
Average annual labor productivity	38,99
Utilization of production capacity	14,73
Other factors	46,18

Source: Own calculations

The results obtained (Table 7) show that the largest share of production has achieved a factor x_2 , average annual labor productivity, ie 38.99%.

x_1 , agricultural land has led to yield 0.10% of production, as the factor that has contributed the lowest proportion of production from.

Utilization of production capacity has a weight of 14.73%.

For factory at Bod was obtained following regression equation: $y = 909.46 + 4.74 x_1 + 20.55x_2 + 36.09x_3$

Regression coefficients in the obtained equation shows an increase in the amount of sugar obtained from sugar beet:

- by 4.74 tonnes if the yield of agricultural land increases by a tonne of sugar beet per hectare;
- by 20.55 tons when the average labor productivity is increased by one tonne of sugar beet per employee;
- 36.09 tons when the utilization of production capacity increases by one unit

Elasticity coefficients will be

- For x_1 : $E_1 = 0,0090$
- For x_2 : $E_2 = 0,7523$
- For x_3 : $E_3 = 0,1720$

The elasticity coefficients calculated values allow us to state that:

- increase efficiency by 1% of agricultural land will help increase sugar production by 0.0090%;
- Average annual labor productivity increase of 1% will lead to increase sugar production with 0.7523%
- increase the use of production capacity by 1% will result in increased production of sugar by 0.1720%.

Applying the methodology of calculation the following results are obtained for r_{yxi} :

$r_{yx1} = 0,4981$; $r_{yx2} = 0,9948$; $r_{yx3} = 0,9557$,

And for the partial coefficients of determinants:

$d_1^2 = 0,0043$; $d_2^2 = 0,8653$; $d_3^2 = 0,1217$;

Thus, the yield of agricultural land, average annual labor productivity and utilization of production capacity determined change in physical production of sugar by 0.43%, 86.53% and 12.17%. (Table 8).

Table 8: The participation rate on sugar production factors

INDICATORS	%
Sugar production from sugar beet	100,00
Return on agricultural land	0,43
Average annual labor productivity	86,53
Utilization of production capacity	12,17
Other factors	0,87

Source: Own calculations

The results obtained (Table 8) show that the largest share of production has achieved a factor x_2 , average annual labor productivity, ie 86.53%. X_1 , yield of agricultural land has led to 0.43% of production, as the factor that has contributed the lowest proportion of production from. Utilization of production capacity has a weight of 12.17%.

4. Conclusions

The aggregate analysis model of the use of production factors proposed to determine the following regression equations

- sugar Oradea $y = 3020.68 + 168.90 x_1 + 0.95 x_2 + 232.48 x_3$ which shows an increase in the amount of sugar obtained from sugar beet: to 345.87 tonnes, where the yield of agricultural land increased by one tonne of sugar beet per hectare to 0.95 tonnes, where average labor productivity is increased by one tonne of sugar beet per employee, with 232.48 tonnes when utilization of production capacity increase by one unit;
- In Ludus sugar $y = 8.369,54 + 31,80x_1 + 17,91x_2 + 49,23x_3$ which shows a 49.23 increase in the amount of sugar obtained from sugar beet: with 31.80 tonnes, where the yield of agricultural land increased by a tonne of sugar beet per hectare, 17.91 tons, where average labor productivity is increased by one tonne of sugar beet per employee, with 49.23 tons when utilization of production capacity increases by one unit .
- For Sugar Bod $y = 909.46 + 4.74 x_1 + 20.55 x_2 + 36.09 X_3$, which shows an increase in the amount of sugar obtained from sugar beet: with 4.74 tonnes of agricultural land where the yield increases by a tonne of sugar beet per hectare, 20.55 tons, where average labor productivity is increased by one tonne of sugar beet per employee, with 36.09 tons when utilization of production capacity increases by one unit.

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CALCULATING METHODS REGARDING THE INFORMATIONAL MODERNISATION OF THE EMERGENCY MANAGEMENT

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Abstract: *An important role in improving information emergency management is occupied by the mathematical modelling. It allows to examine the structure and dynamic of emergencies systems, identifying ways and methods to effectively employ all available forces and means in solving emergency situations. Therefore, optimal management of information in the set up structures for emergency management is the cornerstone that allows efficiency to all activities.*

Keywords: information network, optimization, model, decision.

JEL classification: M 29

1. Introduction

Upgrading information for emergency management is based on accurate scientific calculations and has a big importance for structuring the information flow.

When seeking to optimize linkages between the driving information base point (PCB) and management points from the areas of activity (PCS₁ to S₆) is required to analyze the networks information structures we can use.

They consist of elements between which are trades of decision information (nodes), using specific WAN networks technology (Wide Area Network - Wide Area Network) (Zota, 1999), compliant with the chosen optimization method.

Developing a information network for information management we need to envisaged that the organizational information system is the best.

One of the main criteria that can lead to *optimization* of emergency information network is studied by Bavelas (Alexandrescu, 2009; Wysoki; DeMichiell, 1997).

2. Mathematical modeling of information network optimization

If we consider the graph associated with an information network (the nodes of the graph represents the management point of view of the analysed structure and the arches are the links), each node x_i can be associated with each arc length d_{ij} and it represents the *minimum* path length between the nodes i and j .

For a network with n nodes, we have:

Centrality index point:

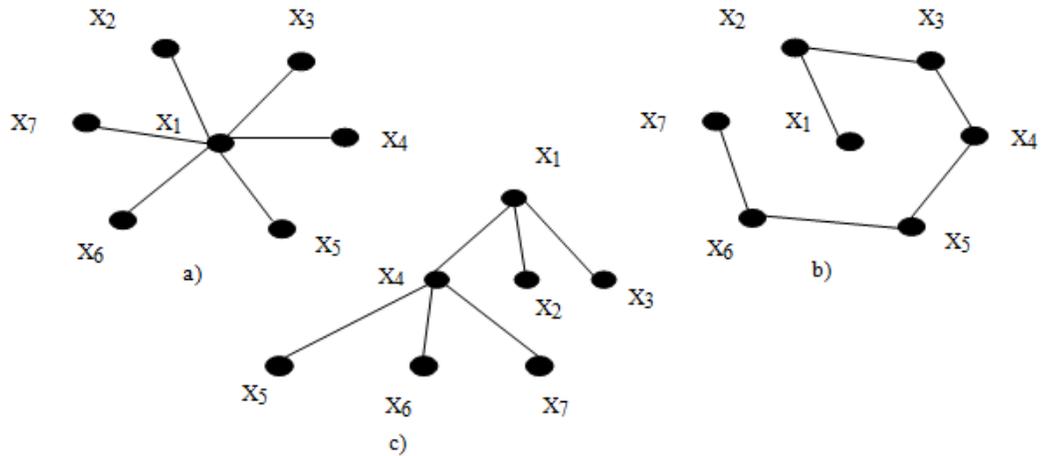
$$c_i = \frac{\sum_{i=1}^n \sum_{j=1}^n d_{ij}}{\sum_{j=1}^n d_{ij}}, \quad i \neq j, \quad \text{and} \quad (1)$$

Global index point

$$C = \sum_{i=1}^n c_i \quad (2)$$

We consider the information network shown in Figure 1, where node x_1 is associated to basic control point and $x_i, i = 2 \div 7$ are the control nodes of each sector (x_2 – for sector 1, ..., x_7 – for sector 6).

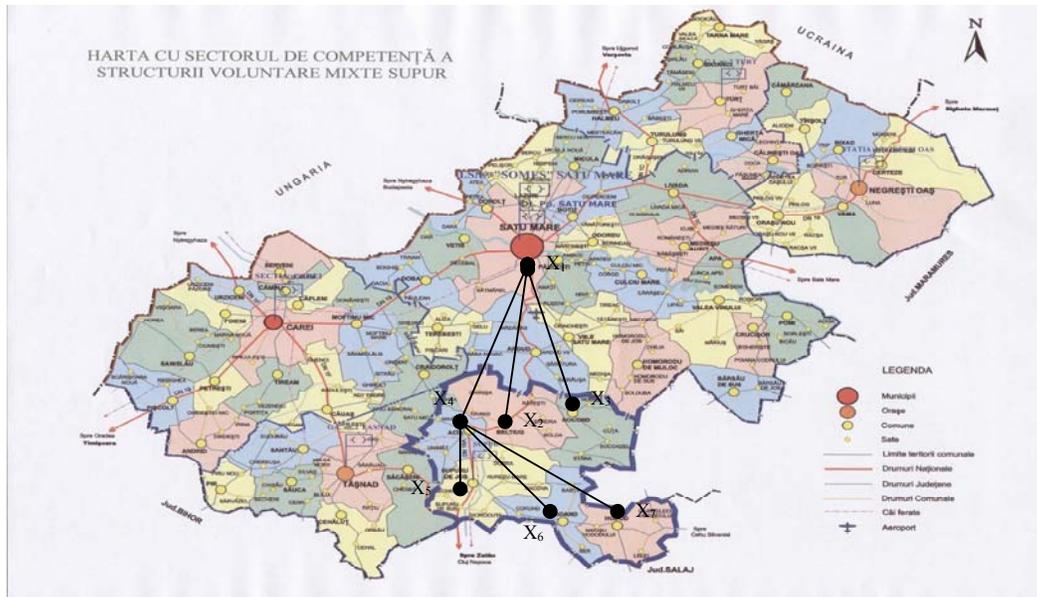
Figure 1: Structures of network management information associated with leading points



Statements presented in Figure 1 are hypotheses that currently work. They are taken into account in the moment of points distribution into the field, when the complexity of emergency management recommends hierarchical management intervention with more forces.

Example: For Figure 1 c), where PCB is the Emergency Inspectorate of Satu Mare, according to the map from Figure 2, it will coordinate the PCS1, PCS2 and PCS3 activities points, corresponding to x_2 , x_3 and x_4 , in Beltiug, Socond and Acășvillages home. PCS₄ (Acăș) will coordinate the management point from S₄ S₅ and S₆ corresponding to x_5 , x_6 and x_7 (Supur, Bogdand and Hodod). Having the same logic, the explanation is similar for the two cases what were taken into consideration.

Figura 2: Example of a hierarchical network management between ranked points



For the network in Figure 1 a) the arc lengths are presented in table 1.

Table 1: Arc lengths for fig. 1a)

$d_{12}=1$	$d_{21}=1$	$d_{31}=1$	$d_{41}=1$	$d_{51}=1$	$d_{61}=1$	$d_{71}=1$
$d_{13}=1$	$d_{23}=2$	$d_{32}=2$	$d_{42}=2$	$d_{52}=2$	$d_{62}=2$	$d_{72}=2$
$d_{14}=1$	$d_{24}=2$	$d_{34}=2$	$d_{43}=2$	$d_{53}=2$	$d_{63}=2$	$d_{73}=2$
$d_{15}=1$	$d_{25}=2$	$d_{35}=2$	$d_{45}=2$	$d_{54}=2$	$d_{64}=2$	$d_{74}=2$
$d_{16}=1$	$d_{26}=2$	$d_{36}=2$	$d_{46}=2$	$d_{56}=2$	$d_{65}=2$	$d_{75}=2$

$d_{17}=1$	$d_{27}=2$	$d_{37}=2$	$d_{47}=2$	$d_{57}=2$	$d_{67}=2$	$d_{76}=2$
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The corresponding indices for the information network from figure 1 a), are:

$$c_1 = \frac{\sum_{j=1}^7 d_{1j} + \sum_{j=1}^7 d_{2j} + \sum_{j=1}^7 d_{3j} + \sum_{j=1}^7 d_{4j} + \sum_{j=1}^7 d_{5j} + \sum_{j=1}^7 d_{6j} + \sum_{j=1}^7 d_{7j}}{\sum_{j=1}^7 d_{1j}} =$$

$$= \frac{6+11+11+11+11+11+11}{6} = \frac{72}{6} = 12$$

$$c_2 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$c_3 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$c_4 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$c_5 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$c_6 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$c_7 = \frac{6+11+11+11+11+11+11}{11} = \frac{72}{11} \approx 6,55$$

$$C = c_1 + c_2 + c_3 + c_4 + c_5 + c_6 + c_7 \approx 51,30 \tag{3}$$

Therefore, any subordinate node $(x_2 \div x_7)$ is not disadvantaged in terms of information and losing connections with any of them produce the same damage.

The network from Figure 1b), has the arc lengths presented in table 2.

Table 2: Arc lengths for figure 1b)

$d_{12}=1$	$d_{21}=1$	$d_{31}=2$	$d_{41}=3$	$d_{51}=4$	$d_{61}=5$	$d_{71}=6$
$d_{13}=2$	$d_{23}=1$	$d_{32}=1$	$d_{42}=2$	$d_{52}=3$	$d_{62}=4$	$d_{72}=5$
$d_{14}=3$	$d_{24}=2$	$d_{34}=1$	$d_{43}=1$	$d_{53}=2$	$d_{63}=3$	$d_{73}=4$
$d_{15}=4$	$d_{25}=3$	$d_{35}=2$	$d_{45}=1$	$d_{54}=1$	$d_{64}=2$	$d_{74}=3$
$d_{16}=5$	$d_{26}=4$	$d_{36}=3$	$d_{46}=2$	$d_{56}=1$	$d_{65}=1$	$d_{75}=2$
$d_{17}=6$	$d_{27}=5$	$d_{37}=4$	$d_{47}=3$	$d_{57}=2$	$d_{67}=1$	$d_{76}=1$

The corresponding indices for the information network from figure 1 b), are:

$$c_1 = \frac{\sum_{j=1}^7 d_{1j} + \sum_{j=1}^7 d_{2j} + \sum_{j=1}^7 d_{3j} + \sum_{j=1}^7 d_{4j} + \sum_{j=1}^7 d_{5j} + \sum_{j=1}^7 d_{6j} + \sum_{j=1}^7 d_{7j}}{\sum_{j=1}^7 d_{1j}} =$$

$$= \frac{21+16+13+12+13+16+21}{21} = \frac{112}{21} \approx 5,33$$

$$c_2 = \frac{21+16+13+12+13+16+21}{16} = \frac{112}{16} = 7$$

$$c_3 = \frac{21+16+13+12+13+16+21}{13} = \frac{112}{13} \approx 8,61$$

$$c_4 = \frac{21+16+13+12+13+16+21}{12} = \frac{112}{12} \approx 9,33$$

$$c_5 = \frac{21+16+13+12+13+16+21}{13} = \frac{112}{13} \approx 8,61$$

$$c_6 = \frac{21+16+13+12+13+16+21}{16} = \frac{112}{16} = 7$$

$$c_7 = \frac{21+16+13+12+13+16+21}{21} = \frac{112}{21} \approx 5,33$$

$$C = c_1 + c_2 + c_3 + c_4 + c_5 + c_6 + c_7 \approx 51,24 \tag{4}$$

It results that in order to have a proper network function from figure 1b), the nodes $x_2 \div x_6$ are very important.

For the network showed in figure 1c), the arc length are presented in table 3.

Table 3: Arc length for figure 1c)

d ₁₂ =1	d ₂₁ =1	d ₃₁ =1	d ₄₁ =1	d ₅₁ =2	d ₆₁ =2	d ₇₁ =2
d ₁₃ =1	d ₂₃ =2	d ₃₂ =2	d ₄₂ =2	d ₅₂ =3	d ₆₂ =3	d ₇₂ =3
d ₁₄ =1	d ₂₄ =2	d ₃₄ =2	d ₄₃ =2	d ₅₃ =3	d ₆₃ =3	d ₇₃ =3
d ₁₅ =2	d ₂₅ =3	d ₃₅ =3	d ₄₅ =1	d ₅₄ =1	d ₆₄ =1	d ₇₄ =1
d ₁₆ =2	d ₂₆ =3	d ₃₆ =3	d ₄₆ =1	d ₅₆ =2	d ₆₅ =2	d ₇₅ =2
d ₁₇ =2	d ₂₇ =3	d ₃₇ =3	d ₄₇ =1	d ₅₇ =2	d ₆₇ =2	d ₇₆ =2

The corresponding indices of the information network from figure 1 c), are:

$$c_1 = \frac{\sum_{j=1}^7 d_{1j} + \sum_{j=1}^7 d_{2j} + \sum_{j=1}^7 d_{3j} + \sum_{j=1}^7 d_{4j} + \sum_{j=1}^7 d_{5j} + \sum_{j=1}^7 d_{6j} + \sum_{j=1}^7 d_{7j}}{\sum_{j=1}^7 d_{1j}} =$$

$$= \frac{11+14+14+8+13+13+13}{11} = \frac{86}{11} \approx 7,82$$

$$c_2 = \frac{11+14+14+8+13+13+13}{14} = \frac{86}{14} \approx 6,14$$

$$c_3 = \frac{11+14+14+8+13+13+13}{14} = \frac{86}{14} \approx 6,14$$

$$c_4 = \frac{11+14+14+8+13+13+13}{8} = \frac{86}{8} = 10,75$$

$$c_5 = \frac{11+14+14+8+13+13+13}{13} = \frac{86}{13} \approx 6,62$$

$$c_6 = \frac{11+14+14+8+13+13+13}{14} = \frac{86}{14} \approx 6,62$$

$$c_7 = \frac{11+14+14+8+13+13+13}{14} = \frac{86}{14} \approx 6,62$$

$$C = c_1 + c_2 + c_3 + c_4 + c_5 + c_6 + c_7 \approx 50,71 \quad (5)$$

It result that in order to have a proper function for the network presented in figure 1c) it is very important the x_4 node.

From the study we can see that the organizational level of the network from figure 1a) is better, the global centrality index being higher.

$$C_{fig.1a} = 51,30 > C_{fig.1b} = 51,24 > C_{fig.1c} = 50,74. \quad (6)$$

Beside the centrality index, other important factors of the organizational information network that has to be taken into account are the economic and operational factors. The information has one direction trajectory simultaneously from PCB to PCS₁₋₆, without going through other nodes that have a retarding effect on its transmission, aspect which is not allowed in emergency situations, the information being the basic support of the manager in decision making intervention.

Another reason for choosing the network in fig.1a) is that the total system works with the following features (Ramniceanu, 2007):

- Compatibility;
- Interoperability;
- Interchangeability;
- Standardization;
- Accuracy;
- Availability;
- Flexibility;
- Privacy and security;
- Viability;
- Ergonomics.

Organizing information network on the models shown in the figures 1b) and 1c) does not meet these principles, therefore such a network is not viable.

Taking into account the accelerated cadence of events that take place in emergency situations, there is a need to use a system in order to assist the managers. The system should not obstruct the reasonable process of managers, but it must increase the capacity of analysis and decision making and it must become an extension of managers reason (Boldur, 2009).

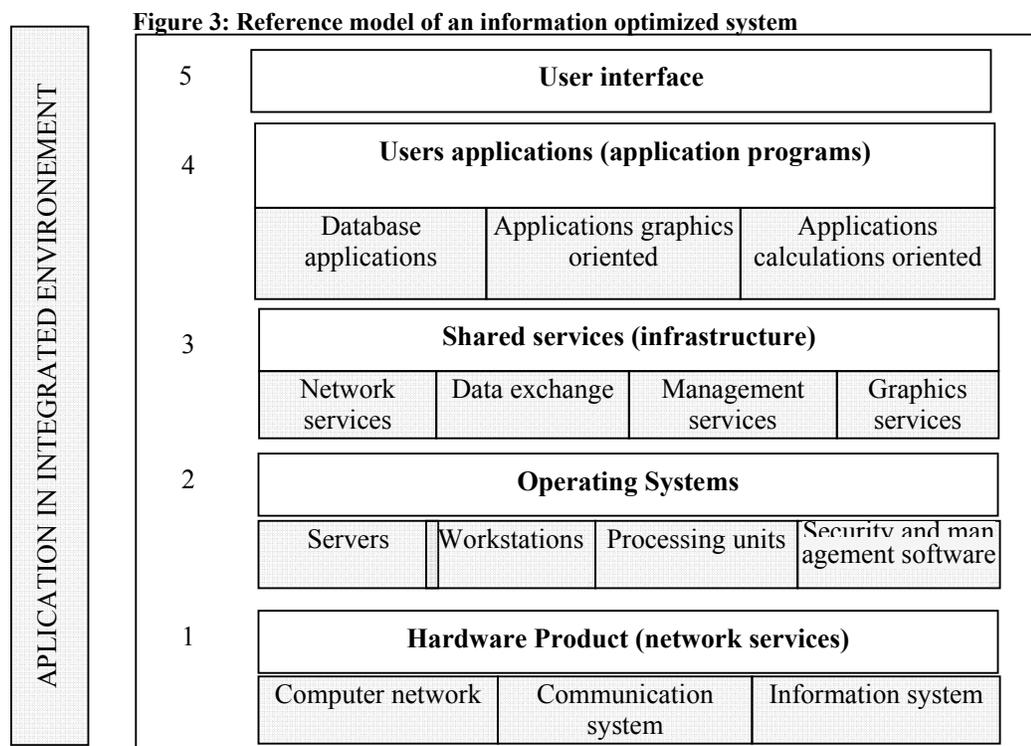
The main novelty element in the optimized informational system consists in the existence of the mobile command points, that are capable to ensure the closure of the management of the intervention object.

All information on emergency management must be found in databases, they have to be continuously updated and need to be used immediately, depending on the specific situation (Ciobanu; Ilie; Nour, 2006).

A thorough insurance information to each department involved in solving emergency situations is considered an important condition for the success of the intervention actions (Habracken, 2002).

Upgrading information system for emergency management should be based on full implementation of all standardization elements.

Reference model of an information system is detailed in figure 3.



Source: (Alexandrescu, 2009)

For example, in the case of crews alerting to participate at intervention using communication techniques we have a permanent contact with the dispatcher from the order point, for any new information on the operational situation.

The computer network having a database with graphics-oriented applications can easily locate the center of the disaster area, the user interface in this case being the portable computer (laptop). Response teams sent reports and pictures from the intervention place with the help of equipment which works through integrated operating environment.

Treatment of the data and of the information, operational information flows and procedures, use of processing information are the result of the performance and execution management.

We can note that the main element of the information system is the information infrastructure with four basic components (Alexander, 2002):

- Information management system;
- Data and information resources;
- Information technology;
- Processes information (mostly automated).

3. Conclusion

If in the past, information technology, was aimed at storing data, in the modern world it provides a dynamic view on the emergency situations, facilitating the adaptation of decision-makers factors on environmental changes and random events that can occur during the disasters event.

In this way, information technology is extremely important in achieving objectives in resolving emergency situations. In addition, it is applicable to any area of organizational system regardless the size.

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ANALYSIS OF THE MAIN INTERNATIONAL STANDARDS AND GUIDELINES ABOUT PROJECT RISK MANAGEMENT

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Abstract: *The purpose of this paper is to present the main guidelines and standards concerning the project risk management such as: the PMBOK guide, the PRAM guide, the PRINCE2 standard and the ISO 31000:2009 standard. Also, this paper tries to make a comparative analysis of main standards about project risk management. In my opinion, the best standard regarding the project risk management is that which suits better with the size and nature of the project and also is that on which you know and manage the best.*

Key words: project, risk, management, standards, guidelines

JEL classification: G32

1. Introduction

From the project management point of view, the risk can be defined as the probability of an uncertain event to occur. This event can have a positive or rather negative impact on the project objectives.

Managing a project without taking into account the potential risks can lead to its failure. Therefore, it is important to implement the risk management in any projects.

In the last years, some guidelines and standards concerning the project risk management were proposed. Of these, the best known and most used are:

- A guide to the Project Management Body Of Knowledge (the PMBOK Guide) issued by the Project Management Institute (U.S.A.);
- The PRINCE2 (PProjects IN Controlled Environments) standard (methodology) who was initially developed, in U.K., by the Central Computer and Telecommunications Agency;
- The Project Risk Analysis and Management Guide (the PRAM Guide) issued by the Association for Project Management (U.K.);
- ISO 31000:2009, “Risk Management – Principles and Guidelines”, developed by the International Organization for Standardization (Switzerland).
- ISO/IEC 31010:2009, “Risk management – Risk assessment techniques”, developed by the International Organization for Standardization (Switzerland) in cooperation with the International Electrotechnical Commision etc.

2. Project risk management according the PMBOK Guide

In 1969, in the U.S.A. it was constituted the first organization which had the aims to promote and develop the project management: Project Management Institute (PMI).

In 1987, the Project Management Institute has proposed a set of standards and practical guidance for the this field, in a document known as the PMBOK (Project Management Body Of Knowledge), which defines the fundamentals of project management for several areas activity, such as engineering, construction, IT etc.

Later, in 1996, was developed the first edition of the guide (A guide to the Project Management Body of Knowledge). The second was developed in 2000, the third in 2004 and the fourth (which is in force today) in 2008. This year the PMI will elaborate the fifth edition of this guide. In present, this edition is already in draft.

In the PMBOK guide, the problems concerning the project risk management are treated in the 11th chapter.

Comparing the five editions of the guide, we can say that the approach to risk management has suffered in recent years, several changes both in terms of number of processes and their name and

definition. Thus, the five editions of this guide (standard) consider that the project risk management covers the following processes (PMI, 1996, 2000, 2004, 2008):

Table 1 The processes of project risk management according the PMBOK Guide

First edition of the PMBOK guide	Second edition of the PMBOK guide	Third edition of the PMBOK guide	Fourth edition of the PMBOK guide	Fifth edition of the PMBOK guide (in draft)
	11.1 Risk management planning	11.1 Risk management planning	11.1 Plan risk management	11.1 Plan risk management
11.1 Risk identification	11.2 Risk identification	11.2 Risk identification	11.2 Identify risks	11.2 Identify risks
11.2 Risk quantification	11.3 Qualitative risk analysis	11.3 Qualitative risk analysis	11.3 Perform qualitative risk analysis	11.3 Perform qualitative risk analysis
	11.4 Quantitative risk analysis	11.4 Quantitative risk analysis	11.4 Perform quantitative risk analysis	11.4 Perform quantitative risk analysis
11.3 Risk response development	11.5 Risk response planning	11.5 Risk response planning	11.5 Plan risk responses	11.5 Plan risk responses
11.4 Risk response control	11.6 Risk monitoring and control	11.6 Risk monitoring and control	11.6 Risk monitoring and control	11.6 Control risks

Concerning the fourth edition of the guide, plan risk management process has the role to define how will be conduct the activities related to risk management within a project (PMI, 2008). The main result of risk management planning process is the risk management plan. This plan is a document in which will be setting out the strategies, the actions that will be used to minimize the negative effects which can be generated by the manifestation of the potential risk factors. This plan is made at the start of the project and is a major part of the project management plan.

Identify risks is the process of determining the risks that may affect the project and of documenting their characteristics (PMI, 2008). Risk identification is a repetitive action during the project life cycle. To identify project risks can be used several tools and techniques such as: documentation reviews, information gathering techniques (Brainstorming technique, Delphi technique, interviewing etc.), diagramming techniques (cause-and-effect diagrams, system or process flow charts etc.), checklist analysis, SWOT analysis, expert judgment etc. The main result of this process is a document named the risk register.

Perform qualitative risk analysis is the process in which is realized a risk hierarchy, a prioritization for the identified risks (a prioritization of the risks as low, moderate, or high priority risks). For this is necessary to establish for these risks the probability of occurring and impact.

The qualitative risk analysis is based mainly on the risk register and on the risk management plan. In order to achieve a qualitative risk analysis can be used several tools and techniques, based on: risk probability and impact assessment, probability and impact matrix, risk data quality assessment, risk categorization, risk urgency assessment etc (PMI, 2008).

Perform quantitative risk analysis is the process designed to analyze the effects of identified risk on project objectives, from numerical point of view. This analysis is made only for risks, which were classified (in the previous process) as risks with high priority.

As tools and techniques for performing quantitative risk analysis, we can use: PERT technique, Monte Carlo simulation, decision tree analysis, sensitivity analysis, expert judgment etc (PMI, 2008).

Plan risk responses is the process which consists in the development of the actions and strategies to enhance or exploit opportunities and to reduce or eliminate threats to project objectives. For achievement this goal, the followings strategies can be used (PMI, 2008):

- strategies for negative risks or threats (avoid, transfer, mitigate or the acceptance of the risks);
- strategies for positive risks or opportunities (exploit, share, enhance or the acceptance of the risks);

- contingent response strategy.

Risk monitoring and control is the process of executing the risk response plans, tracking identified risks, monitoring residual risks and of identifying new risks.

For performing this process several tools and techniques can be used, such as: risk reassessment, risk audits, variance and trend analysis, reserve analysis etc (PMI, 2008).

In 2009, the PMI has elaborated a standard for project risk management named “The practice standard for project risk management”. In this standard, the problems concerning the project risk management are very similar treated like in the 11th chapter from the Guide to the Project Management Body of Knowledge (fourth edition) elaborated by the PMI in 2008.

3. Project risk management according the PRINCE2 standard (methodology)

In present, the PRINCE2 methodology is the UK de facto standard for project management. The origin of this standard comes from a project management method called PROMPTII. In 1979, The Central Computer and Telecommunications Agency (CCTA) adopted PROMPTII as the standard for all government information systems projects. In 1989, PROMPTII suffered some changes and has transformed in PRINCE Standard. Later, in 1996 the PRINCE standard was revised and improved and his name became PRINCE2. The important revisions of this standard were made in 2002 and in 2005.

In the PRINCE2 standard, the risk is considered o major theme, which proposed to identify, assess and control uncertainty. The project risk management according the PRINCE2 is in detail developed in the book named „Management of risk: Guidance for practitioneres” elaborated by the Office of Government Commerce (OGC), in 2007. According this guide, every project must have its own risk management strategy. Also, PRINCE2 considered that the risk management can be viewed like a procedure, which implies the following steps: identify, assess, plan and implement (OGC, 2007).

To identify project risks, according the PRINCE2, can be used some tools and techniques such as: Ishikawa diagram, risk checklists, risk prompt lists, risk breakdown structure, brainstorming etc. For every risk must be establish the cause, event and the effect.

The next step of this procedure implies to assess the risks. As tools and techniques for assessing risks, we can use: expected value technique, decision tree analysis, Pareto analysis, Monte Carlo simulation etc.

Planning risks has the aim to establish the actions to control risks.

PRINCE2 focuses on the opportunities. The guide proposed three major ways of approaching an opportunity: exploit, increase (the probability or impact of the event occurring) or reject the opportunity. Also, the PRINCE2 proposed some responses to threats, such as: avoid, share, reduce, accept or transfer the risks.

The next step implies the implement of the risk responses. Another important element of this procedure, which is considered the last part of this procedure, is the communication. Communicating information about risk needs to be carried out continually (OGC, 2007).

4. Project risk management according the PRAM Guide

The Project Risk Analysis and Management Guide (the PRAM Guide) was elaborated by the Association for Project Management’s Specific Interest Group on Project Risk (Risk SIG). The first edition of this guide, edited by P. Simon, D. Hillson and K. Newland, was published in 1997. The second edition was published by the Association for Project Management (APM) in 2004. Many concepts about risk management remained the same as they were in 1997. The major contributions of the second edition of the PRAM guide (who was strong restructured) regarding the aspects about the actions which can be used to enhance or exploit opportunities and to reduce or eliminate threats to project objectives.

The PRAM Guide was elaborated like guidelines for controlling risk within a project. Project Risk Analysis and Management is a iterative process, who must be repeated throughout the project life cycle. This process has five phases: initiate, identify, assess, plan responses and implement responses (APM, 2004). The first phase can be divided into two sub-phases: define project and focus risk management process. In addition, there is a Manage Process continuous phase, which is conducted in parallel to the other phases.

5. Project risk management according the ISO 31000:2009 standard

In Australia and in New Zealand was proposed and adopted a standard concerning risk management named AS/NZN 4360. The first edition was published in 1995. The next edition was published in 1999 and in 2004 was elaborated the third edition of this standard (AS/NZN 4360:2004). In 2005, the International Organization of Standardization (ISO) started to work for elaboration of an international standard based on the AS/NZN 4360 standard. The result of this work was the ISO 31000:2009 standard, "Risk Management – Principles and Guidelines". In Australia and in New Zealand this standard is named AS/NZN ISO 31000:2009 standard, "Risk Management – Principles and Guidelines".

ISO 31000:2009 provides general guidelines and principles on risk management. This standard can be used by all forms of organizations for different activities including projects.

ISO 31000:2009's risk management process requires 7 phases: communication and consultation (with stakeholders), establishing the context (the context in which the rest of the process will take place), risk identification, risk analysis, risk evaluation, risk treatment, monitoring and review (ISO, 2009).

6. Comparative analysis of main standards about project risk management

Comparing the main standards about project risk management we can identify many common elements but also some differences in terms of their approach to process of risk management.

Table 2 The process/procedure of project risk management

The process/procedure of project risk management				
	PMBOK	PRINCE2	PRAM	ISO 31000:2009
Processes/ Phases/ Steps	Plan risk management		Initiate	Communication and consultation Establishing the context
	Identify risk	Identify	Identify	Risk identification
	Perform qualitative risk analysis	Assess	Assess	Risk analysis
	Perform quantitative risk analysis			Risk evaluation
	Plan risk response	Plan Implement	Plan responses Implement responses	Risk treatment
	Monitor and Control Risks	Communicate	Manage Process	Monitoring and review

The process/procedure of project risk management of these standards is formalized, phased and iterative. Also, process/procedure of project risk management of these standards has in common three major elements related to: identify risk, assess risk (risk analysis and evaluation) and plan risk response (risk treatment).

The differences between these standards refer to the phases number of the project risk management process and to the structure of this process.

The approach of the PMBOK standard is based on the process notion. Every process has own inputs, outputs and particular tools and techniques. The PMBOK standard is comprehensive and descriptive, while the PRINCE2 standard is more prescriptive and based on business case.

The PMBOK standard has many similarities with the PRAM standard. The processes (used by the PMBOK standard) and phases (used by the PRAM standard) are very similar. Also, the tools and techniques used by these standards to manage the risk are rather similar.

The main aim of the ISO 31000:2009 standard is to harmonize risk management processes in actual standards. The approach used by this standard provides the principles and guidelines for managing any type of risk.

There are some differences between these standards, which refer, among other things, to the manner in which is approached the communication and consultation with stakeholders about the risks within project and to the manner in which is realised the monitor and control of the risks.

7. Conclusions

In the last years, some standards concerning the project risk management have been elaborated. These standards propose different approaches related to the process/procedure of project risk management. However, these approaches are not fundamentally different. The common aim of these standards is to create a framework to manage the risk within project.

Different organizations can adopt different strategy, tools and techniques regarding project risk management. The most important thing is that the organization must choose the project risk management strategy that suits them. Also, project risk management must be adopted during the project initiation phase, throughout the project lifecycle.

In conclusion we can say that the best standard regarding the project risk management is that which suits better with the size and nature of the project and also is that on which you know and manage the best.

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THE EVALUATION OF A BLOCKING TRADEMARK OWNED BY A COMPANY IN INSOLVENCY PROCEDURE. CASE STUDY

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Abstract: *In Romania, the general tendency is to underestimate the value of intangible assets of a company in insolvency or even bankruptcy. The case study in this paper provides the real value of a trademark whose owner is in bankruptcy. In a bankruptcy process, creditors will monitor and evaluate intangible assets valued separately - eg. trademarks, inventions, copyrights, because they might suffice to creditor more than money.*

Key words: trademark blocking, evaluation, exclusive right, superprofit

JEL classification: F12, O34

1. Introduction

According to Law no. 84/1998 on trademarks and geographical indications "[a] mark is a sign capable of graphic representation serving to distinguish the goods or services of a natural or legal person from those of others; may constitute trademarks: distinctive signs such as words, including names of people, drawings, letters, numerals, figurative elements, three-dimensional shapes and forms as the product or its packaging, colour combinations, and any combination of signs".

Whether it is about products already in production, the services already offered on the market, be it about products or services for which the company management efforts are underway for future activity, a trademark is meant to *distinguish* the company's products or services identical or similar to those of the competitors'.

The logical steps in a transparent business are i) to further protect through a private label some existing products / services, following a less than easy route to make a domestic, EU and international documentary research to avoid the risk of infringement trademark, or ii) to protect previously by a private trademark some products / services which still do not exist, but the company is working to shape them.

A type of *dishonest practice* is the registration in Romania and for the Romanian territory of an existing trademark, protected by a person - or entity - on a territory or territories on which some European directives have no effect (eg. Turkey). The purposes of such an approach are: a) misleading the consumers and customers about the possible rights given by a license, which can induce the idea of a quality product / service related to the trademark, b) real and immediate blockage or opportunity to lock for the future the foreign owner of the trademark when he would like to let other manufacturers, suppliers of services or traders to manufacture, offer or sell on Romanian territory the foreign original product protected previously through a trademark by the owner. That is a dishonest practice - though little known - demonstrated by the provisions of Article 5, letters a) and b) of Act No. 11 of 1991, updated, on unfair competition: „It is an offense and it is punishable...:

a) *the use of a firm, invention, trademark, geographical indication, a design, the topography of an integrated circuit, a logo or a container liable to cause confusion with those legitimately by another trader;*

b) *the release of counterfeit goods and / or pirate, whose proprietor trading prejudice and mislead the consumer on the quality of product / service; ... "*

The real case we present refers to a complex case.

Trade names and trademarks are renamed fictionally.

Thus, Romanian company ZENITH imports, at Phase I, detergents under STER trademark from Turkey, from the manufacturer BATIK, which is the owner of STER trademark which is protected in Turkey (non-EU country). In Phase II, ZENITH records in Romania and Moldova the STER trademark without firm announce BATIK. In Phase III, BATIK arrange to protect in Romania, Germany and Moldova trademark STER: is refused in Romania and Moldova; is accepted in Germany. In Phase VI, a large American company is trying to protect the same trademark internationally in Germany: is refused on the grounds of opposition. In phase V, the Romanian company ZENITH becomes insolvent; a bankruptcy process is opened; the list of creditors, including

the Romanian state, still presents a creditor - PATOR, which – due the impossibility to recover Currency - requires evaluation trademarks of insolvency, to be obligatory transferred by enforcement.

2. The evaluation of a blocking trademark in insolvency procedure

2.1. The trademark, intangible asset separately assessable

Unlike *Goodwill* - which is all the information, necessarily intangible, irremovable from the economic entity (enterprise) and not be rated separately, elements that contribute to a higher value of the company than the amount of its components' values - valued separately intangible assets are removable from the economic entity, and may be subject to economic transactions and transfers. These are: the trade name, the patent, the utility model, the trademark, the geographical indication, plant and animal varieties (races), the design, the integrated circuit topography, the copyright, the franchise contract, the lease, the costs of incorporation (the organization), the special contracts (eg training courses), the CD costs.

For its evaluation, methods are in place to take out either costs or revenues or profits, however obtained by free production or marketing or by calculating the royalties obtained from licensing.

2.2. Boomerang effect of monopoly position

The main functions of the mark are: a) function of the product or service differentiation, b) quality assurance function, c) function of competition, d) function of advertising, e) function of market organization, f) function of monopoly. For a trademark registration by honest commercial reasons, all functions can coexist and harmoniously coordinate.

While monopoly position should be a *consequence* of the registration of a trademark, it is sometimes - as is this case – the reason of the registration.

In this situation, the other functions are not important:

a) *function of product differentiation* or service - does not work at all; product or service cannot exist; the law allows five years for a trademark owner to decide to produce, market or provide services under that trademark;

b) *quality assurance function* – does not work at all;

c) *function of competition*, should work to allow consumer orientation decision, make a sign of the economic value of the product or service; but in this case, it is not oriented at all - not being advertised at all, the brand is kept only to be opposed, or even disorients, misleading;

d) *function of advertising* – does not work at all

e) *function of market organization* - the phrase "brand sells the product" no longer takes effect.

The *monopoly function* remains, which arises from the owner's exclusive right to use the trademark (for production, storage, offering for sale, marketing, export, import) given by law.

Mainly, the monopoly allows to limit the competition and to set high prices for goods, which ensures high profits, or superprofit.

When monopoly is due to the trademark, the superprofit due to the trademark (Spm) can be calculated, among others, through trademark additional margin assessment (MSM):

$$MSM = P_m - P_n \quad (1)$$

where: P_m is the monopoly price

P_n – normal price,

and the superprofit due to the trademark, S_{pm} , is calculated by applying MSM to each sold product, even if, due to the small quantity of goods sold, there is no corporate profit:

$$S_{pm} = MSM \times Q \quad (2)$$

where Q is the quantity of goods sold.

The reason of this logic is the following: product protected by the evaluated trademark can be important, but i) management can be imperfect, or ii) other products, with different trademark of the same manufacturer support a temporary or a permanent recoil of the market, or iii) the company is insolvency for various reasons etc.

It should be noted that:

- a) MSM ignores the amount of goods sold.
- b) Spm ignores firm profitability; the company may be at a loss.

This means that in a process of bankruptcy creditors will monitor and evaluate intangible assets valued separately - eg. trademark, inventions, copyrights, because they might suffice to creditor more than money.

In our case, PATOR is expected to receive the binding assignment and to remain in a product market STER known and profitable trademark.

2.3. Case study

In accordance with data reported in financial statements (profit and loss), the statement branded STER goods bought and sold during 2005 to 2008 is as follows (Table 1):

Table 1

		Purchase Value		Sold Value		Profit Margin			
		607		707				%	%
		(1.)	RON	(2.)	RON	(3.) = (2.) - (1.)	(2.)/(1.)	(3.)/(1.)	
ZENITH	2003	13164772		21688614		8523842	1,65	0,65	
ZENITH	2004	3327365		3683205		355840	1,11	0,11	
ZENITH	2005	145204		116156		-29048	0,80	-0,20	
ZENITH	2005	6600135		7672320		1072185	1,16	0,16	no production
ZENITH	2006	8740864		10668184		1927320	1,22	0,22	no production
ZENITH	2007	5102660		7024122		1921462	1,38	0,38	
ZENITH	2008	3759785		4502847		743062	1,20	0,20	

In the years where there was production, ZENITH branded STER goods imported directly from BATIK producer in Turkey.

The accounting data shows that ZENITH Ltd. activity was import and direct marketing and production activities. It seems that the loan contracted by ZENITH in foreign currency for the production line proved to be bankrupt (Table 2).

Table 2

		Manufactured and Sold Production	
		RON	
ZENITH	2003		0
ZENITH	2004		26748500
ZENITH	2005		720153
ZENITH	2005		0
ZENITH	2006		0
ZENITH	2007		693542
ZENITH	2008		2648555

Production decreased total financial result for the period (Table 3). Therefore, the assessment was made without taking into account the influence of production.

Table 3

	Total Operating Income (Production)	Total Expenses (Costs)	Profit - RON	Profit Margin - from Production (in exploitation)
	(1.) RON	(2.) RON	(3.) = (1.) - (2.)	(4.) = (3.) / (1.)
2003	26567562	26232639	334923	0,01260646
2004	31762805	33295993	-1533188	-0,04826992
2005	872121	1096346	-224225	-0,25710309
2005	7672320	7342203	330117	0,04302701
2006	10668184	10236061	432123	0,04050577
2007	8195459	7549186	646273	0,07885745
2008	7597561	7133993	463568	0,06101537

The production worked in loss. And this loss is not due to the mark but to financial management problems, to which we do not refer. Therefore, the calculation was performed taking into account only the financial effect of the sale of products imported and sold directly (freight).

The Method of the Multiple of Net Profit was applied (Stan V. Sorin, Ion Anghel, 1999; International Valuation Standards Council, 2011), only applicable in this case. In this method, the essential elements necessary for trademark evaluation is based on the following estimates:

a) calculating an annual average net profit for the last three years, given to the brand. To calculate this reproducible net profit (annual average), one must accurately reflect the economic reality of the period considered for the calculation. With regard to our present case, the calculation period is characterized by an evolution of the average rate which is 22.50 ROBOR peak value (maximum on 06.02.2004) and ROBOR 6.47 (minimum on 11/07/2005) - Table 4.

EURIBOR (Euro Interbank Offered Rate) is the interest rate for loans in EUR, applied between the main European banks.

BUBOR (now ROBOR - Offered Romanian Bank Rate) is the average interest rate for loans in RON granted on the interbank market and is set by the NBR.

Table 4

	data	indice		data	indice		data	indice
2003	06.ian.	20,31	2005	06.ian.	17,13	2007	05.ian.	8,31
	06.feb.	19,50		07.feb.	14,44		06.feb.	8,25
	06.mar.	18,25		07.mar.	12,00		06.mar.	7,91
	07.apr.	18,38		06.apr.	10,16		06.apr.	7,88
	06.mai	18,69		06.mai	9,69		07.mai.	8,66
	06.iun.	19,31		06.iun.	9,84		06.iun.	7,74
	07.iul.	19,00		06.iul.	9,51		06.iul.	7,64
	06.aug.	19,25		05.aug.	8,35		06.aug.	7,14
	05.sep.	20,84		06.sep.	8,56		06.sep.	7,21
	06.oct.	21,31		06.oct.	6,56		05.oct.	7,71
	06.nov.	21,72		07.nov.	6,47		07.nov.	7,93
	05.dec.	21,75		06.dec.	7,56		06.dec.	8,23
2004	06.ian.	22,19	2006	06.ian.	7,63	2008	07.ian.	8,41
	06.feb.	22,50		06.feb.	7,78		06.feb.	9,72
	05.mar.	22,50		06.mar.	8,61		06.mar.	10,71
	06.apr.	22,50		06.apr.	8,64		07.apr.	10,99
	06.mai	22,50		05.mai.	8,68		07.mai.	11,06
	07.iun.	22,19		06.iun.	8,61		06.iun.	11,38
	06.iul.	21,38		06.iul.	8,99		07.iul.	11,78
	06.aug.	20,25		07.aug.	9,46		06.aug.	11,77
	05.sep.	19,31		06.sep.	9,23		05.sep.	13,48
	06.oct.	19,00		06.oct.	9,11		06.oct.	15,95
	05.nov.	18,93		07.nov.	9,19		07.nov.	17,38
	06.dec.	17,91		06.dec.	9,00		05.dec.	15,91

The value of the table rate is: 13.30306.

b) multiple determination (multiplier) applied to average net profit (PNM) annually reproducible. This analysis is based on specific market transactions (transaction is either similar

intangible assets or sales operations - purchase, merger etc.. dealing with the companies that hold such intangible assets).

Therefore, the formula for calculating trademark value will be:

$$VM = PNM \times m, \quad (3)$$

where m is a multiple of average annual net profit.

According to the relevance evaluator, determination of average net profit may be considered over the last period (usually three years) or over the forecast horizon (for applications, 10 years).

He studied product wholesale market "detergent" in Romania. From the data collected, both for foreign brand products (ex. ARIEL) and Romanian brand products (eg DERO, Persil), normal profit margin (AC) is between 15% and 20% of the import that the manufacturer price (Romania).

For simplicity, we calculated the balances (Table 5), the difference between the Superprofit and the average annual price addition of ZENITH between 2003 and 2008. Table 5

years	Purchase Value	Sold Value	Profit Margin	%	%
	(1.) RON	(2.) RON	(3.) = (2.) - (1.)		
	607	707	(difference)	(4.) = (2.)/(1.)	(5) = (3.)/(1.)
2003	13164772	21688614	8523842	1,647	0,647
2004	3327365	3683205	355840	1,107	0,107
2005	145204	116156	-29048	0,800	-0,200
2005	6600135	7672320	1072185	1,162	0,162
2006	8740864	10668184	1927320	1,220	0,220
2007	5102660	7024122	1921462	1,377	0,377
2008	3759785	4502847	743062	1,198	0,198
TOTAL	40840785	55355448	14514663		

Thus, for a normal commercial addition (AC) of 15%, Superprofit (15%) is 8,582,639 lei for all imported goods; and for a commercial addition (AC) of 20%, Superprofit (20%) is 6970 .964,80 lei for all imported goods, including products branded STER.

Note that it is branded STER products of BATIK exporter in Turkey, trademark which becomes blocked in Romania by Romanian holder branded STER.

From the study of import invoices and internal invoices, we have data in Table 6.

As the number of import invoices offered by ZENITH is greater than the number of domestic invoices, expert chose the percentage of STER products obtained from processing import bills, even if it is lower than that found in the processing of domestic bills, but surety increases.

Resulting values between **EUR 1,088,150 and EUR 1,339,729**.

Of the two latter values the value of EUR 1,088,150 was admitted.

Addition max. 15%	Superprofit	Addition max. 20%	Superprofit
(6) = (1.) x 1,15	(7.) = (2.) - (6.)	(8) = (1.) x 1,2	(9.) = (2.) - (8.)
15139488	6549126	15797726,4	5890887,6
3826470	-143265	3992838	-309633
166985	-50829	174244,8	-58088,8
7590155	82165	7920162	-247842
10051994	616190	10489036,8	179147,2
5868059	1156063	6123192	900930
4323753	179094	4511742	-8895
46966903	8582639	49008942	6970964,8

Table 6

FROM INTERNAL INVOICES

If a total of 110,624.74 lei sales, merchandise STER is USD 90,650.64, namely 82% (.8194502) of the total, then

A. For Superprofit _(15%) merchandise STER is (82%)	RON 8.582.639
	RON 7.037.764
	or EURO 1,716,528
B. For Supraprofit _(20%) merchandise STER is (82%)	RON 6.970.965
	RON 5.716.191i
	or EURO 1,394,193
FROM EXTERNAL INVOICES	
From the external list results that STER-branded merchandise is 64% (0,64) .	
A. For Superprofit _(15%) merchandise STER is (64%)	RON 8.582.639
	RON 5.492.888,96
	or EURO 1,339,729
A. For Superprofit _(20%) merchandise STER is (64%)	RON 6.970.965
	RON 4.461.417,60
	or EURO 1,088,150

Applying the discount factor $i = 13\%$ (average of Table 4) - reflecting the comfortable stability of the market in years in which we have data, we can offer – for STER trademark – a value between EURO 1,500,000 and EURO 1,200,000 sufficient, we believe, to meet the debt to the creditor Pater.

3. Conclusions

In Romania, the general tendency is to underestimate the value of intangible assets of a company in insolvency or even bankruptcy.

The fact that a large American company tries to register, under its name, the Turkish trademark STER in Germany, demonstrates the importance of protecting the trademark of a market, even we approach the limits of the law occurs.

The case study in this paper provides a real value of a trademark whose owner is in bankruptcy. If for a such small company we raise a value of over one million EURO for a trademark, we can imagine what values were thrown into nothingness when assessment of Romanian state companies occurs, or to foreign companies buying them knew how to get around this issue, either from employers in Romania, who did not know the subject (many do not know even now).

We are sure that most - if not all - Romanian companies (about 1500) that have been closed after privatization, have been underestimated by not taking into account the value of intangible assets. The only elements assessed were physical assets - buildings, machinery, vehicles. It is verifiable that companies evaluating Romanian companies with renown mark in bankruptcy (UTB, Mechanics Cugir, Roman, IUS and other hundreds), have given no value for the purchase of any brands. UTB is the exception: one of the modules offered for purchase the intangible assets, but did not define them.

Future research may give answer as to where tons of projects and execution drawings of incalculable value are gone. Perhaps on the spare parts market in counterfeit as long as in Romania are dozens of firms producing U650 tractor parts, without any license? Perhaps given by little money to foreign manufacturers for infringement?

We believe that this paper can provide all stakeholders - professionals, teachers, PhD students, students - another side of trademark intangible, as intangible asset distinct assessable in the company patrimony and as intangible marketing - one of the few assets that confer a monopoly right and the only one that can be renewed - in theory - forever.

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GLOBALIZATION ERA AND HUMAN RESOURCES MANAGEMENT

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Abstract: *The phenomenon called "globalization" ignores national boundaries and the main factor capable of securing the adaptability and flexibility of organizations needed to achieve success is people. It is well-known that, for the production of goods and services, each organization, combines, in varying degrees, financial resources, material resources, information resources and human resources. But from of all these, people are assessed as being vital to success of any business. The fact that without people cannot be done any business and organization goals cannot be achieved only through joint efforts of those who work within these is obvious and does not need any further explanation. Our main resource, man, represents an invaluable treasure which influences the prosperity that we all look for and human resources management becomes, in the context of globalization, the main tool which can lead organizations to achieve superior performance in global markets.*

Keywords: competition, work force, globalization, recession, HR

JEL classification: O15

1. Introduction

Business globalization is a complex and irreversible phenomenon of the XXI century of major importance, it began in the mid 80s, with influence in all areas of economic and social life, radically affecting international trade in the context of multicultural development, generating deep changes in organizations in national economies and on the global market. Under the impact of globalization, the world economy has suffered over the past two decades huge transformations.

For organizations, globalization means challenges and also perspectives. They must ensure their competitive advantage and gain added value in terms of achieving a unique market share. The investment process and the decision to invest, to immobilize financial funds for a certain period of time, hoping for profit may be, at the same time a risk and a opportunity to deal with the global economic environment. It is necessary to identify an organization's own potential in order to build solid foundation for activities in a complex competitive environment. Increasing the national and international economic efficiency requires accelerated learning. As well the cultural diversity cannot be ignored, being an absolute condition for value creation in different countries. Flexibility and speed to adapt to change are fundamental characteristics of a successful organization operating in global markets.

2. The concept globalization

The meaning of the term globalization, the fact that not all people have the same attitude towards globalization, pro and against, and the intensity of exploitation are no longer a novelty. But one thing is certain: that globalization has become an objective process, relentless, happening with an amazing top speed, including within its sphere almost all countries of the world. It is already a truism that globalization and internationalization of business organizations have become dominant and defining features of the contemporary world, so that working local, national, regional states form and radiate phenomena that alter perception and general philosophy about life and development in all areas and spheres of human activity. (Bogdan,2007).

Globalization has become a common word, but as we have shown, it has very different meanings for everyone. For some, it is synonymous with increasing international corporations whose extensive operations and interests transcend national borders. For others, the term is closely related to the technical revolution, the mobility of money, ideas and jobs that could provide them with

computers and other new technologies. Globalization signifies a complex structural transformation of society in which numerous interwoven forces make national borders more permeable than before, increasing trade, investment, travel and computer networks. (Bran, John, 2009)

The famous English scientist John Dunning, assigns to globalization the following definition (Dobrotă, 1999): "Globalization refers to the multiplication of connections and interconnections between states and societies that are now part of the world system. It describes the process by which events, decisions and activities deployed in the world have significant consequences for individuals and communities located at great distances from one another. Globalization has two distinct features: the scope (extent) and intensity (depth). On the one hand, it defines a set of processes that include almost all the world, and operates worldwide, which borrows this concept a spatial connotation. On the other hand, it involves increasing levels of interaction, interconnection and interdependence between states and societies that make up the world community. Therefore, to the extension of connections comes the deepening of global processes."

Anthony Giddens (2000) defines globalization as a reference "to the development of social and economic relations that extend throughout the world. (...) A key aspect of the study of globalization is the emergence of a global system, which means that, to some extent, we have to see the world as a single step social order. "

3. The main changes brought up by globalization

Globalization gives the world a new form and new perspectives in respect of international relationships. This phenomenon, although economic itself generates implications and effects in all areas of people. It is obvious that globalization is the implacable fate that awaits the world, an irreversible process which affects us all equally. (Bauman, 2002) Thus, globalization has a major impact on the social, cultural and political level. Organizations stand in the center of these phenomena, so they should be treated with seriousness and attention, this means that the actions of managers should focus on maximizing the advantages that these phenomena bring up, such as: technology transfer, know-how transfer, etc.

Globalization is a force that restructures society, the governance institutions and world order, reorganizing national economies, making economic activity to take a transnational dimension, so that the national economic space no longer overlaps with the national territory (Castells, 1996; Ruggie, 1996). Economic globalization (Giddens, 2001) is a reality and not just a continuation or a revival of trends from previous years. [...] Globalization means not only - or not primarily - economic interdependence, but to transform the time and space in which we live.

U.S. recession has major influence on other economies in Europe and Asia. And this demonstrates the complexity and interdependencies that exist in the structure of world economy.

Nowadays, all countries, no matter if they are developed, developing, less developed or in transition, follow global market-oriented policies, opening to organization the access to international competition. And the successful development of organizations is possible only through their interaction with the post-industrial world and following the path already taken by developed countries. Globalization offers extended opportunities for a real development worldwide, but the progress across regions is uneven. Some countries become more integrated in the global economy faster than others. Countries that managed to become part of the globally unique system that is about to shape, are having more important economic growth and at the same time, a significant reduction of poverty.

Most of the economic actors are focused on values such as profit, efficiency, size and development and see business as a way of gaining a living. Globalization determines the business and economic actors to accept new responsibilities. The business must be seen as a "means through which people can grow and to serve others. Moreover, businesses should start to take responsibility of all, not only to provide goods and services to private consumers' conglomerates". (Bari, 2001)

Globalization is not only beneficial development, but also potential uncertainty and possible threats. Globalization may increase yields, reduce costs, offer choices for the taxation locations, competitive advantage, increase company value and shareholder capital, profits generally, but as well risks and losses if these phenomena are not properly managed and maintained.

Business success will depend on management's response to globalization, how economic actors will know to answer to the global community needs.

In the current context of globalization, the organizations are some goals that will have to be met if high performance is desired:

- to switch from the idea of competition to the idea of collaboration, serving the world;
- to identify customer needs as they define them and to make this the main goal of economic actors;
- to recognize and invest for the benefit of global organizations;
- to recognize the fact that the organization is a sum of individuals, involved in and around its organizational structure;
- to have a global view of its actions.

We consider that investments of organizations to adapt their products and services and to develop new products and services specific to international markets are crucial to strategic success.

Globalization has led also to rethinking of the concept of ecology. In this context, organizations can gain a competitive advantage by investing in industries involved in pollution control, recycling resources, energy efficiency, environmental services and biotechnology.

The main strategies chosen by SMEs to entry on international markets must be strategic alliances, joint ventures, mergers, funds from international markets. In this context, we want to emphasize the fact that, if the beneficial effects of globalization of business are focused on: access to new markets previously inaccessible, easier access to raw materials with higher-value, amplifying and accelerating transfer of international managerial know-how, access to higher qualified labor wage at reduced costs etc, the management of Romanian organizations must manage, on the other hand, a number of specific issues, such as: changing infrastructure, legislative inconsistency, the interpretation of legislation, lack of internal labor markets flexibility or indifference towards environmental resources.

4. The impact of globalization on human resource management

It is well known that, by its nature, the globalization phenomenon affects in a bigger or smaller extent the directions of development of the activities of any organization but in terms of human resource management the following three aspects should be clarified:

- Can globalization and human resources be compatible partners?;
- What is the influence they have on each other?;
- Their goals are converging?;
- Does globalization imply harmonization at international level of the human resource management systems in different countries? (Ciobanu, 2009)

Globalization forces organizations worldwide to move people, ideas, products and information to meet local requirements. Moreover, globalization means lack of geographical constraints, which leads to the fact that well prepared people can work where they are needed.

Globalization and multinational companies expanding operations call for knowledge and understanding of international dimensions of human resource management. In the global context it is necessary to redefine the role of human resources, which should provide senior management the tools to respond to an international market characterized by a high degree of competitiveness.

Human resource management is the main instrument and means through which organizations can ensure competitive advantage and the strategic decisions of managers must always reflect a growing commitment to people.

Although globalization is one of the factors that determine the success of multinational companies in a market constantly changing, its multidimensional character generates a series of failures or problems and organizations must deal with it.

It is widely accepted that success or failure of organizations worldwide depends in a large extent on how employees are approached. Human resource is widely recognized as the creator of activity in an organization; it decisively influences the effectiveness of other resources: financial, material and information. In terms of continuously developing globalization, human resources should be managed as investments. And investment in human capital - ensuring, maintaining, and motivating the development of human resources - represents the main premise in ensuring a competitive advantage.

One of the main objectives of the globalization process is the integration of human resource practices in a global model. This goal is difficult to accomplish because of differences between countries in economic, social, institutional and not least cultural matters.

According to Geert Hofstede, HR practices must reflect the cultural specificity of each country; companies must recognize that different kinds of people should be valued using different

standards. The specific cultural context of each country has a major influence on human resources practices in the country. In many situations the rule that is valid in one culture may not be applicable to another.

Human resources professionals consider that the level of competence of human resources has a major influence in the process of integrating the human resource strategy in the strategy of the organization. Globalization eliminates national borders, as we have shown and people are the main factor that ensures organizations adaptability and flexibility, absolutely necessary to obtain success.

The frequent changes that occurred in the activity of multinational companies require increased attention to human resources, both in mother companies and in the subsidiaries. At the mother company, the human resource strategy and policies have to ensure the maintenance and development of managers capable to coordinate the activities at international level and in this regard, priority should be given to following human resource activities:

- human resources recruitment and selection;
- staff training;
- career management;
- employee motivation.

Nowadays, employees require more interesting and diverse jobs or tasks. Due to this fact human resource management must have a personnel policy oriented to value and this policy must begin with a rigorous selection.

Expatriate managers are connection between the mother company and its subsidiaries, they implement the mission and values of the mother company in its subsidiaries. At that level, the role of human resources is to develop human resources strategies and policies tailored to local, to ensure the quality of employees. The human resources department of the mother company has the main role in the implementation of human resource practices in multinational companies. (Ciobanu, 2007)

According to Michael Armstrong (2003), international human resources management becomes increasingly important in relation to human resources management developed within national borders for the following reasons:

- personnel problems generated by the variety of cultures, social systems and legal requirements;
- the need for direct personal contact, on-site cannot be replaced not even by the most sophisticated communication systems;
- complexity of the topic and of the managerial processes of human resource in the context of a mixed workforce.

On the other hand, changes in technology have created a new concept and the management of human resources must face them: the learning organization. It is the organization where (Corse, 2003) people continue to develop their capacity to create the results they really want, they have new and enhanced models of thinking, collective aspiration is freely accepted and people are continually learning how to learn together. Many managers and professionals have found that a learning organization is more likely to survive, being able to progress in the current uncertain conditions.

A set of rules (Chaşovschi, 2009) should be respected in order to obtain competitive advantage in respect of employees:

- Resources must be valuable: people are a source of competitive advantage when they involve with efficiency and effectiveness in achieving business goals;
- Human resources must be rare: knowledge, skills, abilities should not be equal to those of employees of other competitors;
- Resources must be organized because good results can be achieved when talent is combined and developed in work.

5. Conclusions

At the beginning of the third millennium, globalization has become a fact.

It is clear that globalization is a factor with major impact on human resource management. In the conditions of an increase in globalization, human resource management is one of the main tools through which companies can ensure their competitive advantage. According to specialists the main cause of failure for some European companies is the lack of understanding of key differences in the

management of human resources in different countries. We consider that successful firms will be those who invest not only on the market but also in people, for them to be able to operate effectively in terms of different cultural and political environments.

We consider that the development of flexible workforces, capable of facing the 21st century, the globalization, the new technologies and the changes is a major request.

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A SNAPSHOT OF ROMANIAN ECONOMY IN THE FIRST YEAR AFTER EUROPEAN UNION ADHESION

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Abstract: *To identify the economic sectors of national interest in order to modernize the national economy from European structural and cohesion funds in the period 2014 – 2020, the authors intend to examine some structural features of the Romanian economy – the intersectoral relations, the share of gross value added in output, and to determine the branches with the highest driving effects. For this purpose they will use the input – output model. The economic activities were grouped into 15 sectors by aggregating the extended input-output tables for Romania and the chosen reference year is 2008, first year after European Union adhesion.*

Keywords: input-output analysis, multipliers, structural, cohesion funds

JEL Classification: C67

1. Introduction

The European Union aims to eliminate the economic and the social disparities in the new EU member states through structural and cohesion funds. The structural and cohesion funds are instruments used to establish the cohesion policy adopted by EU. Structural and cohesion funds for the period 2014 - 2020 are considered to support the fundamental directions of the economic and social development of the EU, adopted in the Europe 2020 Strategy. This is a new strategic approach of the EU and includes the fundamental goals which EU plans to achieve, in the economic and social field, in 2020. In this strategy, the European Commission proposes three priorities that reinforce each other: *smart growth* - developing an economy based on knowledge and innovation; *sustainable growth* - promoting a more efficient economy in the terms of resource, greener and more competitive; *inclusive growth* - promoting an economy with a high rate of employment, ensuring social and territorial cohesion.

To achieve these objectives, EU also wants a more coherent use of the available funds: European Regional Development Fund, European Social Fund and Cohesion Fund. Thus, it is considered 3 categories of regions (according to GDP/capita): less developed regions (< 75% of EU average), transition regions (75 – 90%) and more developed regions (>90%). Given these lines of action, each country is to establish a defined number of national priorities and a centralized national program based on the local features and the needs of developing their economies.

Considering the aspects mentioned, Romania must take into account the mandatory elements required by European Commission but also the national specificities, which includes not only the effects of economic policies, but also the different aspects of natural resources, culture, and entrepreneurship.

The paper aims to analyze the structure of the Romanian economy to identify the economic sectors of national interest in order to modernize the national economy from European structural and cohesion funds in the period 2014 - 2020. Using input-output model we examined some structural features of the Romanian economy – the intersectoral relations, the share of gross value added in output, and we determined the branches with the highest driving effect. The paper is divided into the following chapters: Chapter 2 describes briefly the use of input-output model in economic research; Chapter 3 presents the methodology, the data used for the empirical research and the results.

In addition, because the analysis concern the first year before the economic crisis, we believe it is more useful to policy and economic makers, being presented before the new programming period for structural and cohesion funds of the EU in the period 2014 -2020.

2. The current state of economic research in the field

The input - output model or connection between branches analysis allows among others to estimate the cumulative impact (direct and indirect or induced) of various components of final demand on the productive sector. The propagated effects of final demand can be determined starting from the so-called technical coefficients matrix or Leontief matrix (named after the economist, Nobel laureate for economics, which use it for the first time in the economic analysis of inter-branch connections).

Using the input-output model it can be analyzed a very complex theoretical and practical problem, namely the interdependencies between compartments structures within the national economy. The main merit of the structural economic models is the attempt to quantify by using the coefficients the intensity flows between branches of national economy. This type of analyze provide the valuable elements to determine the conditions that are required in order to comply with the rational proportions of normal functioning of the economic complex.

The input – output model considers a simple structure of production expressed through a linear relation and with constant coefficients, containing several economic activities and processes, each producing one output. To produce a unit of a certain output, for instance the j^{th} output, requires a quantity a_{ij} of input i . Therefore, in the linearity conditions shown above, producing the output quantity X_j requires an input i quantity $a_{ij} X_j$, represented as x_{ij} . Essential for this model is the fact that “at least partly, inputs are themselves current outputs for the other processes of the system” (Lancaster, K., 1973).

On the basis of the cross-sectoral exchange table, the technical coefficients a_{ij} (matrix A) were determined:

$$a_{ij} = x_{ij} / X_j \quad (1)$$

where: x_{ij} represents the part of sector i 's output used in sector j , and X_j the total output of sector j .

Introducing the final use (demand), denoted by Y_i , the interdependencies within the economy are quantified through:

$$X_i = \sum a_{ij} X_j + Y_i \quad (2)$$

Which, in matrix representation, is written as:

$$X = XA + Y \quad (3)$$

where A is the technical coefficients matrix, a_{ij} , X is the column vector of total production branches, and Y is the vector of final demand. For the a_{ij} coefficients, i is the supplying branch and j is the beneficiary branch. By algebraic transformation we obtain:

$$(I - A) X = Y \quad (4)$$

where I is the unit matrix. We can estimate the production vector through y multiplier, as follows:

$$X = (I - A)^{-1} Y \quad (5)$$

where $(I - A)^{-1}$ is the inverse matrix of $(I - A)$ matrix. The condition that the system can be solved and accordingly the multiplier has real values, is the determinant of the latter to be nonzero.

The input-output model has proven to be a very useful tool for a detailed analysis on branches of the national productive system and therefore, for the government policies, but also for the businesses, especially for the foreign and domestic investors. Structural analyses were conducted for each year of the period 2000 – 2007, Voinea L. and other, (2010). The authors estimated the values for the total final demand multipliers and for its main components (household consumption, public consumption, investments and exports), using a national production system reduced to a 43 branches.

In the article published by Dobrescu E., Gafta V., Scutaru C. (2010), the authors focused on the impact of gross fixed capital formation upon the output. On the one hand, the authors estimated the implications of changes in volume (for example, data for 2007 were recalculated for a variation of + / - 5% in gross fixed capital formation), and on the other hand the influence of the sectoral structure of the gross fixed capital formation with the help of three different macroeconomic simulations.

Matei A. (2007) approached the problem of local development using, within the general framework of the input-output analysis, as vectors of development, the public utility services. The empirical application carried out in the Brăila Municipality refers especially to the multiplying effects of some activities or services within local economic development, as well as studies of impact and forecast on short or medium term.

In pursuing these studies and to identify the economic sectors of national interest in order to modernize the national economy from European structural and cohesion funds in the period 2014 - 2020, the paper aims to analyze the structure of post-accession Romanian economy, namely the

intersectoral relations and the share of gross value added in output, and to determine the branches with the highest driving effect. Thus, it is presented a reference regarding the period of strong economic crisis we are going through and from which the economy must find the optimal ways to recover.

3. The model and the results on the structural features of the Romanian economy after EU adhesion

3.1. The methodology used and the data

The research is based on the input-output tables for Romania with 105 branches from the last available year, namely 2008. The National Institute of Statistics recorded the data for 105 branches for the period 1989 - 2008. To make the estimates more relevant in terms of macroeconomic analysis and prediction, the 105 branches were aggregated into 15 sectors deemed representative for the current configuration of the Romanian economy. Table 1 explains the correspondence of the initial classification (105 branches) with the new more aggregated classification (15 sectors).

Table 1: The aggregated sectoral structure

Sector Code	Sector Name	Branch codes (of the classification based on 105 branches) included in the respective sector
1	Agriculture, forestry and fishing	1...6
2	Mining	7...17
3	Food, beverages and tobacco	18...27
4	Strong labor intensive sector	28...32, 77
5	High energy-intensive sector	33, 35...40, 43...59
6	Machinery, equipment and complex technological lines	60...65
7	High tech sector	34, 67...71
8	Means of transport sector	72...76
9	Production and distribution of electric and thermal power	79...82
10	Other industry sectors	41, 42, 66, 78
11	Constructions	83
12	Trade and business	84, 96...97
13	Tourism	85, 86, 93
14	Transports, post and telecommunications	87...92, 94...95
15	Public services	98...105

This aggregation takes into account the main features of the respective sectors. Thus, the first group includes branches that significantly depend on the climate conditions. The output of the second one is essentially influenced by the peculiarities of the mineral deposits (due to the strong connection between the extraction and processing of oil, both are included in the manufacturing industries). All industries linked with agriculture are integrated into the third. The fourth comprises a large variety of labour intensive sectors - textiles, leather, pulp and paper, wood processing, furniture. The next one includes the industries that use a very high level of the energy resources (significantly higher than the national average). The sixth group covers the machine building branches, the seventh brings together the electrical and optical equipment industries, as well as the publishing houses, the polygraphy, recording and copying, and the eighth includes the industries for increasing the speed and/or the security of the transportation. This group of sectors has a crucial role in the investment process and modern civilization. The ninth group represents the quasi-generally used energy utilities. The rest of the manufacturing industries, characterized by a great heterogeneity, constitute the seventh group. All infrastructures, productive and civil constructions are included in the next group. The twelfth aggregates the service activities. The travel services are reflected separately in the thirteenth group. The fourteenth one is dedicated to transports and telecommunications. Finally, the fifteenth group aggregates the public service activities.

3.2. The structural features of the Romanian economy

In this part we present some structural aspects of the Romanian economy revealed by matrix A of the input-output analysis. The analysed aspects are the intersectoral relations, the share of intermediate consumption and gross value added in output, and the relative contribution of domestic output to cover the intermediate consumption of the economy. We use the aggregate sectoral structure with 15 branches of the national economy, namely: Sector 1 - Agriculture, forestry and fishing, Sector 2 – Mining, Sector 3 - Food, beverages and tobacco, Sector 4 - Strong labor intensive industries, Sector 5 - High energy-intensive industries, Sector 6 - Machinery, equipment and complex technological lines, Sector 7 - High tech industries, Sector 8 - Means of transport industries, Sector 9 - Production and distribution of electric and thermal power, Sector 10 - Other industry sectors, Sector 11 – Constructions, Sector 12 - Trade and business, Sector 13 - Tourism, Sector 14 - Transports, post and telecommunications, Sector 15 - Public services.

A first presentation aims to examine the share of intermediate consumption (IC) and gross value added (GVA) in output, a first indicator that reveals the consuming sectors and those who obtain an outstanding efficiency.

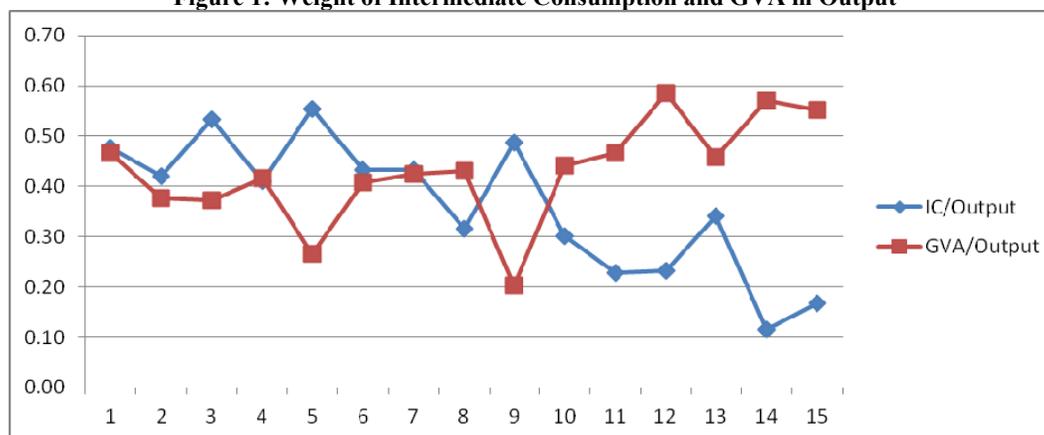
Table 2: The weight of Intermediate Consumption and GVA in Output

Sector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
IC /Output	0.48	0.42	0.53	0.41	0.55	0.43	0.43	0.32	0.49	0.30	0.23	0.23	0.34	0.12	0.17
GVA /Output	0.47	0.38	0.37	0.42	0.27	0.41	0.42	0.43	0.20	0.44	0.47	0.59	0.46	0.57	0.55
Effective Output	0.06	0.20	0.09	0.17	0.18	0.16	0.14	0.25	0.31	0.26	0.30	0.18	0.20	0.31	0.28

Source: Authors' own computations

The estimation of the share of intermediate consumption and gross value added in the sector output is easily visible and presented in Figure 1. The row 'Effective Output' highlights the Sectors 1 and 3 by the difference from the unit of the shares of IC / Output and GVA / Output with the lowest rounded values 0.06 and, respectively, 0.09. The situation is presented in the following figure:

Figure 1: Weight of Intermediate Consumption and GVA in Output



Source: Authors' own computations

A second analysis is performed using the matrix and the input - output analysis. The technical coefficients matrix (A) for 2008 is presented in Table 3a.

Table 3a: Technical Coefficients Matrix (A)

Sect	1	2	3	4	5	6	7	8	9	10	11	12	13
1	0.34355	0.00157	0.19310	0.07758	0.00162	0.00026	0.00007	0.00008	0.00021	0.00700	0.00057	0.00750	0.0514
2	0.00001	0.24509	0.00073	0.00054	0.20904	0.01792	0.00800	0.00125	0.44151	0.00100	0.00676	0.00540	0.0023
3	0.02789	0.00091	0.26734	0.00979	0.00837	0.00319	0.00463	0.00308	0.00257	0.00835	0.00306	0.09626	0.1972
4	0.00722	0.00615	0.01165	0.19673	0.00872	0.00418	0.00459	0.01656	0.00134	0.08315	0.03352	0.02650	0.0288
5	0.07920	0.09217	0.04874	0.09931	0.28968	0.17017	0.15185	0.20894	0.02001	0.17363	0.14464	0.06836	0.0450
6	0.01558	0.05052	0.00772	0.02003	0.03102	0.20583	0.05092	0.04685	0.00899	0.01444	0.03293	0.01340	0.0053
7	0.00304	0.02305	0.00403	0.00632	0.00616	0.03051	0.21281	0.03832	0.01266	0.01444	0.00747	0.01604	0.0107
8	0.00275	0.00913	0.00159	0.00571	0.00435	0.00535	0.00188	0.09244	0.00106	0.00201	0.00144	0.00310	0.0027
9	0.01258	0.08056	0.03287	0.03318	0.08003	0.04819	0.02694	0.04026	0.24840	0.03354	0.01390	0.01545	0.0345
10	0.00307	0.00258	0.00170	0.00776	0.00199	0.00161	0.00121	0.00232	0.00053	0.12256	0.00090	0.00647	0.0077
11	0.00412	0.00588	0.00303	0.00508	0.00280	0.00319	0.00238	0.00322	0.00402	0.00363	0.14463	0.02056	0.0234
12	0.01522	0.01558	0.01607	0.01979	0.01499	0.02312	0.01670	0.01971	0.01107	0.01390	0.03027	0.08812	0.0346
13	0.00126	0.00471	0.00427	0.00460	0.00383	0.00547	0.00723	0.00416	0.00178	0.00799	0.00037	0.00294	0.0279
14	0.00703	0.03055	0.01719	0.02544	0.02719	0.02741	0.02755	0.03059	0.00684	0.03832	0.00985	0.02783	0.0424
15	0.01174	0.05456	0.01654	0.07280	0.04372	0.04497	0.05915	0.06080	0.03598	0.03494	0.10342	0.01684	0.0272

Table 3b: Inverse Coefficients Matrix $(I - A)^{-1}$

Sect	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.54926	0.01650	0.41704	0.16487	0.02273	0.01526	0.01535	0.01664	0.01587	0.04200	0.01993	0.06637	0.1779
2	0.11241	1.54215	0.12885	0.15558	0.59287	0.24495	0.19742	0.22036	0.93875	0.19273	0.16598	0.10742	0.1231
3	0.07156	0.02306	1.39582	0.04262	0.03790	0.02813	0.02992	0.02756	0.02632	0.03594	0.02772	0.15717	0.3007
4	0.02435	0.02733	0.03413	1.26315	0.03452	0.02378	0.02397	0.04090	0.02434	0.13360	0.06640	0.04888	0.0555
5	0.23408	0.29548	0.20564	0.28098	1.57817	0.40510	0.37361	0.44285	0.24454	0.38759	0.33665	0.18987	0.1836
6	0.05357	0.12465	0.04579	0.06632	0.11419	1.30453	0.11870	0.11079	0.09816	0.06265	0.08380	0.04458	0.0394
7	0.02103	0.07020	0.02575	0.03583	0.05332	0.07653	1.29894	0.08392	0.07104	0.04719	0.03849	0.03864	0.0354
8	0.00881	0.02095	0.00823	0.01445	0.01776	0.01510	0.01002	1.11009	0.01576	0.01042	0.00863	0.00853	0.0092
9	0.07752	0.22362	0.11696	0.12605	0.25877	0.17077	0.13045	0.15603	1.48195	0.13824	0.10015	0.07633	0.1130
10	0.00896	0.01111	0.00816	0.01845	0.01155	0.00915	0.00881	0.01047	0.01016	1.14682	0.00981	0.01224	0.0150
11	0.01179	0.01672	0.01173	0.01448	0.01483	0.01235	0.01062	0.01198	0.01821	0.01237	1.17610	0.03102	0.0355
12	0.03954	0.04772	0.04536	0.04987	0.05320	0.05576	0.04662	0.05021	0.05103	0.04217	0.06130	1.11426	0.0629
13	0.00549	0.01276	0.01014	0.01137	0.01330	0.01327	0.01536	0.01154	0.01179	0.01544	0.00645	0.00741	1.0342
14	0.03570	0.08750	0.05499	0.07175	0.09502	0.08115	0.07965	0.08358	0.07307	0.09168	0.05065	0.06155	0.0847
15	0.05617	0.14596	0.06942	0.15331	0.15177	0.12784	0.14275	0.14440	0.15505	0.11161	0.19066	0.06283	0.0833

Source: Authors' own computations

Table 3a shows horizontally that for each sector the largest coefficients are related to their own inputs (values on the main diagonal). Naturally, significant inputs to the sector's output occur, for example:

- from sectors 4, 6, 7, 8, 10 to sector 5;
- from sector 5 to sector 2;
- from sector 9 to sector 2;
- from sector 11 to sectors 5 and 15;
- from sector 12 to sectors 5 and 3;
- from sector 13 to sectors 3, 9, 12, 14, 15.

Generally, the output conditioning of each sector on its inputs is high, which suggests that the direct cross-sector interdependencies are still low. However, for sector 5 the interdependency is high, its inputs being from 7 sectors. A future extension of the analysis to tables with 105 branches will highlight more accurately if this finding reflects the actual technological characteristics of the Romanian economy or it was induced (and in what proportion) by the aggregation operation (by using the classification based on 15 sectors).

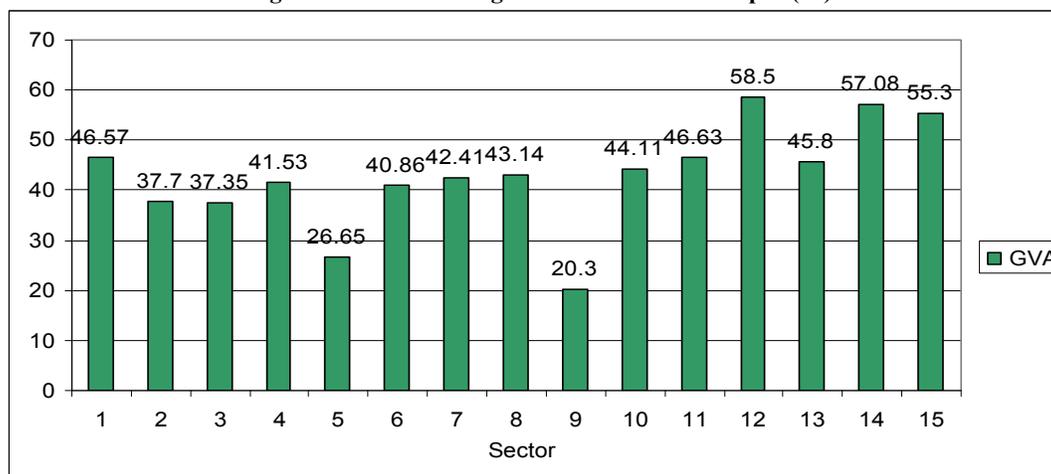
Since the cross-sector exchange table is built in prices, the coefficients a_{ij} can sum up vertically (s_c) and horizontally (s_r); they are shown in the following table:

Table 4: Total of a_{ij} Coefficients by vertical (s_c) and horizontal (s_r) summing

Sector code	s_c	s_r
1	0.5343	0.6858
2	0.6230	0.9427
3	0.6265	0.6594
4	0.5847	0.4646
5	0.7335	1.7093
6	0.5914	0.5298
7	0.5759	0.4597
8	0.5686	0.1542
9	0.797	0.7654
10	0.5589	0.1886
11	0.5337	0.2368
12	0.415	0.3671
13	0.542	0.0911
14	0.4292	0.5373
15	0.447	0.7679

Source: Authors' own computations

Vertical totals (s_c) estimate the share of intermediate consumption in the sector output. The difference from the unit approximates the share of gross value added in output. We may note that, without exception, the s_c values are below unit, thus confirming that in the aggregation used the gross value added is positive in all sectors. There are not notable differences regarding the size of the s_c itself. Based on the information provided by s_c we have calculated the share of gross value added in output, the values are presented in Figure 2.

Figure 2: The share of gross value added in output (%)

Source: Authors' own computations

Analysing Figure 2 we can find that the best placed sectors in terms of value added are (in order):

- Sector 12 - Trade and business, because of the trade markup rates and tariffs in the private sector. This result confirms the development of services sector in Romania.
- Sector 14 - Transport, post and telecommunications. The sector largely uses the high-skilled human resources and high-technology.
- Sector 15 - Public services. The public sector output estimates based costs, where wages are prevailing.
- Sector 11 – Constructions: as a result of the convergence process, but at the same time has a speculative component in the context of real estate boom generated in 2007. Since 2008 it began to feel a slow pace of development, correlated with lower economic growth amid of the international economic crisis.
- Sector 1 - Agriculture, forestry and fishing. The sector typically uses unskilled human resources and advanced medium technology. The high percentage of gross value added of this sector shows the specificity of the national economy with a high agricultural potential in comparison with other countries.
- Sector 13 – Tourism: due to significant growth of net use index and of number of tourists. By building the infrastructure mix (airports, ports, highways, rehabilitation of rural roads, rehabilitation of railways to increase the transport speed) the value added in another sector of the economy will increase (for example, construction).
- Sector 8 - Means of transport industries: has one of the most important driving effects in upstream industries. The sector use high-skilled human resources, advanced technologies and made products for increasing the speed and/or security of the transportation.
- Sector 7 - High-tech industries: makes products mainly for increasing the level of communication, creativity and knowledge dissemination and is characterized by a very high-skilled human resources and advanced technologies.
- Sector 4 - Strong labor intensive industries: textile, leather, pulp and paper, wood processing, furniture). The fundamental feature of the sector is the high use of unskilled workers. Also the sector dispose by medium-technology, its products being long used.
- Sector 6 - Machinery, equipment and complex technological lines. The sector employs high-skilled human resources, high-technology, and its products being designed to equip other industry sectors. It also produces the durable equipment for raising the home comfort.

The second part of the ranking includes:

- Sector 3 - Food, beverages and tobacco: strategic sector for processing the agricultural resources, its products are vital for the health of the population. Romania has the most important agricultural potential in EU, but is a net importer of food and drinks (the degree of coverage of imports by exports GA = 22.3% in 2009).

- Sector 2 - Mining. The sector employs the unskilled workers and disposes by medium-technology.
- Sector 5 - High energy-intensive sector. The mainly feature of the sector is the very high use of the energy resources (significantly higher than the national average), measured by the ratio of energy costs and value added. The sector use medium-skilled human resources (with some exceptions in the petrochemical industry), dispose by medium technologies (also with some exceptions in the petrochemical industry) and mainly produces intermediate goods used in other sectors of manufacturing industry or for the propulsion of the means of transport, the soil fertilization, the construction of buildings.
- Sector 9 - Production and distribution of electric and thermal power is still dominated by administered prices.

Results of horizontal summing from matrix A (s_r) approximate (by the difference from the unit) the relative contribution of domestic output to cover the intermediate consumption of the economy. The highest deficit in this regard is in Sector 5 – High energy-intensive sector, indicating a high dependence by energy resources. At the opposite end stands Sector 13 (Tourism), mainly known as serving important segments of final demand.

3.3. Estimating the driving effect for the national economic branches

In this chapter we aim to estimate the driving effect of the national economic branches, observed due to output multipliers. We use the aggregate sectoral structure with 15 branches of the national economy, envisaged in the previous chapter.

The analytical valences given by the inverse matrix $(I - A)^{-1}$ are known as numerical expression of interdependencies among the sectors of the economy – not only direct (indicated by the matrix A), but also indirect. Table 3b shows Inverse Coefficients Matrix $(I - A)^{-1}$.

Expressed in prices, the coefficients on the vertical – in the case of matrix $(I - A)^{-1}$ – could also be summed up (S_c). In fact, they approximate the output of all industrial branches induced by one unit of final demand addressed to the sector relative to the vertical in question (hence, in matrix $(I - A)^{-1}$, the coefficients on the main diagonal have over unit values). Vertical sums of matrix $(I - A)^{-1}$ are also called *output multipliers*.

The s_r values resulted from matrix A do not involved the second quadrant of the input-output table. To make these values somewhat comparable with the corresponding sector S_c , we use the relation $s_r^* = s_r + 1$. The two sets of values (S_c and s_r^*) are shown in Table 5.

Table 5: Coefficients S_c and s_r^*

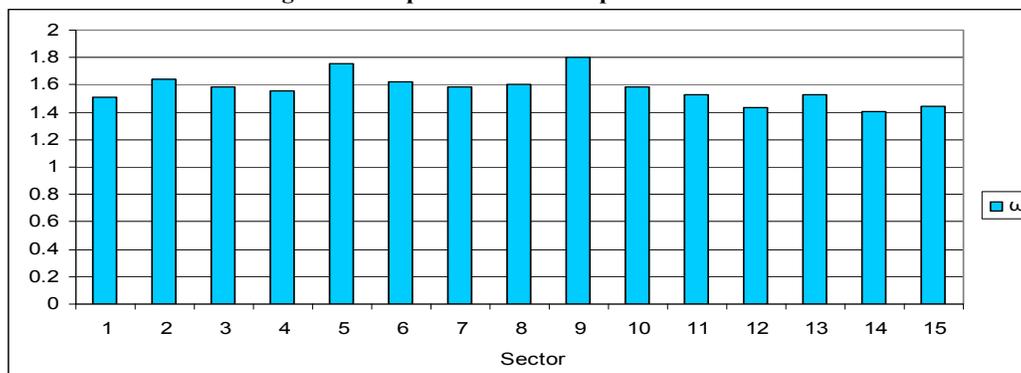
Sector Code	S_c	s_r^*
1	2.3102	1.5343
2	2.6656	1.6230
3	2.5780	1.6265
4	2.4690	1.5847
5	3.0498	1.7335
6	2.5836	1.5914
7	2.5021	1.5759
8	2.5213	1.5686
9	3.2360	1.797
10	2.4704	1.5589
11	2.3427	1.5337
12	2.0271	1.415
13	2.3540	1.542
14	2.0051	1.4292
15	2.0905	1.447

Source: Authors' own computations

The driving effect is expressed by the S_c value. The higher is the S_c value the greater is the driving effect. Among the sectors with the highest driving effect are: Sector 9 – Production and distribution of electric and thermal power, Sector 5 – High energy-intensive sector, Sector 2- Mining, 6 – Machinery, equipment and complex technological lines.

The difference between S_c and s_r^* is attributable to the way the effect of productive interdependencies within the economy is expressed. While s_r^* is limited to the direct ones, S_c adds to them the indirect interdependencies (mediated by the links between the related branches). Thus an index of output indirect drive determined as the ratio $\omega = S_c / s_r^*$ is shown in graph ω (Figure 3).

Figure 3: Graph ω - index of output indirect drive



Source: Authors' own computations

In the case of matrix $(I - A)^{-1}$, the sums of coefficients on horizontals (S_r), estimate the output required by the respective sector to ensure a unit increase in the final demand in all sectors of the economy. These values would not be comparable if they refer to matrices of different sizes. This aggregation effect can be mitigated by dividing them by the number of sectors, thus obtaining values associated with a variation by a unit of the final demand in the economy.

Their use for explanatory purposes still requires caution because they are based on the less realistic assumption of uniform modification in final demand in each of the sectors.

4. Conclusions

The present paper reflected an analysis of the structure of post-accession Romanian economy to identify the economic sectors of national interest in order to modernize the national economy from European structural and cohesion funds in the period 2014 – 2020. Using the input-output analysis we identified the intersectoral relations, the share of gross value added in output, and the branches with the highest driving effects.

Generally, the output conditioning of each sector on its input is high, which suggests that the direct cross-sector interdependencies are still low. The results confirm that in the aggregation used, the gross value added is positive in all sectors. The sectors Trade and business, Transport, post and telecommunications, Public services and Constructions have the most important share of the gross value added in output.

One of the conclusions that can be drawn on input-output model is the driving effect due to output multipliers. For Romania, among the sectors with the highest driving effect are Production and distribution of electric and thermal power, High energy-intensive sector, Machinery, equipment and complex technological lines. It should not be overlooked the communication infrastructure and the transport that have a very special role in the revival of all sectors and for a sustainable and balanced development at the national level and for the integration into the European economic system.

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COMPARATIVE ANALYSIS OF CORPORATE GOVERNANCE IN CENTRAL AND EASTERN EUROPE

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Abstract: *In Central Eastern Europe (CEE) the transition to market democracy significantly influenced the corporate governance practice. The region, demonstrates much more diversity in corporate governance than expected in generally similar transition economies. This research aims to focus on identifying the similarities and differences of corporate governance in these countries based on four research hypotheses formulated around two corporate governance variables: number of codes issued and years of distance from first code in the sample.*

Key words: corporate governance, shareholders, stakeholders, investors, corporate governance codes.

JEL classification: G30, M10

1. Introduction

Corporate governance has become an important topic in practice and academic literature in recent years. To ensure a competitive position, to attract capital, to ensure sustainability, and to combat corruption, companies from developing countries need to put in place good governance institutions.

According to Monks and Minow (2004) the importance of corporate governance has increased dramatically in 2002 when a series of events led to the bankruptcies of large U.S. companies and the loss of thousands of jobs. The way companies are governed determines their fate as well as that of the economy in general. Failure to attract adequate levels of capital threatens the existence of firms which can have serious consequences for the entire economy. Firms that are unable to attract capital may remain outside of international markets entirely, while economies may not benefit from globalization. The investors are interested in those companies with good corporate governance because, according to OECD (1999), Corporate governance specifies the distribution of rights and responsibilities among different participants in the company, such as managers, shareholders and other interested parties, specifying the rules and procedures for making decisions on company's affairs. In this way, it also provides the structure through which company's objectives are set, the means of attaining those objectives and monitoring performance. Thus deficiencies in corporate governance can have as a consequence not only scandals and corporate liquidations but also financial crises and economic instability.

The Center for International Private Enterprise (2002) listed some of the main advantages of a strong corporate governance. These include:

- improved access to capital and financial markets;
- higher accountability and transparency;
- stimulation of performance;
- protection of shareholders and their investment;
- reduces the incidence of corruption;
- enhancement of marketability of goods and services

The list illustrated above gives a general image of the most important benefits of a good corporate governance. For developing countries, the problem of good corporate governance development becomes more complicated because of the underdeveloped institutional infrastructure. For this reason there is a need for a careful approach to governance restructuring.

A weak or absent corporate governance can have the following consequences:

- reduces the opportunities to attract sufficient capital, limits competitiveness and job creation;
- has a negative impact on employees' commitment;
- may lead to bankruptcy due to a lack of solid company strategy and leadership from the board of directors;
- allows company managers and directors to follow their own interests at the expense of shareholders, creditors, and other stakeholders;
- excessive regulation that impacts private sector growth (CIPE, 2002).

The CEE region, demonstrates much more diversity in corporate governance than expected in generally similar transition economies. This research aims to focus on identifying the similarities and differences of corporate governance in these countries.

2. Review of the literature: the concept and framework of corporate governance

The literature on corporate governance is extremely broad. Only in recent years hundreds of articles and dozens of books have been oriented toward corporate governance.

The concept of corporate governance began to take shape more clearly after 1997, in the European Union, when most countries have adopted codes of corporate governance. The impulse of adopting these codes has been the financial scandals related to the failure of British companies quoted on the stock market. On the other hand, the Asian economic crisis of 1997 and the withdrawal of investors from Asia and Russia had created problems for the international business community regarding the consequences of the investors lack of trust in corporate management.

Corporate governance principles developed by the OECD (Organization for Economic Cooperation and Development) provide specific indications, meant to improve the legal regulations. They formulate practical proposals to the attention of stock market authorities, investors and other pillars that have intervened in the governance of the company. Adapting corporate governance principles for the purposes of ensuring transparency, accountability and fair treatment of shareholders has resulted in the development of the OECD Principles of Corporate Governance. The principles underlying corporate governance should ensure the strategic direction of the company.

The concept of corporate governance encountered many definitions. Depending on their perspective, different authors define this concept in different ways. Thus corporate governance definitions can be grouped in two categories: narrow and broad definitions. These two categories are illustrated below.

In a narrow sense, corporate governance can be defined as the relationship among various participants in determining the direction and performance of corporations. The primary participants are (1) the shareholders, (2) the management, and (3) the board of directors (Monks and Minow, 2004).

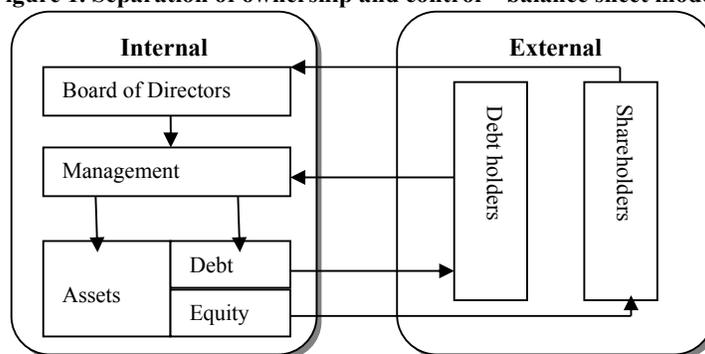
A broader definition was given by Cadbury Committee, 1992. Thus corporate governance was defined as the system by which companies are directed and controlled.

An even broader definition belongs to Zingales (1998). According to this author, corporate governance is the complex set of constraints that shape the ex post bargaining over the quasi rents generated by the firm.

Many researchers consider that the corporate governance mechanisms fall into one of the two groups: those internal and those external to the firm. This aspect is illustrated in figure 1 which depicts the separation of ownership and control.

On the left side, figure one illustrates the internal governance and on the right hand side the external governance. The Board of Directors is charged with advertising and monitoring management and has the responsibility to hire, fire and compensate senior management team (Jensen, 1993).

Figure 1. Separation of ownership and control – balance sheet model



Source: (Adapted from Gillan, S. (2006): 382)

In conclusion we can say that there is no exact definition of corporate governance, not even in developed countries. All are based on the theory of interest holders. Interpretations of corporate governance refer to a set of relationships, distribution rights, set of rules, sector of the economy.

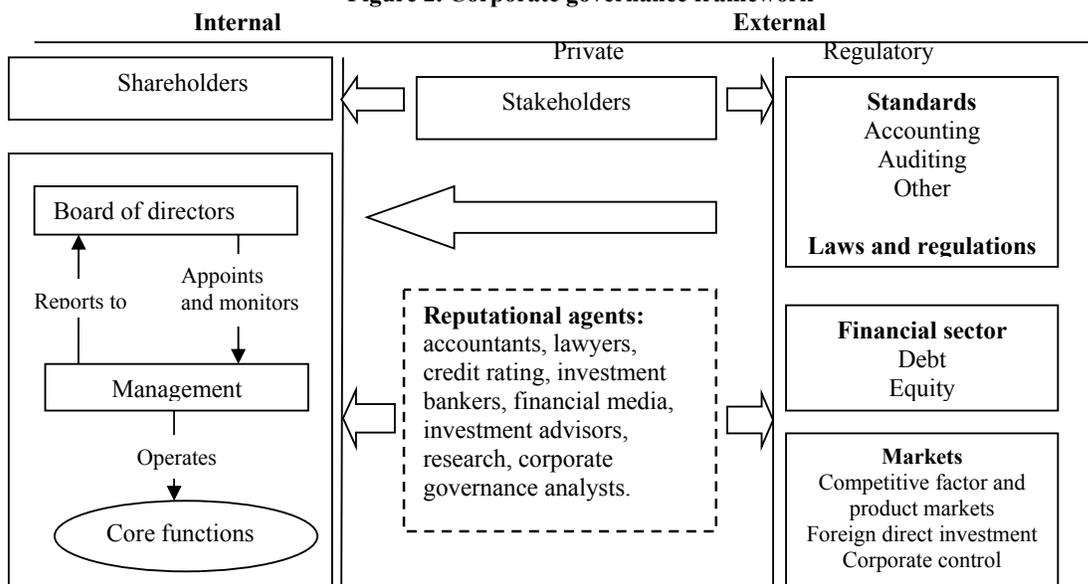
If we closer analyze Figure 1 we can see that firms are more than board, managers, debt holders and shareholders. A more detailed framework of corporate governance is depicted in Figure 2.

This is an expansion of the previous figure in order to examine a broader set of governance influence. As in Figure 1, the corporate governance framework is divided into two broad classifications: Internal and External Governance.

At the center of this system as an internal force, is the board of directors which is considered by many as the lynchpin of corporate governance (Gillan, 2006). Its overriding responsibility is to ensure the long-term viability of the firm and to provide oversight of management. In many countries the board is responsible for approving the company’s major decisions and strategy and for hiring, monitoring and replacing the management (World Bank, 1999).

As previously stated the framework includes internal and external forces that face one another and have an impact on the activity of the existing corporations. The external forces are represented by policy, legal, regulatory and market. The role of the external forces is to strengthen the internal mechanisms for corporate governance.

Figure 2. Corporate governance framework



Source: (Adapted from World Bank, Corporate Governance: Framework for Implementation, Overview, 1999: 4)

Many authors and analysts consider that the problem of corporate governance has become increasingly important for developing countries. The challenge for these countries is to adapt systems of corporate governance to their own corporate structures and implementation capacities, in order to create a culture of enforcement and compliance.

3. Corporate governance in Central and Eastern Europe

In the past years the economies of the Central and Eastern European (CEE) region have registered rapid growth rates. Foreign investors have been setting up throughout the region and the privatized businesses have also been expanding.

A large amount of laws and regulation have been adopted in these countries over a short period of time. Many of these laws have been imposed from the outside, as part of the EU accession process or copied from the UK or US. This is why we expect to observe some differences between the CEE countries that are EU members and those that are not. Ensuring the implementation and sustained enforcement of these laws is another challenge facing the countries from Central and Eastern Europe.

Compared to the CEE countries the countries from Western Europe have seen far more corporate governance developments in recent years, ranging from the Cadbury Report in the UK to the Vienot Report in France. Regarding the disclosure and transparency compliance with the Organization for Economic Co-operation and Development requirements in European countries, according to Ștefănescu (2011), the level of provisions related to disclosure and transparency stipulated in corporate governance codes are influenced by their issuer's type and diversity.

Based on the aspects mentioned above we can formulate the following research hypotheses:

Hypothesis 1: CEE countries are less prone to develop codes than the Western European countries.

Hypothesis 1(a): CEE countries members in the EU are more prone to develop codes than those that are not members in the EU.

Hypothesis 2: CEE countries issue codes later than the Western European countries.

Hypothesis 2(a): CEE countries members in the EU will issue codes before than those that are not members in the EU.

4. Research design

Sample and data collection

Our sample includes 15 countries from Central and Eastern Europe and 6 Western European countries (Austria, Germany France, Denmark, Sweden and Finland). Table 1 includes a summary of the most recent code in each country from CEE structured by the year and the issuer. The countries included in our sample were further divided in two groups based on the European Union membership of each country. In order to analyze the development of corporate governance in these counties we used secondary data analysis, more specifically reports or statistics offered by: European Corporate Governance Institute (ECGI), World Bank Reports (ROSC Reports) and the European Bank for Reconstruction and Development (EBRD) reports.

Table 1. Country, year and issuer of the most recent corporate governance code

Source: (Own compilation based on data provided by the ECGI)

Country	Year of last code	Issuer of last code	Last code
Estonia	2006	Tallinn Stock Exchange	Corporate Governance Recommendations
Latvia	2010	NASDAQ OMX	Principles of Corporate Governance Recommendations on their implementation
Lithuania	2003	National Stock Exchange Lithuania	Corporate Governance Code for the companies listed on the National Stock Exchange of Lithuania
Poland	2010	Warsaw Stock Exchange	Code of Best Practice for WEE Listed Companies
Czech Republic	2004	Czech Securities Commission	Corporate Governance Code based on OECD Principles
Slovakia	2008	Central European Corporate Governance Association	Corporate Governance Code for Slovakia
Hungary	2008	CG Committee of the Budapest Stock Exchange	Corporate Governance Recommendations
Slovenia	2009	Ljubljana Stock Exchange	Corporate Governance Code
Bulgaria	2007	The Bulgarian Stock Exchange	Bulgarian National Code for Corporate Governance
Romania	2009	Bucharest Stock Exchange	Corporate Governance Code of Bucharest Stock Exchange
Croatia	2010	Zagreb Stock Exchange	Corporate Governance Code
Bosnia-Herzegovina	2006	Banja Luka Stock Exchange	The standards of Corporate Governance
Serbia	2008	Belgrade Stock Exchange	Corporate governance Code of Belgrade Stock Exchange
Montenegro	2009	Montenegro Stock Exchange	Corporate Governance Code of Montenegro
Turkey	2005	Capital Markets Board of Turkey	Corporate Governance Code and Principles

5. Data analysis

In order to test our two hypotheses we used the t-test for the difference of means for the number of codes issued and the years of distance of first code. The results are included in table 2.

Table 2. t-tests for difference of means on the years of distance and number of codes

	CEE countries	Western European countries	CEE countries members of the EU	CEE countries not members of the EU
Years of distance from first code	6.53* (0.72)	2.66 (0.71)	2.30* (0.66)	6 (1.14)
Number of codes issued	1.93* (0.3)	8.17 (2.99)	2.20 (0.41)	1.40 (0.24)
Number of observations	15	6	10	5

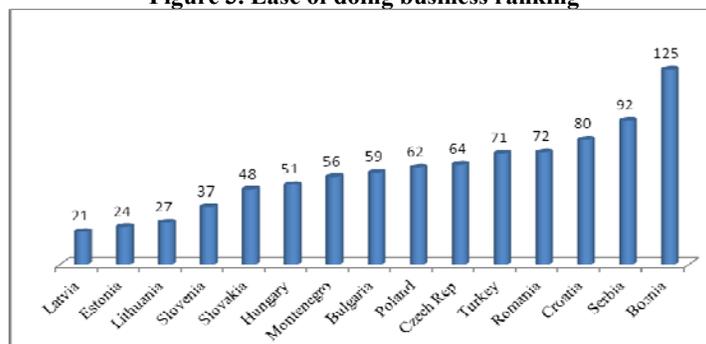
*p<0.05. Standard error in parentheses.

Our results show that CEE countries issued codes later than the Western European countries and the CEE countries not members of the EU issued codes later than those that are EU members. Also the difference of means for the distance of the first code in the sample is significantly different ($p < 0.05$) for both situations which validates our second set of hypotheses 1 and 1(a). The average distance from the first code (1998) in CEE countries was 6.53 years compared to 2.66 years in Western European countries. Also the average distance from 2001 in the second situation was 6 years for the CEE countries not members of the EU and 2.3 years for those that are EU members.

Moreover, we can observe that the Western European countries are more prone to issue codes than CEE countries the difference of means between the two sets is also significant, which validates our first hypothesis. Regarding the two groups of CEE countries we can observe that there are some differences between the average number of codes issued (2.20 for CEE countries members of the EU and 1.40 for CEE countries not members of the EU) but according to the results of the t-test these differences are not significant which does not validate the hypothesis 2(a).

Emerging markets, particularly those from Central and Eastern Europe, represent a great interest to investors as they indicate greater growth potential and higher returns. In order to attract capital, remain competitive and ensure credibility of their business, companies must seek to establish exceptional corporate governance standards. This is why we considered useful for our study to illustrate the overall ease of doing business rank (out of 183 economies). The ease of doing business rankings are illustrated in Figure 3.

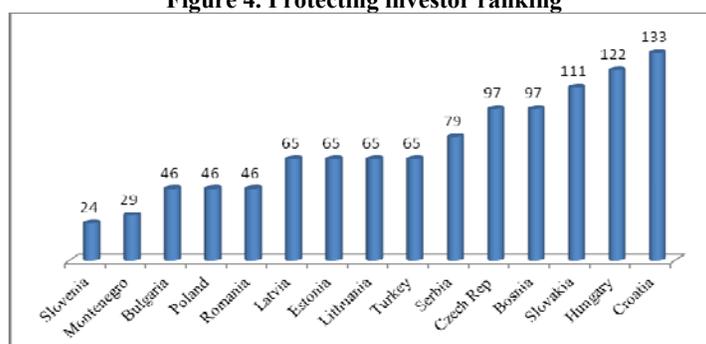
Figure 3. Ease of doing business ranking



Source: (Doing Business Report, 2012, World Bank)

As we can observe, except for Romania and Montenegro all the countries from CEE that are EU members have higher rankings than those that are non EU members.

We chose to illustrate also the investor protection index (Figure 4), which is a component of the overall ease of doing business because we consider it to be very relevant to our study. The Investor Protection Index consists of three dimensions of investor protection: transparency of transactions (Disclosure Index), liability for self-dealing (Director Liability Index) and shareholders' ability to sue officers and directors for misconduct (Shareholder Suits Index).

Figure 4. Protecting investor ranking

Source: (Doing Business Report, 2012, World Bank)

As we can observe the results regarding the protecting investors are very mixed. The second place is occupied by Montenegro which is a non EU member while the bottom places were occupied by 2 EU member countries: Slovakia and Hungary.

6. Conclusions

To analyse the corporate governance situation in CEE countries we used a sample of 15 countries further divided in two groups: those that are EU members and those that do not have this membership. For a better insight we contrasted the results on two corporate governance variables (years of distance from first code and number of codes issued) for the CEE countries with the results for the same variables registered in 6 Western European countries. Based on the t-test results there are significant differences between these two set of countries on the two variables considered.

The results of this paper also show the differences of corporate governance in CEE countries. The most significant difference was demonstrated to be between the CEE countries that are EU members and those that are not regarding the years of distance from the issuance of the first code in the sample.

Acknowledgements

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SOME CONSIDERATIONS ON THE MEETING OF PATIENTS. CASE STUDY: CHRONIC DISEASE HOSPITAL SMEENI - BUZAU

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Abstract: *Recently, many health systems in the world in their heart patient's needs. The Romanian system is no exception to this trend. Quality health care is no doubt an evaluating of patient satisfaction.*

The purpose of this article is to analyze how the perception of quality medical services according to perceived needs of patients when you can call the doctor. Research methods used were: documentation, technical survey and comparative analysis with other countries, and expected results are the level of satisfaction of patients, correlated with a medical provider and available resources.

Key words: satisfaction questionnaire, quality assessment, patients, health systems, performance management

JEL classification: I 10 – health general

1. Introduction

Quality medical services that benefit patients in Romania is a topic extensively dissected. Theme topic is not based on lack of resources, which is often correlated with service quality evaluation and satisfaction of patients, but efficient and effective use of those available.

European health systems and beyond, have changed focus from general to particular, from institutions to the patient to better identify needs and to tailor treatments ingrijire the sick and not a disease.

An important component of evaluating the quality and efficiency of care and patient satisfaction is. As an indication of defense and felt needs for care of patients, patient satisfaction, although it contains a high degree of subjective factor and often not directly related to the medical act itself, but rather with administrative services, hotels, attitude and behavior of personnel entering patient contact.

The present study concerns a comparative analysis of the level of satisfaction expressed by patients in the current funding of service providers. The case study concerns a chronic disease hospital in Buzau County, located in a village, 20 km from the county town, the only hospital of its kind in the area.

A questionnaire method was used, for the year 2011 and first quarter of 2012. Events and events were conducted in the foreground with the patient and the results are shown below.

For an overview of overall patient satisfaction is the degree of response to their expectations. These expectations, the waiting time at the emergency room until the room air temperature, the appearance of food and bedding to cyclical change and general hygiene, not least respect infomarea hours of treatment or on medication, listing only a few indicators of satisfaction, reflects what the patient wants to achieve and the impression is what has been, rather than disease stage and treatment response.

2. The conceptual framework

As a structure, defined by the Health Act, the Romanian system is composed of several actors:

- health care providers - primary care (GPs), secondary care (ambulatory and medical practices speciaity), tertiary (hospitals) and the Quaternary (rehabilitation).

- insurer - currently represented by the National Health Insurance and the county - third party payer
- patient - care recipient.

Service providers

Primary care is provided by family doctors. The most common type of organization is their individual medical office, but there is a growing number of civil society than medical.

General practitioners provide primary care medical services to patients insured by health insurance system, their lists (without pay) or other medical lists of family and uninsured patients (fee). General practitioners have the owner / legal representative, a family doctor. They provide preventive care, curative and emergency recovery.

This differs significantly from medical services before 1998, when primary care was provided by a large number of dispensaries of various types: local, school and business. They were given territorial area hospital. Patients were repatriated, having no choice option advice.

With the reorganization in the CMI, or other forms of organizational, patients were given the right to choose their doctor, they were paid per capita (for each patient enrolled in the list), which was introduced competition between service providers primary care. An attempt was also an increased role in filtering GP patients to other medical services.

Family doctors are independent suppliers are no longer employees. Manages its own budget and enter into contract with the Health Insurance.

Secondary care include specialized care: ambulatory, ambulatory integrated hospitals, clinics, diagnostic and treatment centers, medical specialty civil society, etc.

Ambulatory care units are particularly suited for outpatient health care. They are either legal entities or the structure of a hospital (outpatient integrated). Those providing medical treatment for medical specialty for which they were intended. Generally, they have one specialty, but there are cases which are grouped several related medical specialties. Services provided are preventive, curative and emergency recovery. In these types of units can take place and educational activities.

Hospitals or clinics are unincorporated, which provides specialized care in many specialties, outpatient. They work in the public system (paid and unpaid) or the private system, providing preventive care, curative and emergency.

Diagnostic and treatment centers are hospitals providing the care specialty beds featuring day. These were mainly the task of diagnosis, treatment and outpatient treatment recommendations.

Tertiary care - provided by hospitals, sanatoriums, preventoria, social medical units - mostly belongs to the public sector.

Hospitals are hospitals (public, private public and private sections) with beds, public utility, with legal personality, which provides medical services to persons hospitalized or attending outpatient health insurance population. Under health reform law, which provides preventive care, curative and palliative recovery. The organizational structure comprises of a hospital if necessary: wards, laboratories, diagnostic and treatment services, departments, services or technical offices, economic or administrative, pre-hospital care services and emergency transport, emergency receiving structures. Hospitals may have the structure of specialized outpatient services, day hospital services, home care and outpatient laboratory services. Hospitals are required to operate and research medical education for physicians, nurses and other medical and non medical staff.

Nursing is bedded hospitals providing medical care using natural healing factors, associated with other methods, techniques and therapeutic means. There are units with legal personality and is organized as tuberculosis sanatoriums, sanatoriums sanatoriums of neurosis or spa for various specialties (impaired motor, cardiovascular, digestive, renal, etc.).

Preventoria are hospitals with beds, with legal personality, which provides prevention and combating of tuberculosis in children and young people, and in patients with clinically stable and non-contagious tuberculosis.

Health centers are hospitals with beds that provide health care specialist at least two specialties, the population of several adjacent locations.

Social medical units specialized beds are public institutions with legal personality, subordinated to local authorities, which provide people with medical needs social care services, medical services and social services.

Romania has chosen to reform the public health system, Beveridge model the transition from one based on health insurance. Changes in health care last year but did not solve the problems of services, the system currently one hybrid, innovative in this regard.

Reforming health services continued in 2010 producing significant changes in health system infrastructure and personnel structure involved in providing health services, both public sector and in

private.

Network health units recorded in 2010 significant changes. Thus, the number increased by 29 hospitals, 5 outpatient at the hospital's integrated with that of the 353 dental offices and pharmacies with 340 numbers, points of pharmacies and drug stores work. The network of medical units in 2010 were separated institutes and institutions without beds, the total land is 108 such units.

Previous year, in 2010, distribution prinipalelor health units in Table 1 is as follows:

Table 1: Number of health units in the main categories of units

Health units	2009	2010	In 2010 compared to 2009
			Differences (+/-)
Hospitals	474	503	29
Polyclinics	268	311	43
Dispensaries	211	204	-7
TB sanatoria	5	4	-1
Preventoria	4	4	-
Spa sanatoriums	7	7	-
Medico-social units	68	68	-
Specialty ambulatory	69	75	6
Integrated outpatient hospital	392	397	5
Family medical	1390	1170	-220
GP surgeries	1055	1000	-55
Dentist	1683	1236	353
Medical specialty	998	8870	-1128
Civilian medical societies	108	110	2
Civil society dental care	165	159	-6
Civil society specialist medical	251	218	-33
Pharmacies, pharmacy outlets and drugstores	7586	7926	340

Source: INS – activities of medical units in 2010

Insurer – payer

Health insurance is a unique combination, because, despite the transition from a centralized system based insurance system still has a strong social character, which is why large sections of the population are covered by the insurance without contribution person's financial or other State body. Also, health services are covered by insurance for home wife of a man who pays insurance for pregnant women and other smaller categories of beneficiaries.

Health insurance system is an innovative hybrid because, despite the move to insurance-based system, the system still has a strong social character, which is why large sections of the population are covered by the insurance without contribution from the person or other State body. Also, health services are covered by insurance for home wife of a man who pays insurance for pregnant women and other smaller categories of beneficiaries.

On the other hand, social health insurance financing system changed, but made minor changes in the package of services that are offered to policyholders. Except for medical services cosmetic surgery and / or requiring hospitalization conditions with increased comfort and medical services performed at the request of the patient without a medical recommendation in this regard, access is theoretically possible to any medical service recommended.

Limiting access to specific services considered essential and would lead to cost control was a concern of all countries that use the health insurance system, so far no system not finding convenient way to introduce this measure. From this point of view the population has not experienced a major change in the new law. Nedefinirea minimum package of health services is that CNAS impose financial limits: the cap on doctor prescriptions offset, limit the number of admissions and discharges; cap recipes offset, limit the number of medical tests.

With limited financial resources have been found, therefore, other ways of limiting the number of services and therefore cost: access to specialist services, generally more expensive, is permitted only with referral from your family doctor, laboratory investigations and laboratory are allowed only in relation to diagnosis and can be prescribed only by certain doctors, prescriptions for compensated and free drugs are limited in number and the amount prescribed drugs per prescription.

Given that it is in a new healthcare reform package, we stop here to analyze the two actors of this trivalent system. In fact, the present study especially interested in the third.

Recipient - the patient

Patient, insured or not, paying or not uniquely call service providers. Filtering disease is by your family doctor on whose list it is.

Here begins our analysis on expectations that the satisfaction or dissatisfaction has. The indicators can be analyzed at this level are:

- waiting time in the schedule (days, weeks, etc..) and to the consultation room
- attitude of the doctor and medical staff
- time for consultation
- quantity and quality of information on disease and treatment prescribed
- medical equipment available
- investigations required
- look cabinet: temperature, hygiene, furniture

About the same indicators are relevant and if it dervicii furniorilor secondary care. Weight are significant differences in terms of further investigations and communication with other providers, hospitals and family doctors for the disease and continuation of treatment.

3. The operational. Case Study: Chronic disease hospital Smeeni

To assess patient satisfaction, the study was a hospital for chronic diseases in Buzau, only such a category in the county. Given that in 2011, the reorganization and restructuring of hospitals were closed or reassembled 3 hospitals, answer questionnaires and interpretation are affected by the fact that patients who responded were still in a position to benefit from these services at this level (about home, with doctors whom know the history of the disease and have high confidence in).

The research was conducted from January 2011 - March 2012.

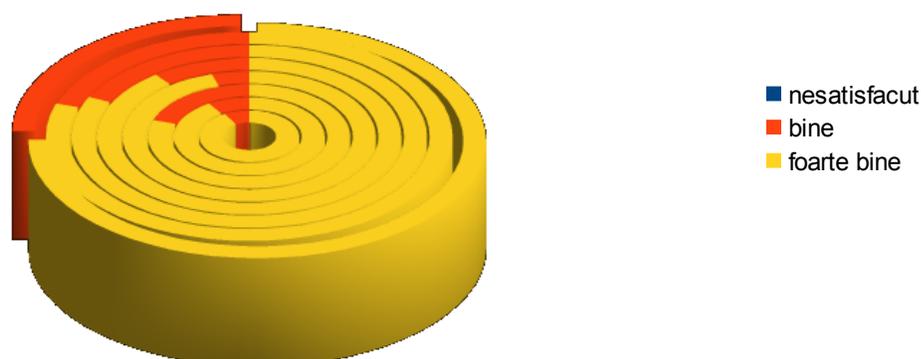
Number of patients surveyed was 1200 – all hospitalized in this period

The number of respondents was 1005.

The questionnaire included 11 questions and one point for comments and suggestions and referred to sex, age, department and date of admission, the hospital attendant (personal health, individual carers), the score for the accommodation, cleanliness, food, staff, attitude to admission, time to the doctor for consultation, training on the administration of drugs, if drugs were provided by the hospital, patients or both purchased and on what basis, when treatment has been satisfactory, overall impression, if necessary would choose this hospital again.

Figure 1: answers to questions 2 - 9

The level of patients satisfaction



The questionnaires were anonymous, respondents were in number 500 men and 505 women, aged between 20 and 84.

The analysis of responses to questions 2 – 9, responses were noted in most part, with honors, “very good”, only six food with a number of respondents who said “partially satisfied”.

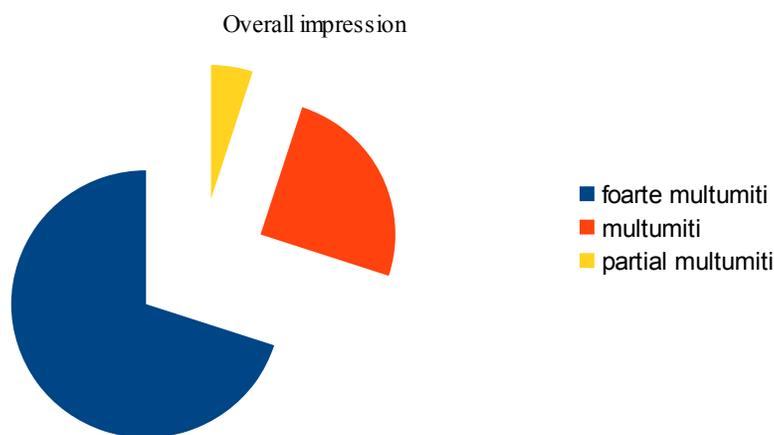
To question 10 (overall impression), the responses were:

~ 70% of patients said they were very satisfied, on a scale from 1 to 4, the quality of medical and administrative services, without comments and suggestions or complaints;

~ 25 of respondents patients – were generally satisfied with services received, with positive feedback, especially about the attitude of medical staff and hotel conditions.

~ 5% of patients said they were satisfied / partially satisfied - the main suggestions / complaints are related to environmental conditions during summer, possibilities of entertainment (television, newspapers).

Figure 2: Overall impression



No significant differences were observed between men and women. Respondents aged under 40 were more active in terms of suggestions.

Although this questionnaire is available online on its website, it has received only test its response, the reason probably being that the audience does not use this information channel.

Open Day at health day - April 7, 2012

This event took place on 2 April 2012 and focused on aging and what can healthcare providers to help people grow old suits beautiful and worthy.

Elderly were invited – or assisted hospitalized during that period of a center for the elderly, located near the hospital.

The objective of this event was popularizing the patient leaflet, released on the same occasion, and the package they offer institution, collaboration with other institutions, like the county Department of Public Health, Health Insurance House, City Hall and Local Council of in whose administration the hospital is, ambulance district, etc..

Also at this event was shown a movie in which patients were interviewed on various conditions which gives hospital.

Aside from the inherent subjectivity of a filmed interview, which may induce some error, commonly manifested as the expression on hospital doctors and care staff are the first and second place is the hotel conditions, observing a high degree of satisfaction of patients hospitalized at the time in hospital.

In addition, the events are invited to participate in hospital, creating an improved tone of both patients and the employees, with positive effects on health care.

Although this event could not quantify the impact on patient satisfaction, showed the difference between what the patient receives according to his expectations and what matters in terms of health.



Figures 3 , 4: Images from open day

3. Conclusions

The 2012-th patients are informed, documented, know their rights and, especially, have well-established expectations of caregivers. Therefore, it seems impossible at times, thank you, from all points of view, a patient, given that, suffering with pain, may cause subjective communication

barriers.

However, sometimes it takes very little for a patient to be fully satisfied by the treatment.

On the other hand, the most expensive medicine in the modern hospital, a patient can lead to unhappy state, for a simple reason such as lack of explanations from the doctor regarding the condition or treatment, and, often, for bland food, although adequate in terms of composition.

Overall satisfaction of patients is indeed almost impossible, in real terms of financing, reform of the system and endless staff remuneration, ridiculously low relative to system requirements. However, by preparing and appropriate stimulation administrative and medical staff in hospital at similar hospitals in developed countries, to achieve a maximum degree of patient satisfaction or very high.

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SUSTAINABILITY MANAGEMENT IN ROMANIA: CHALLENGES AND OPPORTUNITIES

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Abstract: *In a world facing increasing environmental, social and economic challenges, business companies have been charged with the task of aligning their processes and services with a sustainability agenda. However, the concept of sustainability is complex, interdisciplinary and contested. The study consisted of an exploratory analysis looking at the importance given to Education for Sustainability by Romanian companies from which to begin to sketch the landscape of sustainable innovation in Romania. The study raises implications at the University/Industry interface with regard to the preparation that is offered to future leaders and employees in order to pursue sustainable innovation.*

Key Words: Romania, education for sustainable development, corporate social responsibility, sustainable business.

JEL classification: Q56

1. Introduction

Many of the challenges associated with sustainable development (SD) can be traced back to the ways in which modern societies produce and consume. The production, distribution, and delivery of goods and services require inputs of materials and energy, impacting the natural resource base both quantitatively and qualitatively, with the generation of waste and pollution and general disorder of the ecosystems (Petry et al, 2010).

A good management of environmental services has now become the focus of many business strategies tending to the aspiration of 'greening' their infrastructures and product deliveries. The growing demand for "green" products has created major new markets in which visionary entrepreneurs reap the rewards of approaching sustainability (IISD, 2010). Hence, by adopting sustainable practices, companies can gain competitive advantage, increase market share and boost shareholder value. Moreover, large and small companies may combine an environmentally-friendly approach to production with an increase in profitability, by pursuing a high efficiency model, as well as achieving better community relations (Genesis Renewable Energy Inc., 2011). However, it seems that many companies have not fully committed their most important resource to innovation- their employees. Every day, employees within an organization make decisions with long-term consequences on the environment and society and are therefore directly involved in any potential innovation the company may seek to pursue.

This paper is focused on the importance given to Education for Sustainability by Romanian companies. Romania is a country of the former Eastern bloc which has experienced fast economic growth in recent years and it is aligned with foreign development policies, with a greater role played by private investments in the pursuit of technological innovation (Nemoianu Istocescu, 2008). Recently, sustainable development has started to feature on the Government's development strategy (NSSDR, 2008). This study consisted of an exploratory analysis looking at the importance given to Education for Sustainability by Romanian companies with a view to begin a discussion on the particular position of Romanian companies within the debate on sustainable innovation in business. We argue that discursive tensions may exist between the globalized ideas of economic growth and the localized needs of Romanian workers who seek more involvement in the pursuit of sustainable strategies. In such conditions, a more complex understanding of employees both as workers and civic actors can play an important role in shaping the future of the country's sustainable strategies.

2. Background: Economic growth versus Sustainability

Sustainability and sustainable development belong to the category of contested concepts which hold different meanings for different actors and bring forth a variety of different ways of framing the problem at stake. An important and strongly debated aspect in sustainability is the relationship between economic development and the environment. As reported by Cole (1999), on the one hand global institutions and national governments typically argue that only economic growth can provide the resources with which to tackle environmental problems. Along with this idea, there is the belief in technological innovation that would lead to the discovery of new resources and thus an improvement of other dimensions such as life expectancy, housing, nutrition, and education levels in both the developed and the developing world (Cole et al, 1973; Anderson and Huggins, 2004). However, industrial expansion has also been identified at the root cause of environmental and social degradation and should therefore be restrained (Boulding, 1966; Meadows et al, 1972).

In the paper "*Economic growth—the essence of sustainable development*" (2004), Anderson and Huggins argue that "this gloom-and-doom theory has been resurrected under the guise of sustainable development, calling for changes in virtually every aspect of our consumption and production." The amorphous nature of the concept 'sustainability' (Campbell, 1994; Pretty, 1995) means that it is impossible to state the precise relationship between sustainable development and economic growth.

Regardless the viewpoint that one may agree with, evidence of Planet's degradation is mounting. Concerns for resources depletion go hand in hand with concerns about resource quality and general systemic changes of the natural systems' services. Our overconsumption and fixation for more and more growth is killing our planet (Leufstedt, 2010).

3. Sustainability: Opportunity or Risk?

The business sector is responsible for a significant proportion of the environmental footprint, in addition to having a major influence on wider social and economic sustainability issues, both nationally and internationally (Robinson, 2009). Therefore, it is crucial to improve the environmental and sustainability performance of businesses and organizations in order to achieve a more sustainable society

A sustainable business is any organization participating in ecological or green activities to ensure that all processes, products and production activities adequately address the current environmental concerns, while maintaining a profit (Rennie, 2008a). In other words, it is a business that "meets the needs of the present world without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987). Generally, a business is considered to be green if it meets the following four criteria (Cooney, 2009): (1) Incorporates sustainability in each of its business decisions; (2) Provides environmental products and services that replace the demand for products and / or organic services; (3) It is greener than traditional competition; (4) Made a commitment to the principles of environmental sustainability in its business operations.

The turn of the 'green' in business has been associated with a multitude of conceptions and practical ideas. Authors like Keijzers (2002), Rennie (2008a, 2008b), Galvao (2008), and Matthews (2009), attempted to define sustainable business or green business as business that not only curb pollution, ensure re-use of renewables and recyclable resources, and preserve natural resource stocks, but also respond to customer needs while at the same time leaving no negative impact on the environment, community, society and economy.

However, customers, financial partners, non-governmental organizations, governments, the globalization of economies and internationalization of social and environmental standards exert new pressures on companies to take on social and ecological responsibilities. Over the last decade, there has been an increased pressure on enterprises to broaden the focus of sustainability and accountability in business performance beyond that of financial performance. Demands for sustainability management spring from a variety of sources, including societal mandates incorporated into regulations, fear of loss of sales, and a potential decline in reputation if a firm does not have a tangible commitment to corporate sustainability management (Lee, 2005; Siegel, 2009). As a response, companies start to contribute to the development of sustainable energy and transport infrastructures, and in designing and implementing new sustainable technologies (Keijzers, 2002; Schmidt-Bleek, 1994).

Although industry is sometimes seen as a source of environmental degradation and social concerns, it is widely recognized that it is an essential part of development and wealth creation. Therefore, as an important social actor, industry must play a prominent role in creating a sustainable future (Azapagic and Perdan, 2000). The challenge of sustainable development for any business is to ensure that it contributes to a better quality of life today without compromising the quality of life of future generations. If industry is to respond to this challenge, it needs to demonstrate a continuous improvement of its triple bottom line, i.e. economic, social, and environmental performance, within new and evolving governance systems (Azapagic, 2003).

Furthermore, environmental (e.g. climate change) and social (e.g. accountability) demands from shareholders and stakeholders are contributing to the pressure for companies to consider sustainability issues more seriously. However, the major challenge to companies and industries is to demonstrate their current contribution to the society as a whole without compromising the potential for continuing to deliver improvements or future generations. In short, sustainability management practices at a firm level may help the management board to align its corporate and business strategy and to meet key sustainability challenges (Schaltegger and Burritt, 2005).

4. Corporate Sustainability Management System

Despite urgent calls for the adoption of corporate sustainability management practices (Figge et al, 2002; Lee, 2005; Siegel, 2009), its incorporation into corporate organizational management often remains more superficial than effective (Figge et al., 2002). Some of the reasons for this lack of integration are, according to Briassoulis (2001), both that companies do not know how to measure and address the issues in a systematic way, as well as the shortfall of available tools to support sustainability management practices in concrete and operational terms. However, there are international standards and guidelines for integrating sustainability management into business organizations. Increasing number of companies adopted sustainability management related standards and guidelines including ISO 14000, Social Accountability (SA) 8000, ISO 26000, AccountAbility 1000, OECD Multinational Enterprises, Dow Jones Sustainability Index (DJSI), and World Business Council for Sustainable Development (WBCSD) initiatives.

Azapagic (2003) proposed a general framework for the Corporate Sustainability Management System (CSMS), outlined in figure 1. As shown in the figure, „if a corporate sustainability strategy is to be successful, it must emerge from and be embedded into the business vision and strategy” (Azapagic, 2003:304). Corporate sustainability is not an ‘add-on’ as often assumed by some; rather, it should be viewed as an ‘umbrella’ tool which helps business identify and manage economic, environmental and social risks in an integrated way (Azapagic, 2003). For companies interested in long-term sustainable development, seeking to penetrate new markets and provide value-added solutions, an integrated approach to sustainability can unlock numerous opportunities to improve competitiveness and enhance reputation.

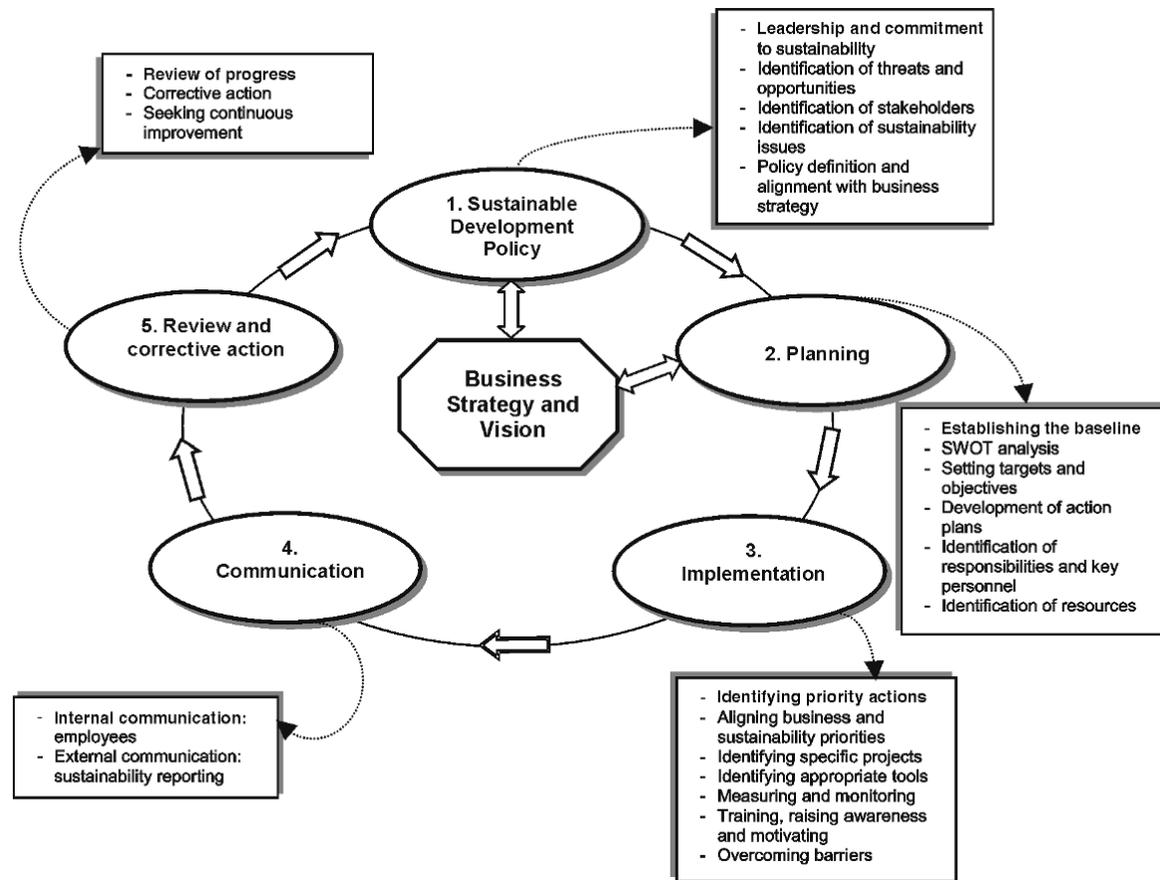


Figure 1: Corporate Sustainability Management System (CSMS).

(Source: Azapagic, 2003:305)

Definition of a sustainable development policy is the first stage in setting up the CSMS. The policy should encapsulate the set of core business values agreed by the company and should contain statements of principles or policies on social, economic and environmental responsibilities and stakeholder relationships. However, before a sustainability policy can be formulated and put into practice, the following has to be carried out (Azapagic, 2003:305):

- “demonstration of leadership and commitment to sustainability;
- identification of threats and opportunities;
- identification of stakeholders; and
- identification of sustainability issues.”

Zoe Robinson (2009) observes that organizations are increasingly demanding sustainability literacy skills for a wide range of roles and responsibilities. If learners can gain these skills they are therefore improving both their own employability as well as their ability to contribute to making their future workplace and society more sustainable.

5. Sustainability in Romanian Companies

Companies already know that their employees' sustainability literacy is important. Employees who have knowledge regarding sustainable development can help the business grow. In difficult economic times, sustainable development practices can save money and reduce environmental impact of the organization. To identify the approach to sustainability and to measure the importance given to education for sustainability in Romanian companies, a study was conducted using a questionnaire prepared by NEEF USA (2009). The questionnaire was translated into Romanian and adapted to the Romanian economic environment. Research results suggest that education for sustainability is becoming an increasingly common practice in many companies; however, there is still not a universally valid model - to suit all companies and industries.

5.1. Research Objectives

The main objective of this research was to identify how sustainability is approached and to measure the importance given to education for sustainability in Romanian companies.

Secondary endpoints of the study were:

- Identification of awareness on sustainable development and sustainable practices;
- Identifying the best methods to educate employees on sustainability issues within a company
- Identifying the department most qualified to deal with issues of sustainability;
- Identifying obstacles encountered by employers in implementing a sustainable strategy.

5.2. Sampling

The survey covered the entire population of Romania, which is why it was chosen an online method of data collection. Using the website www.freeonlinesurveys.com the questionnaire has been put online and distributed via e-mail, or through social networking websites and websites dedicated to partnerships between companies (eg www.bizoo.ro). Results are sent to the server in real time and can be viewed and analyzed. 807 valid questionnaires were collected, which means that for an indeterminate population there was a sampling error of $\pm 3.45\%$ for a confidence level of 95%.

5.3. Research Results

When asked what do they think of when they hear the term sustainability (sustainable development), some of the answers of the respondents were: "future generations", "evolution", "future ecology", "balance", "responsibility", etc. Most respondents were aware to some extent what sustainability is, but still, action is required to inform people about sustainability and its importance.

Out of the 807 respondents, only 342 said that their organizations have a program to educate employees on sustainable development, i.e. 42.85% of all respondents, while in the USA 75% of the companies have such training programs (NEEF, 2009). In terms of size of the organization, it appears that in small and medium sized enterprises is given the highest importance to education for sustainability.

Companies that have an advanced program for educating employees about sustainability / environment place a lot of value on the environmental/sustainability knowledge of the job candidates. As seen in figure 2, more than 83% of these companies think that sustainability knowledge of employees is important or somehow important. The importance given to this aspect decreases gradually with the intensity of training programs. Therefore, in companies without a training program, the chart is mirrored, with more than 57% of respondents indicating that their company gives very little or no importance to the sustainability knowledge of their employees.

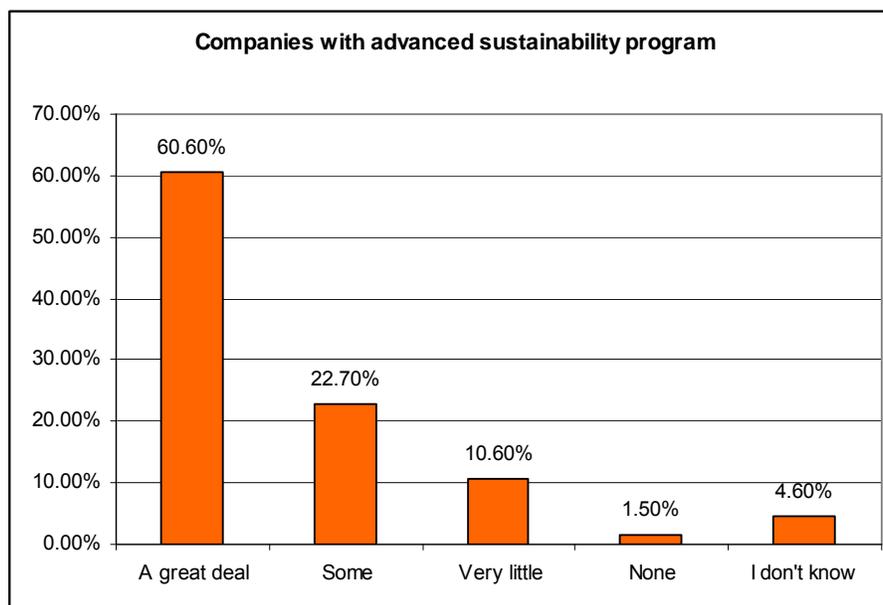


Figure 2: The importance of sustainability knowledge of potential employees, prior to employment

When asked if the company plans to start educating employees about environment / sustainability in the next two years, only 6% of respondents from companies without such a training program responded affirmatively. 20% said that the company doesn't plan to start such a program, and the rest don't know. Compared to USA, 49.4% of the companies plan to start such a training program in the next two years and 9.7% don't. The rest of 40.9% are not sure about the company's plans. It is noted that the percentage of firms with no employee training program is much lower in USA (25%) than in Romania (56.8%).

The reasons given by these firms for not having such a training program were 'lack of time', 'lack of such objectives' and 'priority of activities required to fight competitors', in America, and in Romania the biggest problems are raised by 'too many other priorities', 'lack of money', 'lack of time', 'disinterest for this problem', lack of education and trained persons to further educate other employees on the company (see fig. 3).

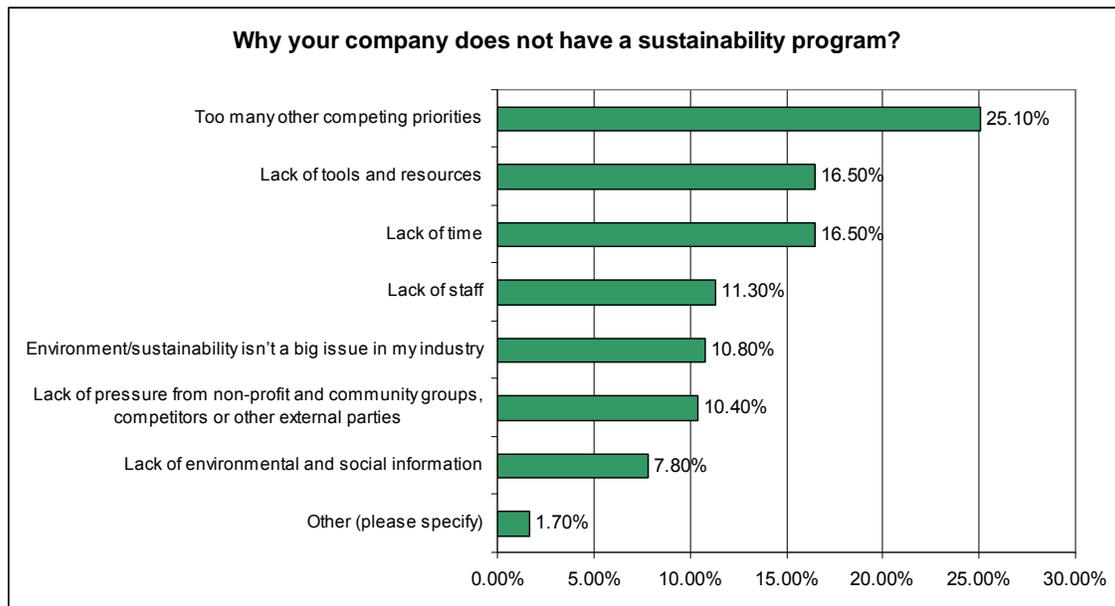


Figure 3: The reasons of employers for not yet having such a program

When asked what department would be responsible for educating employees on environmental / sustainability issues, most of the subjects responded that the departments of environmental protection (46%) and HR (24.8%) should be involved in this problem. This is confirmed by the answers of the people working in companies with advanced training programs. They also say that the departments responsible with environmental protection, human resource and quality assurance were most active in educating employees with regard to environmental / sustainability issues.

Question 31 seeks to identify which tools and resources would be useful for educating employees on environmental / sustainability issues. Being an open question, respondents could write anything. Most indicated that human and financial resources must be involved, but time is another important resource for the success of education employees.

Regarding instruments, the classic ones have been suggested by most respondents: training, workshops, role play to arouse the interest of all, posters, flyers, messages sent by e-mail, electronic watermark on the documents or sites, examples of best practices of other organizations. Notable is that although the question was an open one, more subjects identified the need for at least "a person with initiative, and several others with some openness and an interest in the environment in which they live and their children and grandchildren will live".

Employees of companies that have a program to educate staff on sustainability and the environment, responded that the most important motivating factors for employees to learn about the company's environmental/sustainability goals are the concern for the environment and society and job

satisfaction, followed by the objectives of sustainability included in performance evaluation and the company's reputation and prize money that employees receive.

Question 23: "What were the three most important components for developing an educational program about the environment / sustainability in your company?" Most subjects (21.7%) responded that after the assessment of the company's impact on the environment and the society, the company decided to start such programs to educate employees. Other factors were internal questioning of employees (who suggested the initiation of such programs) and defining the values and principles. Factors least frequently encountered among the reasons for starting programs to educate employees are: designating an employee who is a champion on sustainability issues (1.2%), involvement of non-profit organizations (2.4%) or organizing committees of conference (4.8%) (See figure 4).

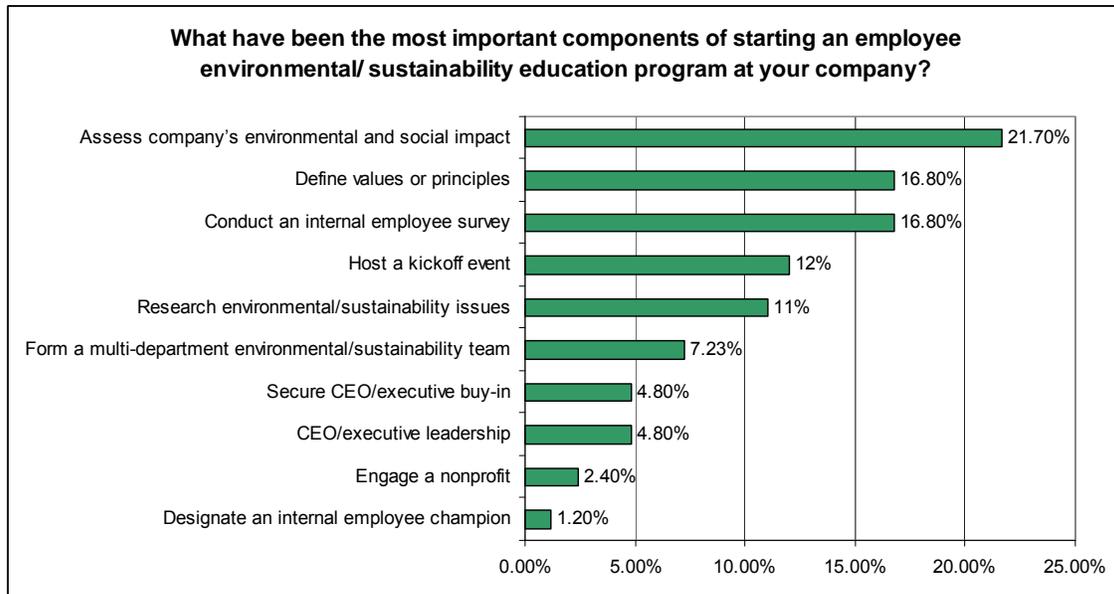


Figure 4: Determinant factors in developing an educational program

Regarding the efficiency of training, the most efficient methods are considered internal communication campaigns (27.6% of respondents) and volunteer programs in the community (26.7%). Award and recognition programs and competitions between departments or partnerships with non-profit organizations have also been assessed as effective methods of education. While in the U.S., the most effective methods are considered the online training modules, followed closely by competitions between departments and hiring consultants.

6. Discussion

The study aimed to find out to what extent education for sustainability is considered important by Romanian companies and the data showed that this is a matter which is being given increasing attention both by companies and individuals. People are motivated to learn about environmental and sustainability issues because they feel concerned about the environment and society. However job satisfaction and performance evaluation are also seen as good motivators. The low marks for customer loyalty in fact seem to suggest a minor concern for the wellbeing of the company alone (see the low marks for customer loyalty). Hence arguments for introducing sustainability measures to increase technological efficiency and the economic sustainability of the company might appear less motivating to employees if these are not connected to personal and social aspects.

When comparing the topics that are taught as part of the training courses introduced by companies, with what the employees desire to be taught, it is interesting to note a certain congruence of views. Namely, such courses should include general information about sustainability and knowledge of specific actions required at the workplace for conserving or protecting resources and the environmental regulations that the company has to comply with. This shows a level of pragmatism regarding sustainability, as people are less interested in success stories of other employees, or broader discussions on greening the supply chain or even generic sustainability attributes of the company's

products and services. So it seems that the employees are action orientated and they would consider taking sustainability measures a part of their job.

6.1. Education for sustainability in Higher Education?

Potential benefits for the implementation of Corporate Social Responsibility (CSR) and sustainability standards include lower prices for financial services, higher GDP growth and employment rate, equitable wealth distribution and long term sustainability in all areas of business (Cocris and Nichitean, 2010). Therefore, sustainability issues are relevant to organizations of all sizes and all sectors. Increasingly, organizations themselves are demanding sustainability literacy skills for a wide range of roles and responsibilities. If learners can gain these skills they are improving both their own employability as well as their ability to contribute to making their future workplace and society more sustainable (Robinson, 2009).

However, even if there is increasing concern towards this topic in Romanian companies, as shown by the results of this study, there are currently few examples of sustainability literacy being addressed across the curriculum in Romanian mainstream education (Grecu and Denes, 2011).

Zoe Robinson (2009) argues that in order to effectively contribute to driving environmental and sustainability improvements in their (future) workplaces, learners need to acquire knowledge, understanding, skills and experience in identifying opportunities for improvement and designing effective strategies for realizing them. They also need skills for presenting the proposed changes effectively and persuasively. Robinson (2009) goes further and highlights that besides the direct benefits of learners, gaining sustainability literacy skills has many wider institutional, societal and environmental benefits.

Growing concerns about sustainability raise the need for the involvement of citizens in an extended peer community (Benessia, 2009; Giumaraes Pereira, 2009). Accordingly, this widens the notion of 'expertise' from being a character of single individuals holding specialized knowledge, to that of being a competence, an ability, of a collective group of people to engage in the production of new knowledge, along with new discourses, models and images (Benessia, 2009). Yet, this implies a change in the traditional conceptions of science education and science literacy (Hodson, 1999). As stated in the Sapporo Sustainability Summit Declaration, "universities have a critical role to play in educating future generations, disseminating information about sustainability, and particularly by training leaders with the skills to solve regional and local problems from a global and interdisciplinary perspective" (G8 Summit, 2008).

Given that sustainability-related issues are increasingly evident and pressing, and that addressing sustainability in the real world often demands interdisciplinary approaches, it is safe to assume that Higher Education Institutions (HEIs) seeking to innovate a changing world will need to pay increasing attention to interdisciplinarity and sustainability and their interrelationship, and further, seek links with other agendas that may be driving the institution (Jones et al, 2010).

Given this, we suggest that the challenge of Sustainability Education in HEIs would be:

- To address the limitations of the organizational mindset and to include more personal aspects of sustainable behaviors;
- To introduce Education for Sustainable Development in Undergraduate courses and work in partnership with Industry;
- To contribute to steer the development process towards Sustainability and promote a collaborative culture within and outside the organization;
- To encourage a form of leadership that is open to dialogue with employees.

The type of ESD we envisage goes beyond simple training on the 'what & how' of sustainable development, but it aims at the development of broader civic capabilities of communication, self-expression & collaboration (Robinson, 2009). Further, HEIs need to focus on the nature of interdisciplinary programs arising from the University / Industry interface. In this view, sustainable education can become a vehicle of substantial changes in the practice and representation of civic spirit. Emancipation and empowerment can be associated with an environment of commitment, conviviality and creativity – making society, schools and living environments more hospitable and sustainable (Gray et al, 2009).

7. Conclusions

The objective of this study was to identify the approach to sustainability and to measure the importance given to education for sustainability in Romanian companies. Research has shown that in

Romania, over 56% of organizations do not have education programs for the employees on the environment or sustainability issues while in the U.S., the percentage of organizations that do not have such programs is only 25%. This difference can be explained by the greater involvement of universities in this field.

The objective of an education on environmental sustainability for the employees is to help organizations to engage their employees directly, and enable them to address their actions towards the achievement of a superior performance in terms of sustainability. Thus, companies can produce innovative changes in the business process, reduce costs and their impact on the environment and society, or inspire employees to make sustainable decisions at home or in their communities. The starting point is the organizational culture of each company, and the employees' engagement to turn the organization's values and commitments on sustainability into reality.

There are programs for educating employees about sustainability, which are often launched with enthusiasm, but they are lacking structure and methodology to quantify cost savings and accountability to ensure success (NEEF, 2009). Such programs fail if they do not enjoy unconditional support from top management or do not receive feedback, interaction and participation from employees, customers or partners. This study aims to highlight the importance of education for sustainability - which if done in higher education institutions - can reduce training costs by companies, may facilitate synchronization of programs and sustainability efforts with business objectives.

Another argument for the necessity of education for sustainability is clear from the study done and is valid both in Romania and in America. When asked how do they anticipate that the value assigned to the candidates' knowledge of environmental / sustainability and their interest for these issues will change as a factor in employment over the next five years, 58.3% of respondents in Romania estimated that the importance of these knowledge will increase, while in America 78% of respondents predicted an increase in knowledge about the importance of sustainability.

Business is, directly or indirectly, the cause of most problems in the environment. It becomes increasingly evident that businesses are also those that should and can (both in terms of management and resources) address these issues. However, business community leaders ignore the studies about the ability to balance population growth, increasing consumption levels and threats to the natural environment. Education they have received in management school has indoctrinated them to prioritize increasing profits and shareholder value, not to recognize their actions as part of a finite, shared world. Recognition of the connection between environmental degradation and this dominant view of the purpose of schools reveals the deep need of a radically different vision of education. As David Orr (1992) notes, "The crisis cannot be solved by the same kind of education that helped create the problems".

Benefits of implementing environmental and social initiatives must be quantified and expressed in business terms as relevant benefits in the medium and long term, to induce managers to make sustainable development a priority. Universities must educate future leaders of corporations and their employees to convince them that the adoption of responsible business strategies in terms of sustainability is a "win-win-win proposal for companies, environment and the society" (Willard, 2004).

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Abstract: *In a dynamic environment, with an increasing level of competitiveness, projects might be a solution for handling complexity. But when dealing with projects not only the objectives' achievement is important. The way of dealing with new information during and after the project implementation is also a critical success factor in the case of the project and on a long term, of the organization. The article concentrates on the link between projects and knowledge, and presents the opinion of some Romanian project managers about managing knowledge when dealing with projects, in the case of projects financed by the European Union.*

Key words: project, knowledge, project management, knowledge management

JEL classification: D83

1. Introduction

As a member of the European Union (EU), Romania is facing an important development opportunity. The total amount of structural and cohesion funds allocation for Romania, for the period 2007-2013, is over 19 billion Euros, being on the 9th place among the largest financial allocations for this period (Government of Romania, 2007). Significant investments were made in Romania, before and after the accession to the European Union, through projects financed by the European Union in order to implement European policies.

Starting the 1st of January 2007, until the 31st of March 2012, there were a number of 32.183 projects applying for European funding in Romania, according to the Authority for Coordination of Structural Instruments. From the total number of project applying for EU funding in the period 2007-2011, there were 10.304 projects approved for funding. The total value of the approved projects was over 25 billion Euros and the European contribution was over 15 billion Euros. The number of funding contracts or agreements signed in this period was 8.218, which means that from the 10.304 projects approved for EU funding, 8.218 projects were at the end of March 2012 implemented or under implementation. The detailed description of the situation at the end of March 2012 is presented in the table below (Table 1).

Table 1: The situation of projects financed from EU funds on 31 March 2012

1 euro = 4,3480 lei

EU allocation 2007 – 2013 (cumulative) (billion Euro)	Number of projects approved for EU funding	Value of approved projects (billion Euro)	EU contribution on approved projects (billion Euro)	% EU contribution on approved projects/ EU allocation for 2007-2013	Number of funding contracts signed	Amounts reimbursed from the CE (billion Euro)	% Amounts reimbursed from the CE/ EU allocation for 2007-2013
1	2	3	4	5=4/1 *100	6	7	8=7/1 *100
19,213	10.304	25,352	15,724	81,84	8.218	1,260	6,56

Source: The Authority for Coordination of Structural Instruments of Romania

Projects are the principal way of creating and dealing with change (Cleland and Gareis, 2006), being used with increasing frequency in all fields. The increasing use of projects determined the development of the research in this area.

Different approaches regarding the perception of projects exist (Gareis, 2005, p. 39-41). Projects can be seen as tasks with special characteristics: "A project is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates a definitive beginning and end" (PMI, 2008, p. 5).

Some authors also define projects as temporary organizations and social systems: A project is a temporary and transient organization surrounded by inherent uncertainty (Turner and Muller, 2003). A project can be defined as "a temporary organization of a project-oriented organization for the performance of a relatively unique, short to medium term, strategically important business process of medium or large complexity" (Gareis, 2005, p. 41). Organizations and also projects can be viewed as social systems which have clear boundaries to differentiate them themselves from their environment, according to social system theory (Gareis, 2005).

Projects are favorable environments for knowledge creation. Knowledge is considered an intangible resource within an organization, which contributes to obtaining competitive advantage. Knowledge can be defined as a set of skills, experiences, information and skills that apply to solving problems (Baker et al, 1997). On the other hand, knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport and Prusak, 1998).

The literature offers a number of different knowledge taxonomies. Drawing on the work of Polanyi (1958), Nonaka (1994) explained the most cited classification of knowledge distinguishing tacit and explicit knowledge dimensions. The author also views knowledge as individual or collective. Other classifications (Alavi, Leidner, 2001) refer to knowledge as declarative (know-about) or knowledge by acquaintance (Nolan Norton, 1998), procedural (know-how), causal (know-why), conditional (know-when), and relational (know-with) (Zack, 1998).

Likewise, research in the domain of knowledge management seems fragmented. According to Sveiby (1997) the expression "managing knowledge" appears for the first time in a context of artificial intelligence at the end of 1980s. Early research in the field of KM was interested on the possibility of using information technology to support the process of individual learning. Again, in the artificial intelligence community, Wiig (1993) was one of the first scholars to recognize the limits of a primarily technological approach and he *defined KM in term of creation, learning, sharing (transferring), and using or leveraging knowledge as a set of social and dynamic processes that needed to be managed* (Iandoli, Zollo, 2007). Almost at the same time, Nonaka and his research group conducted a number of studies on the management of innovation processes in large Japanese companies. These studies together with the total quality management movement and the concept of continuous improvement, re-evaluate the overall role that human resources play at all levels in organizations discovering what was not yet obvious in organizational practice: *the centrality of the individual in the knowledge creation process* and the consequent need to recognize the person's necessary level of competence and autonomy (Nonaka, Takeuchi, 1995). Most of the contributions in the vast literature on KM can be summarized to one of these two approaches or attempts to integrate the two perspectives (Iandoli, Zollo, 2007).

Bhatt, (2001) defined KM as a process of knowledge creation, validation, presentation, distribution, and application. These five phases in knowledge management allow an organization to learn, reflect, and unlearn and relearn, usually considered essential for building, maintaining, and replenishing of core-competencies.

In a broad sense, Quintas et al. (1997) define knowledge management as the process of continually managing knowledge of all kinds to meet existing and emerging needs, to identify and exploit existing and acquired knowledge assets and to develop new opportunities.

The KM definition suggested by Iandoli and Zollo (2007): "*KM is the process of creating, capturing, and using knowledge to enhance organizational performance. It refers to a range of practices and techniques used by organizations to identify, represent, and distribute knowledge, know-how, expertise, intellectual capital, and other forms of knowledge for leverage, reuse and transfer of knowledge and learning across the organization*" simultaneously refers to objectives, knowledge

involved, tools and phases of KM. Knowledge management is a set of practices applied by an organization to create, store, use and share knowledge (Probst et al, 1998).

In projects, seen as temporary organizations, knowledge management is increasingly important although relatively few studies link the two fields: knowledge management and project management. Knowledge management in projects focus not only on the knowledge created within the project but also on the knowledge transferred between projects and the knowledge on projects in general (Schindler, 2002). The temporary nature and uniqueness of projects can be an obstacle to learning (Hanisch et al, 2009), which can cause loss of important knowledge. Knowledge transfer between or in projects can be achieved through personal interaction or through documents. Hanisch et al synthesized five main objectives of knowledge management in projects, in addition to reducing costs and time of project implementation (Hanisch et al, 2009):

- Increasing work efficiency and reducing risk by capitalizing the experience gained during other projects and applying knowledge acquired during earlier projects;
- Learning by repetition, or in other words avoiding repetition of mistakes and continuous improvement;
- Optimal allocation of human resources in projects, by taking into account the capacity and competence of employees;
- Identifying and implementing innovative ideas using the potential of interdisciplinary collaboration;
- Harmonization of project management methods/ standardizing, by identifying best practices and turning them into standards, use of consistent terminology.

Based on the literature presented above, we formulate the central research question of this article: “What is the opinion of Romanian project managers about managing knowledge when dealing with projects?”

In order to answer the research questions we present below, the methodology and the results of our research.

2. Methodology

The goal of the research is to analyze the opinion of some Romanian projects managers about managing knowledge when dealing with projects.

Considering the high frequency of projects financed by the European Union in the last years in Romania, we will focus our research on analyzing the opinion of project managers of this specific type of projects. Although there are several differences between managing projects financed by EU and those financed from other funds, dealing with knowledge appropriately improves the results of current and future projects in both cases. Knowledge management can be applied when dealing with projects, regardless of their funding or other specific elements.

In order to answer the central research question, we developed a questionnaire addressed to project managers of EU funded projects. For convenience reasons the questionnaire was sent by e-mail to project managers from the Northern Transylvania region (Nord-Vest region) of Romania. In other words we can say that the surveyed population was selected from a sample of convenience. The sample of convenience is defined by Marczyk et al as “simply a potential source of research participants that is easily accessible to the researcher” (Marczyk et al, 2005).

From the questionnaire we will analyze in this article:

1. The opinion of project managers related to the topic discussed in this article;

In this part of the questionnaire, two different statements will be discussed with several Romanian project managers:

- Projects are an important source of information and knowledge which are useful for the organization.
- Your organization supports the knowledge transfer in and between projects.

The respondents were asked to rate their point of view related to the statements above on a numeric continuum from 1 to 5, where 1 means strongly disagree, 2 means disagree, 3 means undecided, 4 means agree and 5 means strongly agree to the statement. We used the Likert scale in this part of the questionnaire.

2. Some specific identification data, such as: the type of the organization the project managers belong to and the number of projects implemented by the organization since 2007. The response format for all questions in the questionnaire is closed-ended.

Since this research is part of a more complex one that at this moment of time still takes place, from the questionnaires sent we received nineteen valid responses. The number of responses can be considered a limit of our research. We hope to improve the response rate in the months to come, as the research continues.

In order to further develop the research, we decided to interview four of the project managers that answered the questionnaire and ask them: “How does their organization support the knowledge transfer when dealing with projects?”

Although many researchers prefer either qualitative or quantitative methods of research, we consider that integrating the two approaches increases the quality of the research, since qualitative methods bring feedback and help interpret findings. For this reason, the data collected through the questionnaire is statistically analyzed but we also apply and interpret some interviews to complete the research.

3. Data analyzing and results

In the first subsection we analyze the responses received to the questionnaire and in the second subsection we present the results of the interviews applied to the project managers.

3.1 Analyzing the questionnaire

The valid responses received from the project managers were analyzed using the SPSS 19 program. According to the answers received, the organizations that the questioned project managers belong to have an important experience with EU founded projects. Most of them implemented more than three projects since the year 2007 (Table 2). In these cases the topic of knowledge management when dealing with projects is even more important, in order to increase the performance within projects and the competitiveness of the organization.

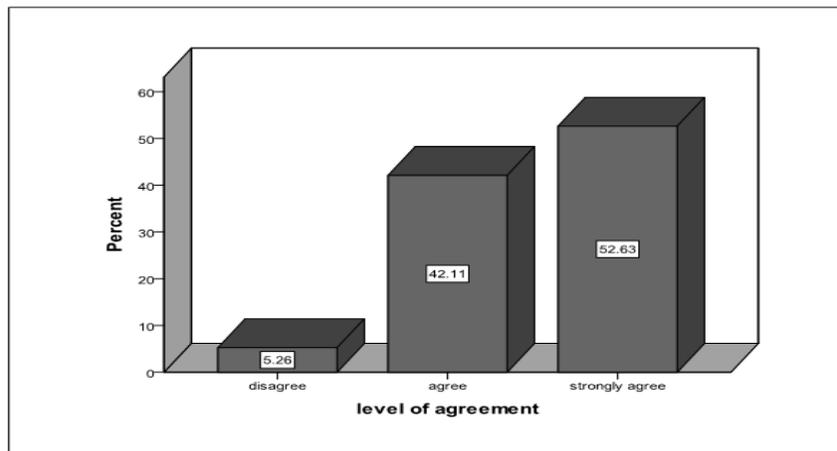
Table 2: No. of projects implemented by the organizations since 2007

Number of projects	Responses
1 project	3
2 projects	2
over 3 projects	14
Total	19

Source: SPSS

In the figure (Figure 1) below we present the frequencies of the answers the respondents gave when they were asked to rate the statement: “Projects are an important source of information and knowledge which are useful for the organization”.

Figure 1: Projects as a source of information and knowledge



Source: SPSS

From the total number of questioned project managers, 5,26% of the project managers disagree with the statement. They consider that projects are not an important source of information and knowledge, useful for the organization. But, the majority of the project managers questioned sees projects as an important source of information and knowledge. As it is presented in the Figure 1, 42,11% of the questioned project managers agree with the statement and 52,63% strongly agree with the statement.

We consider that analyzing the answers depending on the type of the organization the respondents belong to can represent an interesting point of view (Table 3). Ten of the questioned project managers work in public organizations and nine of them work in private organizations.

Table 3: Responses depending on the type of organization – statement 1

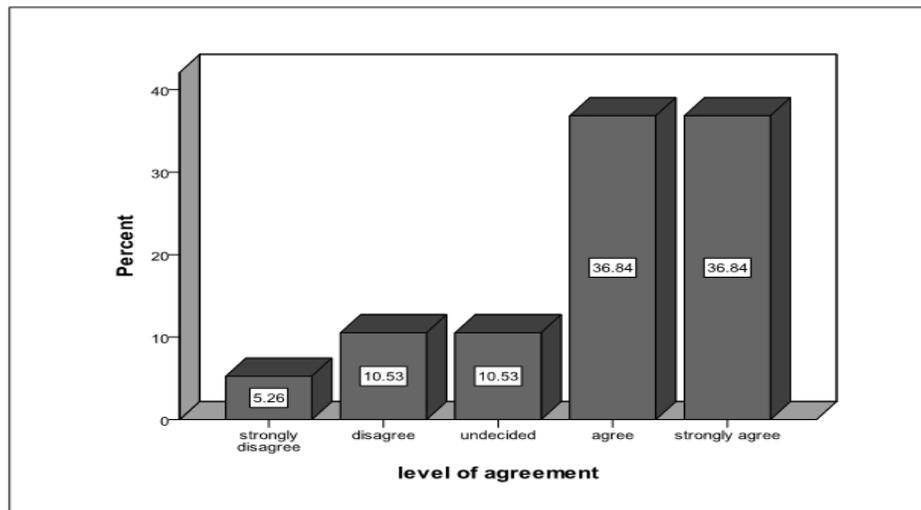
	Projects as source of information and knowledge			Total
	disagree	agree	strongly agree	
Organization type: public	1	6	3	10
private	0	2	7	9
Total	1	8	10	19

Source: SPSS

Although the majority of the respondents strongly agree with the statement, only three of them work in public organizations. From the project managers that agree with the statement, six work in public institutions and two in private organizations. The single respondent which considers that projects are not an important source of information and knowledge belongs to a public organization.

In Figure 2 we present the frequencies of the answers the respondents gave when they were asked to rate the statement: "Your organization supports the knowledge transfer in and between projects". From the total number of questioned project managers, 5,26% of the project managers strongly disagree with the statement. They consider that their organization does not support at all the knowledge transfer in and between projects. The project managers which disagree with the statement represent 10,53% of the total number of questioned managers. They consider that their organization does not support the knowledge transfer. Again, most of the project managers agree or strongly agree with the statement, although the percentage is lower than it was in the case of the first statement. An equal percent of 36,84% of the questioned project managers consider that their organization is supportive or very supportive to the knowledge transfer in and between projects.

Figure 2: The organization supports the knowledge transfer



Source: SPSS

According to the answers analyzed in the table below (Table 4), from the total number of nineteen questioned managers, six project managers working in public organizations and eight project managers working in private organizations consider that their organization is supportive or very supportive to knowledge transfer in and between projects. There are also two project managers working in public organizations, which consider that their organization does not support the knowledge transfer when dealing with projects. The single respondent that strongly disagrees with the statement belongs to a private organization.

Table 4: Responses depending on the type of organization – statement 2

	The organization supports the knowledge transfer					Total
	strongly disagree	disagree	insecure	agree	strongly agree	
Organization type: public	0	2	2	4	2	10
private	1	0	0	3	5	9
Total	1	2	2	7	7	19

Source: SPSS

From the statistical data presented above, we can conclude that most of the questioned project managers consider projects as an important source of information and knowledge. Also, the majority of respondents work in organizations that support knowledge transfer. Depending on the type of organizations the respondents work in, we can observe that the number of project managers working in private organizations which agree with the second statement is higher. This might indicate that private organizations are more supportive to knowledge transfer when dealing with projects, than the public ones.

3.2 Analyzing the interviews

We consider that presenting the actual way organizations support knowledge transfer when dealing with projects enhances the results of the quantitative research from the previous subsection. All of the interviewed project managers work in private organizations. Below we present the received responses.

Project manager No. 1 said that knowledge transfer within the organization he works in, is supported by means of a project environment that has two components:

- Standard project artifacts and processes that are created within a particular project and further on adapted for use in new projects and by new project teams;
- A learning routine that exists within a project team (inherent informal knowledge transfer from more experienced developers - tech leads, team leads etc. - to juniors in their team) and even between different project teams (by means of technical trainings and presentations - with information and training materials being available in a common repository).

Project manager No. 2 said that in his organization, the employees specialized in project specific activities work in different projects, where their expertise is required. Also, there are project workshops, conferences, meetings and tutorials organized, where project specialists are invited to identify opportunities to increase efficiency in achieving the final project results, and improving organization's performance.

Project manager No. 3 said that knowledge transfer between projects within the organization is assured through project meetings, manuals, coaching and mentoring activities, tutorials, informative workshops, simulations.

Project manager No. 4 said that his company supports the knowledge transfer within a project by using a dichotomous criterion of relationship among employees. First of all is the professional relationship through which the knowledge is shared at its highest level in a "one to one" way by using specific documentation called SOW - Statement of Work, where one can find all the technical details necessary for that particular project. What makes the things go properly and in a natural way, is actually the second type of relationship, the human one. The organizational culture in this case is that investing in people and acting like a team for the benefit of the project is more important than being

totally focused on the success of the project. These are the key factors of the knowledge transfer in their case and they claim that will always place the human resource on the top of everything within the organization, because they are aware that the team members represent the gold of any project.

4. Conclusions

An important achievement in project environments is that information and knowledge is created. Managing knowledge increases the success chances of projects on short term and the organizational performance on a long term.

Knowledge transfer when dealing with projects financed by the European Union is essential for achieving sustainable development, increasing productivity, innovation and competitiveness, creating new jobs and supporting social progress. We focused the research on projects financed by the European Union and the opinion of project managers with experience in this field.

From the empirical study, we conclude that the topic of knowledge management in EU founded projects is considered to be of great interest by the project managers. The majority of questioned project managers consider projects as an important source of information and knowledge. Also, most of the project managers that answered the questions work in organizations that support knowledge transfer. These answers might be influenced by the experience of the organizations with EU founded project, as most of the questioned project managers work in organizations which implemented more than three projects since 2007.

The interviews prove once again that there are organizations, with experience in dealing with EU founded projects, which consider knowledge management in projects an important issue and are aware of the benefits it brings to projects and to the organization.

Considering the complexity and importance of the topic, research can be continued in this field, hoping to receive a higher number of responses from project managers in the next months. Also, it might be interesting to correlate the statements with the size of the organization where the project managers work and to analyze the level of knowledge on project management of the project team members.

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Priority Axis 1. "Education and training in support for growth and development of a knowledge based society"

Key area of intervention 1.5: Doctoral and post-doctoral programs in support of research.

Contract nr.: **POSDRU/88/1.5/S/60185** – "INNOVATIVE DOCTORAL STUDIES IN A KNOWLEDGE BASED SOCIETY" Babeş-Bolyai University, Cluj-Napoca, Romania

CREATIVITY, INNOVATION AND CHANGE IN KNOWLEDGE-BASED ORGANIZATION**IONESCU Vladimir-Codrin***Associate Professor, PhD, Faculty of Business and Administration, University of Bucharest, Romania
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Abstract: *The innovative- creative potential of an organization is determined by the creative capacity of its members, by its managerial team competency and by certain mechanisms to sustain implementation of new ideas, as well as their transformation in competitive products and services. From the premise that knowledge-based modern organization is permanently connected to changes of business environment, the paper aims to underline the essential role of creativity and innovation in projecting and implementing organizational change programmes. Also, the paper presents possible directions of action recommended to nowadays organizations for the transition to knowledge-based organization stage.*

Key words: creativity, innovation, change, knowledge-based organization.

JEL classification: D83, D90, M10, M21.

1. Introduction

Last decades, society changed in a more alert manner. In Europe and around the world, accelerated implementation of new technologies and expanding globalisation phenomenon determined a radical shift from traditional production and innovation services. Gradually, plants are replaced by creative communities, which use as raw material imagination, the capacity to create and innovate (European Commission, 2010a).

Within new knowledge-based society and economy, immaterial values generate more and more material values, in a context in which consumers are in search of new and stimulating experiences. Capacity to create experiences and social networks is, nowadays, an essential factor of competitiveness.

To maintain competitiveness in a global context of great changes, economically, socially, technologically, culturally and so on, Europe must create the necessary environment for innovation and creativity to develop in the frame of new entrepreneurial culture (Barosso, 2009).

Knowledge – based society and economy presume materialization on a superior level of knowledge, as main component of intellectual asset of a nation. In such a society and economy, knowledge, as result of knowledge process, is main source of national, organizational and individual competitive advantage. Growth of activity's complexity, society computerization, as well as accelerated rhythm of technical changes and technologies need new competencies, as a result of knowledge accumulation, developed by a continuous learning process. Therefore, in knowledge – based society and economy, human resources are permanently involved in learning processes on institutional level (in schools, colleges, universities, academies and so on), as well as on organizational level (in private organization, non profit and public).

American professor Peter F. Drucker appreciated that “knowledge – based society will become, inevitably, more competitive than any known human society, for simple reason that along with increase of information access, lack of performance will no longer have any excuse. There will not be any “poor” countries, though only ignorant countries. Same principle will apply to companies, industries and organizations of all sorts. Actually, it will apply equally with persons.

Famous Romanian scientist, Mihai Drăgănescu, believes that knowledge society, as a new stage of information era, such as informational society, ensures dissemination without precedent of

knowledge towards citizens by new means, using with priority the internet, e-book and learning methods by electronic procedures (e-learning). Knowledge society follows expansion and study of scientific knowledge and truth on existence, being the only way to ensure a sustainable society on ecological point of view. Also, such a society will represent a new stage in culture, based on knowledge culture, which involves all sorts of knowledge, including artistic knowledge, literary knowledge and so on (Drăgănescu, 2002).

Knowledge – based society represents a society built on innovation and continuous formation of its members, which are supported by a wide community of researchers, academicians, engineers, reunited in a network of universities, research centres and innovative firms, offering high-tech products and services which use and materialize information (World Science Forum 2009).

2. Creativity – innovation – competitiveness. An European perspective

Creativity and innovation have a fundamental role in increase of organizational competitiveness, including in economic, social and cultural development of a nation. In the context of new society and of new sketched economy, the role and significance of scientific and technological knowledge for economic activities have drastically changed, more persistent and credible being the point of views which support the necessity to redefine, theoretically, the innovation concept itself and frame it in a systemic model, more complex than the traditional one, adequate to the contemporary realities and, on practical level, to bring change in innovation politics linked to new requirements (Iancu, 2006).

The creative – innovative potential of an organization is determined by creative capacity of its members, as well as projection and implementation of new strategies and politics which sustain generation, experimentation and application of new ideas, such as their change into tangible goods (products and services) and intangible goods (know – how).

Creativity represents the ability to see a challenge or an issue into a new light and to find, thus, solutions which by then weren't obvious. Creative people develop a habit in thinking more open and more flexible, anticipate and aim invent thing and new modalities of thinking. Radical creativity can change the world. It could be as practical as creativity applied to day-by-day issues, but has long term effects and does not yield even facing the most unreasonable and utopian hopes (Weston, 2008).

Creativity reunites an unitary ensemble of subjective and objective factors, which lead to product accomplishment by individuals or groups (as the result of a process) original and valuable (Bucurean, 2001).

Creativity implies to have an idea, and innovation to have the method to implement the idea. As a consequence, creativity is essential for innovation.

Promoting creative – innovative activities, European organizations benefit from support nationally and communitarian. Thus, European Union developed states have adopted strategies and politics of creativity and innovation stimulation, which to ensure passage to new economic, social and institutional structures, specifics of society and economy based on knowledge.

On communitarian level, the campaign developed by European Commission in 2009, surnamed “European year of creativity and innovation”, had as main objective promoting several creative and innovative actions in certain sectors of human activities, such as awareness concerning the importance of creativity and innovation for personal, social and economical growth. A key-factor for future economic growth is full development of innovation and creativity potential of European citizens, which are based on European culture and scientific excellence (Council of the European Union, 2008).

Projects developed by the European Commission in the campaign conducted during 2009 have included the following major directions (European Commission, 2009a):

- cooperation between member states in areas such as education, culture, business and employment;
- creating closer bonds between arts, business, schools and universities;
- raising awareness among youth on entrepreneurship;
- development of innovative behaviour in public and private organizations.

Creative thinking is the key to success in a global economy, fact acknowledged by the European Union long ago.

Innovation is an integral part of the European Commission climate change package and its plan to revive the European economy, set in the Europe 2020 strategy.

Today's world is based on rapid innovation. As it moves to a knowledge-based economy, the European Union as a whole and organizations must develop innovative creative potential through greater openness and responsiveness to change.

Danuta Hübner, former Commissioner for Regional Policy states that "due to ever fiercer competition and the important global challenges, innovative practices and creative solutions represent a springboard to economic growth and prosperity of our regions and countries. Skills, ideas, processes: all combine to help us gain a competitive advantage. Europe should not react to the current crisis by reducing investment into skills and innovation. We have to trust and to rely on the quality of our ideas and our ability to adapt."

Creativity is the ultimate source of innovation, transforming creative ideas into products and services.

Creativity and innovation can not lead to sustainable economy without respecting cultural diversity, which is itself a source of creativity and innovation (European Commission, 2009b).

The results of the campaign conducted by the European Commission under the slogan "Imagine. Create. Innovate. "were synthesized in the" Manifesto for creativity and innovation in Europe ", which gathers seven priority directions of action and is also the support of Community Strategy for creativity and innovation for the period 2010-2020.

European Union maintains by active politics creative-innovative processes, fact emphasized by the Programme of political cohesion for 2007-2013, in which creativity and innovation are appreciated as durable development sources. Thus, over 86 billion Euros, representing 25% structural funds' total, were assigned to Innovation Agenda, which includes research and innovation, ICT exploitation (Information and Communication Technologies), measures for entrepreneurial spirit, such as innovation at workplace.

On what concerns the Initiative "An Union of Innovation", stipulated in Strategy Europe 2020, European Commission will act on following coordinates (European Commission, 2010b)>

- improvement of frame-conditions for allowing enterprises to innovate, creating an unique European brevet and a specific brevet court, modernization of royalty and trademarks protection;
- launching European partnerships on innovation between European Union and national levels, in order to accelerate development and use of necessary technology to answer today's challenges;
- development of the role of communitarian tools of innovation sustainability (i.e. structural funds, funds for rural development, Frame-Programme of research-development, Frame-Programme for competiveness and innovation, SET plan), including by a tight collaboration with European Bank of Investment;
- promoting partnerships on what concerns knowledge and consolidation of bonds between education, enterprises, research and innovation, including by the European Institute of Innovation and Technology (EIT), such as promotion of entrepreneurial spirit for support of young innovative enterprises.

3. Organizational change through creativity and innovation

Creativity and innovation allow organization to foresee change, to develop new technologies, to create new products, services and operational methods. Modern knowledge-based organization must permanently be connected to changes of the business environment. Thus said, organization based on knowledge is an organization specialized in change which, according to Rosabeth Moss Kanter, professor of management at Harvard Business School, anticipates, creates and reacts efficiently to change (Kanter, 2006).

The creative-innovative behaviour of human resources, such as their implication in organizational change processes must become a way of life. Knowledge-based organization is oriented to future, and managers and entrepreneurs have a proactive strategic view on business approach. Such a managers' and entrepreneurs' vision is reflected on the behaviour of organization's human resources, which must act same involvement in current organizational issues as well as in change projects.

Modern knowledge-based organization is also a learning organization. In such an organization, are developed and grown new thinking models, human resources are permanently engaged in learning for gaining competencies and each experience is an opportunity to learn.

Organizational change covers a series of activities which the firm is prepared to gain competencies necessary to adopt a new management strategy. Hence, successful projection and implementation of an organizational change presume, along with creativity and innovation, new competencies, resulted by accumulation of knowledge, which are acquired by members of an organization through continuous learning.

In our opinion, investment in education and implication of human resources in continuous learning process, represent important coordinates of knowledge-based organization. It is essential that managers, through their strategic vision, to induce employees the need for change and to imprint a pro-change pro-learning attitude. Thus it creates a stimulating organizational climate, dynamic and propitious to reach operational excellence, with beneficial long-term effects within firm competitiveness.

Knowledge-based organization, change oriented, produces three categories of intangible values, useful in initiation and efficient implementation of strategic organizational change:

- concepts (ideas and technologies resulted from creative-innovative activities);
- competence (capacity to satisfy more the exigencies of those who make the request);
- connections (creating some partnerships or strategic alliances in order to expand firms' influence, as well as to value new opportunities in business).

Organizational change presumes modification of organization mission and vision, introducing new technologies, a modern system of performance evaluation, reengineering payment system, orienting towards new target-groups of clients, as well as applying to complex managerial methods such as management through objectives, management through projects, management through budgets, total quality budget and so on (Nica, 2006).

Organizational change corresponds to a new orientation, fundamental and radical, concerning manners organizational undergoing activities, with essential implications on all its members' behaviour. Launching a changing process is being aware of need for change, expressing change desire, accumulation of knowledge such as formation of necessary abilities in change implementation.

A series of authors appreciate that organizational change must be approached as a phenomenon which is the result of interactions between economical, technological, social, political factors which act on the environment.

Variables involved in a process of organizational change are, in our opinion, strategic view, objectives, organizational structure, technologies, organizational culture and management techniques. Lead actors of change, human resources – entrepreneurs, managers and employees – create and implement organizational change project, linking reminded variables and coordinating interactions between them. Most of the organizations, strategic view and objective system are not adequately linked. Entrepreneurs and managers must have the capacity to communicate their employees the strategic vision and enterprise mission. Unfulfilled objectives, inadequate communication between different hierarchical steps, lack of management involvement are obstacles in changing process.

Organizational changing process implies applying systems, methods and managerial techniques which lead to reaching objectives specific to new firm's strategic orientation. Management practice aim the accomplishment of new connections between human resources and organizational activities, such as new rules and principles to govern labour processes within the firm. If employees are not motivated to execute their tasks or do not understand the connection between their objectives and the firm's, a "system incoherence" will appear which imposes analyse and solving in order to bring success to change initiative within the firm (Trahan, W., Burke, W., 1996)

Trinomial "creativity – innovation – change" is, therefore, the fundament of proactive, flexible and innovative management, by which modern, knowledge-based, organization, as an entity of new society and economy, constantly creates competitive advantages reported to competition firms.

4. Recommendations for today's organizations for transition to knowledge-based organizations stage

In our opinion, action horizons recommended to today's organizations, for transition to the stage of knowledge-based organizations, must subscribe to the following major coordinates:

- practice strategic management on wide scale;
- promoting an organizational climate towards creativity and innovation;
- operationalization of certain politics and programmes for developing human resources;

- creating and developing new evolutionary culture models, towards result and economic performance;
- organizational partnerships implication, along with universities and research institutes.

To be permanently connected to change, organizations must implement an integrated system of strategic management. Implementation opportunity of strategic management is supported, on one side, by growing turbulence of the environment and, on the other side, by multiple advantages this manner of foreseeing management brings (unity of view and actions at every hierarchical level, the demand of certain state of mind governed by interest and openness to new, capacity to detect emergent opportunities and so on).

Practically, strategic management is necessary in every step of the firm's life cycle. In every step – launch, growth, maturity, decline – the organization is confronted with new challenges specific to development stage, and strategic management is a source of competitive advantage on long term.

Our point of view is that organization can choose a procedural strategic management structured on three stages: strategic planning, launch or implementation of strategy and evaluation of strategy. The essential stage of strategic management process, strategic planning, includes three phases: analysis-diagnosis, organizational change and strategy projection. Succession of these phases of strategic planning must be seen in a correlative and interdependent vision, which means strategy is gradually sketched along the analysis – diagnosis and organizational strategic change. In strategy projection phase is finalized, based on information obtained in first two stages of strategic planning, the trajectory taken by the organization in the following period.

Creativity and innovation represent, as shown, two of the important elements which ensure development and success of an organization in a more and more complex competitive environment. The capacity of innovation of an organization is determined by the power of personnel creativity, of managerial team competency and the existence of mechanisms to sustain new ideas implementation, such as their transformation into competitive products and services. Developing creative and innovative power of human resources is realised by recruiting, and their adequate training and permanent improvement.

Today, we appreciate that managers and organization entrepreneurs must fulfil a series of actions, from which we remind: conceive and development of dynamic strategies and politics; creating a favourable organizational climate for creativity, thus human resources will have a higher degree of liberty in thinking, expressing and acting; promoting certain flexible organizational structures; building certain groups between compartments and laboratories for experimenting new ideas; encouraging and supporting human resources to participate to scientific conferences and symposiums, such as fares and expositions; selecting, hiring, motivating and promoting employees with creative spirit; use of methods and techniques of creativity stimulation such as Delphi technique, brainstorming, Delbecq method and so on.

Another action direction recommended for today's organizations has in sight the development of human resources, of which creative-innovative potential is inexhaustible. Human resource produce, accumulate, transfer and disseminate knowledge, which is main source of competitive advantage in today's society. Communitarian states adopted Operation Programmes to establish priority axes and main domains of intervention for human resources, in order to implement financial assistance of European Union through European Social Fund, within Convergence Objective, for programming period 2007-2013.

We appreciate to impose the substantiation and operationalization of new programmes for human resources to target, mainly, on favouring access to education and quality professional formation, promoting entrepreneurial culture, stimulating participation to programmes and continuous formation, supporting organizations and employees in order to grow adaptability to new knowledge-based society challenges and so on. Entrepreneurial – management development programmes, focused on creativity and innovation, show a great importance nowadays. Attending such programmes, entrepreneurs and managers will be aware of the fact that the organizations they manage could become more competitive by a plus of creativity and innovation.

To maintain in operational excellence sphere, organizations must promote evolutionary cultural models, focused on economic results and performance. Such type of evolutionary culture organization is materialized by helping managers to identify change, hence the organization to adapt to the environment and obtain competitive advantages on long term.

Orientation of organizational culture towards economic result and performance is established in tight connection with complex motivation of human resources. Essentially, an evolutionary culture of organization, oriented towards results and economic performance, is based on four main coordinates: accepting necessary changing rhythm; human resources creativity, as a support of change; acting positively towards the organization, in its ensemble, facing change. Management must adopt politics which have as an inspirational source exceptional results of its employees. Developing such a cultural model supposes that managers and entrepreneurs to respect human resources, to offer them freedom of creation and enough autonomy to excel.

Involvement of partner organization along with universities and research institutes is essential in the context of knowledge-based society and economy. With partnerships, innovative organizations, universities and research institutes have greater chances to win grants and projects and to win funding on national and international forums.

Also, such partnerships create the possibility of accomplishing studies and interdisciplinary research, by participation, for example, of certain universities, institutes, research centres with technical, economical, medical profile and so on. Involvement of private organizations in such projects imprints from the beginning to studies and research a profound applicative dimension.

Dissemination of activity results of scientific research, stipulated in grants and projects programme, is realised by organization of conferences, symposiums and workshops, by editing scientific bulletins, by publishing studies and articles in high impact journals etc.

5. Conclusions

Society and economy based on knowledge presume materialization on a higher level of the knowledge capital, as main component of intellectual capital of a nation. For such a society and economy, knowledge, as a result of knowledge process, is a main source of competitive advantage on national, organizational and individual level.

The creative-innovative potential of an organization is determined by the capacity of creation of its members, such as projecting and implementing strategies and politics to sustain generating, experimenting and applying new idea, respectively transforming them in tangible goods (products and services) or intangible (knowledge). Creativity and innovation allow organizations to anticipate change, to develop new technologies, to create new products, services and operational methods.

Creative-innovative behaviour of human-resources, such as their involvement in organizational changing process must become a way of living. Knowledge-based organization is focused on future, and managers and entrepreneurs have a proactive strategic vision in business approach. Such managers and entrepreneurs' vision is reflected on human resources behaviour, which must manifest same implication in today's organizational problems, as well as in changing projects.

Organizational changing process implies application of systems, methods, managerial techniques to lead to reaching objectives of new firm's strategic orientations. Management practice aim to accomplish connection between human resources and organizational activities, such as teaching rules and principles to govern the firm's working processes.

Directions of action recommended to nowadays organization, in order to pass to knowledge-based organization stage, must subscribe to the following major coordinates: practice strategic management on wide scale; promoting an organizational climate towards creativity and innovation; operationalization of certain politics and programmes for developing human resources; creating and developing new evolutionary culture models, towards result and economic performance; organizational partnerships implication, along with universities and research institutes.

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THE HUMAN RESOURCES MANAGER - A MODERATOR FACTOR OF THE ORGANIZATIONAL CHANGE

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Abstract: *The main purpose of this article is to establish the role that the managers of human resources play in the coordination of the organizational change. In this context are analyzed the managers' report regarding the changing factors.*

Key words: organizational change, global financial crisis, manager.

JEL: M12

1. Introduction

The way the change is approached is different from one organization to another, according to several factors such as the type of organization, leadership style, organizational culture, etc. But no matter the approach, one thing is certain: organizational change requires the involvement of people in sustaining it whether we talk about the organizational development, reorganization or the restructuring of the activity.

In this study we analyze the factors that contribute to a successful organizational change in time of the existing crisis and the human resources' manager role in this change. Regarding the analysis and suggestions of this article, the authors were taking into account the approaches of the specialists, developing or shading a series of theoretical and practical aspects.

2. The global financial crisis, a triggering factor in the organizational change

Started initially in the U.S., the global financial crisis caused major changes at the level of all world states against the background of strong globalization with effects on the global economic growth but also with political, strategic and social consequences.

Considering the recession and the chaos in the financial system, the organizations, no matter their rank had to reorganize in order to survive.

The crisis has determined a series of changes related to: the changes in the mission and vision of an organization, the use of new technologies in relation to new types of activities, the introduction of a performance evaluation system and pay system reengineering and essential changes in the organizational structure, the orientation to new target groups of customers with other needs and customer behavior, totally different than the one considered before, the introduction of the system of management by objectives and others. Once the crisis started, the words change, transformation, optimization, reorganization or restructuring, have been associated to it.

The management of the organizational change began to be seen more as an indispensable component necessary to the adaptation and survival of the organization on the market. This involves making some essential changes of the organization as a whole. According to the specialists J. Kotter and L. Schlesinger (1979) the management of change focuses on identifying the sources of resistance to change and providing ways of overcoming them. The challenge for managers is, however, not only to identify these sources, but also the way they approach them in order to achieve a successful change.

Several organizations have made successive changes in small periods of time and with a huge impact but they haven't yielded the expected results. Although huge efforts were made the problem that arises is that the objectives we have set with it were not accomplished. This is the unpleasant perspective after the fact when we didn't have a correct approach that becomes now more problematic if we do not have anymore the flexibility to start over – we spent a lot of money, we overworked the

people, we have a lot of medium and long term commitments, and the revenue is not where it should be.

This is an unpleasant post factum perspective determined by the fact that those who thought the change did not have a correct approach and the situation is even more delicate as great amounts of money people have been spent, people were overworked, there are plenty of medium and long term commitments long, and revenues are the expected ones.

We believe that in the process of transformation it is necessary for the organization to have a clear image of the changes that have to be made to overcome the crisis. This will serve as a direction for forecasting, planning, diagnostic analysis, decisions for the entire period of the organizational change. The change's trigger may be an opportunity or a form of crisis. In both situations, the way we prepare and implement the change will determine the outcome. When we are in a situation of crisis symptoms appear gradually worsening over time unless we do something. The more we delay, the more difficult is for us to launch our business again. We must not neglect the fact that very often that may cause panic and confusion. At the end of this stage, the team dealing with this change and every manager from the business department that are involved in these changes would have to obtain an objective characterization of the causes of the crisis and a clear vision of how to deal with it.

The future of the organization should be based on understanding the crisis and its current status. Moreover, the vision must be supported by a strategic plan that focuses on the organizational objectives designed to counteract the crisis. Given the fact that the inability to adapt is at the bottom of many organizational crises, adaptability is an essential element at the structure of the future company.

2.1. The role of the Human Resources manager in the organizational change

Over the years the role of the Human Resources manager has changed, moving from the administrative part to the recruitment and training ones, and ending with the strategy for the organization.

With all these transformations, until the beginning of the crisis, the role of the Human Resources department, including the Human Resources manager, was in a few cases seen as a strategic partner in an organization. For years, the Human Resources Department was seen only as a "support" for the rest of the management team. The crisis was a good time for the Human Resources specialists to demonstrate the benefit they can add to the company.

The value that a Human Resources manager can bring inside an organization is based on his professional experience, of his leadership skills, and on the existence of circumstances, may them be favorable or not. Its inclusion as a strategic partner in the process of taking decisions, in the establishment of the strategies and objectives of the organization can bring great benefits to the organization because an active understanding and participation in the organization's strategy can help us make the right decision regarding the most valuable resource an organization has: the human resource. To see the role of the human resources manager and Human Resources Department, especially during the crisis, just as a lever of action in relation to the employees, is a huge mistake that, unfortunately, many organizations do. The human resources manager with the entire management team needs to focus and work together proactively in order to manage these changes to the employees. Therefore, we believe that before announcing the changes we need some time to identify the individual and group areas of resistance to know how to deal with the change. Most of the time, the changes in time of crisis were based on financial issues, that is why changes took place quickly without following the necessary steps required in these situations.

Not few were the situations in which instead of getting the foreshadowed results the companies found themselves in the position to report large losses of financial or human nature by restructuring the staff.

One of the models developed and successfully applied in the organizational change is the systemic pattern developed by Harold Resnick (2012). The author provides a wide, but easy to identify way of the starting point that guides the change process.

The pattern developed by Harold Resnick (2012) is based on two components:

- the vision which must be sufficiently wide to provide support and guidance to any employee of the organization. The vision of an organization is a future image, which also gives strategic direction. A good vision is that when all organization members identify their interests and find their motivation to transpose it into reality.

- the market that the organization serves and the customers' requirements. In most of the cases the change is determined by the internal factors but this change must be based on the market analysis where the company was developed, on the future potential and last but not least on customer's satisfaction.

Around the two components, the four parts of the organization that make it up and which have a relationship of interdependence are outlined:

- a) The organizational structure that shows how the organization presents itself, also defining the functional relationships and skills within departments and key positions.
- b) The working processes which describe the activities that are performed on every department within the organization. Generally, the large companies describe these work processes or activities basing upon the standardized procedures that give greater transparency and understanding of the activity.
- c) Humans are the most important resource of the organization. This means that they must find a place in the organization according to their skills, aptitudes and abilities.
- d) The instruments are the physical facilities and the equipments - hardware and software systems, management and reporting systems, written documents such as policies, procedures and manuals, and compensation tools.

Analyzing the system components it results that the Human Resources manager should identify the variables of processes and systems he is responsible for, so that the infrastructure and company culture to better support the change, the performance, the energy and employees' confidence. Also, in order to mitigate the impact of change is necessary for the Human Resources managers to have an evaluation of the skills of all employees in order to use more efficiently the human resources in this difficult process. The change will mainly affect the roles, behaviors and values of the employees.

The Human Resources manager will have to provide support to the employees engaged in change, on the one hand, and on the other hand to the management team involved in the process. He will play an important role of mediator between the board committee and the employees of the organization, given the fact that he will be involved, from the beginning, in these changes.

2.2. Communication and employees' training - tools of the Human Resources manager in the organizational change

Although all experts agree with the necessity of communication strategies within the organizations, often, in practice, few of them have a particular strategy especially in the case of organizational changes.

Nicolae T. and other authors (2006) define the organizational communication as a process through which messages are exchanged, in order to achieve individual and common goals of its members.

Changing the environment in which the organization works, entails redesigning the internal activity, introduction of new strategies, together with the corresponding set of communication relationships and the design of a new organizational culture. In all cases, no matter the hierarchical level, restructuring the organization is perceived by the managers and employees as a factor of stress and frustration. It is difficult and especially hard to explain to the employees that the restructuring is by no means synonymous with penalty or dismissal but that it is a normal process of adaptation to the environment necessary for the survival of the organization. Both the formal and informal communication should highlight that the change is good not only for the organization but also for the employees. If this message is transmitted and perceived in this form the result will be stress reduction, the acceptance and support for workers in applying the proposed strategies, relaxing of the work environment and last but not least sending messages to the outside.

Once a transformation strategy is developed, the organization can assess the costs and benefits of planned actions. Certainly, the benefits of the individually transformation efforts have to exceed the estimated cost. So the concentrated efforts involved in this change will prove to be a real failure. This is the reason why we share our opinions to experts according to which in the organizational change we should involve the employees too.

According to C. Handy (1993) negotiation in the organizational change can be accomplished in two ways:

- a) Organization of the internal environment to prevent degeneration of competition in conflict.

For any organization, knowledge and the environment analysis and its operating mechanism, is the starting point to identify the opportunities, but also the dangers, the threats that may appear in the horizon. Therefore, it is necessary, to have knowledge upon the content and the environmental requirements, quantitative as well as qualitative changes that occur in its area, even the anticipation on the future evolution of the environment so that the organization can adapt to his new structure. Knowing the characteristics and changes in the structure of the environment is a fundamental condition in the development of strategies of the organizational changes. It is also necessary to determine which are the overriding factors contributing to the adoption and implementation of the decisions and actions as an expression of present and future needs and opportunities.

b) Conflict control

The resize of the organizations, the changes in the operational procedures are internal changes experienced by most organizations during the crisis. Reorganizations and the change of the size of the organization can lead to chaos, threatening the job security of everyone. Conflict resolution depends, largely, on the managers strategic options.

The human dimension of the organizational change is fundamental, because people in the organization are those whose behavior eventually determines what organizational changes can be made and the real profits that will result from them. It happens this way because organizations are, above all, human systems. It is important to admit it and act according to it, because this requirement in an organization refers to everyone, starting with its manager. Those who want their subordinates and colleagues to change must be ready to analyze and change their own behavior, working methods and their own attitudes.

Changing the environment in which the organization is operating entails redesigning the internal work, introducing new strategies, together with the corresponding set of relations of communication and the designation of a new organizational culture. The organizational change corresponds to a new orientation, fundamental and radical, regarding the ways in which the organization will carry on its business, having critical implications on the behavior of all components of an organization, from the general manager to the executive staff.

Depending on how much they are affected by the crisis, companies turn to solutions such as:

- Freezing or reducing salaries;
- No more granting of the bonuses;
- Stopping the business activity for a period of time;
- Restructuring etc.

All these are bad news for employees and the Human Resources Department must know how to minimize the negative effect these management measures have on the staff. In this context, the communication of the organizational changes occurring on the fond of crisis becomes priority but the lack of communication leads to the development of informal communication channels on which will begin to circulate information that trigger panic, an important fact, leading to repercussions on the work. For these situations to be reduced it is necessary to transmit relevant and accurate information about the changes taking place in the organization. Moreover it is necessary for the message to insist on the idea that that change is necessary in this context and to be argued with concrete information. If the message is well sent it will lead to ease tensions and to accept situations without resisting the change. In order to ensure high efficiency in transmitting messages, it is useful to consider the following steps:

- a) Establishing the place and time when communication is performed. Therefore it is necessary to prepare the organizational environment for the introduction of changes and not just move to implement these changes.
- b) The careful planning of the communication and the coordination of the internal processes of communication to avoid duplication of messages and confusion. Therefore it is necessary for the communication to be made by a person able to answer all questions related to this issue.
- c) Different approaches are necessary taking into consideration the people in the organization we are addressing too, to ensure maximum communication impact. The question is who do we address too? The employees directly affected, the employees indirectly affected, overall organization, partners, customers and the public?
- d) Most organizations find enough the changing of communication but we think it is necessary that we should monitor and communicate even the impact on employees and how they respond to messages.

People have to understand, to want and to be able to implement changes that at first glance may appear as purely technological or structural, but that will affect them, in fact, in one way or another. In the process of adaptation to organizational change people must change themselves: they must acquire new knowledge, absorb more information, tackle new tasks, improve their level of competence and very often change their work habits, values and attitudes towards the working mode inside the organizations. The change of values and attitudes is essential. It is probably that there can't be any real change without a change of attitude. We don't have to expect that once people have established these changes they will immediately become the changing factors, but communication and the permanent involvement in the process of changing, explanation of each stage of change and consistent support of these changes can lead to the expected results. The change must also be uniform, and once the exceptions occur, they must be explained as such, or otherwise they will create confusion. Unfortunately most of these companies in which major changes occur, often have to face common obstacles: a structural change in the changing of the organizational design is accompanied by a redefinition of roles, functions, or restructuring, but the "human and social" dimension of the organization is rarely taken into account in managing the change.

The change should not be imposed as it happens in most cases, even if we are talking of less pleasant consequences. This way the trust and system of values that the employees of the organization have formed will be permanently destroyed and we cannot expect, in the future, to rely on their loyalty anymore. Those who remain in the organization after all these changes will always remember how they made these changes and will never trust management again.

Generally, managers focus more on the idea of change and expected result and less on the implementation of the process itself. Therefore we consider it as being necessary, the permanent feedback coming from the employees and we even encourage them to come up with concrete proposals to improve the process of change.

3. Conclusions

Recently, especially due to economic crisis, managers have tried different approaches in order to maintain organizations on the market. Now we naturally wonder which is still the key to success and how did they overcome some of the specific critical stages of change? We do not believe that there can be general solutions available but it is important that solving specific conflicts or tensions in this process to be approached through the light of communication and mutual understanding and not by imposing force. The tense situation may be absent if the change is prepared in time and specific stages of this process are respected. Also, the success of the change depends on sustaining it, on the ability of managers to control every step in the process of change and not to turn back to the past. The employees' confidence in managers who ensure the change is an important factor not only in supporting the change but in annihilation of sources resisting to it. Fairness, respect to the employees, treating them as partners of change are just some of the aspects that managers need to take into account when making the change. Using the personal example of managers, their degree of involvement in changing, their concrete way of deciding, to organize, to act will be acquired by everyone according to the perception created more or less by the participants to change.

To overcome these moments related to the change, we believe that at every level of the organization, managers must have the necessary knowledge in order to achieve a constantly change. It is also necessary to meet the execution staff, in order to cross these difficult times. They are required a different mindset, a different system of values. Everything that was normal before is now undesirable, inappropriate or unacceptable.

Among the factors leading to the failure of the organizational change we enumerate:

- a) the lack of real diagnosis of the organization leading to the identification of a false problem and therefore to the establishing of erroneous measures to action;
- b) the lack of a clear and simple vision that can be understood by all participants involved in the process of change;
- c) the change of strategy during the process of change without reviewing the given situation in that moment;
- d) the employees' resistance to change because of their lack of communication and training;
- e) the lack of control on all the execution phases of the process of change and post change
- f) the return to the old system;
- g) the economic and financial analysis at the time of change and the lack of forecasts after the change.

There are no universal recipes when it comes to the organizational change. Although several authors have developed models and identified the underlying principles of the management change, in practice the organizational change is mainly determined by a number of aspects related to the organization's size, industry, the type of management of the organization and last but not least, the ownership of the organization.

More and more authors agree on the fact that the performance of an organization depends on the teamwork. Teamwork is essential to achieve outstanding results as well as project management. But in order to constantly achieve these results it is necessary for the manager, to be able to form, lead and motivate a team where each teammate should give the best of them. This must be valid for the organizational change as well.

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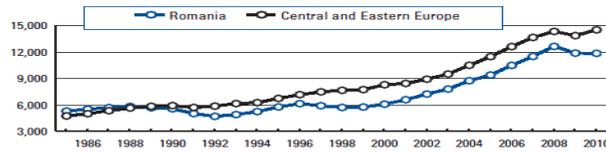
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Annex 1a, Romania 2011-2012

Key indicators, 2010

Population (millions).....	21.2
GDP (US\$ billions).....	161.6
GDP per capita (US\$).....	7,542
GDP (PPP) as share (%) of world total.....	0.34

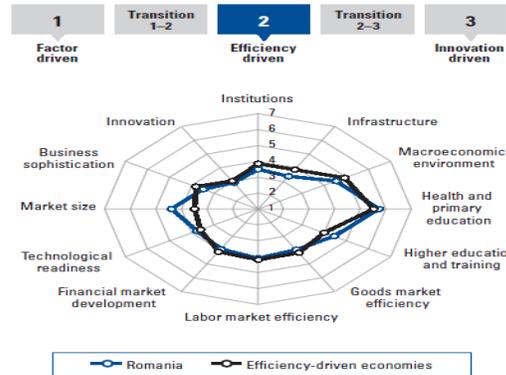
GDP (PPP) per capita (int'l \$), 1985-2010



Global Competitiveness Index

	Rank (out of 142)	Score (1-7)
GCI 2011-2012	77	4.1
GCI 2010-2011 (out of 139).....	67	4.2
GCI 2009-2010 (out of 133).....	64	4.1
Basic requirements (40.0%)	89	4.3
Institutions.....	99	3.5
Infrastructure.....	95	3.4
Macroeconomic environment.....	87	4.5
Health and primary education.....	66	5.7
Efficiency enhancers (50.0%)	62	4.1
Higher education and training.....	55	4.4
Goods market efficiency.....	96	4.0
Labor market efficiency.....	92	4.1
Financial market development.....	84	3.9
Technological readiness.....	60	3.8
Market size.....	44	4.4
Innovation and sophistication factors (10.0%)	99	3.2
Business sophistication.....	102	3.5
Innovation.....	95	2.9

Stage of development

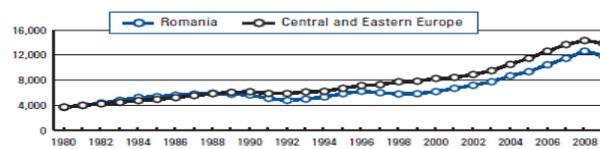


Annex 1b, Romania 2010-2011

Key indicators, 2009

Population (millions).....	21.3
GDP (US\$ billions).....	161.5
GDP per capita (US\$).....	7,542
GDP (PPP) as share (%) of world total.....	0.36

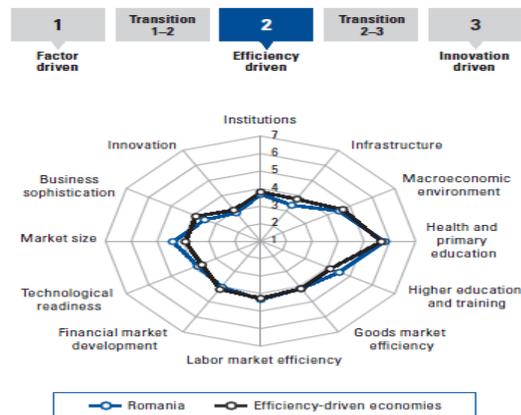
GDP (PPP) per capita (int'l \$), 1980-2009



Global Competitiveness Index

	Rank (out of 139)	Score (1-7)
GCI 2010-2011	67	4.2
GCI 2009-2010 (out of 133).....	64	4.1
GCI 2008-2009 (out of 134).....	68	4.1
Basic requirements	77	4.4
1st pillar: Institutions.....	81	3.7
2nd pillar: Infrastructure.....	92	3.4
3rd pillar: Macroeconomic environment.....	78	4.5
4th pillar: Health and primary education.....	63	5.8
Efficiency enhancers	54	4.2
5th pillar: Higher education and training.....	54	4.5
6th pillar: Goods market efficiency.....	76	4.1
7th pillar: Labor market efficiency.....	76	4.3
8th pillar: Financial market development.....	81	4.0
9th pillar: Technological readiness.....	58	3.8
10th pillar: Market size.....	43	4.4
Innovation and sophistication factors	91	3.2
11th pillar: Business sophistication.....	93	3.5
12th pillar: Innovation.....	87	2.9

Stage of development

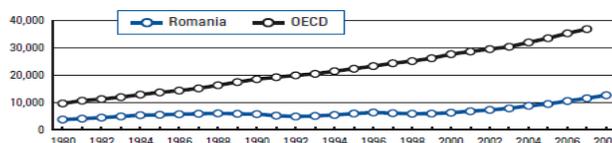


Annex 1c, Romania 2009-2010

Key indicators

Population (millions), 2008.....	21.3
GDP (US\$ billions), 2008.....	199.7
GDP per capita (US\$), 2008.....	9,291.7
GDP (PPP) as share (%) of world total, 2008.....	0.39

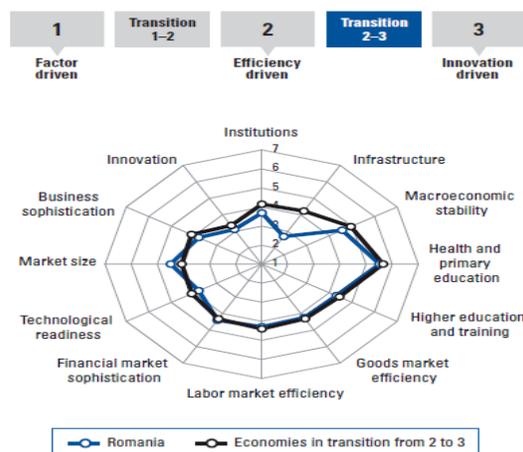
GDP (PPP int'l \$) per capita, 1980–2008



Global Competitiveness Index

	Rank (out of 133)	Score (1–7)
GCI 2009–2010	64	4.1
GCI 2008–2009 (out of 134).....	68	4.1
GCI 2007–2008 (out of 131).....	74	4.0
Basic requirements	86	4.1
1st pillar: Institutions.....	84	3.7
2nd pillar: Infrastructure.....	110	2.7
3rd pillar: Macroeconomic stability.....	75	4.6
4th pillar: Health and primary education.....	63	5.5
Efficiency enhancers	49	4.3
5th pillar: Higher education and training.....	52	4.3
6th pillar: Goods market efficiency.....	61	4.2
7th pillar: Labor market efficiency.....	79	4.3
8th pillar: Financial market sophistication.....	56	4.4
9th pillar: Technological readiness.....	58	3.8
10th pillar: Market size.....	41	4.5
Innovation and sophistication factors	75	3.4
11th pillar: Business sophistication.....	83	3.8
12th pillar: Innovation.....	70	3.1

Stage of development



Annex 2, 2011-2012

Romania

The Global Competitiveness Index in detail

INDICATOR	VALUE	RANK/142	INDICATOR	VALUE	RANK/142
1st pillar: Institutions			6th pillar: Goods market efficiency		
1.01 Property rights.....	3.9	85	6.01 Intensity of local competition.....	4.5	97
1.02 Intellectual property protection.....	3.0	98	6.02 Extent of market dominance.....	3.6	74
1.03 Diversion of public funds.....	2.8	96	6.03 Effectiveness of anti-monopoly policy.....	3.7	93
1.04 Public trust of politicians.....	1.9	119	6.04 Extent and effect of taxation.....	2.5	135
1.05 Irregular payments and bribes.....	4.0	67	6.05 Total tax rate, % profits*.....	44.9	90
1.06 Judicial independence.....	3.1	94	6.06 No. procedures to start a business*.....	6	34
1.07 Favoritism in decisions of government officials.....	2.5	115	6.07 No. days to start a business*.....	10	40
1.08 Wastefulness of government spending.....	2.7	107	6.08 Agricultural policy costs.....	3.3	122
1.09 Burden of government regulation.....	2.8	105	6.09 Prevalence of trade barriers.....	4.5	69
1.10 Efficiency of legal framework in settling disputes.....	2.8	122	6.10 Trade tariffs, % duty*.....	0.8	4
1.11 Efficiency of legal framework in challenging regs.....	2.9	113	6.11 Prevalence of foreign ownership.....	4.5	84
1.12 Transparency of government policymaking.....	2.9	140	6.12 Business impact of rules on FDI.....	4.1	105
1.13 Business costs of terrorism.....	5.7	66	6.13 Burden of customs procedures.....	3.3	121
1.14 Business costs of crime and violence.....	4.9	62	6.14 Imports as a percentage of GDP*.....	44.0	68
1.15 Organized crime.....	4.9	87	6.15 Degree of customer orientation.....	4.1	106
1.16 Reliability of police services.....	3.7	90	6.16 Buyer sophistication.....	3.2	83
1.17 Ethical behavior of firms.....	3.4	103	7th pillar: Labor market efficiency		
1.18 Strength of auditing and reporting standards.....	4.3	91	7.01 Cooperation in labor-employer relations.....	3.3	137
1.19 Efficacy of corporate boards.....	4.3	98	7.02 Flexibility of wage determination.....	4.8	90
1.20 Protection of minority shareholders' interests.....	3.8	98	7.03 Rigidity of employment index, 0-100 (worst)*.....	46.0	118
1.21 Strength of investor protection, 0-10 (best)*.....	6.0	36	7.04 Hiring and firing practices.....	3.6	91
2nd pillar: Infrastructure			7.05 Redundancy costs, weeks of salary*.....	8	15
2.01 Quality of overall infrastructure.....	2.3	139	7.06 Pay and productivity.....	4.1	55
2.02 Quality of roads.....	2.1	137	7.07 Reliance on professional management.....	3.9	84
2.03 Quality of railroad infrastructure.....	2.4	78	7.08 Brain drain.....	2.2	131
2.04 Quality of port infrastructure.....	2.8	128	7.09 Women in labor force, ratio to men*.....	0.79	65
2.05 Quality of air transport infrastructure.....	3.6	113	8th pillar: Financial market development		
2.06 Available airline seat kms/week, millions*.....	174.6	68	8.01 Availability of financial services.....	3.9	104
2.07 Quality of electricity supply.....	4.5	77	8.02 Affordability of financial services.....	3.6	106
2.08 Fixed telephone lines/100 pop.*.....	20.9	60	8.03 Financing through local equity market.....	3.2	89
2.09 Mobile telephone subscriptions/100 pop.*.....	114.7	49	8.04 Ease of access to loans.....	2.6	82
3rd pillar: Macroeconomic environment			8.05 Venture capital availability.....	2.5	77
3.01 Government budget balance, % GDP*.....	-6.5	114	8.06 Soundness of banks.....	4.5	110
3.02 Gross national savings, % GDP*.....	22.2	55	8.07 Regulation of securities exchanges.....	3.7	106
3.03 Inflation, annual % change*.....	6.1	105	8.08 Legal rights index, 0-10 (best)*.....	8.0	20
3.04 Interest rate spread, %*.....	6.8	90	9th pillar: Technological readiness		
3.05 General government debt, % GDP*.....	35.2	52	9.01 Availability of latest technologies.....	4.2	115
3.06 Country credit rating, 0-100 (best)*.....	49.3	73	9.02 Firm-level technology absorption.....	4.1	117
4th pillar: Health and primary education			9.03 FDI and technology transfer.....	4.5	83
4.01 Business impact of malaria.....	N/Appl	1	9.04 Internet users/100 pop.*.....	39.9	63
4.02 Malaria cases/100,000 pop.*.....	(NE)	1	9.05 Broadband Internet subscriptions/100 pop.*.....	14.0	42
4.03 Business impact of tuberculosis.....	5.0	80	9.06 Internet bandwidth, kb/s/capita*.....	20.5	33
4.04 Tuberculosis incidence/100,000 pop.*.....	125.0	96	10th pillar: Market size		
4.05 Business impact of HIV/AIDS.....	5.3	67	10.01 Domestic market size index, 1-7 (best)*.....	4.2	42
4.06 HIV prevalence, % adult pop.*.....	0.1	21	10.02 Foreign market size index, 1-7 (best)*.....	4.9	46
4.07 Infant mortality, deaths/1,000 live births*.....	10.0	55	11th pillar: Business sophistication		
4.08 Life expectancy, years*.....	73.3	71	11.01 Local supplier quantity.....	4.4	100
4.09 Quality of primary education.....	4.0	62	11.02 Local supplier quality.....	4.0	104
4.10 Primary education enrollment, net %*.....	90.3	92	11.03 State of cluster development.....	2.8	116
5th pillar: Higher education and training			11.04 Nature of competitive advantage.....	2.9	103
5.01 Secondary education enrollment, gross %*.....	91.6	56	11.05 Value chain breadth.....	3.1	103
5.02 Tertiary education enrollment, gross %*.....	65.6	23	11.06 Control of international distribution.....	3.5	116
5.03 Quality of the educational system.....	3.3	90	11.07 Production process sophistication.....	3.3	91
5.04 Quality of math and science education.....	4.5	45	11.08 Extent of marketing.....	3.8	86
5.05 Quality of management schools.....	3.8	92	11.09 Willingness to delegate authority.....	3.3	96
5.06 Internet access in schools.....	4.4	58	12th pillar: Innovation		
5.07 Availability of research and training services.....	3.3	112	12.01 Capacity for innovation.....	2.9	78
5.08 Extent of staff training.....	3.8	79	12.02 Quality of scientific research institutions.....	3.2	91
			12.03 Company spending on R&D.....	2.9	87
			12.04 University-industry collaboration in R&D.....	3.0	115
			12.05 Gov't procurement of advanced tech products.....	3.1	111
			12.06 Availability of scientists and engineers.....	4.2	59
			12.07 Utility patents granted/million pop.*.....	0.8	62

Notes: Values are on a 1-to-7 scale unless otherwise annotated with an asterisk (*). For further details and explanation, please refer to the section "How to Read the Country/Economy Profiles" on page 89.

THE WORKING CONDITIONS OF HIGHLY QUALIFIED EMPLOYEES IN ROMANIA AND HUNGARY, ACCORDING TO SOME EXPERTS FROM THE TWO COUNTRIES, IN THE CURRENT ECONOMIC CRISIS

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Abstract: *This paper aims to identify and comparatively analyze the main features of the working conditions of highly skilled employees in Hungary and Romania, with emphasis on employees' complaints during the economic crisis, in the opinion of experts in areas of working conditions, labour protection, organizational consultancy etc. in Romania and Hungary. The empirical research was based on in-depth interviews conducted face to face with experts. It feels in both countries the lack of legislation on improving quality of life for high-skilled employees. In both countries, professionals' complaints vary by type of property and business capital source.*

Key words: high-skilled employees, working conditions, quality of life for employees, economic crisis.

JEL classification: J28, J24.

1. Introduction

The interest in improving quality of life for employees is, theoretically speaking, a part of the larger issue of the social dimension of sustainable development, which includes a democratization of relationships inside organizations, the latter not just being limited to merely giving autonomy and consulting with employees before making top decisions, but also referring to centring the interests of organization on the individual/employee (Leovaridis, 2010). The new type of management begins by changing its vision on and attitude towards the individual. It does not simply refer to using the individual more as a means, but it focuses on approaching the individual as a goal in itself, the supreme goal, and attempts to see what can and should the organization do in order to help the individual achieve human accomplishment throughout his work (Hoffman, 2004). Today, perhaps more than ever, it is necessary to discuss about the human mission of organizations, and the manner in which they are projected and capitalized, as not just creations of the individuals, but also as tools of satisfaction for the same individual. The European Union highlighted a new vision of the company as a social actor bearing responsibilities, not only to generate profit for its investors and stakeholders, but also to produce welfare for the society as a whole, by creating "more and better" jobs. It is in this context that the interest for employee life quality is a central feature of the EU policies regarding workforce, especially in the current economic crisis, which led first to increased unemployment, and on the other hand in some cases to worsening working conditions of employees left in organizations after the dismissal of some of their colleagues. Mats Alvesson and Hugh Willmott (2003) mention the necessity of a theoretical approach of organizations from a critical, deconstructivist perspective, in order to develop a less managerial position, to democratize relations inside an organization – all these could allow the consideration of the interests of *silent* groups (employees), unrepresented in the corporate decision-making process. These groups have other ideals rather than an efficient use of resources in order to achieve economic goals – their interests include aspects of work quality, gender equality, workplace democracy etc. (Alvesson, Deetz, 2000).

The quality of working conditions became the central focus of the European social model, as its development is centred on multiple dimensions, intended to lead to a balance between flexibility and security, particularly to work satisfaction generated by salary levels, safety at workplace and flexible arrangements regarding working time. Researches performed by the European Foundation for the Improvement of Life and Work Conditions showed that most Europeans, despite their countries of origin, have similar ideas on what life quality means – one of the most important factors is ensuring health and safety at workplace (Eurofound, 2004). In July 2008, the European Council offered member states several directions concerning issues of safety at work (European Council, 2008) of which we mention the recommendation of formulating policies based on the flexibility of labour

markets, activity organization and workplace relations, harmonising professional life with private life, as well as workplace safety and social protection. “Europe 2020. A European strategy for intelligent, ecologic and inclusion favourable growth” (European Commission, 2010) mentions indirectly the important role that improving working conditions has on improving social inclusion: “an inclusion favourable to growth demands ensuring citizens’ autonomy by higher rates of employment, investing in developing competences, combating poverty, modernizing labour markets and social protection and instruction systems in order to help citizens anticipate and administer change, as well as for building a united society”.

In the literature, many authors insist on the term “knowledge economy”, on the central role of knowledge in production and competition. More important than the knowledge contained in equipment, is the knowledge of the employees’ mind, shared and developed by them, which are the engine of the new type of economy (Mehaut, 2008). Regarding the new trends of economic development, some researchers propose to use the term “learning economy” instead of widespread general “knowledge-based economy” (Nielsen, Lundvall, 2007). Therefore there is a great interest is for competitive advantage that knowledge held by high-skilled employees (knowledge workers) can provide to organizations, and hence the concern for life quality of high-skilled employees.

A new strategy has been elaborated in 2007 – “The Community Strategy on health and security at work”. It was issued for the years 2007-2012 and brings center-stage several changes occurred in the nature of risks: some types of professional illnesses tend to develop (muscular and bone disorders, infections and other disturbances caused by psychological pressures); the nature of professional risks changes, in the context of the development of new risk factors (workplace violence, including moral and sexual harassment, dependences) and labour transformation (a more fragmented professional life). At present, issues connected with poor mental health are the fourth most common cause of work incapacity, and the World Health Organization estimates that by 2020 depression shall be main cause of work incapacity. Recent research on work conditions at European level pointed out an increasing tendency of psychological disturbances, which could be the root of workplace health problems, especially for employees involved in non-manual occupations (European Commission, 2007). Organizational changes including also the changes in work organization (especially more flexible manners of work schedules, including teleworking, but followed by the obligation to achieve specific results up to fixed time limits) have a great impact on quality of workplace current conditions. Nowadays, the most common professional risks and illnesses are stress, depression, anxiety, workplace violence, harassment and intimidation – these are responsible for 18% of work-related health problems, a quarter of them leading to two or even more weeks of work absence. These issues are twice more common at highly qualified employees from the fields of education, healthcare and social services. They are connected with being exposed to factors generating stress such as long working time and difficult hierarchic relations (Leovaridis, 2011).

2. The research methodology

Empirical research was based on a technique belonging to qualitative research: *face to face in-depth interviews* conducted with a 21 experts (11 Romanian experts and 10 Hungarian experts) in areas of labour market and labor laws, working conditions and labor protection, organizational consulting and analysis, from our country and Hungary, more precisely from Bucharest and Budapest.

The reason we used especially qualitative research, which is descriptive and exploratory at the same time, is the very nature of the problem investigated: only such a method could help us to get details of a phenomenon as complex as quality of life of high-skilled workers. As *technique* associated to this method, it was used the *semi-structured interview*, which is centered (focused) on subjects' perspective on the issue discussed, offering the possibility of an in-depth, complex interpretation of the phenomenon, being able to identify even new research directions that were not initially considered by the researcher. Being approached a very recent perspective (in our case, the quality of employees' life) on a social segment too little discussed in organizational studies (high-qualified workers in sectors specific of the knowledge society), semi-structured interview was even recommended, because it offers a high degree of freedom to explore the phenomenon in all its aspects; although the topic of discussion is established before, questions and their sequence are not predetermined – we used an interview guide comprising few directions for discussion.

The *aim* of conducted research was the comparative study of the working conditions of high-skilled workers from Romania and Hungary, in areas specific for the knowledge society (IT&C, high-

tech, education, research, cultural, financial, consulting, media, advertising and other knowledge-intensive services etc.), as they appear in the opinion of experts in the field. *Research objectives* were: a) reviewing the unfavorable aspects of the current general situation of the labor market, during economic crisis; b) identification of the main complaints of high-skilled employees about their workplace, including the comparison between private and public sector, between large, multinationals firms and small and medium enterprises with domestic capital, between different economic sectors, with emphasis on changes occurring during economic crisis; c) identification of good practice examples regarding the influence at the macro level, of the labor legislation and official policies or strategies in working conditions area; d) identification of good practice examples at the micro level, regarding the impact of management style or bipartite social dialogue or human resources management or organizational culture etc., on improving the quality of life for employees with intellectual occupations in sectors specific for the knowledge society; e) identification of the existence in the legislation or current strategies of some measures and/or special rules to prevent new types of occupational diseases specific to non-manual occupations, such as eye and headaches, stress, depression, back pain etc.; f) studying the forms of protest used by non-manual employees compared to other types of employees, as well as those they can access, comparatively between highly qualified employees from the multinational companies and those from Romanian / Hungarian companies, used especially during economic crisis.

The analyzed collectivity consisted of experts in the fields of labour market, working conditions and labor protection in Bucharest and Budapest. Research sample was composed of 21 such experts, 11 from Bucharest and 10 from Budapest. Subjects who responded to our field interviews were primarily scientists and academics (from academic institutes of sociology or economics, from state or private universities in Bucharest and Budapest that have conducted research, published papers or teach courses in areas of organizational health, labor, sociology of organizations - 5 from Romania and 7 from Hungary), researchers from the national institutes of labor and labor protection (2 from Romania), human resource managers in multinational companies and private consultants in the diagnosis and organizational development that provides consulting and training sessions to companies on health and safety at work (2 from Romania and 1 from Hungary), leaders of trade unions in specific sectors of the knowledge society (2 from Romania and 2 from Hungary). I opted for them, because of experience and expertise they have in this domain, that makes them aware of all aspects of our research subjects, and may thus give us pertinent data. I opted for such different areas of expertise of respondents, because based on their opinions, to have a more complete overview of the subject studied.

Qualitative research based on in-depth interviews with semi-structured interview guide are characterized by the fact that the sample is small and unrepresentative statistically. The sample was made by two methods: first, the one used for most interviews, namely those with academic experts (researchers or academics) involved visiting several websites of research institutes, faculties with profile closed to our theme from several universities in Bucharest and Budapest, state or private, where we have studied the research programs of the departments, the curricula on years of study and CVs and presentation of all researchers and teachers to identify professionals with expertise on our theme. After applying the first method to identify potential respondents, most of those contacted by e-mail for an appointment to interview have not responded or have refused on the grounds that the interview subject is outside their current expertise. The second method, used less, was based on the recommendations, for interviews with leaders of trade union federations or private consultants in the field of occupational health and organizational development.

Interviews with Hungarians experts in Budapest took place during September-October 2011, and with the Romanian experts in the period November to December 2011; every interview lasted about 60 minutes. The conclusions drawn from empirical research will be supported by quotations from respondents to the interviews.

3. The research results

Given the intended purpose, research results have facilitated comparative study of working conditions of high-skilled workers from Romania and Hungary, in areas specific for the knowledge society, as they appear in the opinion of experts in the field, by identifying the main complaints related to workplace of highly qualified employees, including comparison between private and public sector,

between large, multinationals companies and small and medium enterprises with domestic capital and between different economic sectors, especially during the current economic crisis.

3.1. Negative aspects on the general situation of the labor market and working conditions in the two countries, during the current economic crisis

According to the responses of Romanian experts interviewed, the most important problems that currently exist in the labour market in Romania, in general and in particular on working conditions, during the economic crisis, are: lack of jobs and wages very low compared to prices (which causes many people in rural areas or small towns to emigrate to work in countries such as Italy, Spain etc.), job insecurity, under-employment in terms of skills, qualifications; low capacity of the economy to absorb high-skilled workforce; highly rigid mechanisms for maintaining older people over 45 years on the labour market; blocks in the labour market entry of young people.

In regard to working conditions, were identified two categories of negative aspects, some specific to non-manual occupations in the industry and construction, and others specific to non-manual occupations in services: 1. use of old technology, which leads to work accidents, harmful environmental factors (emissions, noise, temperatures too high or too low, great exercise etc.) that cause occupational diseases in industry and construction, eliminating the law which allowed the retirement at 40-50 years for those working in special conditions (military, fire, metallurgy, mining, nuclear, oil extraction, aviation), and 2. lack of legal framework on work ergonomics and psychological health of employees, long working time and lack of work-life balance especially during the current economic crisis, the effects of intense cognitive activities on the body (accelerated aging processes of the brain, high degree of cognitive isolation, poor interpersonal relationships) are not taken into account, for employees with non-manual occupations:

- "Although many companies were privatized, their employees still work with old technology, so with the risk of work accidents. Harmful environmental factors in construction and industry (e.g. emissions, noise, temperatures too high or too low, great exercise etc.) influences the employees' health and cause occupational diseases".

- "During communism, according the law, those working in special conditions of work, from the group I of work were retired at 40-50 years. Currently, based on the G.D. 1058/2003, it decided the expertise of jobs in these industries (to assess whether there are still difficult working conditions, because in these sectors they want to increase the retirement age), but only in those companies that applied for this expertise (firms have made these requests together with the unions), thus many of the firms with difficult working conditions in construction or industry remained unexpertised. Employees in these sectors should retire earlier than others because they have very high risk of death before 60 years".

- "Lack of a structured legal framework applicable to all sectors covering issues related to work ergonomics (ergonomics of workplace, of climatic conditions, of labour instruments), psychological health of employees (especially occupational wellbeing and occupational stress)".

- "Workloads is not accompanied by clarification of tasks, duties and responsibilities of the post; daily and weekly rest are reduced more than ever during the economic crisis; there is not protection in the event of layoffs due to economic problems of the company during the crisis: there are weak mechanisms for informing employees about the economic performance of the company where they work; in organizations there are no mechanisms of reconciliation of family life and work, so it is necessary to support people who take care of children, elderly or disabled people etc.".

In Hungary, as in Romania, the labour market face the same difficulties during the current economic crisis, as insufficient jobs (so many people go to work in other countries such as Germany and Austria), low wages, job insecurity, but unlike Romania it is mentioned the new labour code, which "will favors employers, opening the way to abuses that will affect more than ever before the quality of employees' life" (although in Romania in May 2011 was adopted a labour code with the same potential negative consequences on employees).

3.2. Highly qualified employees' complaints, differences between public and private sector, between multinational companies and ones with domestic capital, between different economic sectors in both countries, during economic crisis

Despite the fact that experts are from different areas (some from state academic, others from production, the private sector), there is a highly qualified employees' dissatisfaction in the current

crisis period (whether in the private sector, whether in public sector employees) mentioned by all experts, namely tasks overload, overwork, mainly because the employees remaining after the disposal of others had to take over their responsibilities, while being under the pressure that if they do not meet them, their will lose their job.

In addition, there are other specific complaints, depending on the source of capital, i.e. private or public. Thus, some *high-skilled employees in the private sector especially from international companies*, in specific areas for the knowledge society (IT&C, high-tech, financial, consulting, media, advertising etc.) are dissatisfied with lower budgets and implicitly of employers' investment in the professional development of employees, dismissals, job insecurity, restrictive rules imposed by the parent company, in this crisis period:

- "reduction in the number of training courses due to the economic crisis";
- "private sector was more affected by cuts in personnel and thus to increase the workload and responsibilities for those remaining";
- "the feeling of job insecurity";
- "the existence of drastic rules taken from the parent company and imposed in subsidiaries (because often employees do not want to learn the rules - *so far I worked so all my life and now you come to teach me how to do ...*); in multinationals, if employees do not follow the rules, are dismissed immediately, while in state firms still it considered *it goes so*".

Other complaints are also mentioned: lack of communication between superiors and subordinates, not considering the health risks of working with PC in the office, stress generated by limited time for solving tasks, low-wages for "knowledge workers", the last two are accentuated in the crisis period: "the work in jumps is practiced, in style "hey-rup" and "non-stop", because "different" causes, i.e. that "the client asked now" / "the customer is the king" / "the customer should not be discontent", and these "temporary" acceleration of pace become permanent ("if you don't agree, there are others waiting to take your place!", "you do not agree - you are free to go!"); "they are trying to solve problems with increasingly less employees - to the brink of affordability, one of the consequences is that, usually, the normal 8 hour program is not respected, program that is typically exceeded"; "is not given the right importance to physical working conditions (there are cases when in offices there are too many people in a room with crowded desks, they don't have enough air but they are not aware of the lack of fresh air and thus reach discomfort and illnesses".

In Hungary, as in Romania, is priority mentioned as complaint of highly qualified employees, in the present economic crisis period, the lack of work-life balance (high labour intensity and the large number of working hours). In addition, we identify in multinationals, according to experts, other employees' problems, such as: the imposition from the parent firm of organizational culture and requirements from there, inadequate to local specificity; lower wages on the same positions in subsidiaries compared to the parent company; unpaid overtime; lack of freedom of creation and innovation; taylorian management system based on authority; lack of promotion prospects; job insecurity due to limited periods of employment for young professionals; the tense, stressful, atmosphere, based on competition between colleagues:

- "market inequalities between demand and support for talented employees, who must adapt to very strict requirements and organizational culture of multinational firms";
- "very challenging to adapt these employees to Western standards, especially in banking or IT&C, where these employees need to learn rationality, precision, work discipline, strict standards imposed by the parent company management, including through training courses, thus losing the creativity and innovation";
- "salaries are lower than those of employees with the same education and the same positions in the parent companies";
- "number of working hours is much higher than in the headquarters";
- "lack of work-life balance for employees in private foreign-owned firms";
- "the pay for overtime is required, request found particularly for the staff in multinationals, which often use overtime, these requests were met with similar frequency in both industry and services";
- "multi-level hierarchies in multinationals, taylorian management system";
- "lack of autonomy to innovate";
- "lack of opportunities to promote - the promotion is not for professional reasons, but the coincidences, power relations, interpersonal relations. In large and medium companies, in words, the

promotion is done by well-established rules, procedures of human resources department, but which in practice are applied arbitrarily“;

- “employment for limited periods, not exceeding 6 months or 1 year, and if the employee fails to demonstrate that he is competitive, the contract does not continues after this”;

- “firms want to obtain fast and maximum profit from short-term employment, employment is uncertain”;

- “in terms of management style and organizational environment of multinational companies, the atmosphere is more tense, stressful, competitive between colleagues etc., because their managers are also pressured by parent companies to obtain profit, this is their main purpose, which often can lead to heart attacks, diseases for employees: it is very hard to retire from these companies, managers do not take staff positions over 40-45 years because they become too expensive, demanding higher wages, and especially because they can not manage stress anymore, beginning to have health problems; in turn, they hire graduate students, whom they train in the light of the organizational culture of the company, using their enthusiasm and overload resistance because of good health they have, they are drawn into these positions because they receive higher salaries than in SMEs. Currently, the service sector flourished and remained in Western Europe, and production was moved to the East, and later in Asia, which is considerably cheaper by multinationals from developed European countries”.

Most Hungarian experts emphasize the lack of autonomy and freedom to innovate in Hungarian subsidiaries of multinationals firms. From surveys conducted by some of them, it was found that the Hungarian employees trying to delay implementation of these standards and rules, in order to have freedom of creation and innovation. A characteristic of multinationals is that they do not set “(not allow) research departments in the subsidiaries of Central and Eastern European, they remain in the parent companies; this displeases highly trained staff here, who want to innovate, and for that should avoid the rules. Engineers, educated employees are underestimated in many multinationals, their knowledge is not used enough. Although those from West know that the creative industries need a leadership style based on autonomy, democratic, it applies only in the mother country, where freedom of thought and autonomy is given to employees, but not in daughter companies”

Possible explanation for this phenomenon, from the perspective of these surveys authors, is that in daughter countries, these firms need dependent, disciplined people; Western management have prejudices regarding local employees, due to socialist culture which the latter were educated (including corruption, bureaucracy), and therefore they consider necessary to discipline them, lacking confidence in their intellectual capacities; experts interviewed considered that „it takes time, for another generation, to change this wrong perception on employees from the former communist countries”.

Among the specific complaints of *highly qualified employees from the public sector* in our country (health, education, research, social assistance), we mention, according to opinions of the experts interviewed: low wages, especially after reductions in the crisis period, disproportionate to the effort, which determined in many cases of young professionals leaving the country (particularly from research and higher education), job insecurity, lack of promotion and professional development, lack of infrastructure (research laboratories), which is causing some respondents to find that in Romanian capital firms in the private sector where they have expertised, the working conditions are better than those in state firms:

- “public sector has been affected rather by the reduction of wages and therefore lower general living conditions of workers both high-skilled employees and all employees in this sector in general”;

- “many young researchers and young academics leaving the country, because here they have no chance: those who are committed and really want to do something are discouraged”;

- “in addition to very low wages, other complaints of high-skilled employees, especially the younger ones, are no opportunities for promotion and professional development”;

- “lack of infrastructure (tools and equipment, research equipment for high research)”;

- “jobs are unsafe – a lot of young researchers have lost their jobs due to privatization and subsequent dissolution of several research institutes or joining institutes at universities and their transformation in research centers (if in 1989 170,000 employees worked in research, of which about 60,000 certified researchers, now there are only 15,000 employees of which about 6,000 are certified, in the 66 budget institutes of the Romanian Academy or extra-budgetary national research institutes, which are self-financing from projects”.

In Hungary, the difficulties faced by high-skilled employees in the budgetary system, in the crisis period, are similar to those in our country: very low wages compared with the intensity of their work, lack of career prospects, lack of job security:

- “Low wages, an intensive activity”;
- “high intensity work is a feature in academia (university professors are now overload, have to teach too many courses, must go to a number of conferences per year, to publish books and articles, to win and to work on research projects etc., even an university colleague died suddenly of a heart attack caused also by overload)”;
- “large number of working hours and overloading we can find at the doctors, in the medical system, so there is a great migration of physicians from Hungary to England, Austria and Germany. But there is no so much intensity of work for intellectual occupations employees in government institutions, ministries, central and local authorities”;
- “lack of career prospects, lack of job security, so high-skilled employees often have more jobs at the state for short periods, then go to private sector”.

In regard to working conditions in private companies in our country, comparing foreign with Romanian firms, things are different: “in Romanian capital SMEs, employees complaints during the economic crisis are related to the lack of capital, difficult access to capital; huge dependence on market - with extreme variations / dependence on the demand designed by multinational companies; while in the large, multinational, complaints are related to: job instability, capping career development in the multinationals, high specialization in narrow areas”.

With regard to differences in quality of life for *highly qualified employees in different sectors*, some respondents stated that if industry and construction there are generally physical risks related to emissions, noise, high temperature etc., in the services appear also risks of professional diseases related to interpersonal relationships or work pace, “that’s why the evaluation of these posts must include in addition to the physical environment, the whole work system”. And among the services sector, there are less dissatisfied high-skilled employees: “the most advantaged were those in IT&C and outsourcing, areas that have been little or not affected by the economic crisis”.

3.3. Examples of good practice at the macro level, regarding laws and strategies in the field and at the micro level, in various organizations

Most Romanian experts interviewed, although from different sectors, have similar views, showing their disappointment at the lack of specific and effective concerns at macro level, to improve the working conditions of high-skilled employees, the official regulations in force regarding only the risks and physical safety at work for employees with non-manual occupations:

- “in terms of examples of good practice and influence of official strategies in working conditions, all studies done in the institute where I work concern only working conditions in industry and construction; Law 319/2006 on health and safety at work and all provisions of the European Commission on this subject, which were translated into government decisions, were made as if there are only industry in Romania”;
- “all the training organized in our institutions for those who assess the working conditions aimed only working conditions in industry, only recently I heard about a course that cover working conditions in health”;
- “at macro level, I could not mention some policies, because I believe that we do not have such policies”;
- “according to GD 425/2006 and 955/2010, in all public and private companies with more than 9 employees, from any economic sector, there is a department of prevention and work protection, number of employees in this service is proportional to the number of employees of the company. The legislation obliges employers to create this department, which shall have the responsibilities: risk assessment and formulation of preventive measures. If these departments have some visibility in industry and construction and carries out activities for which they were set up, employees do not know about their existence in services companies”.

Only one expert interviewed explicitly mentioned a positive aspect of macro strategies on high-skilled employees’ life quality: “stimulating access to training courses, based on articles of the Labour Code - studies leave with opportunity of paid educational leave (art. 154, 157 of Law no. 53/2011. Labour Code). Thus, in art. 154, it states that “Employees are entitled to receive, upon request, leave for training. Such leave may be paid or unpaid”, and in art. 157 it states that “If the

employer has not complied with his obligation to ensure the participation, on his expense, of an employee to training as provided by law, the employee is entitled to a leave for training, paid by the employer, up to 10 working days or up to 80 hours”.

If at the macro level, there is a general pessimism of Romanian experts on the efforts at central level to improve the quality of professionals’ life, at the micro level, in certain organizations, each of the respondents could list at least one good practice of management concern (even of directors in state institutions) to improve the working conditions of employees, even in the economic crisis, such as: job rotation, recruitment of young students from faculties in the final year which are paid scholarships then are hired and trained, payment for subscriptions for sports halls where employees to attend in their leisure time, health insurance for employees in private clinics, free annual medical check, sports competitions between company employees or healthy eating programs or for smoking cessation, providing free meals in the cafeteria of a company, improvement of infrastructure and working equipment for employees:

- “within my expertise, I met the job rotation so that employees not to become crazy, continually making the same thing: no employee remains in his post more than four years, after 4 years is moved to another post in another department - for example, from human resources after 4 years an employee goes to communication, then marketing etc.”;

- “compared with the lack of state policies, at the micro level I think that multinationals have understood the importance of psychological aspects, of general wellbeing and there are several initiatives on the health of employees, such as gyms payment, payment of a hot meal in the canteen”;

- “many multinationals in recent years offers for employees subscriptions at private clinics with many health services included in, or organize sports competitions among employees at ping-pong, football etc.”;

- “I know some companies that brought in the company pneumologists or nutritionist for performing training for employees to learn them to eat right and healthy and to help them quit smoking”;

- “there were local initiatives of directors of various institutions, to improve the working conditions of employees, to bring new research equipment, but received no funding for these projects”.

In Hungary, too, the experts interviewed expressed their dissatisfaction with the fact that the Government do not take enough steps to improve the lives of employees in multinational and do not sanction abuses of management, because these foreign companies not to leave Hungary and thus not increase unemployment, especially in this period of economic crisis.

There are also some cases of good practice in some multinational companies with subsidiaries in Hungary, especially with Scandinavian capital, where working conditions are good, but they are only initiatives at local level, there is not legislation, official governmental measures explicitly dedicated to improve the working conditions of highly qualified employees:

- “at the Swedish-owned company E., there is research department in Hungary, the company is a family atmosphere, the building is like a hotel, modern, with modern furniture, has palm trees, chairs, kitchen, staff are all young people”;

- “at small company with German capital S.D. (which manufactures filters for underground water transport), the plant looks like a museum with sculptures, paintings, restaurant and cafe, there are 120 employees of which 80% engineers, who have autonomy to invent all the time”;

- “at the IT companies like Google and Skype, the atmosphere is very relaxing, familiar, there are ping-pong and pool tables, it’s innovating all the time, is similar to a college campus”;

- “at Scandinavian-owned multinational firms such as Nokia, it dominates an open, positive atmosphere, favourable for human relations”;

- “G. R. (pharmaceutical company) with a family atmosphere, friendly and cooperative, or firm S.E. – also a company with a human face”;

- “there is coaching in multinationals, as a way initiated by management to reduce overload of professionals employed”.

Recently, increasingly more Hungarian small companies begin to focus on corporate social responsibility, on social dimension of sustainability, which includes concern for life quality of its own employees, according to interviewees.

3.4. Regulations on new types of occupational diseases

The fourth objective of the research was to identify the existence in current strategies or legislation of special measures or rules to prevent new types of occupational diseases specific to non-manual occupations, such as eye- or headaches, stress, depression, back pain etc. According to Romanian experts, that they do not know in current legislation a certain concern to avoid occupational diseases specific to new types of occupations:

- “according to my knowledge, there is only one mention in the Law 319/2006 on the protection and safety at work, which regulates the psychological aspects, which is minimal compared to what is found in European legislation and especially guidelines”;

- “after a discussion with a lawyer in labour issues, I concluded that, since the majority of European recommendations in this area are an option, Romanian authorities have taken and transposed into Romanian legislation only those measures that are mandatory, about physical safety, ignoring the rest, related to psychological well-being”;

- “In the current strategy in force (National Strategy on Safety and Health at Work for 2008-2013) or in the previous (Romanian Policy and Strategy on Safety and Health at Work for 2004-2007), are not specified issues about the implications of the knowledge economy activities on safety and health at work”.

As in our country, Hungarian experts can not identify, in their country's laws, explicit regulations on new types of occupational disease specific to non-manual occupations, such as eye and headaches, stress, anxiety, back pain, heart disease etc.

3.5. Forms of protest used by high-skilled employees

As at the previous question, Romanian experts interviewed express the same disappointment and distrust of the ability of unions to contribute significantly at improving the life quality for employees, especially those of multinationals, primarily because for many of these companies, there are no unions; in many cases employees are tacitly advised not to join trade unions; in addition, in many multinationals “difficult” employees which protest are promoted to management positions or are dismissed, especially during the economic crisis:

- “I do not think that unions have ever been involved in it”;

- “on the forms of protest that high-skilled employees may use when they have complaints about working conditions, if they are not member of a union, they have no choice but to resign or to contact the Ethics Commission of the organization, but probably without much success; if they are enrolled in the union, should contact the union leader of the organization”;

- “because in many universities or institutes there are no unions, there is the possibility that interested employees to join directly to Federation of Trade Unions of Research-Projection in Romania; is not necessarily to have their union in the organization”;

- “being employee, if you set up a union in an organization, you will be blacklisted immediately by the management of that institution”;

- “employees are NOT encouraged to join and protest, especially in multinational companies (those who are “passionate” are annihilated, some are promoted to positions of management and give up the “agitation” or, at worst, those persons are dismissed); sometimes they have even a commitment that they will not subscribe in a trade union (not necessarily written)”;

- “there is union in research, various unions in education etc.; and their forms of protest are both classic (strikes, picketing and other classical instruments) and modern (online letters signed on Facebook or other social networks, such reaction of researchers in socio-human area on the new European research budget in the socio-human domain, that was proposed too small)”.

In Hungary, regarding the social dialogue and freedom of association in many multinational companies, the experts also recognize the lack of unions: “there are no unions in transnational companies in the services sector; trade unions exist in the national state companies, transport, industry”.

Referring to the „coverage” of employees by unions in multinational companies, although, as in Romania, in many cases employees are tacitly advised not to join trade unions, there are examples of good practice: „for example, hypermarkets chain TESCO, with English capital, or METRO, LIDL, where there are unions. There are also trade unions in some small and medium-sized Hungarian firms with domestic capital”.

Highly qualified employees, professionals from the private sector, as in the media (journalists), doctors, lawyers, architects etc. are not grouped into unions, but in „professional camera” in which they enter individually. According to respondents, teachers, researchers, doctors have no trade unions in Hungary.

Although there are numerous complaints of professionals (in the public sector are related to salary and those of the private sector - too long working program, unpaid overtime), “not being grouped in unions, when they are discontent, professionals can not use forms of protest specific to unions, so prefer to leave that company”.

If a Hungarian employee has a complaint related to working conditions, “if he is enrolled in the union, he addresses the union, that will try to solve the problem by discussing with management and if so will not solve, the employee will address the Official Labour Court; if the employee is not enrolled in the union, it will directly address the Official Labour Court, a rare case, because often there is the risk that employee to be fired”.

4. Conclusions

According to the research results, the vision of Romanian experts on the complaints of highly qualified employees regarding their work conditions in the current economic crisis is similar in many ways to that of the Hungarian experts. In both countries, the professionals’ complaints differed based on the type of property and the source of capital invested in the firm – the firm’s area of activity influenced less their discontents. Thus, the main complaints of those in the public service (doctors, professors) refer to low salaries as opposed to the great intensity of work that causes overload; for those in the private sector – an accelerated pace, lack of autonomy, authoritarian management, rigid multilevel hierarchy, standards imposed by the mother-firm, lack of work-life balance, no payment for extra hours, lack of unions to support their rights, the lack of safety of the workplace.

Although rare, cases of good practices have been mentioned by experts as to be found mainly at a micro level, in certain firms, especially the Romanian and Hungarian branches of multinational companies (most of them with Scandinavian capital), especially in IT&C field.

The lack of a legislation aimed at improving working conditions for highly qualified employees, as it is the case in the present study, focusing on the specific difficulties they face, especially in this economic crisis period, is felt acutely in both neighbouring countries. Both the Hungarian and Romanian legislation concentrate only on the work protection norms for manual workers in industry and construction. A common explanation from several Romanian and Hungarian experts on the absence of such legal measures on a national level to protect highly qualified workers from the services sector is that the legislation has not evolved from the industrial period (highlighting protection norms for manual workers in industry and construction), while the economy changed and the share of services sector increased.

Taking into consideration the fact that the services sector (and especially the knowledge-intensive services) produce almost 2/3 of the GDP, and the highly qualified employees are an ever-increasing part of the total of employees in the respective sector, it has become necessary to elaborate public policies to improve the working conditions of these employees, who have specific complaints and are risk-prone to new types of professional illnesses, complaints and risks exacerbated by the current economic crisis. These policies need to be associated with the already achieved organizational changes inside certain companies, unfortunately too few, changes meant to introduce measurements to improve life quality for their employees.

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RESEARCHES REGARDING THE APPLICATION OF THE CLASSIC TOOLS OF QUALITY MANAGEMENT IN HIGHER EDUCATION UNITS

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Abstract: *The paper presents a method for assessing the quality of a service by applying one of the classic tools of quality management. It studies a quality related issue in the higher education process, a small pass rate to the exams taken by students. It presents all the possible main identified causes. The potential secondary causes are identified for every main cause. A cause-effect diagram is made (ISHIKAWA diagram), in a formula specific to the studied problem - $3M+1MP+IMS$. It underlines the advantages of this method for repairing the matter in study.*

Key words: education, low pass rate, causes, Ishikawa

JEL classification: I290 (Education: Other)

1. Introduction

Quality management is a fundamental quality of academic strategic management and this is why it is important to discuss it within the context of higher education reform in Romania.

Romanian education reform has been required by the changes made in the Romanian society after 1989. The decisional system has been decentralized, university autonomy has been developed and there has inevitably resulted the need for developing a quality management system in universities.

One of the strategic objectives of the higher education reform process was the development of a total quality management system.

When we are discussing the problem of total quality management implementation in higher education, we are considering the fact that universities are fundamentally different from the companies with production processes.

The educational process is fundamentally different from the production process. The main processes developing in universities are: education processes and research processes.

Another problem specific to universities refer to the concept of client. A client is the student with two roles:

- internal client- direct participant to the education process
- external client- beneficiary of the knowledge transmitted in the education process.

Students also have the role of products of the educational process, which reach the work force market. The quality of the educational process is reflected in the quality of knowledge transfer from the professor to the students.

The classic educational process is based on the knowledge transfer process from the professor to the students. It is a process centred on the professor and the quality of the educational process depends on the quality of professors and laboratories (Bratianu, 2000).

The great universities worldwide have developed a dynamic educational process, in which students play an active role. The process is centred on the student. The quality of the educational process is determined both on the way in which the professor has conceived the learning process and by the students making increased efforts for developing their thinking and acting capacity (Rusu, 2001).

Assessing the quality of the educational process can be made partially by assessing the knowledge acquired by students.

An important indicator of the quality of knowledge acquired by students is the pass rate percentage of students at exams.

The causes that determine a higher or a lower pass rate percentage have to be known and analyzed in order to act accordingly.

The paper uses an instrument of quality management for determining the causes that determine a small pass rate percentage.

The concept of total quality occurred at the end of the 20th century, has established the quality management tools. The 7 classic tools used in quality management are: histogram, cause-effect diagram, Pareto diagram, correlation diagram, control chart, data stratification, Brainstorming.

The cause-effect diagram – fishbone or Ishikawa - was developed by Kaoru Ishikawa in order to determine and divide the causes of a given problem on main fields of causes. It is recommended to use it only when there is only one problem, and possible causes can be classified based on several criteria.

Ishikawa diagram is a graphic representation that schematically illustrates the relations between a specific result and its causes. (Severin, Voicu, 2005)

The studied effect or negative problem is “the fish head” and the potential causes and sub-causes define the “fish bone structure”.

Therefore, the diagram clearly reveals the relations between a problem identified in a product and its potential causes. The cause-effect diagram can be built into several variants: 5 M (Machines and devices, Manpower – workers, Methods, Materials, Maintenance), 4 M (when maintenance is omitted), 6M (including a sixth dimension – the environment), 4 P (for extra-productive fields where the main causes can be grouped into Policies, Procedures, Personnel, Position-location).

The cause-effect diagrams are very useful in analyzing a certain fault or a negative problem in general occurred in the field of production, in the field of services provision or in any other field of activity.

An interesting model of Ishikawa diagram was developed in the case of a defect occurred after a service car repairing. (Luca, 2011).

The most known models are 4M, 5M, 6M, the initials being in order: materials, methods, men, machines, mother nature, measurement (Kifor, Oprean, 2002).

The factors that may cause a problem have to be identified as accurately as possible and for this purpose, every person involved in the problem has to take part in a Brainstorming debate.

Specialized literature presents many Ishikawa diagrams made for various identified problems and for which causes had to be found and analyzed in order to be removed in the future.

The paper presents the results of a study concerning the use of the Ishikawa diagram in analyzing the causes that determine a non-quality problem in higher education process.

2. Determining and classifying the causes of low pass rate to the exams taken by students

The studied problem was “**low pass rate at exams**”. All the possible, main and secondary causes that could generate the studied problem were identified.

In determining the main causes we left from the list of identified secondary causes that determine small percentage of promotion at the examinations held by students. We took into account the main causes that are presented in the literature in chapters that relate to the cause – effect diagram. We tried to respect one of the formulas 4M, 5M or 6M but we noticed that in this case none can be met exactly.

Since learning process differs fundamentally from the production process, the main causes are specific to this field. Consecutive to this study, we have identified two main causes that are found in the previously developed works, namely: *management* and *environment*.

We set another main cause as being *Methods and materials used in the learning process*. Here we included secondary causes that relate to teaching methods, materials and equipments used in the learning process with the specification that materials exclude the student.

In the known (classical) cause-effect diagrams is given as a primary cause - the materials, meaning materials used for the product realisation and that goes into the finished product. In the educational process the material to process is the student and the finite product is represented by the competences acquired by a student upon graduation of a college.

The student has multiple roles: material of the educational process which eventually turns into a competent graduate for the labour market, internal customer - direct participant in the educational process, external client - beneficiary of knowledge transmitted in the learning process. In this context, we gave choosing a main cause - materials, in the classic theory of cause - effect diagram.

In terms of people (workers) who participate in the educational process we have two major players: teacher and student. So we thought for this case under study that it is still necessary to consider two main causes, represented by: *man-teacher* and *man-student*.

Table 1 presents the main and secondary causes that were identified.

Table 1: The main and secondary causes

The identified problem	Main causes	Secondary causes
Low pass rate at exams	<p>Methods and materials used in the learning process</p> <p>2. Management</p> <p>3. Environment (Mother nature)</p> <p>4 Man- Professor</p> <p>5. Man- Student</p>	<p>Appropriateness of teaching methods</p> <p>Teaching based on feedback</p> <p>General organization of the course</p> <p>Courses presentation rate</p> <p>Materials (courses, exercise book, laboratory guidance, standards, etc..)</p> <p>Laboratory equipment</p> <p>Computer and information systems</p> <p>Library and reading room</p> <p>Teaching oriented towards student requirements</p> <p>Teamwork</p> <p>Stimulation of attention</p> <p>Encourage the students to ask questions</p> <p>Correlation between the amount of information and the students fatigue</p> <p>Defining the utility of course themes in the future career</p> <p>Identifying learning styles</p> <p>University management</p> <p>Faculty management</p> <p>Department management</p> <p>Management of students group as an educational community based on mutual support</p> <p>Quality management system implemented for all processes carried out in the university</p> <p>Involvement of local community</p> <p>Family involvement</p> <p>Psychological assistance</p> <p>Social assistance</p> <p>Appropriate environment for teaching</p> <p>Appropriate environment for student organization activities</p> <p>Professional training</p> <p>Physical condition, fatigue, nervousness</p> <p>Individual training</p> <p>Communication style</p> <p>Simulation by providing prizes</p> <p>Financial motivation</p> <p>The knowledge acquired in high school</p> <p>Intellectual development</p> <p>Skills in conformity with the faculty profile</p> <p>Creativity</p> <p>Personality</p> <p>The adaptation degree to higher education</p> <p>Encouraging performance</p> <p>Students' interest</p> <p>Student trust in the university</p>

3. Ishikawa Diagram

The graphic representation of all the possible, main and secondary causes is rendered in figure 1. A fish skeleton resulted that we called in this paper the Ishikawa diagram "3M+1MP+1MS". The diagram symbols, 3M + 1MP + 1MS, were chosen after the names of the main causes :

- **M**ethods and materials used in the learning process , M

- Management**, M
- Mother nature** (environment), M
- Man- Profesor** , MP
- Man- Student**, MS.

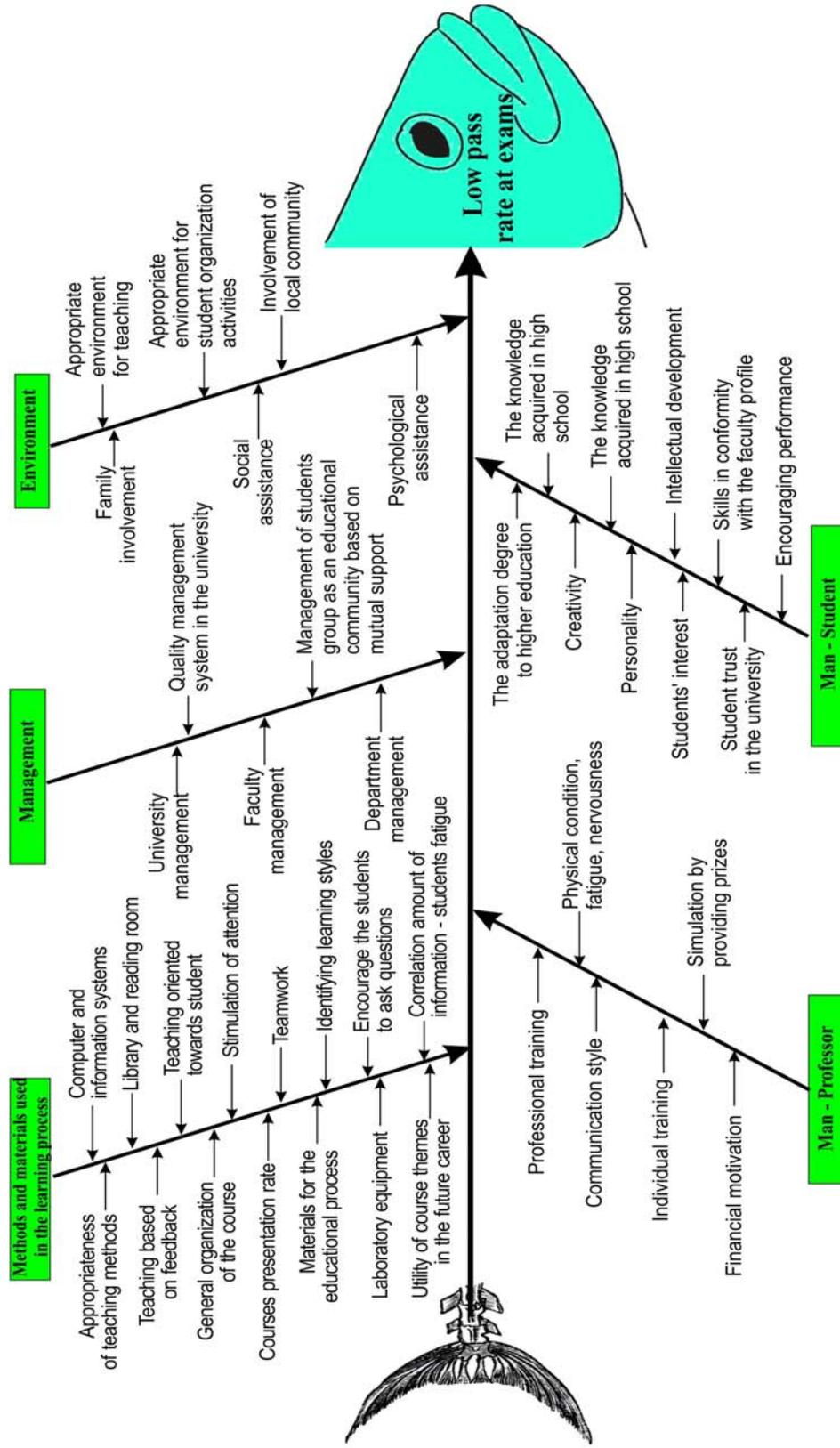


Figure 1. Ishikawa Diagram "3M+1MP+1MS" for the problem: Low pass rate at exams.

4. Conclusions.

The Ishikawa diagram helps analyzing the causes of quality faults in the education process.

The development of the Ishikawa diagram in a detailed form for determining the possible causes of a problem (the quality of the education process reflected in the students' pass rate to exams) has the advantage of giving the possibility of identifying and analyzing all the factors connected to the problem. Drawing a very good Ishikawa diagram has the advantage of directing the organization / university that deals with the settlement of a problem, towards the causes that generate the problem and removing them and not only towards the remedy of the problem.

Using the Ishikawa diagram in the educational field is also useful for improving the quality insurance and control system.

Using the Ishikawa diagram allows highlighting the main causes of non-quality and it represents an important tool in the quality planning.

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COLLECTIVE LEADERSHIP – ORGANIZATIONAL DIMENSION OF HUMAN RESOURCES STRATEGIC DEVELOPMENT

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Abstract: *This study aims to show how important the role of leader is, in the context of public leadership as a form of collective leadership. The expected results, obtained after applying research methodology, will reflect the management styles of leaders.*

In this regard, the action of a leader becomes essential, both to revitalize their management teams and to develop a social environment based on collaboration and collegiality – the dominant features of collective leadership.

Key words: strategic development of human resources, collective leadership, social climate, formal / informal leader.

JEL classification: CO2; H8H83; J5J53; M1M12; O1018; Z1Z13.

1. Introduction

I was mentioning in a recent study (Manole, 2011, p.208), that in the context of economic crises, when the organizations (public institutions / private companies) go through a series of changes at different levels, the strategic development of human resources (SDHR) may provide a useful conceptual framework for senior management to better manage crisis (Wang, Hutchins and Garavan 2009, p. 22-53). However, according to experts, SDHR involves many different systematic, formal processes, which need to be adapted to the needs of the organization, to its economic and financial restrictions. SDHR also helps the management to improve its operational capabilities, all the specific skills and abilities that enable better management of existing crisis and preventing future ones (Wang, Hutchins and Garavan, 2009, p. 22-53).

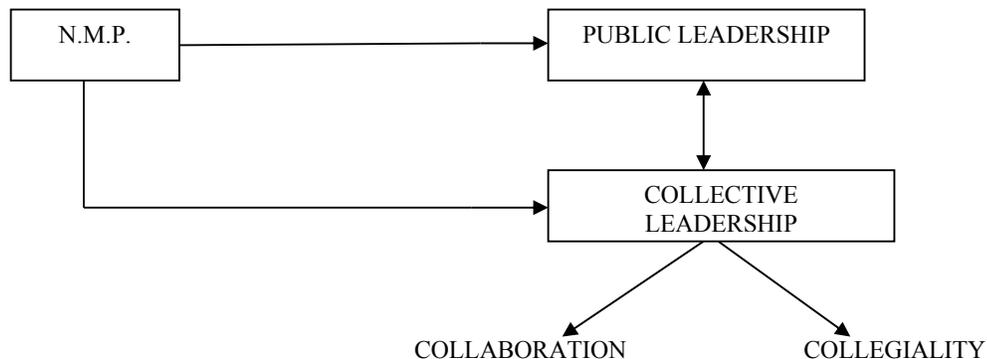
Designing and developing a human resources strategy involves leaders to analyse deep several aspects: evaluation of human resources management system, including recruitment procedures and systems and employees development, their capacity to meet future organizational goals and to adapt to changes; assessing the current supply of staff (establishing the correlation between the number of employees, skills, competencies and professional experience, on the one hand and other factors, such as duties, responsibilities, workload and level of responsibility, on the other hand); assessing organizational culture and internal human relations in terms of staff capacity to meet predetermined objectives, ensuring a close correlation between human resources management system (personnel administration, personnel management itself, information and communication social development, etc..) and objectives set in the strategy development, evaluating the impact on stakeholders in the work and results achieved by them, etc.. Thus, complex analysis that leaders must make to design and develop a specific organizational strategy, including human resources, require from them, a sustained intellectual effort including multiple knowledge and many skills, attitudes and professional competences.

In a recent review (Manole, 2011, p.207-221) showed that leadership, culture, structure and strategy are the four internal dimensions of organizations which would explain the contribution of strategic human resource development to manage crises that arise at insitutional level and to private companies. In this paper, we will focus on leadership, which is an important vector of development, so that its role should not be reduced, but not overwrought.

According to specialists (Dunleavy et. al., 2006, p. 467-494) new public management, which has been the focus in recent decades is not quite as current. It is now argued that “the torch” to change the leadership passed through the new public management and should be redirected and handed to supporters of public leadership. According to specialists (Brookes, 2011), public leadership can be defined “as a form of collective leadership in which public bodies and agencies work together to achieve a common vision based on common values and objectives that seek to promote, influence and deliver economic prosperity in a changing and complex social context”.

As such, I believe that the shift from new public management (N.M.P.) in collective, public leadership can be represented schematically as follow:

Figure 1: The transition from the N.M.P to collective (public) leadership



In the current economic crisis is absolutely necessary the transition to the new public management leadership team in order to obtain results arising from the collaboration between different organizations and in the equitable distribution of responsibilities and encourage teamwork. As observed in previous scheme (see Img.1), to the base of the collective leadership are two fundamental concepts: collaboration and collegiality (Brookes, 2011). Thus, in terms of first principle, that of collaboration, emphasis must be placed on the common elements of a certain vision, which requires teamwork at different levels. From the perspective of the second principle, that of collegiality, emphasis must be placed on the delegation and empowerment of several teams in a framework of responsibility, which holds a common vision and strategic objectives.

In this context, it is necessary to understand exactly what is collective leadership, how to develop leadership skills and when to appreciate the leadership to be effective. The strategic side of leadership is an objective, consisting of working activities and / or administrative, that make up the economy and strategy of the organization. The approach of this part of leadership involves detailed analysis, precision, rigor, etc.. The subjective (human) leadership is based on organizational culture and individual spirit. In fact, in reality, we can not speak of an organizational culture a number of individuals think and act as a leader, if an organization are a sufficient number of people with a genuine leader mentality (Moldoveanu, 2005, p.260).

Concluding this part of the study, we can say that a true leader will be able to recognize and appreciate the leadership skills of others and also to delegate those with leadership aptitudes and special skills. So, this is key, say experts (Brookes, 2011), for achieving public leadership (collective).

2. The social climate study of strategic human resources development perspective

We mentioned earlier that, the approach of human resource strategy involves a thorough analysis of several management aspects, including assesment of human relationships (the internal social environment), in terms of staff capacity to meet prescribed organizational objectives. Also, collective leadership is that which allows, at present, to obtain at institutional level, the results arising from the collaboration between different social groups and from the equitable distribution of responsibilities and encourage teamwork.

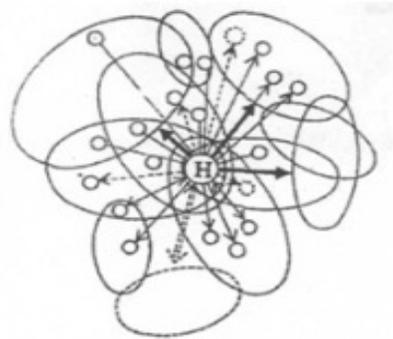
For the promotion of teamwork (major feature of collective leadership) the official leader of the group, his qualities must give employees a sense of collective responsibility in terms of fulfilling the objectives and strategies adopted at the organizational level. From this point of view, he must be perceived by everyone else, at the same time, as the informal leader (informal, emotional), the

performing groups are those in which the informal structure becomes functional, facilitating the mutual knowledge of individuals participating in groups, maintaining the common language of the group, through purpose and motivation, thus releasing the entire informational system. It is known that affective structure of a group, the type of communication within, and the type of existing leadership within the group generates the emergence of informal subgroups (cliques) which often give the existence of internal states of tension and conflict, with extremely negative influences on the performance (Caramete, 2002, p.104-105). In this context, the research of affective structure (informal) distinguishes social relationships between individuals, their position in the group configuration (including the official leader) and influence each other on the performance of the group.

To investigate and quantify affective relations existing in a professional group, the sociometric technique can be used (as a research method) which is actually a set of processes and mathematical and graphical techniques (test and sociometric table, target sociogram) which allows the configuration for determining the group's structure, the leader's official position and the informal one, and also the constellation of connections (relationships) between group members, as it appears at a given time (Caramete, 2002, 105-106). In fact, sociometric technique has applicability in economic sociology.

Thus, sociometric study conceives human relations as being arranged in sociometric network, formed by the action of "social atoms", "social electrons", etc. (Roman, 2000, p.67). Here is an outline of "social atoms" which imagines the links from which it belongs, and links to subjects belonging to other groups (Roman, 2000, p.67).

Figure 2: Social atom sociogram



History:

H=subjects

O=other subjects

-----> = relationship with other subjects

-----> = broken relationship

====> = relationships with groups

<--> = mutual relationships

Source:(Roman,2000,p.67)

The test is designed in terms of surprising the emotional climate, assuming, for achieving the sociogram, obtaining individual scores which mean group structure and types of status of its members. As a test designed to capture the role of work climate, its orientation is, from the beginning, towards the activities involved in the specific domain, in which the analyzed groups belong.

Thus, each group member is required to express preferences (and denials) in the selection (and rejection) of other groups members, to accompany him in a professional activity, such as achieving a work on specific problems or analysis data necessary to develop business development projects at the institutional level.

The test requires the first three members appointed by positive scores (+3; +2; +1) on which such employee would like to have as collaborators, and also the first three members with negative scores (-3; -2; -1;) on which he will not wish to work with it on the completion of professional tasks.

The test requires also a member of each group to present its views on those who believe that elected him and those who rejected him for the same type of activity.

Answers to questions of this type are represented graphically in a sociogram; this provides and insight into the emotional structure existent, revealing who the "star" group is (the group member who converge positive choices), who are the "isolated" (group member who get a score equal with "O"), the "rejected" (those who obtain negative scores), which are the "mutual"elections (Manole, 2011, p.217).

In our efforts, we have chosen to apply the sociometric method as a research method for social climate of two services: Territorial Planning Service and Urban Data Management and Heritage

Administration Services and Urban Commercial, of the local public authority, believing that the development of collective leadership would be a major objective to revitalize the local public sector in the current economic crisis.

Another reason that led to the choice made was the activity within the two services (see table 1.), this having a great impact on the population, from the perspective of modern urban development.

Table 1: Main activities undertaken

TERRITORIAL PLANNING SERVICE AND URBAN DATA MANAGEMENT	HERITAGE ADMINISTRATION SERVICES AND URBAN COMMERCIAL
<ul style="list-style-type: none"> • provides modern urban development of the area and respects the legislation in its domain; • applies the strategy imposed by urban plans approved by the Decision of Local Councils; • checks the documentation required for the issuing of Urban Certificates and Building Permits ; • Improves communication relationships between citizens and services, etc. 	<ul style="list-style-type: none"> • presents committees of the City Council reports on the administration of goods belonging to public and private city; • participates in joint actions with other police services and community hall in the matter of public administration and management of the municipality ; • manages assests which consists of movable and immovable property belonging to the public domain for local and private sector of the city; • creates inventories on movable and immovable property located on public and private city, etc.

In accordance with the law, central and local authorities are obliged to ensure the organization and the process of public participation in development activities of the territorial and urban area (Alpopi, 2008, p. 118).

It also said, authorities are designed to manage all public and private land and buildings, construction of buildings and facilities responding to the public. In this respect, some public authorities tasks are the following: (Alpopi, 2008, p.120)

- check how owners and owners of land and construction manage these assets, in accordance with the documentation of land use and planning regulations and other community interests;
- organize data banks and information systems for management of land and settlements (data is used only in public interest, due to the confidentiality character it posses);
- establish easements on real property (restriction on the use of land and contruction completion) to carry out public work of general interest such as (Alpopi, 2008, p. 120):
 - networks of water, sewerage, electrical, gas, heating, telephone etc.;
 - social objectives of education, research, health, culture, sports, public administration, justice, etc.;
 - - historical or natural monuments and protected areas declared by law;
 - - ways of communication;
 - - airport and ports;
 - - exploration and exploitation of soil and subsoil;
 - - goals for the country's defense, public order and national security.

2.1 Applying the research

At the level of the two services was applied the following sociometric test (Manole, 2011, p. 217) on a number of 11 employees of the Service Territorial Planning and Urban Data Management and 15 employees of the Administration Services Heritage and Urban Commercial, and the structure is as follows;

Table 2: Territorial Planning Service and Urban Data Management

Nr of employees	Employees structure			Task Coordinator (job)
	Employee number	Qualification	Age gap	
11	1	1-ECONOMIST	35-40	ECONOMIST
	10	2-COMPUTER OPERATORS	20-40	
		2-PROFESSIONAL REFERENCES (technicians)	35-55	
		4-ENGINEERS	25-55	
		2-ECONOMISTS	30-35	

Table 3: Heritage Administration Services and Urban Commercial

Nr of employees	Employees structure			Task Coordinator (job)
	Employee number	Qualification	Age gap	
15	1	1-ECONOMIST	40-45	ECONOMIST
	14	3- COMPUTER OPERATORS	20-40	
		4- ROFESSIONAL REFERENCES (technicians)	35-55	
		3- ENGINEERS	25-55	
		2-ECONOMISTS	30-35	
		2-UBENGINEERS	40-55	

2.2 Sociometric test model:

1.If, next week, you made the team to work on specific problems regarding the team to which they belong, with which of your colleagues would you like to work? Name the first three of them (+3;+2;+1).

2.The same scenario as above, with which colleagues would you not chose to work with. Name three of them (-3; -2; -1).

3.In the conditions of achieving the requierd work, which of the colleagues do you belive has chosen you to work within a team? Name three of them.

4.Which of the colleagues do you believe do not want you to work along side them? Name three of them.

According to the research method, the results of sociometric test, applied to employees of both services can be found in the sociometric tables and their graphical representation in the target sociometric graph of the two entities analyzed, as follow:

Table 4: Extract table sociometric Territorial Planning Service and Urban Data Management

Nr. crt.	MEMBERS	COLLECTIVE MEMBERS						
		VR	GM	TS	AN	.....	PC	AM
1	VR		3	1	-1	.....		2
2	GM	3		2	-2	.....	1	-1
3	TS		3		1	.....	-1	2
4	AN	1	3	-1		.....	2	-2

10	PC	3	2		1	.....	
11	AM	-1	3		2	.....	-2	
	SCOR “+”/”-”	20/- 15	24/-3	3/-1	7/-3	.....	3/-3	4/-3
	SCOR TOTAL	5	21	2	4	.....	0	1

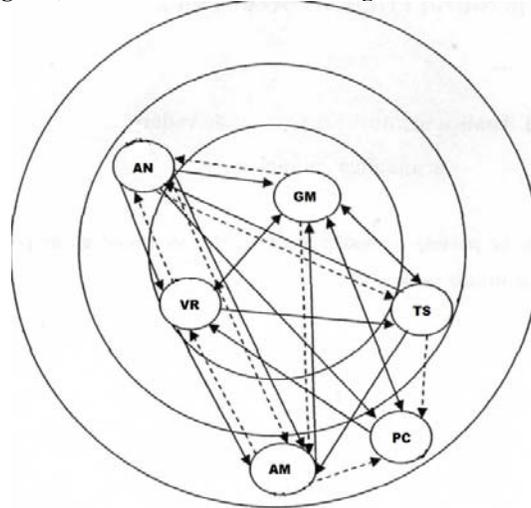
Source:(Caramete,2002,p.120)

Note: "VR.", "GM", "TS", etc, represent the name and surname initials of staff member researched. Sociometric table reads as follow:

- "VR" preferred "GM", "AM" and "TS" and rejected "AN";
- "GM" preferred "VR", "TS" and "PC" and rejected "AN" and "AM", etc.

Seen from the sociometric table that : "GM" is the formal leader of the team analyzed, according to the official structure and also the informal leader (unofficially), because for him have turned most choices (preferences) from the group's members, giving him the highest positive score (+ 21 points). The isolated area of the group ("PC") has obtains a score of 0. Graphical representation of the situation obtained is as follow :

Figure 3: Target sociogram, Extract Territorial Planning Service and Urban Data Management



Source:(Caramete,2002,p.123)

History:

- teleelement "+"
- - - - - teleelement "-"
- ↔ mutual attraction
- ← - - - - - mutual rejection

Table 5:Extract table sociometric, Heritage Administration Services and Urban Commerical

Nr. crt.	MEMBERS	COLLECTIVE MEMBERS							
		RV	AP	DC	CM	IC	.....	ET	OS
1	RV			3	-3	+1	.....	-3	
2	AP	-2		2			.....		-3
3	DC	-1				2	.....	-2	1
4	CM	-1	3	2		-1	.....		-2
5	IC	3	-2	1			.....	
.
.
.
14	ET	-1	3	-2	2		.....	
15	OS	3	1	-2	-3	-1	.....	2	
	SCOR"+"/"-	14/-7	12/-4	25/-13	33/-8	14/-10	.....	2/-8	1/-10
	SCOR TOTAL	7	8	12	25	4	.....	-6	-9

Source:(Caramete,2002,p.121)

Note: "RV.", "GM", "TS", etc, represent the name and surname initials of staff member researched. Sociometric table reads as follow:

- "RV" preferred "DC" and "IC" and rejected "CM" and "ET";

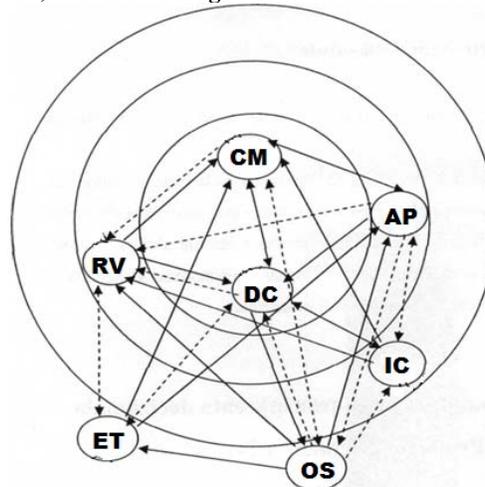
- “AP” preferred ”DC” and rejected “OS” and “RV” etc.

Seen from the sociometric table that :

While the “AP” is the official leader of the team analyzed, according to the official structure of the group, “CM” becomes , through the members’ votes, the informal leader (unofficial), because he obtained the highest positive score (+25 points).

The rejections of the group are “ET” and “OS”, because they have negative scores, etc.

Figure 4:Target sociogram, Extract Heritage Administration Services and Urban Commerical



Source:(Caramete,2002,p.124)

Applying sociometric method can be seen that the differences in the work climate within the groups analyzed reflect the management style of each leader, and also the internal competition between its members. Thus, if for the first service (Territorial Planning Service and Urban Data Management), we can speak of a “hot” climate (based on collaboration and collegiality, characteristics of the leadership team) resulted in a solidarity around the official leader of the group, who obtained a maximum positive score (gaining also the informal leadership status, unofficial) in the case for the second service (Heritage Administration Services and Urban Commercial) the situation is different, in that there is observed an isolation of the official leader (its score is close to zero). At the level of the second service, there is another person with the status of informal leadership, thereby achieving the highest positive score (+25 points), because all the groups members’ choices were directed to her.

This is because the formal leader comes from the old team, maintaining a leading position due to his relationship with the current senior management of the institution. This leader follows a “command” management style, which consists mainly of verifying the achievement of activities by staff members, in a rigorous way. Or, this management style is old, not allowing normal operation of business. The disputed leader, close to retirement age, is unable to open communication with subordinates (including informal leader), not understanding the need to stimulate them towards achieving superior performance at the level of the positions held.

From this perspective, the formal leader should be replaced with a high ranking leader of the institution, open to new or with the informal leader of the younger subgroup of the studied service. This replacement is absolutely necessary because the formal leader (official) of the group has demonstrated that he does not have the capacity to create a „hot” climate, of collaboration, at the level of service he coordinates. So, he is unable to promote team work (major feature of the collective leadership) and to give employee a sense of responsibility towards the objectives set at the level of subdivision he leads. From the perspective of the other service reviewed, in which there is a balanced situation, I suggested a more dynamic structure, a increase of „rotation” in employees tasks. This dynamic should be designed to eliminate possible conflicts of competence, which could occur due to limited individual capabilities in relations with completion of common objectives.

3. Conclusions

Therefore, the action of the leader becomes essential, both to revitalize their management team and developing a work environment based on collaboration and collegiality with all other employees. The effectiveness of an action of a leader is the key for achieving public leadership as a form of collective leadership, which can be developed within the Romanian public sector in coming years.

From the perspective of public leadership, the structure of a work team becomes functional and depending on how the authority within the group shifts, the acceptance by team members, an authority with coordinating role, animation and control its activities. Thus, the nature of authority prescribed for a particular work group, is influenced by the characteristics of leaders, how they conform to or exceed the prescriptions of their functions (Manole, 2006, p 52-54).

We could say that, under the conditions of public leadership development, as form of collective leadership needed to revitalize the local public sector, teamwork should acquire new meanings, requiring several conditions to be satisfied in order to obtain performance (Manole, 2006, p.53), as follow:

- bilateral interpersonal communication to be easy in absolutely every direction, not only in the ways prescribed by the official network, established to fulfill the task;
- affective participation in the group work to be consciously accepted by all its members ;
- the possibility to express disagreements and tensions within the group is maximum;
- individual difficulty cases need to be solved by the participation of all group members;
- division of labour to be performed after establishing common goals and accepted in relation to the structure and function of this;
- knowledge of aptitudes, reactions and initiatives of each group member, which will exclude any surprises within the team.

Work climate plays therefore an essential role in transforming the group into a team, under stable environmental conditions, the action in this environment becomes the normal expression of spontaneity potential team.

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WORK CAPACITY AND FATIGUE RELATION IN EMPLOYEES ACTIVITY

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Abstract: *The purpose of the paper is to present the relation between fatigue and work capacity of the employee, in order to highlight the importance of the two factors in organisation of the work. Because we cannot always achieve optimal working conditions, motivation and activation, we have to appreciate fatigue and the work capacity of each individual, especially if we want to assure an intensive and long lasting professional activity. It is important for the employer to understand and implement a system for work efficiency taking into account the fatigue and work capacity with the final goal to achieve better profitability.*

Keywords: fatigue, work capacity, efficiency, productivity

JEL Classification: M59

1. Introduction

The term "fatigue" is used for a long time in physiology, psychology, occupational health and sport, ergonomics, engineering psychology, medicine and other scientific fields. It has different meanings in terms of the underlying etymology, regulating mechanisms of the nature of professional activity, etc. It requires a wide circle of questions about the occurrence, development and its effects in extreme social and physiological individual cases. It is noted that the literature is not separating clearly the definition of "fatigue" and "super tired", "physical and mental fatigue", "psychological fatigue and burning", "professional fatigue", etc., which makes it more difficult to study them in the complex domain of physiological and psychological science.

The condition of fatigue not only gained great importance in science, but has become a concept that reflects the consequences of the human body and mind in different branches of its activity: sports, physical, intellectual, and communicative labour and other forms of activity.

2. Interconnections of categories "work capacity" and "fatigue"

In psychology and physiology of labour the "work capacity" and "fatigue" are viewed from the standpoint of working capacity that is determined by the degree of training, psychological and physiological state of professional functions, directing personality in work performance, may not coincide fully with the requirements of a specific activity, the possibility to achieve the efficacy of time (productive).

In such cases the fatigue will develop faster and more intensively. Conversely, the development of fatigue is accompanied by functional depletion of body and mind, leads to deterioration of work capacity, which is manifested in increase of body functions tension, decrease of functional capacity of man and therefore reduction of effectiveness.

Complicated interference between work capacity and fatigue is reflected in particular in the work before the end of the day, due to fatigue development can be determined a brief increase of work capacity, increase of work efficiency as a result of the additional efforts of human in mobilizing its functional resources, called the "last push".

The interference character of fatigue and work ability index is determined by a number of individual characteristics of the concrete specialist (professional, psychological, physiological, etc.), among which, in particular, is indicated a subjective assessment of their condition and success tasks

(Ieh, Wickens, 1988). Fatigue often means a temporary decrease in work capacity under the influence of task - her way, intensity, impact and recovery.

But reduction of work capacity is not only a symptom of fatigue, but also other functional states: monotony, mental saturation and decrease, overheating (super cooling, hunger and burning oxygen (hypoxia)), etc. If fatigue can be characterized as a “normal reaction, linked to increased blood work for a long time work” (Leonova, 1984), then other states are often the result of an activity or overstressing unilateral influence of extreme emotional or the environment. The unique direction of changes in working conditions in these events does not reflect their identity, but they differ in the ways and dynamics of tension by subjective reactions, the behaviour of character work. After Leonova, for dullness are characteristic lower overall activity, development of the human state of drowsiness, “removal” of the process activity, mental saturation state is accompanied by the development of complex emotional care. Increased fatigue is accompanied by increased blood functions, lower accuracy and speed psychomotor reactions, violations of the stability functions of attention, functional exhaustion of body reserves.

Interference of notions work capacity and fatigue define some weight in their determination about that they are reflected in two aspects - namely internal and external resources mobilization of body function and performance of work productivity. Both aspects have both notions - the effectiveness that proves the “useful activity coefficient” of the body. But efficiency and work capacity are not the same. Effectiveness is a parameter that can be appreciated at any level of load, while the ability to work as its nature is related to potential or functional capabilities of the body.

Functional capabilities of body and mind to do something concrete can be determined as a way of manifestation (appearance) of straining the maximum level of functions that provide workload (potential capabilities), and appreciation towards the previous level of functional tension (operational possibilities); in the first case it's the highest level of work capacity, and in the second - about the appropriate level of previous requirements. Related to this, some authors determine the concept of work capacity as an extreme functional capacity of man to perform a well determined task (Measiscev, 1935; Leman, 1967; Iliun, 1968; Rosenblatt, 1975; etc.); taking into account previous work capacity, other researchers since determined as an opportunity to achieve and sustain the working level for an adequate and stable functional level of functional tension in terms of standardization requirements as intensity and duration of the task (Kosilov, 1965; Striukov, Grishevskii, 1973; etc.).

Work capacity and fatigue are characterized by internal events, which reflect the level of expression and violations, as well as internal processes that determine the essence of these manifestations of work activity, training and control features of development and manifestation. For a quantitative characterization of work ability are used quantitative and qualitative indicators of labour, durability, productivity, ie. the actual work. These indices allow us to appreciate the ability of those who work directly, fulfil concrete work tasks. But forecasting such work capacity until the beginning or during the professional activity is required to use its physiological and psychological evidence indices.

Physiological aspects of physical work capacity are PWC_{170} , PWC_{150} (power of work, where the foreshortening reach 170 and 150 beats (pulse) per minute), maximum aerobic power of work, maximum use of oxygen, etc. (Zagradskii, Sulimo-Samuillo, 1982; Navakatean, 1984). Intellectual work capacity is assessed using a rich complex of psychomotor tests that characterize the important qualities such as professional reception, attention, memory, reasoning, psychomotor, etc. and study the individual characteristics (motivational, temperamental, emotional - volitional). The choice of methods and indicators are based on specific type of intellectual work by relying on professional-frontier researches (Platonov, 1970; Egarov and Zeagradskii, 1973; etc.).

So the work capacity and fatigue presents itself similar notions. The working capacity is conditioned by the absence or presence of fatigue, which in turn is characterized by the development and manifestation of this state. On the other hand the speed and rate of fatigue development in the professional activity is determined by the working capacity of man.

3. Determination and content of the notion “work capacity”

In line with the contemporary visions in psychology and physiology of man's work must be investigated as a system of attributes, which are formed as a result of including the human into activity, manifests and appreciates of work. The work capacity is determined by total internal interference of characteristics, human qualities and external factors, business skills. The character of

system of this attribute correspond to regulation of Lomov about “different order” of human qualities and the need to highlight the system of attributes reflecting individual membership of the system determined (Lomov, 1984).

In psychology and physiology of labour is a widespread notion, and also more indefinite that “work capacity of man”. There are a whole series of tests of this notion, analysis of which is given in one series of works (Egorov, Zagreadskii, 1973; Bodrov, 1983, 1987; Rudnai, Bodrov, 1983; Alisev, Egorov, 1984; Popov, 1985; etc.).

Analyzing the concept of “work capacity”, Averianov with co-authors (1993) notes that the publication in four volumes on human physiology (Smith, Teva, 1986) gives the following determination - this is “the body's ability to respond to difficulties and to meet so anything” (Smith, Teva, 1986, Vol.4). The work capacity depends on the body condition, training and inclination to give it (“the talent”). In the “Dictionary of physiology” is given the following wording: “work capacity - human potential capacity during a fixed time and efficiency due to meet a large number of works up” (Dictionary of physiology, 1987).

Different authors determined that the concept of work capacity as “the capacity or ability to perform productive work for a long period” (Kosilov, 1965, 1979), “the maximum work that man can fulfil” (Leman, 1967), “the state of body systems, preparing to show its full potential” (Iliin, 1968), “the size of human functional capacity characterized by a potential amount of human labour to perform work during a time assigned with received efficacy” (Medvedev, 1977), “the maximum capacity to perform quality work in a determined and motivated high tension of the body, which still results in pre-pathological changes, rather the overstressing and over fatigue” (Navakotikean, 1984), etc.

Stinkov and Crisceavskii (1973) thought that is rational to study the ability to work, as a forecasting category taking in consideration human working capabilities in time. It is about „current work capacity”, better to say, is about appreciation of body condition at the moment in link with the length, weight, tension, work performed and work direction character.

Most authors investigate the ability to work, as a human trait, which reflects the ability to achieve something concrete, while others identify this notion with the body's functional status. Others characterize the ability to work as a property in order to ensure a given level of labour efficiency, and some - the maximum possibility of body parameters related to intensity and duration of labour. Under this concept is understood also as potential of the body, its capacities to carry out specified work and concrete results. Identification is often observed, changing the term „work capacity”, „functional state” and „systems and body functioning”.

Egorov and Zagreadskii (1973) redistributed the concept into 2 groups. First group included determination that characterized their work capacity in terms of „functional capabilities of the human body”. Group 2 was characterized to determine understanding of „productivity”, i.e. the number of production in a unit of time, while carrying out work on „the power of data”. The authors correctly stated that the content of determination characterizes also the features ways of assessing the work ability: the first group is to determine the most appropriate methods of functional diagnostics, and 2 to index the entry method of effective and quality activities.

Generalizing different views, Averianov and co-authors (1993) found that understanding the notion of “work capacity” must reflect the following sides of the event studied:

- a) Maximum possibilities (extreme boundary) of “the body to perform a specific activity”.
- b) Physiological cost of work or price that the body must pay for the opportunity to fulfil a specific activity.
- c) Enabled capabilities, providing the exit from state of tranquillity at a necessary level for mobilization functions.
- d) Some special tracks coming from work as physiological changes of the body which determines the reduction of capacities to given work during the period required for work activity.
- e) These requirements, according to the authors, respond fully to determination of working capacity of the largest reserves of human functioning, which with no damage to health can, under a high motivational level, be achieved in a specified volume of work with expected quality (Averianov, 1993).
- f) The authors often precisely and completely described the basic characteristics of the concept of work capacity. But they did not mention that along with maximum work capacity (limit capacity of the body) is characteristic and transient (short-term, daily) and long-term work capacity, and its

dynamics is related not only to maximum capacities, but also by the previous capacities of the psyche and body. In the listing presented are mixed rules, reflecting the competitive components of this concept (body capacity), "to achieve something concrete" etc., and components on which work capacity put pressure ("physiological cost of work, capacity activation, remote consequences, functional reserves of the body", etc.). In our view, determining the term "work capacity" should reflect a general form, to find basic symptoms of the features of the work subject, the determination must already be commented out in terms of characteristics of conditions, which open its content.

Work capacity specific concept is based on the fact that is permanently concrete as work in the process in which is manifested the work capacity. In the physiology of exercise domain, such a point of view supports Farfel (1946, 1969), Volkov (1974, 1994), Zimkin with co-authors (1955), Borilkevici (1984). As a theoretical basis of these concepts can serve functional systems theory of Anohin (1973, 1975) who sustain that the body, depending on the purpose of the activity (outcome of the system), is able to form specific functional operating system that allows achieving this goal. The body is not isolated and dynamics of functional systems and training of the individual components (anatomical, physiological, etc.) occur during specific decision tasks. After Anohin, the system can be called only that chosen complex components, interference and reciprocity that becomes interference for gaining the focused result. Appreciated by such understanding of the physical phenomenon, work capacity theory can be estimated in its many hierarchical structures (Israel, 1978), according to which the specific work capacity consists of a series of constructive elements, organized for a specific task. In connection with this, it may be said that the man has a chosen work capacity, with determined boundaries, whose range is possible to determine with the potential phenogenotopic capabilities.

Therefore, it can be concluded that work capacity always shows the specific nature of the work and the final result. It is natural to assume that more close are business types; the functional systems are more suitable for their achievement. But how similar would they be, physiological and psychological characteristics of comparable types of activity, how much would they're components be similar structurally (first of all functional components of the subject structure after work), organization specific systems function will always have specific differences, sometimes very thin (small), manifested in the activity level of interference functions.

Psycho-physiological basis of human work activity is the functional capacity of the body and mind to form and to ensure its utility operations and necessary results. In work, man expresses his capacity characteristics: work capacity, labour power and capacity to action. The work capacity is determined by the human social, medical, psychological, physical possibilities to take some work, to be able to train and work with performance in any sphere of professional work. The power to work characterizes the human body and mind possibilities to form an appropriate activity. Psychologically any business opportunity in itself represents functional systems, which are present in the composition and program of work to the result gained. Any appropriate activity requires well-defined purpose - to carry out specific activities and to get concrete results that meet the purpose. Labour power determines what is specific for the given functional system, but not just any, reflects the quality of man's labour activity.

Achieving a determined appropriate activity is ensured the ability to perform activities, which is work capacity. Without activation of the work capacity any appropriate form of activity remains to functional system, ready to provide potential to human work. That is why in psychology and physiology of work the capacity work is the central concept, the scientific basis for decision of scientific practical questions.

The term "work capacity" is different from the concept of "labour power", which characterizes the human capacity to perform a quality work and with determined volume by taking account of its health. The difference between these two concepts is determined by confronting the category "labour" as a social phenomenon, which reflects a broad spectrum of specific activity, and "work" as a biological phenomenon, which reflects the determined type of a type of activity to a specific person.

After Polejaev and Macushin (1974), the work capacity of the body physiologically speaking is the ability to work, namely to reform some kind of energy to another, performing one or another "unit" function (nerve cell, muscle, etc.). This quality creates the power that moves the body - a process of challenge, energy and chemical reactions. The work capacity enables fulfilling the activities of one or other functional "unit" and forms a quantitative expression of the result of this activity. The work capacity finally determines quantitative characteristics of human work.

Man, working, may have a different initial work capacity. An important factor influencing the work capacity level is motivation, ie. all material and moral incentives which during work activity confronts his specific purposes. In the theory of functional system, the material purpose of these activities is the physiological and psychological contribution – acceptor of the result of activity. It has an important number of features that explain why the motivation in labour significantly influences the final level of human work capacity.

The purpose is the exceeded manifest (reflection) of the reality, which is why acceptance of activity as physiological unit is formed before starting work for its realization. On the one hand, this device determines the way of activity by which it can be realized the goal. But on the other hand, the acceptor of the output is the source of influences that promotes the active functional system at a given level of work capacity - maximum, optimum or minimum depending on the level and type of motivation.

In addition to motivation, on the initial size of work capacity influences the workers age, level of training, health, character and intensity of future activity, working and resting conditions, the presence of unfavourable external environmental factors and other factors.

Navakotikean with co-authors (1987) based on Anohin (1975) own research and data have proposed the following scheme of argumentation of work capacity under the influence of the task. The working strain, which is formed in concrete situations, is determined, on the one hand, by the outside working tension, and on the other hand – by the functional status of the argument, presented in that moment, formed because of the previous state and state that will be created as a result of the future activity, and the level of functional resources of the body. The operating voltage systematized by the influence of external factors on the body, so its internal state includes the history and changes regulated by the accepted mechanism of the output. Strain from work (labour) is a mobile feature, dependent largely on labour momentary tensions and functional state of the body. Fatigue, whose occurrence is related to the level of functional and energy reserves, is a more energetic characteristic. High plasticity and stability of biological systems are provided on account of duplication or organization. Its adapted defence reactions are realised through mobilization of functional reserves of all systems in account of directed centralized leadership. It can be assumed that such centralization of management is manifested also when develops the fatigue, because namely in this case for the body is necessary to achieve the expenditure of functional and energy resources. It was found that the higher the structural - functional level of the organized system, the lower is the frequency of the hierarchical system. Perhaps the evolution of fatigue must be accompanied by a decrease in frequency of physiological processes and psychological insecurity in the body.

The basis for slowing down this frequency in the deepening of fatigue and her passing in over fatigue, according to Navakotikean et al., is the braking guard of nerve cells necessary to protect the body from loads. Such braking of cells, that are in different parts of the nervous system and therefore bring different functional tasks, can lead to desincronisation of physiological and psychological processes of the body.

The analysis of existing presentations about the notion of work capacity, and the research experience of operators' activity gives the possibility to study the characteristics of work capacity as a basis of human socio-biological capacities, reflecting its qualities to fulfil something concrete during the time reserved with an effective maximum or normal functional and functional resources level (Bodrov, 1983, 1987).

Is necessary the differentiation of determining the work capacity for a specific act, and to determine its duration and conditions of realisation, man can have a high work capacity in a specific type of activity and its own state of professionalism in professional and functional formation and not to be capable enough to work in that sphere of labour. He can show the necessary levels of work capacity in a work process or own power distribution on a longer working live. Some activity or other extreme conditions of some people cause decreased work capacity, and others manifest in such conditions a high level of stability.

The work capacity of man and the degree of stability is determined by all professional components, psychological and physiological, reflecting the most basic features of the subject of activity:

a) Experience and training - the level of development, plasticity, stability, special knowledge, skills, abilities;

b) Personal inclinations of the specialist - the character and level of the requirements, tasks and business reasons;

c) Functional status of body and size of capacity reserves, body condition, presence of fatigue (over fatigue), psycho - nervous strain, "heavy" mental states, etc. In addition, work capacity, in particular its dynamics, depends on the individual psychological, physiological, physical characteristics of the subject of activity, also engineer - psychological, psycho-physiological, anthropometric, hygienic and other qualities of the object content (means, structures), conditions and organization of work.

The term "work capacity" is used, usually, in connection with a fixed, concrete activity. This finds expression in individual assessments of the way work. But in many cases this understanding is used in a general form, non-specific (eg. intellectual or physical work capacity, work capacity at operators, etc.). Using the term "work capacity" in the sense of phrase (several words) does not allow to found something concrete, to reflect the content of activity, her professional indications, methods of assessment and ways of raising the work capacity. Also remains questionable the proper use of (correct) notion of "speculators work capacity (motor)", because the work capacity category is an integrated attribute of the subject of the activity. If we use the term "work capacity" in connection with the characterization of a system (body), as law, consider the process parameters, status and results (evidence) of their operation, which is why more accurate would be the use of notions as "dynamics and the functional status of the systems (organ)", "effectiveness and quality of functions realisation after appropriate indexes".

Given the longevity factors of work capacity manifestation of a given level, they may differ as long lasting and effective. This distinction is determined by:

- a) The common or current functional status;
- b) Targeting towards some kind of professional activity in the broad sense of the word, rather, in a stable form of reasons, interests, needs or even target of a specific work task;
- c) Stable level of training to achieve a specific work activity or high professional training, in realisation of specific professional tasks in a certain time.

"Work capacity" understanding should be considered from two perspectives. On the one hand, is the presence of the level over a period of time. In practical researches and assessment of a specific level of activity that is the basic feature of the work capacity and the quality of functional psychophysical and physiological cost index activity, mainly from the work. The work capacity, achieved under defined conditions, usually is studied as extended features, better said the opportunities to perform such work under the same conditions with analogue effectiveness.

On the other hand, the term "work capacity" is the psychological derived category of "capacity" and in this plan it means the human potential ability to perform a specific job with determined efficiency and quality. In this case at the base of the work capacity concept is made all the psychological, physiological and other human conditions for successful build and develop qualities that determine the experience and training to achieve a concrete thing. Such clues of work capacity must demonstrate not only the effectiveness and quality of work, but first, dynamic development, professional development of important psychological and physiological functions of the body.

Such an understanding of work capacity is close enough to determine what Alishev and Egorov (1984) proposed: a feature with "functional level of training the body to carry out (or continue) a specific activity that occurs under practical conditions of life, regime, longevity, efficiency, stability, etc. Manifestations of such training are: the original (and current) system status indicators and body functions, which form the structure of psycho-physiological activity" (Alishev, Egorov, 1984).

The work capacity level is manifested in a complex of measures of effectiveness (productivity, efficiency) and quality of professional activity, also the functional reactions of the body and subjective statement. Although professional indications are undoubtedly the criteria of work capacity presence level, the functional indices reflect the psychological and physiological "cost" of the activity and characterize the potential of the body in achieving a determined efficacy level.

4. Dynamics of work capacity

One of the characteristics of work capacity is "work incentive" reflecting the operational growth on a continuous time (shift, watch) in professional and psycho-physiological indicators at different stages and phases of its manifestation.

Dynamics of work capacity was analyzed for the first time by Krepelin (1898) who used the term “fake work”. If the first work capacity attempts was characterized only the external indices of results (Ananiev, 1968; Cameron, 1974), then in contemporary researches it is described in terms of adaptation of body conditions and professional - motivational factors (Kosilov, 1965; Leonova, 1984; Navakotikean, 1993; etc.).

Despite the diversity of proposed descriptions of this dependence (Dereveanko, 1979; Hogan, Schelton, 1998; etc.) as usually, are presented some general, more typical levels: optimal processing of work capacity, a full compensation, unstable compensation, final breaks, and progressive decrease in productivity (Figure no. 1). Their longevity and level of expressionism is determined by the influence of many factors (difficulty and strain of work, the influence of unfavourable factors of environment, health, work, etc.) and can vary up to drop some of them (Medvedev, 1970; Leonova, 1984; Navakotikean, 1993; etc.).

Complex assessment of work capacity state and its relation with development of fatigue leads to the index, reflecting the dynamics of functional possibilities of the body, business productivity, emotional – volitional tension and fatigue. The maximum possibilities of the body depend on its state, functional training, work experience, the trend towards their work. Business productivity is conditioned, on the one hand, by the maximum possibilities of the body to carry out the work given, on the other hand - the emotional - volitional voltage regulating the use of functional reserves of the body. Emotional - volitional tense depends on individual physical features, attitude towards work, and importance of its social responsibility. Fatigue as a violation of the functional state is characterized by decrease of reserve of body and mind, which manifests itself in a worsening series of objective and subjective indices.

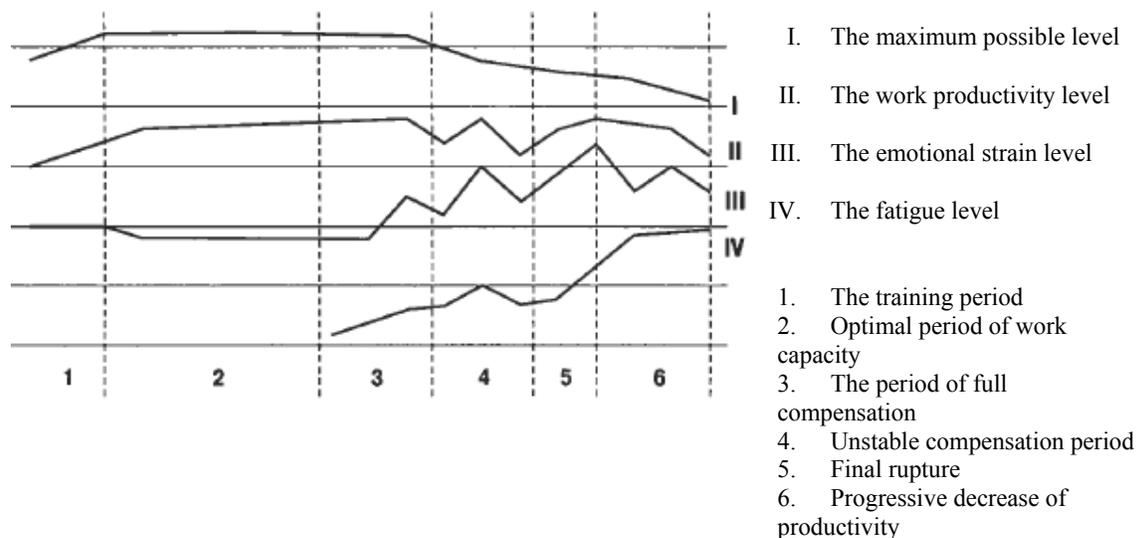


Figure 1: Dynamic stages of work capacity

Source: Dereveanko, 1979

In the proposed literature (Dereveanko, 1957; Medvedev, 1970; Navakotikean, 1984; etc.), and data received in their research output (Bodrov, 1969, 1983) have been determined the following levels and stages of work capacity:

I. Preparatory - is related to the training objectives of achieving a concrete thing, adding (updating) the necessary information regarding the content, conditions and organization of a concrete work, mobilizing the body and mind to ensure the successful fulfilment of the work, stating the production process.

II. Production or increasing level of work capacity. Gradual entry of man into actual productive work takes place because they have a significant influence on various secondary factors, which were held until the end of exchange, shift. During this work, the habits are unstable, weak, inert, accompanied only by activities and operations. Then following the exercises during the work, the technical and economic indices reach the maximum level.

This state includes several phases of formation:

a) The mobilization phase characterizes the stage of involvement in the activity: increases the exchange processes, increases the tone (degree of vitality), strengthens the activity of the cardiovascular system, rises the central nervous system tone, hinders the activity of the digestion, takes place focus, begins to dominate the business reasons for working;

b) Phase of initial reaction may occur immediately after beginning work and is characterized by worsening indices of time and precision of activity (the experienced and trained people are usually missing);

c) Hyper-compensation phase is characterized by the nature of the optimum activity. At this stage the worker is not stable, there is an increase in deliberate and conscious errors, usually the energy costs pass the optimal importance, and the worker's movements are less accurate, than the best.

III. Work capacity stability phase (phase of compensation) - a stable work capacity at a high professional level, it's up to raise the technical and economic indices, which appear in the first stage; the basic functional system gains importance and dominant ability of stability, is characteristic the stability of maximum importance of technical-economic indices (usually - "paid") and the appropriate optimal importance of energy expenditure of human; the working reactions are fixed, correspond to the required rate, is targeted an established activation of memory attention; information processing is in accordance with the body requirements of precise determination of tasks, labour productivity and its efficiency is maximum.

V. Phase of fatigue develops. The technical-economic indices start to decrease, and increases the functional tension, worsens the neurophysiologic and psychological conflict between basic functional systems and recovery. At this stage distinguish several stages of work capacity:

a) Compensation phase, characterized by decrease of work capacity as a result of fatigue development in the central nervous system and worsening the energetic balance, specific requirements are violated in the appropriate energy decrease energy expenditure, and appropriate energy reactions changes with some less useful (eg. blood effort in strengthening the muscles which not only decrease heart rate and thickening), decreases less the focus, no changes in the higher mental functions virtually stage, for this phase is characteristic alternation of long periods of stability, gradually changes to a number of indices, labour productivity remains high, but its effectiveness decreases;

b) Decomposition phase is characterized by gradually worsening the work capacity, visibly reduces the energy supply of the activity, alter the motivational characteristics of the character of work - begins to dominate the reasons for going into business, its conclusion, worsen the climate social-psychological parameters of the collective, sudden increases the number of quantitative and qualitative errors, productivity decreases. Usually this phase of activity is interrupted, as it can go in breaking pre-pathological stage, where there is a breakdown of body functions. If completion of the work coincides with the end stages of under and early decomposition phase, the other can be seen breaking the final phase, understood as a temporary mobilization of all body reserves with the sudden increase in labour productivity.

Fatigue status at the time of work termination may be compensated for a short period on account of the urgent mobilization of reserves motivational sphere, which is accompanied by raising the work capacity (final fracture stage).

For the over fatigue state are characteristic violations of flow and exchange of the typical work capacity phase. Usually already at the start of the activity the work capacity's initial level suddenly decreases and the activity occurs in the compensation phase.

Short duration of the passage of separate phases, showing their characteristic reactions and even exclusion of some stages can vary to an important extent depending on the kind of work, the training of specialists, its individual peculiarities, status of health and other factors.

Violations of functional status in the result of intensive and long lasting professional activity, characteristic for fatigue after work, is normalised and restored.

Fatigue factors as stimulator of recovery processes and practice have been dedicated to a large number of investigations. One of the first researches of this kind have done by Folibart (1955) and his students. It was found that the more manifested the fatigue, the greater the speed of recovery process. But in this case often is overlooked that, not taking into account the speeding recovery, if fatigue increases, duration increases. Regarding the influence of fatigue on the level of training, there are enough data testifying that high duties, which lead to manifestation of fatigue, provide training of the body. But in concrete cases it is necessary to decide what worsening level of training is appropriate for

some people or contingent necessary to achieve something concrete and full vital activities during the life span.

Depending on the development particularities in business process and manifestation of fatigue in rehabilitation process, their duration and character have some peculiarities. There are the following rehabilitation processes:

- A passing rehabilitation in the work process especially when changing from one kind of activity to another;
- Urgent rehabilitation observed especially after work;
- Abandoned rehabilitation (left), which takes place over several hours after the end of work.

A more importance in determination of activity regulating questions has the outcomes of abandoned rehabilitation assessment of psycho - physiological functions, characterized by curl leakage. Manifests and duration of these curling processes depend on the size of the task, the performance of work, functional state. So, for example, after the day flight (9-15 hours) to aviators the time the rehabilitation has two kinds of strong values: first - the maximum change of physiological indices are observed after 3-6 hours after the flight, the second - after sleeping the night the next day. After long flights (18-24 hours), the recovery processes passes after a single wave model closely with maximum change of the physiological indices at about 9:00 am. These features of working hours and rest are for prevention of fatigue aggregation.

The event of fatigue is closely related to present work capacity phases. Work capacity stations and functions can be characterized as response changes of the body to the requirements before the character of the work. Navakotikean (1995) believes that these changes are formed under the influence of two basic processes. It occurs mainly by activating the central nervous system as a result of raising limbic-reticular systems and adjustment of the vegetative nervous and endocrine system, which increases the current work capacity due to the effectiveness of all functional rings system. As fatigue develops it decreases the functional reserve, which is the restraint system from excessive spending. Therefore are seen in the work, changes the work efficiency, the correlation of psycho - physiological manifestations of work capacity is integrated, especially these two processes. Their results may be raising or lowering the prevalence of work capacity current dependence of the processes mentioned above. After the phase of full compensation comes a decrease in functional reserves and the body moves to a less favourable type of reaction energy. During this time, the objectives symptoms of fatigue are maximized, but it can occur at the worker as a fatigue symptom. The volitional efforts, fatigue is compensated, is made by including in work the nerve centres and synergistic muscles, and physiological inputs of sections vegetative nervous system and hormonal activity, that ensures activation human processes.

In the concrete conditions of production activity or while carrying an extreme current, close work capacity, does not always have a typical form. Duration, alternation and the level of manifested periods are determined by the influence of multiple factors and can vary up to complete collapse. This is why a satisfactory appraisal of work capacity and fatigue must take into account the effectiveness of work, state of mental and physiological functions, subjective data.

Fatigue and work capacity are closely related. Determined level of work capacity, the state of those behaviours that determine this notion; professional status of important psychiatric and physiological functions, training towards specific work with a specific goal of productivity and quality and then the fatigue process will grow more intense and have more types and vice versa, development of fatigue leads to division of work capacity, which is manifested in decrease of functional possibilities of the body and mind, reflected as the breach of the activity effectiveness.

Analysis of literature data and own research results allowed Navakotikean (1984) to propose a mathematical conceptual model where are reflected foundations interference of work capacity (P) and fatigue (I) with the effectiveness of work (e), nature of work performed including its goals (W), productive (production) environment conditions (C), state of physiological systems, that fulfil directly the work activity, which he mark it as a state of information system (j), the system status of limbic - cross linking activation or subsystems to ensure energy (E), and subsystem motivation (M).

The basic formula looks like this:

$$e=W*c*j*E*M \quad (1)$$

where all indices express relative units.

They are equal to units in the case of optimal importance C, E, M. Disorder of options does not change many times the size of indexes, each time it changes the work efficiency.

The real work capacity (P) is estimated by physiological and production indices while carrying a concrete thing (W) under optimum conditions:

$$P=e_{\max}=W*C_0*I_{\max}*E_0*M_0 \quad (2)$$

where index (mx) and (0) is maximal and optimal importance function.

Besides this C changes, between two points in time (t_1 , t_2), caused by work, reflect the fatigue (its level (Y)):

$$Y=P_{t_1}-P_{t_2} \quad (3)$$

Because we cannot always achieve optimal working conditions, motivation and activation, to appreciate fatigue should be used indices C and I, received in case of stable levels of employment conditions and activate the body. Such indices of fatigue unlike the real ones (Y), is appropriate to register that the standard indicators id noted with index "s":

$$Y=P_{s t_1}-P_{s t_2} \quad (4)$$

$$P_s=e_{\max}=W_s*C*I_{\max}*E_s*M_s \quad (5)$$

Compliance with these conditions is not easy, but if no standard conditions, the fatigue and work capacity indicators are random sizes, which may not reflect changes in work capacity and fatigue.

Mutual reactions between the work capacity and fatigue are simple, which proves that raising labour efficiency before the end of working hours ("final break") or can actively and productively handle other interests after a hard day of work.

It is known many methodologies and indicators for assessing work capacity, which determined the need of classification to research and practical decision tasks (Rojdestenskaia, 1965; Zagreidskii, Egorov, 1973; Rosenblatt, 1975; Sopov, Solodkov, 1980, Kudrin and others, 1981). For diagnosis of pilots work capacity level was developed a classification (Bodrov, 1983, 1987), according to which all indexes (properly and methodically) subdivide in direct (work) and indirect (functional).

Direct indices characterize the efficacy and safety of professional duties or functions and operations. On his return, direct indices of work capacity are further subdivided into indices of performance of the real professional tasks and so-called work tests, rather, standardized by volume, time and conditions for performing the tasks, presenting themselves, as content, some real elements of work activities (eg. tracking tests, checking information from aboard photo layouts, receiving and sending Morse code, etc.).

Work capacity indirect indices are divided into current indices of functional state of the body and reserves of its possibilities. The first may be objective registered in the state of tranquillity or activity process by means of physiological, psychological, biochemical measures (dimensions) and other measures and subjectively, by means of conversation, surveys performance, interviewees, etc. Reserve indices of body possibilities determines in the process of functional tasks, that characterize their evidence, primarily, the level of tension and clearing capabilities of various body systems by additional tasks due to core activity, introduction of technology refusal during tasks fulfilment in training.

The given classification determines the basic methodological procedures and evidence, which use allows objectively and fully determination of tasks to study and diagnosis of work capacity level based on regulation on the essence of category data.

Presentation of ideas about triple composition of the structure and content category of "work capacity" determines the ways and means of raising them or supports a specific level. This task is possible, primarily, by improving the quality of individual professional, second, trend development of participation in a profession working under concrete objectives for the successful fulfilment of a specific task, in the third - leadership, correcting functional status, in particular, prevention, development of fatigue and restore of normal state.

Multiple studies have found that short-term reduction of work capacity may be subject to a number of functional violations in the body. They relate to disease status and expression of the remaining functional disturbance caused by the influence of unfavourable factors of life, fatigue and over-fatigue, psycho-nervous tension and a series of mental states, such as dominant, drowsiness, mental demobilization, early euphoria, phobia, etc.

5. Conclusions

Peculiarities of any activity, the purpose, content and product of labour, with labour issue, determine the professional features of the employee, reflecting the specific of the activity, in

particular, characterizing the fusion of subject and occupation, the individuality of the activity, individuality and safety, and others. Among the various functional states of the man, work related, such as stress, boredom, etc., a special place is the fatigue in response to loading of each activity. Any occupation that requires effort is indispensable to fatigue, leading to reduction of the ability to work. Fatigue is a criterion for determining the level of validity (capacity and efficiency of work) of the individual. It is used extensively in the work process standardization and regulation, professional training and assessment of the work process, optimization of human interdependence and technology, design of functional activity taking account of its functional capabilities. Fatigue is a component in the complex system of life, leading to physiological and psychological adjustment of the body for the professional activity.

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EVOLUTION OF MAIN STATISTICAL INDICATORS THAT CHARACTERIZE ANIMAL PRODUCTION AT COUNTY LEVEL TELEORMAN FOR THE PERIOD 2000-2009

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Abstract: *Knowing the evolution of the main statistical indicators that characterize farm animal production has an important role in the development of strategies in the county agriculture. Rates of growth, the likelihood of these rhythms and amplitude oscillations for different probabilities can be the defining elements in drawing up plans to ensure a certain amount of animal products. Statistical indicators allow comparison with other countries to be able to find ways to increase production to highest possible level our country can achieve.*

Key words: livestock, average productions, the mean square deviation, standard deviation, coefficient of variation.

JEL classification: Q - Agricultural and Natural Resource Economics; Environmental and Ecological Economics; Q19 - Other

1. Introduction

Meat consumption and milk products have increased four times in the last four decades, and the World Bank believes it will increase by another 50% until 2020. There are already twice more chickens than people on the planet, 1 billion pigs, 1.4 billion cattle and 1.8 million sheep that eat more food than they produce. (Cheran, 2009)

Meat consumption is expected to increase from 87.4 kg / capita in 2004 to about 89 kg in 2012. Pork, with nearly 50%, is by far the favorite of consumers in the EU, followed by poultry, with an increase of 27%, and has surpassed beef and veal since 1996. Milk production in EU-25 is expected to increase slightly in the medium term, with the increase of the quotas, until it achieves the level of 145 million tons in 2012. Milk production in the new Member States, covering about 15% of total EU production is estimated to remain stable, around 22 million tons (Bursa Agricola, 2005-2012).

The pace of expansion of world trade in meat could reach over the next decade the level of 2.5% per year. Brazil will be the main beneficiary of booming exports of meat, by the end of the next decade reaching a market share of 30% of total world meat exports. United States will be also found, among the countries with an increase in the market share of exports. Russia remains the largest net importer of meat of OECD countries, followed by Japan.

In general it is considered that the meat market will not evolve in the next decade as spectacularly in terms of prices, as well as the milk market or the cereals. Only the chicken has known in 2007 a faster rate of price increase (+20 %). For the next ten years, estimates show a moderate expansion of prices by approximately 18-20 percent for beef and the chicken and 19-24 % for the pork, compared with the average of the last decade.

Forecasts also indicate a decline in the share of OECD countries in the production and worldwide export, and in many agricultural goods until 2016 (Commission Communication). Even if these States will increase their share of the world production of wheat, as far as the oilseeds, milk, beef, pork and poultry, the report of the European Commission forecasts a considerable reduction of this share.

This will have as an effect an increase in both South - South (developing countries) trade, as well as an increase in exports, from the developing countries to developed countries.

2. Materials and Methods

In this analysis we used the following indicators: arithmetic average mobile, the mean square deviation, standard deviation, coefficient of variation, confidence limits for a given risk, average annual growth rate, amplitude confidence limits for a given risk compared to average and the

statistical significance of these indicators. We used the following data: Romanian Statistical Yearbook and Statistical Yearbook Teleorman County.

The formulas used (Ceapoiu, 1968; Demographic growth art.):

For the arithmetic average = $\bar{x} = \frac{\sum xi}{n}$, in which,

\bar{x} = the arithmetic average mobile, X_i = average production values on a number of years (i) n = number of years taken into consideration

For average annual growth rate = $r_{2000-2009} = \sqrt[n]{\prod p_i / p_0} - 1$, where:

$R_{2000-2009}$ = annual average growth rate, $\prod p_i / p_0$ = indicators of the interlocked growth

For standard deviation = $\partial = \sqrt{\frac{\sum(\bar{x} - xi)^2}{n}}$, where:

∂ = Standard deviation; x_i = average production values on a number of years
 n = number of years taken into consideration

For the mean square deviation = $\partial x = \sqrt{\frac{\sum(\bar{x} - xi)^2}{(n-1)}}$, where:

∂x = mean square deviation, confidence limits for certain levels of risk = $\bar{x} \pm \partial \bar{x} * tp$, where tp = tabular values based on probability and number of observations (in this case the number of years).

For confidence limits for a given risk $X \pm \partial x * tp$, in which:

X = the arithmetic average, mean square deviation; tp = tabular value for the transgression probability (risk)

Oscillation amplitude of the confidence limits = $((X + \partial x * tp - X - \partial x * tp) / X) * 100$.

For the coefficient of variation = $C = \frac{\partial}{\bar{x}} * 100$, where: C - coefficient of variation (expressed as percentage)

The coefficient of variation can be: between 0-10% - low variation, between 10-20% - middle variation, over 20% - big variation.

3. Results

Teleorman County Livestock evolution over the 2000-2009 period is as follows (Table 1): there is a tendency to decrease the heads of cattle at a rate of -1.45% from 60000 heads in year 2000 to 53000 heads in 2009. The same downward trend is noticed in cows and heifers at the same annual rate of -0.76% at the county level. Pig livestock has a annual growth rate of -1.99% in the Teleorman county, this is due to the decreasing flocks and the oscillations from year to year.

So if in the year 2005 the pig population was 225,400 heads, in the year 2009 it was 121000 heads.

We have a decrease in the livestock of breeding sows from 12,000 heads in the year 2000 to 5000 heads in the year 2009. (-9,84 %).

Table 1. Evolution of livestock in the county Teleorman, during 2000-2009

Species/ Category	UM	Years					Med/ Rhythm
		2000	2003	2005	2007	2009	
Cattle	Thousands heads	60	53.8	53.3	59.2	53	55
	%		1.00	1.01	1.12	0.93	-1.45
Of which cows and heifers	Thousands heads	43	38.7	40.5	42.6	40	40
	%		0.99	1.09	1.13	0.99	-0.76
Swine	Thousands heads	145	118.9	225.4	198	121	166
	%		0.88	0.96	0.99	0.79	-1.99
Of which breeding sows	Thousands heads	12	8.8	18.3	10.5	5	11
	%		0.88	1.10	0.93	0.80	-9.84
Ovis	Thousands heads	157	125.8	123.1	153.4	139	133
	%		0.98	1.05	1.24	1.01	-1.31
Of which Sheep and young	Thousands heads	142	113.8	113.3	131.7	120	118

sheep	%		0.97	1.09	1.15	1.02	-1.84
Capra	Thousands heads	29	32.2	33.8	43	40	35
	%		0.83	1.17	1.28	1.01	3.77
Of which Goats	Thousands heads	23	25	26	32	27	26
	%		0.81	1.13	1.23	0.89	1.63
Birds	Thousands heads	3138	3091.4	2914.3	4107.8	2684	3094
	%		0.99	0.98	1.39	0.89	-1.72
Of which laying birds	Thousands heads	1688	1815.2	1863.6	1975.5	1764	1889
	%		0.93	0.89	0.98	0.86	0.49

Source: Teleorman County Statistical Yearbook 2010 (INS , 2010)

During the period analyzed we observe that sheep livestock dropped at an annual rate of -1,31 %, respectively from 157000 heads at 133000 heads in the year 2009. The same trend is manifested with the herds of sheep and young sheep . There's a growth trend is capra from 29000 to 35000 heads (annual growth of 3,77 %) and in laying birds from 1688000 to 1889000 heads (annual growth of 0.49 %).

Table No.2 Developments in agricultural crops animals at Teleorman county level , for the period 2000-2009

Species/Category	UM	Years					Med/ Rhythm
		2000	2003	2005	2007	2009	
Cow meat	TTLW	5.8	8.7	7.3	7.9	7.1	6.9
	%		1.2	1.3	1.3	0.8	2.3
Swine meat	TTLW	21.8	19.3	19.4	16.1	9.3	16.7
	%		0.9	1.6	1.0	0.7	-9.0
Sheep and goat meat	TTLW	2.8	2.8	2.3	2.3	4.3	2.9
	%		0.9	0.5	1.2	1.8	4.8
Poultry meat	TTLW	7.7	6.3	6.3	6.3	5.1	6.7
	%		0.7	1.2	1.1	0.9	-4.4
Cow milk	thousands HI	1243.0	1232.0	1269.0	1342.0	1172.0	1255.10
	%		1.0	1.1	1.0	0,86	-0,65
Chicken eggs	Thousands pieces	147.0	181.0	225.0	247.0	200.0	206.7
	%		1.0	1.1	1.0	0.8	3.5

Source: Teleorman County Statistical Yearbook 2010 (INS, 2010); TTLW (Thousands tonnes liveweight)

Meat production in the county was analyzed through the following indicators: annual growth rate, coefficient of variation and confidence limits oscillations of the production for the probability of 90%, 80% and 60%. So at cow meat is a slight increase from 5.8 TTLW to 6.9 TTLW, with an annual increase rate of 2.3%. The coefficient of variation is 17.2% (medium variation). The amplitude of the confidence limits for risk for 10% (probability 90%) is 71.2%, for 20% risk is 53.48 % and for the risk 40% is 34.03% .

Compared to other meat products it is the lowest. (Table 3 and 4). Analyzing the acquisition price of cow meat in lei / kg live we found that it increased in this period from 1.13 / kg to 4.79 lei / kg, with an average growth rate of 17.41%. (Table 5). Cow meat price variation is 99.61% of the average price of 2.88 lei / kg live for a risk of 10% and 47.61% for a risk of 40% (table no. 6).

Table 3. The size of the standard deviation and the coefficient of variation of the main animal products, over the period 2000-2009, in the Teleorman county

Species/Category	UM	The average of years 2000-2009	Standard deviation	Coef. Of Variation	
				%	Significance
Cow meat	TTLW	6.92	1.19	17.12	Middle var
Swine meat	TTLW	16.70	3.93	23.52	High var
Sheep and goat meat	TTLW	2.90	0.86	29.54	High var
Poultry meat	TTLW	6.66	1.52	22.85	High var
Cow milk	thousands HI	1255.10	66.02	5.26	Low var

Chicken eggs	Thousands pieces	206.70	32.47	15.71	Middle var
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Source: Teleorman County Statistical Yearbook 2010 (INS, 2010); TTLW (Thousands tonnes liveweight)

After studying the evolution of production of swine meat in Teleorman county level we can see a decrease from the 21,8 TTLW to 9,3 TTLW in 2009 decreasing by -9,0 %. The coefficient of variation was about 23,52 % (great variation) (Table 3). The amplitude of the average in 2000-2009 , namely 16,70 TTLW, was of 97,83 % for the risk of 10 %, 73,48 % for the risk of 20 % and 46,76 % for risk of 40 %.

Table 4. The size of the mean square deviation and the oscillation of the amplitude from the average over the period 2000-2009 for the main animal products in Teleorman county

Species/ Category	UM	The years average 2000-2009	The mean square deviation	p90%, risk=10%		p=80%, risk 20%	p=60%, risk=40%	
				limits		Amplitude %	Amplitude %	
				min	max			
Cow meat	TTLW	6.92	1.33	4.5	9.4	71.20	53.48	34.03
Swine meat	TTLW	16.70	4.39	8.5	24.9	97.83	73.48	46.76
Sheep and goat meat	TTLW	2.90	0.96	1.1	4.7	122.86	92.28	58.72
Poultry meat	TTLW	6.66	1.70	3.5	9.8	95.05	71.39	45.43
Cow milk	Thousands HI	1255.10	73.82	1117.8	1392.4	21.88	16.43	10.46
Chicken eggs	Thousandspieces	206.70	36.30	139.2	274.2	65.33	49.07	31.23

Source: Teleorman County Statistical Yearbook 2010 (INS ,2010); TTLW (Thousands tonnes liveweight)

Analyzing the acquisition price of pig meat it shows an increase in the analyzed period from 1.79 lei / kg to 5.1 lei / kg, in 2009, with an average growth rate of 12.34%. (Table 5). Oscillation amplitude of the pork price is of 90.32% of the average price of 3.76 lei / kg live for a 10% risk of 67.84% for a risk of 20% and 43.17% for risk of 40%. (table no. 6).

Table no. 5. The annual growth rates of the average purchase prices for the main livestock products at the level of Teleorman county over the period 2000-2009.

Species/Category	UM	Years					Med/ Rhythm
		2000	2003	2005	2007	2009	
Cow meat	RON kg live weight	1.13	2.39	3.3	2.98	4.79	2.88
	%		0.91	1.26	0.90	1.36	17.41
Swine meat	RON kg live weight	1.79	3.3	4.69	3.55	5.1	3.76
	%		0.96	1.20	0.85	1.10	12.34
Sheep and goat meat	RON kg live weight	2.29	4.74	3.31	3.52	5.33	3.85
	%		1.16	0.75	1.20	1.27	9.84
Poultry meat	RON kg live weight	1.79	2.9	3.78	3.33	3.47	3.10
	%		1.04	1.21	0.90	1.02	7.63
Cow milk	RON /l	0.26	0.56	0.64	0.75	0.9	0.61
	%		1.22	1.03	1.12	1.02	14.79
Chicken eggs	RON / piece	0.09	0.17	0.22	0.24	0.3	0.20
	%		1.21	0.96	1.14	1.15	14.31

Source: Romanian Statistical Yearbook 2009 (INS , 2009)

Analyzing the sheep and goat meat production at the Teleorman county level we find an increase from 2.8 TTLW in 2000 to 4.3 TTLW in 2009, the annual growth being 4.8%. (Table 2). The coefficient of variation is of 29.54% , the variation is considered high.

The amplitude of the average achievements of 2.90 MTGV is 122,86 % for a risk of 10 %, 92,28 % for a risk of 20 % and 58,72 % for a risk of 40% (Table 4).

The purchase price of meat of sheep and goat meat increased in the period under consideration from 2.29 lei/ kg at 5,33 lei/kg, having an average rate of increase of 9.84 %. (Table 5). Price variation of sheep and goat meat is of 76,85 % of the average price of 3.85 lei per kg live weight, for a risk of 10 %, 57,72 % for a risk of 20 % and 36,73 % for a risk of 40 % . (table 4).

Table No. 6. The size of the mean square deviation and the oscillation of the amplitude from the average at the price of the main animal products during the period 2000-2009 in Teleorman county

Species/ Category	UM	The years average 2000-2009	Mean square deviation	p90%, risk=10%		p=80%, risk 20%	p=60%, risk 40%	
				limits		Amplitude %	Amplitude %	
				min	max			Amplitude %
Cow meat	RON kg live weight	2.88	0.772	1.447	4.317	99.61	74.81	47.61
Swine meat	RON kg live weight	3.76	0.912	2.060	5.454	90.32	67.84	43.17
Sheep and goat meat	RON kg live weight	3.85	0.794	2.367	5.323	76.85	57.72	36.73
Poultry meat	RON kg live weight	3.10	0.614	1.958	4.240	73.66	55.32	35.21
Cow milk	RON/l	0.61	0.192	0.256	0.970	116.46	87.47	55.66
Chicken eggs	RON/piece	0.20	0.057	0.095	0.307	105.28	79.08	50.32

Source: Romanian Statistical Yearbook 2009 (INS, 2009)

Regarding the cow milk product in the Teleorman county we found that the milk production has a slight decrease from 1243 thousand HI in 2000 to 1172 thousand HI in 2009, the annual decrease is by -0.65%.

The value of the coefficient of variation is 5.26% (low variation). The amplitude of production compared with the average of years(1255 thousands HI), was 21.88% for a 10% risk , 16.43% for a risk of 20% and 10.46% for a 40% risk. (Table 4).

The milk price has seen a significant increase from 0.26 Ron / liter in 2000 to 0.9 Ron / liter in 2009, the annual growth being of 14.79% (Table 5).

Price variation during the analyzed period compared with the average price was 0.61 Ron / liter , 116.46% fo a risk of 10%, 79.08% for a risk of 20% and 50.32% for a risk of 40%.

4. Conclusions

- The knowledge of the evolution of the main statistical indicators that characterize agricultural animal production has an important role in developing strategies in the county agriculture. The meat production in the county was analyzed through the following indicators: the annual growth rate, the coefficient of variation and the confidence limits oscillations of the productions for the probability of 90%, 80% and 60%.

- In Teleorman County the livestock evolution over the period 2000-2009 is as follows: for the cattles, livestock number has a tendency to decrease at a rate of -1.45% from 60000 heads in 2000 to 53000 heads in 2009 , the swine presents an annual growth rate of -1.99%, sheep decrease with an annual rate of -1.31%, respectively, from 157,000 heads to 133,000 in 2009.

- With cow meat we see a slight increase from 5.8 TTLW to 6.9 TTLW, with an annual growth of 2.3%. The amplitude of the confidence limits for the 10% risk (90% probability 90%) is 71.2%, for 20% risk is 53.48% and for the 40%.risk has the value 34.03% .

- Regarding the swine meat in the county of Teleorman it has decreased from 21.8 TTLW to 9.3 TTLW in 2009 with a -9.0% decline. The amplitude compared to the average 2000-2009 (16.70 TTLW), was of 97.83% for 10% risk , 73.48% for 20% risk and 46.76% for 40% risk.

- The production of sheep and goat meat in the county, increased in value from 2.8 TTLW in 2000 to 4.3 TTLW in 2009, the annual growth is by 4.8%. Analyzing the acquisition price for mutton and goat meat we can see an increase in the analyzed period from 2.29 lei/ kg to 5.33 lei /kg.

• Concerning the production of cow milk at Teleorman county level it is found that milk production knows a slight decrease from 1243 thousand HI in the year 2000 to 1172 thousand HI in 2009, the annual decrease rate being of -0,65 %. The price amplitude analyzed during the period has been compared to the average price of 0.61 Ron / liter and has shown a 116.46% value for a 10% risk , 79.08% for 20% risk and 50.32% for the 40% risk .

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MANAGEMENT STRATEGIES OF THE ORANGE MOBILE TELECOMMUNICATIONS COMPANY FACING THE ECONOMIC-FINANCIAL CRISIS

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Abstract: *The telecommunications operators have to determine the optimal strategic direction through a careful appreciation of the four main elements of change on the telecommunications market: the technology, the legislation, the clients and the competition. The powerful motivation behind the strategy of growth of every operator already present on a market is a defensive one – the protection of the central market share and the maintenance of the incomes at the current levels. The new competitive environment of the mobile telecommunications needs trained operators to take strategic decisions in uncertain conditions.*

Key words: convergence strategy, strategic alliances strategy, fusion-acquisitions strategy, tacit agreement strategy, advanced technology strategy

JEL classification: M16, G01

1. Introduction

Any strategic approach is founded on a good knowledge of the company and its environment, made possible through the company's diagnosis. Within this context, the global company's diagnosis allows understanding the existing connections between the strategic position, the resources, the defining characteristics of an organization and its managerial culture. The global diagnosis is made at two distinctive levels: the external environment analysis, known as external diagnosis and the internal environment analysis. We can identify several alternatives that will allow us solving the problem and reaching the established objectives, based on the analysis of the gathered information from different internal and external sources. An important role within this stage is the generation of an important number of options that will then be analyzed and evaluated.

The purpose of this research consists in determining the strategic orientations of the Orange Romania mobile telecommunications operator. For accomplishing this goal, we formulated two questions that we tried to answer through a questionnaire:

- What are the elements with the highest competitive potential that the company takes into consideration?
- What are the growth elements that the company focuses on?

2. Literature review

Once opening the telecommunications industry towards competition, the disadvantages of the internal development become obvious. The ritual of the internal growth is limited by the time constraints for the development of the transmission infrastructures, construction of communication nodes, installation of new technologies or training the employees; this aspect can be seen as a competitive disadvantage towards the competition and, often, a strategy of alliances or fusion-acquisitions is imposed.

Towards the handicap of the weak speed of the internal growth, the traditionally adopted strategy by the companies so as to manage the activities from the dynamic sectors with high technology is that of the **external growth** (Ohmae, 1990). This concept can be defined as „a strategy of growth through acquisition of taken control of the whole range of production ways already combined, already in function and, compulsory, second hand.” (Paturel, 1983)

Within the telecommunications field, the development of the networks and operational ways, that are the base for the acquisition of other operators can bring earnings of growth much more important than the strategies of internal growth or alliances.

The second option for the company's development that allows a rapid growth consists in adopting a **cooperation strategy**, in which the most important shape is represented by the alliances. As Grochla and Schonbohm underline, the cooperation is „*a collaboration that is based on tacit or contractual agreements between autonomous companies from a juridical point of view and independent from an economic point of view*” (Grochla et al., 1980). This strategy supposes an external growth through operations of fusion-acquisitions, when it can be translated as a loose of autonomy and independence of one of the partners.

Another fact that explains the growths in importance of the cooperation strategy through alliances is that is approaching many industries (biotechnology and pharmaceutical industry, electronics and automobiles construction, informatics and telecommunications etc), a company can not develop itself (time factor) or to achieve the needed abilities (costs and risks factors) so as to follow the evolution of its environment. An alliances strategy allows the access to these abilities, reducing the restrictions that come from the „*time*”, „*costs*” and „*risk*” factors, keeping the company's autonomy.

Acquisitions are generally associated to fusions. We speak of M&A (**merges and acquisitions**). In reality, these two operations are distinct from a juridical point of view. „*Merges represent the reunion of at least two pre-existent companies through the absorption of one by the other or through the creation of a new society which “absorbs its creators”*”. (Blanchot F. et al., 1995, pp. 145). The absorbed company is dissolved, while its patrimony is transmitted to the absorbing company. We speak here of the dissolution without liquidation.

Contrary to the fusions, „*the acquisitions are favourable, because they correspond to a taken over with no ambiguity of the new assembly*.” (Gouali, M., 2009, pp. 76) If the target company is listed, the take over is done through a public offer of buying or exchange. These allow the clear identification of the several sources of synergy and the mobilisation of the rare resources to create value.

3. Research methodology

The data gathering method was the questionnaire sent by post office to all the Orange Romania branches (a total of 225 branches). The addresses of these mobile telecommunications branches were taken from the Internet site of the Orange Romania mobile telecommunications operator (www.orange.ro). We received a number of 64 responses, what means a responses rate of 28.4%, which were analyzed using the SPSS informatics program focusing on the correlation analysis and factor analysis.

Hypothesis no 1: The Orange company follows at least one of the following strategies: the convergence strategy for the offered services, the strategic alliances strategy, the fusion-acquisitions strategy, the tacit agreement strategy and the advanced technology strategy.

Hypothesis no 2: The Orange mobile telecommunications company focuses on the following elements of growth: the geographical expansion, the customers' base expansion, the service offered development and the diversification of the service offered.

Hypothesis no 3: The competitive dimensions that the Orange mobile telecommunications company focuses on are: the continuous communication with the clients, the personalized offer for a client, the clients' needs anticipation, the variety of the services offered, the growth of the efficiency of the network services sales, the major innovations, the key technologies control, the efficiency of cost and capital investments, the data transfer speed and the externalization of some less important activities.

4. Results

Analysis of the hypothesis no 1. Using the exploratory factor analysis we will verify the measurement scale regarding the strategies followed by the Orange mobile telecommunications company. A KMO indicator of 0.646 allows accepting the results of this factor analysis. (Table 1)

Table 1. KMO indicator

KMO test	
Kaiser-Meyer-Olkin measurement	0.646

Source: Data analysis using the SPSS informatics program

The final analysis revealed the three factors regarding the quality of the representation. (Table 2) The highest value (0.684) is attributed to the factor the alliance strategy, followed by the tacit agreement strategy (0.614) and the fusion-acquisitions strategy (0.533). This factor solution explains more than 60% of the total dispersion. (Table 3)

Table 2. Representation quality

Answers	Initial	Extraction
Strategy of strategic alliances is followed by the company	1.000	0.684
Strategy of fusions-acquisitions is followed by the company	1.000	0.533
Strategy of tacit agreement is followed by the company	1.000	0.614

Source: Data analysis using the SPSS informatics program

Table 3. Explained variation in percentage, number of factors

Components	Total	% dispersion	% cumulate	Total	% dispersion	% cumulate
1	1.831	61.039	61.039	1.831	61.039	61.039
2	0.673	22.442	83.481			
3	0.496	16.519	100.000			

Source: Data analysis using the SPSS informatics program

The Table 4 results reveal the extracted dimension, together with the component elements. These are:

- The alliance strategy;
- The fusions-acquisitions strategy;
- The tacit agreement strategy.

Table 4. Structural coefficients

Answers	Components 1
Strategy of strategic alliances is followed by the company	0.827
Strategy of fusions-acquisitions is followed by the company	0.730
Strategy of tacit agreement is followed by the company	0.784

Source: Data analysis using the SPSS informatics program

The alfa Cronbach coefficient, an internal coherence indicator of a measurement scale has the value 0.678. We can take in consideration this value as being an accepted minimum. (Table 5)

Table 5. Alfa Cronbach coefficient

Alfa Cronbach	Number of elements
0.678	3

Source: Data analysis using the SPSS informatics program

There is also a connection between the elements of growth that the company underlines. In this regard, we can observe a tight link between the alliances strategy and the tacit agreement strategy (0.49; $p < 0.01$).

Analysis of the hypothesis no 2: The Orange mobile telecommunications company focuses on the following elements of growth: the geographical expansion, the customers' base expansion, the service offered development and the diversification of the service offered.

The exploratory factor analysis will be used to verify the measurement scale regarding the growth elements that the company focuses on. Thus, the KMO indicator (0.500) allows accepting the results of this factor analysis. (Table 6)

Table 6. KMO indicator

KMO test	
Kaiser-Meyer-Olkin measurement	0.500

Source: Data analysis using the SPSS informatics program

The representation quality of the variable *clients' base expansion* and *the development of the offered service* have the same value (0.675). (Table 7) The table with the total dispersion presents the dimension that resumes the information. This explains in a percentage of 67.544% the total dispersion. (Table 8)

Table 7. Representation quality

Answers	Initial	Extraction
Clients base expansion represents an element of growth that the company focuses on	1.000	0.675
Development of the service offered represents an element of growth that the company focuses on	1.000	0.675

Source: Data analysis using the SPSS informatics program

Table 8. Explained variation in percentage, number of factors

Components	Total	% dispersion	% cumulate	Total	% dispersion	% cumulate
1	1.351	67.544	67.544	1.351	67.544	67.544
2	.649	32.456	100.000			

Source: Data analysis using the SPSS informatics program

In the Table 9, the second column corresponds to the extracted dimension, with coefficients that can be interpreted as correlation coefficients. The two components are:

- *The clients' base expansion;*
- *The offered service development.*

Table 9. Structural coefficients

Answers	Components
	1
Clients base expansion represents an element of growth that the company focuses on	0.822
Development of the service offered represents an element of growth that the company focuses on	0.822

Source: Data analysis using the SPSS informatics program

Analysis of the hypothesis no 3: The competitive dimensions that the Orange mobile telecommunications company focuses on are: the continuous communication with the clients, the personalized offer for a client, the clients' needs anticipation, the variety of the services offered, the growth of the efficiency of the network services sales, the major innovations, the key technologies control, the efficiency of cost and capital investments, the data transfer speed and the externalization of some less important activities.

The exploratory factor analysis will be used to test the measurement scale regarding the elements that the Orange Romania mobile telecommunications operator focuses on regarding the clients, mobile telecommunications services and the mobile telecommunications network.

From the Table 10 we can see a KMO indicator of 0.725, what allows us to accept the results of this factor analysis.

Table 10. KMO indicator

KMO test	
Kaiser-Meyer-Olkin measurement	0.725

Source: Data analysis using the SPSS informatics program

The quality of the representation of the variable *the control of the key technologies in mobile telecommunications services* has a value of 0.703, while the quality of the representation of the variable *the major innovations in mobile telecommunications* is 0.497. (Table 11)

Table 11. Representation quality

Answers	Initial	Extraction
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Regarding the clients, the company focuses on the continuous communication with them	1.000	0.628
Regarding the clients, the company focuses on the personalized offer	1.000	0.631
Regarding the clients, the company focuses on the variety of the services offered	1.000	0.631
Regarding the mobile telecommunications services, the company focuses on the major innovations	1.000	0.497
Regarding the mobile telecommunications services, the company focuses on the domination of the key technologies	1.000	0.703
Regarding the mobile telecommunications network, the company focuses on the data transfer speed	1.000	0.556

Source: Data analysis using the SPSS informatics program

The Table 12 presents the two dimensions that summarizes the information. The first dimension allows explaining the phenomenon's dispersion in a percentage of 30.887%, while the second dimension synthesizes the phenomenon in a percentage of 29.864%. The two dimensions explain the total dispersion more than 60% (60.751%).

Table 12. Explained variation in percentage, number of factors

Components	% dispersion			% cumulate			Total	% dispersion		% cumulate
	Total	% dispersion	% cumulate	Total	% dispersion	% cumulate		Total	% dispersion	
1	2.516	41.927	41.927	2.516	41.927	41.927	1.853	30.887	30.887	
2	1.129	18.825	60.751	1.129	18.825	60.751	1.792	29.864	60.751	
3	.732	12.200	72.951							
4	.679	11.309	84.260							
5	.525	8.747	93.007							
6	.420	6.993	100.000							

Source: Data analysis using the SPSS informatics program

According to the Table 13, the dimensions that the company focuses on are:

- *The continuous communication with the clients;*
- *The personalised offer for the clients;*
- *The variety of the services offered to the clients;*
- *The major innovations in mobile telecommunications services;*
- *The control of key technologies in mobile telecommunications;*
- *The speed of data transfer regarding the mobile telecommunications network.*

Table 13. Structural coefficients

Answers	Components	
	1	2
Regarding the clients, the company focuses on the continuous communication with them	0.699	0.373
Regarding the clients, the company focuses on the personalized offer	0.520	0.601
Regarding the clients, the company focuses on the variety of the services offered	0.729	0.316
Regarding the mobile telecommunications services, the company focuses on the major innovations	0.608	-
Regarding the mobile telecommunications services, the company focuses on the domination of the key technologies	0.703	0.456
Regarding the mobile telecommunications network, the company focuses on the data transfer speed	0.601	0.441

Source: Data analysis using the SPSS informatics program

We then verify the reliability of the measurement scale, using the Alfa Cronbach coefficient. In this case, its value is 0.795, considered to be acceptable. (Table 14)

Table 14. Alfa Cronbach coefficient

Alfa Cronbach	Number of elements

Alfa Cronbach	Number of elements
0.705	6

Source: Data analysis using the SPSS informatics program

Also, from the data analysis we can say that there is a strong connection between the continuous communication with the clients and the variety of the services offered (0.50; $p < 0.01$), on one hand and, on the other hand, between the efficiency of the cost and investment of capital of the telecommunications network (0.39; $p < 0.01$). Moreover, controlling the key technologies is closely linked to the speed of data transfer (0.44; $p < 0.01$) and the major investments (0.43; $p < 0.01$).

5. Conclusions

The hypothesis no 1 is completely validated. Analyzing the responses, the Orange company follows the following strategies: the alliances strategy, the fusions-acquisitions strategy and the tacit agreement strategy. We can observe a close correlation between the alliances strategy and the tacit agreement strategy.

The hypothesis no 2 is partially verified. The Orange mobile telecommunications company focuses on the following elements of growth: the expansion of the clients' base and the development of the offered service.

The hypothesis no 3 is partially confirmed. The competitive dimensions that the Orange mobile telecommunications company focuses on are: the continuous communication with the clients, the personalised offer for the client, the variety of the services offered, the major innovations, the control of the key technologies and the speed of data transfer.

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HOW SOCIAL RESPONSIBILITY IMPROVE THE INNOVATION POTENTIAL OF COMPANIES. EVIDENCE FROM ROMANIA

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Abstract: *The aim of this paper is to determine whether the corporate social responsibility influences or not the innovation potential of companies. The study is based on a quantitative research made on a sample of companies from Romania regarding their innovation potential and how the social responsibility initiatives can improve it. The research provides evidence that many firms believe that social responsibility initiatives can have a positive effect on their innovation potential, but in practice few of these use corporate social responsibility as a strategic driver for innovation. However, considerable differences can be observed between industries and firms.*

Key words: corporate social responsibility, innovation, social value, sustainability

JEL classification: M14, O31, C12, C51

1. Introduction

Corporate social responsibility (CSR) is defined by the European Commission (2010) as “a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”. We define CSR as voluntary corporate commitment to exceed the explicit and implicit obligations imposed on a company by society's expectations of conventional corporate behaviour. That is, CSR represents voluntary firm endeavours which benefit society.

The aim of this paper is to determine whether the corporate social responsibility influences the innovation potential of companies. Despite the effects of financial crisis, innovation is the key to progress. Company need to cultivate a safe and respectful work environment where employees can create and innovate. The safety and wellness programs help employees enjoy a better quality of life and a very good work-life balance. Environmental initiatives have impact throughout the different stages of product life cycle, from research and development to end-of-life management. Sustainable development requires management of energy consumption, air emissions, reduce water consumption, and resource conservation. Company must examine its resource productivity and reduce total resource loss, including waste recycling. Identify solutions to increase the recycling/recovery rate by develop recycling technologies and expand usage of renewable resources.

Our study attempts to fill the gap in the corporate social responsibility literature by examining relationship between social responsibility and sustainable innovation. A review of the empirical evidence presents how sustainability creates new opportunities. The key objective of this study is to examine the role the CSR activity play to improve the companies' innovation potential. CSR creates a favorable context that positively boosts consumers' evaluations of attitude toward the organization.

The study is based on a quantitative research made on a sample of companies from Romania regarding their innovation potential and how the social responsibility initiatives can improve it. We develop a conceptual model and test a set of hypotheses predicting the influence of social responsibility initiatives on the innovation potential of firms.

Findings from our study make several contributions. First, we find that many firms believe that social responsibility initiatives can have a positive effect on their innovation potential, but in practice few of these use corporate social responsibility as a strategic driver for innovation. Second, our study attempts to fill the gap in the corporate social responsibility literature by examining relationship between social responsibility and sustainable innovation. A review of the empirical evidence presents how sustainability creates new opportunities. Third, considerable differences can be observed between industries, and even between firms within an industry, in the importance of social responsibility and innovation. Fourth, some companies from transportation and manufacturing industries are concerned to develop technologies to achieve the best fuel efficiency performance and

reduce CO₂ emissions and PFCs in their operations, for example, low CO₂ – emitting production technologies. The overall implication that can be drawn from the findings consist in identify a harmony between people, society and environment, and sustainable development of society through innovation. In addition, ethical climate can influence social performance because innovation and creativity of employees and cultural dimensions are considered the underlying determinants of organizational performance.

This study provides statistical evidence as to the role of social responsibility initiatives to develop dynamic capabilities and generate competitive advantage. The originality of the paper comes from the exploration of the innovation potential of Romanian companies from sample by influence of social and environmental initiatives. Finally, a discussion about the theoretical and managerial implications precedes the conclusions with the study's limitations and directions for further research.

2. Background and Hypotheses Development

Social responsibility, according to Carroll, includes both ethical and discretionary, but not economic and legal responsibility. A social responsibility may provide a company the social capital that can be used for competitive advantage, Carroll (1979). In this case, corporate sustainability focuses on the following areas: ethics, governance, business relationships, transparency, community involvement, product or service value, employment practices, and environmental protection, Daft, (2010).

Corporate social responsibility is essentially a concept whereby companies decide voluntarily to contribute to a better society and a cleaner environment, Sprinkle and Maines (2010). Practically, companies should use the CSR initiatives as a solution to reduce the risks and operational costs. Today, only a few number of companies, especially those from developed countries, have understood that CSR initiatives can be used as an efficient support of innovation. Firms try to obtain competitive advantage based on upper social performance or differentiation through the mode what seek to satisfy the requirements of stakeholders. As a consequence of low interest, the civil society play a marginal role in CSR dynamics.

Few studies have focused on the strategic aspects and benefits of CSR and the gains to society from these actions. There has been little consideration of the CSR initiatives and innovation performance because it is difficult to evaluate the benefits of this activities. The use of CSR to capture value for the firm was first referred to as „strategic” CSR by Baron (2001). Firms can capture the value of social initiatives through the effect on the firm's reputation. An enhanced reputation can be a strategic resource because it can lead to ... attract a human capital valuable human capital. For example, employees can be a strategic resource when they are more creative and innovative than the employees of other firms (McWilliams and Siegel, 2011). CSR initiatives constitute a key element of corporate identity that can induce customers to identify with the company and create a very good climate for creativity.

Michael Porter and Mark Kramer have remarked as „in the long run ... social and economic goals are not inherently conflicting but integrally connected” (p.5). They have realized that many economic investments generate social return and many social investments have an economic impact and they are focalised over create and development of social capital, Porter and Kramer (2006). Therefore, companies need to integrate these two approaches through intensification of innovation efforts, but the results would consist in generation of economic and social benefits, Porter and Kramer (2002).

Globalization intensify the pace of changes. An overall competitive economy emphasis the innovation, but this approach depend on human imagination, motivation and collaboration. Social responsibility often generate the experiences that leading to improve the knowledge level and, implicitly to innovation of products, processes or business models. Rosabeth Moss Kanter has realized as „the attention placed on social needs often generates ideas that lead to innovations” Kanter (2011). The overwhelming rationale for companies to engage in CSR actions is long-term profitability linked with corporate efficiency. CSR engagement is seen as providing opportunities for competitive advantage through differentiation. The commitment to voluntary activities in the field of CSR will help them increase profitability in the future.

CSR activities focus on meeting customer desires and protecting future generation, companies want to delight consumers with sustainable innovations, Sprinkle and Maines, (2010). CSR initiatives are extrinsic cues to consumers with low, rather than high, levels of expertise. In addition, structural

capital defines network characteristics, knowledge sharing and strength of social interactions. Improvements in innovation performance through collaborative relationships are increasingly critical to service design, delivery process design, ability frontline employees to customization of service (Lawson et al., 2008).

The level of education quality and research activity in a company are the prime determinants of the innovation capacity. The innovation potential of the company is sustained by quality education, and a skilled workforce. Through education initiatives companies are helping communities build local capacity to improve education. The education initiatives are materialized to grant scholarships, endowment of laboratories or schools modernization, all together contribute to increase the professional level of employees. The innovation potential depends of the human resource quality attracted, and education has an critical role to realize this goal, Smith (2008).

Through „base of the pyramid (BOP)” companies are focalised their efforts on development of products or services what meet the consumers needs and answer at the social problems of community, Prahalad and Hammond (2002). For example, firms make investments to develop products or services for markets from all the world. Firms can create the rewarding markets while they meet the pressing needs of the poor people. They may use the social problems as a source of the new opportunities while they solve the pressing social needs. We formulated hypothesis H1 in order to clasify this relationship.

H1: The social initiatives are positively associated with the level of innovation potential

Environmental initiatives have impact throughout the different stages of product life cycle, from research and development to end-of-life management. Sustainable development requires management of energy consumption, air emissions, reduce water consumption, and resource conservation. From a medium to long term perspective fossil fuels are finite and energy diversification is essential. Company need to develop technologies to achieve the best fuel efficiency performance and reduce CO₂ emissions and PFCs in their operations, for example, low CO₂ – emitting production technologies. Company designs its product to be energy-efficient, utilize environmentally preferable materials, and be capable of being reused, recycled or disposed of safely at the end of their useful lives. Company must examine its resource productivity and reduce total resource loss, including waste recycling. Identify solutions to increase the recycling/recovery rate by develop recycling technologies and expand usage of renewable resources. Some companies implanted measures to simplifying wrapping operations and expanding the utilization of returnable shipment containers. Energy conservation and environmental protection, closely collaborates with business partners across the value chain, and promotes sustainable development of the industry. Harmony between company, peoples, society, and nature is extremely important. Hence, we develop the following hypothesis.

H2: Companies with safe and respectful work environment are more likely to attract and retain skilled talent employees to improve innovation

Employees give a company its primary source of competitive advantage, so talent management is a top priority for smart managers. A company need to have access to the highly skilled talent to remain competitive by recruiting and cultivating the best talent. Workforce diversity increases innovation potential through a broad diversity of talents and views. In addition, the company need to encourage creative behavior and foster innovation by reward programs, cultivating open and direct communications, and investing in career development and leadership.

The goal of every company is to maintain viability through long-term profitability. Corporate initiatives that use core competencies to enhance social welfare. Socially responsible practices may create savings and, as a result, increase profits. Company need to cultivate a safe and respectful work environment where employees can create and innovate. The safety and wellness programs help employees enjoy a better quality of life and a very good work-life balance. Companies need to encourage employees to evaluate, improve and maintain their health care and safety work. Thus the employees are physique and mental at their maxim potential of creation and innovation. Staff motivation is a powerful bottom-line benefit of corporate responsibility. Thus, organization supports the development growth of ideas from innovation to delivery and working environment where inspiration thrive and creativity flourishes. In addition, working externally and internally with organization and specialists who have the strongest capabilities for innovation is a greate opportunity.

Hence this study will examine the health care and safety work in the relationship between CSR and innovation by testing hypothesis H3.

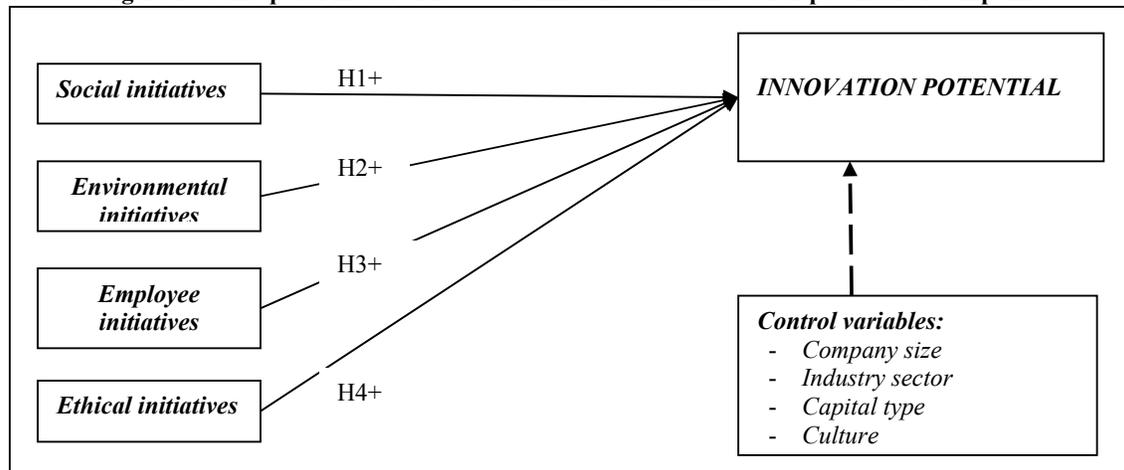
H3: The higher the extent of health and safety care of employees, the higher the level of innovation potential

Ethical responsibilities are obligations that transcend legal requirements. Ethical business practices, operates with integrity. Firm promotes fair operations, and opposes bribery, corrupt activities, dumping, and so on to build a harmonious business environment. A few studies have examined the impact of ethical issues on social performance. Innovation is by its nature experimental, and so there are often risks associated with way in which the research programmes are elaboration and are assessed the results of innovation. Team work, conflicts of interests, the workplace satisfaction, diffusion of new innovations into organization, the transparency of financing the innovation projects, adapted innovation at requirements of stakeholders, respect for human dignity are key drivers of innovation and creativity of employees what is based on solve the ethics problems for organization. Therefore, ethical climate can influence social performance because innovation and creativity of employees and cultural dimensions are considered the underlying determinants of organizational performance. Hence, we develop the following hypothesis.

H4: Ethical considerations will lead to increase the innovation performance

Innovation requires a variety of competencies at key stages in the innovation cycle. In addition, innovation is extremely complex concept and multi-faced and requires integrative thinking. On the basis of consulted literature and following one pilot study we have got to the followings dimensions of the innovation potential: the number of new or improving products and services, the number of developed processes, the number of patents, the number of new ideas, new technologies, new businesses patterns, networks and alliances, innovation climate, innovation talent, reputation for innovation, and time to launch new products on markets. Our theoretical arguments and hypotheses are summarized in the conceptual model shown in Figure 1.

Figure 1: Conceptual model of how CSR influences the innovation potential of companies



3. Research Method and Data

We tested the hypotheses in our model by examining the perceptions of respondents about influence of CSR initiatives on innovation potential of companies. We tested a series of statistical hypotheses using ANOVA method. At the beginning were calculated the descriptive statistics: means, eta and standard deviations for the dependent, independent, and control variables. The second stage is dedicated to conduct an analysis to identify the differences between various companies groups by comparing means. Finally, a multiple classification analyses is used to find out the extend to which the CSR predict the innovation potential.

The target group aimed in this study consist of companies with Romanian or foreign capital of different sizes that operations in services field or manufacturing, indifferently of the industry sector in which the company operation. Our sample was drawn from Romanian companies and it consist of

28 companies (N=28). The structure of sample reproduced good enough the structure of population from which it has extracted. The sample was realized by random extraction of items from statistical collectivity by „sampling without replacement”. Data were collected in 2011 using as primary source from data base consist of companies registering in the National Trade Register Office, Romania.

To realize a quantitative research we have elaborate and validate an structured questionnaire. As a result, we have organized an focus group to identify the main problems refer to the knowledge level and the way in which the CSR initiatives can be used to stimulate the innovation in companies. Within our sample, 58 percent were service companies, 80 percent were SRL, and 8 percent multinational branches. The respondents belong to the management of companies. We have thought the management has enough knowledge and information about CSR activity and the innovation potential of companies.

Based on the feedback from the participants in a pilot study and literature, the research procedure, description, and questionnaire items were refined. Practically, in this study has only been considered the initiatives which potentially should influence the innovation potential of companies. The subjects filled the questionnaire concerning what social responsibility initiatives were important to them as drivers of innovation potential. The questions were measured on Likert scales of 1-7. There were altogether 16 questions about CSR initiatives.

4. Measures and Results

The *dependent variable* in our study was *innovation potential*. This variable can be measured by the aggregation of more drivers: the number of new or improvement products or services, the number of new or improvement processes, the number of new technologies, strategies, structures, procedures or policy, development in the last three years. In our study the innovation potential was assessed by the importance of innovation of new operating processes, products or services in organizations. Respondents were asked to estimate the following statement: „the innovation of new operating processes, products or services is an important value in your organization”. Subjects completed and returned a total of 25 answers, which constituted a response rate of 89.3 per cent. The quantitative research need to define the innovation potential score by IPindex. The innovation index seeks to measure the wider forms of innovation and to present the results comprehensively at both the aggregate level of individual innovation. The survey was designed to examine the strength of innovation with the CSR initiatives of organization activity by enhanced reputation and credibility organization building better relationships with stakeholders.

The next variables *training and education initiatives, developing career of employees, poverty initiatives, the reaction of company to social needs, employees' satisfaction, employees' motivation, health and safety, energy and climate, reduce CO₂ emissions and PCFs, reduce water consumption and resource conservation, recycling of resources, ethical responsibility, open innovation, ethical innovation, and ethical considerations* altogether are measured by using a scale of 1-7 (1= “not at all important” to 7=“very important”).

Subjects were asked: “involvement in education programs dedicated communities is an important value in your organization”, “involvement in developing and utilizing employees is an important value in your organization”, “innovative efforts to develop new products or services to meet the needs of poor people (Base of the pyramid – BOP) is an important value in your organization”, “the reaction of your organization to social needs is an important value in your organization”, “attraction and restraint the best talents is an important value in your organization”, “concerned about work environment, career development, decision making, and compensation systems is an important value in your organization”, “concerned about the health and safety of employees is an important value in your organization”, “concerned about utilize the renewable sources of energy is an important value in your organization”, “concerned about reduce CO₂ emissions and PCFs in operations is an important value in your organization”, “concerned about reduce water consumption and intensify resource conservation is an important value in your organization”, “concerned about recycling of resources is an important value in your organization”, “concerned to have an ethical climate is an important value in your organization”, “the availability to collaborate and co-innovate openly is an important value in your organization”, “innovation and creativity of employees need to be ethical and is an important value in your organization”, and “ethical considerations and the ability to minimize and manage conflicts of interest is an important value in your organization”.

Control variables. We controlled for several variables that were not of direct interest for testing our hypotheses but could be theoretically related to the dependent variable and might provide plausible alternative explanation for our findings. *Company size* is one of most critical determinants of innovation potential Bharati and Chaudhury (2010). We coded company size as 0 for small size (less than 50 employees), 1 for medium size (more than 50 but less than 250 employees) and 2 for large size (more than 250 employees). *Industry sector* is the second control variable. We coded this variable thus: automotive as 0, chemicals as 1, construction as 2, electric engineering as 3, food industry as 4, healthcare industries as 5, mechanical engineering as 6, tourism as 7, toys as 8, information and communication technologies as 9 and others as 10. The *capital type* is coded as 0 for Romanian capital and 1 for multinational branch.

Table 1: Descriptive statistics

Variable	Mean	Standard deviation	Sig	Eta
<i>Industry sector</i>				
Automotive	6	0.23	.751	.527
Chemicals	6	1.239		
Education	3.4	1.14		
Others	5.57	0.976		
Construction	5	0.67		
Electric engineering	5	0.00		
Food industry	4.5	0.707		
Health care	4.5	2.121		
Mechanical	6	1.45		
Tourism	5	2.12		
IT&C	5.4	0.548		
<i>Company size</i>				
Small	4.71	1.604	.873	.104
Medium	4.83	1.169		
Large	5.13	1.17		
<i>Capital type</i>				
Romanian	4.63	1.165	.03	.411
Foreign	5.67	0.866		
<i>Culture</i>				
Entrepreneurship	5	1.1	.202	.346
Bureaucratic	3.86	1.215		
Focuses on customers	5.5	0.855		

Descriptive statistics of different initiatives of CSR are shown in Table 1. It indicates that the importance of company size received a mean values range from 4.71 to 5.13. The industry sector reflects that automotive, mechanical and chemicals have a quite meaningful into sample and a important potential to improve the innovation potential by CSR initiatives, especially from environment activities. All variables used to identify how CSR initiatives can improve the innovation potential of company were measured within 16 statements. *Eta* tells how much one variable can explain the variance of innovation potential. We can notice that the industry sector and capital type are the main predictors of innovation potential. For example, industry sector explains 52.7 per cent of the variance of innovation potential.

Tables 2(I) and 2(II) report the correlations matrix for the study variables. We can see that there are correlations between the variables of interest. However, few problems with multicollinearity exist. Convergent validity correlations were in line with expectations: ethical innovation is most strongly correlated with the importance of innovation ($r=0.47$), less so with poverty initiatives ($r=0.45$), and weakest, yet still significantly, with poverty initiatives ($r=0.22$).

Table 2 (I): Correlation matrix (N=28, two-tailed test)

Variables	1	2	3	4	5	6
The importance of innovation (1)						
Training and education initiatives (2)	0.03					
Developing career of employees (3)	0.32**	0.60**				
Poverty initiatives (4)	0.29	0.23	0.38*			
The reaction of company to social needs (5)	-0.09	0.52**	0.22	0.24		
Employee satisfaction (6)	0.34	0.43*	0.51**	0.07	0.36	
Employees' motivation (7)	0.42**	0.32	0.35**	0.45*	0.24	0.53**
Health and safety (8)	0.45*	0.25	0.48**	0.57**	0.18	0.33
Energy and climate (9)	0.21	0.39*	0.32	0.42*	0.58**	0.34
Reduce CO ₂ emissions and PCFs (10)	0.06	0.25	0.22	0.16	0.53*	0.35
Reduce water consumption and resource conservation (11)	-0.16	0.37*	0.19	0.29	0.48**	0.22
Recycling of resources (12)	0.22	0.47*	0.48*	0.34	0.41*	0.23
Ethical responsibility (13)	0.10	0.43*	0.43*	0.20	0.29	0.48**
Open innovation (14)	0.42*	0.58**	0.46**	0.21	0.34	0.38*
Ethical innovation (15)	0.47**	0.13	0.45**	0.22*	0.25	0.33
Ethical considerations (16)	-0.13	0.30	0.32	0.02	0.40*	0.05

Table2(II) Correlation matrix (N=28, two-tailed test) / continuation

Variables	8	9	10	11	12	13	14	15
Energy and climate (9)	0.2							
Reduce CO ₂ emissions and PCFs (10)	0.23	0.69**						
Reduce water consumption and resource conservation (11)	0.25	0.50**	0.55**					
Recycling of resources (12)	0.37*	0.54**	0.69**	0.55**				
Ethical responsibility (13)	0.13	0.53**	0.55**	0.48**	0.52**			
Open innovation (14)	0.28	0.33	0.20	0.11	0.35	0.35		
Ethical innovation (15)	0.54**	0.40*	0.25	0.19	0.34	0.12	0.43	
Ethical considerations (16)	0.10	0.14	0.29	0.10	0.26	0.14	0.33	0.22

** Correlation is significant at the 0.01 level (two-tailed)

* Correlation is significant at the 0.05 level (two-tailed)

Multiple linear regression analysis was used to assess the relationship between the dependent variables (innovation performance) and the independent variables. The results are shown in Table 3. We can see that reaction of companies to social needs has a positive relationship with innovation potential ($\beta=0.673$, $p<0.05$) and this supports Hypothesis 1. Furthermore, as was hypothesized, health and safety care has a positive relationship with innovation potential ($\beta=0.581$, $p<0.001$) and supports Hypothesis 3. Energy and climate have a positive relationship with innovation potential ($\beta=0.379$, $p<0.05$) and Hypothesis 2 is supported. Recycling of resources has a positive relationship with innovation potential ($\beta=0.446$, $p<0.05$) and Hypothesis 2 is supported. However, we observe a negative but not significant association between training and education initiatives and innovation potential ($\beta= -0.301$, $p>0.05$). A positive and significant relationship between ethical considerations and innovation performance ($\beta=0.948$, $p<0.001$) in line with our Hypothesis 4.

Table 3: Ordinary Least Squares (OLS) regression results

Variable	Beta	t	Sig
<i>(Constant)</i>	-	1.93	.08
<i>Training and education initiatives</i>	-.301	-1.73	.11
<i>Developing career of employees</i>	-.093	-.570	.58
<i>Poverty initiatives</i>	-.857	-3.08	.01
<i>The reaction of company to social needs</i>	.673	2.671	.02
<i>Employee satisfaction</i>	.466	2.208	.053
<i>Employees' motivation</i>	-.402	-2.17	.052
<i>Health and safety care</i>	.581	-3.16	.00
<i>Energy and climate</i>	.379	1.899	.047
<i>Reduce CO₂ emissions and PCFs</i>	.244	1.242	.238
<i>Reduce water consumption and resource conservation</i>	.127	.597	.56
<i>Recycling of resources</i>	.446	-2.28	.04
<i>Ethical responsibility</i>	.567	3.063	.01
<i>Open innovation</i>	.707	3.955	.00
<i>Ethical innovation</i>	-.55	-2.35	.04
<i>Ethical considerations</i>	.948	3.98	.00
R²		0.780	
R		0.883	
Adjusted R²		0.506	
Standard error of the estimate		0.557	
F-value		2.843	
Sig (model)		0.04	
Dependent variable: <i>the innovation potential</i>			

The coefficient of multiple determination is $R^2 = 0.78$. Values of R^2 between 0.5 and 0.8 may be reasonable. Adjusted R^2 measures the percentage of the variation of dependent variable around its mean that is explained by the regression equation, adjusted for degrees of freedom. The highest possible adjusted R^2 is 1. However, in our case it is 0.506, a value vary low. The standard error of estimate is the power the fit of the regression whether $SEE > 0.5$, SEE for our model is 0.55 (OK!). Although R^2 and adjusted R^2 measure the overall degree of fit of an equation, they don't provide a formal hypothesis test of that overall fit. Such a test is provided by the F-test. The calculated F-value is 2.843 and F-statistic we can compute it using Statistical Table. If we choose a 5 percent level of significance, the numerator degrees of freedom equal 16, and the denominator degrees of freedom is 11, then F-statistic is 2.46. We can reject the null hypothesis because the calculated F-value (2.843) is greater than the critical F-value (2.46) and concluded that the equation does indeed have a significant overall fit.

5. Conclusions

In this paper we argue that CSR has a role to improve the innovation potential of companies. The findings (shown in Table 3) strengthen our argument that some CSR initiatives such as employee satisfaction, support for open innovation, health and safety care, the reaction of company to social needs and poverty initiatives all together may contribute to improve the innovation potential, and implicitly the organization performance. Our analysis also suggests that process innovation is often linked to the skills of employees. Collaboration with clients and/or suppliers allows a firm to gain considerable knowledge about new technologies, markets, and users' needs. The collaboration is important driver for innovation. Suppliers may play a more active role in stimulating innovation by trying to influence the small firm's innovation decision. In this case, CSR is important because the relationships between organization and its suppliers are based on trust and a very good reputation. CSR initiatives have essentially role to improve the reputation for companies.

In general, we empirically provide some evidence that explains that CSR initiatives may facilitate an organization's innovation, which, in turn, positively influences its business performance. The findings of this research indicate that CSR activity may be a driver for sustainable innovation. We find that many firms believe that social responsibility initiatives can have a positive effect on their innovation potential, but in practice few of these use corporate social responsibility as a strategic

driver for innovation. Considerable differences can be observed between industries, and even between firms within an industry, in the importance of social responsibility and innovation.

The trends reveal that large firms are likely to be better at innovations that make use of economies of scale and scope, or require large teams of specialists, and large-scale application. Small firms are relatively strong in innovations where effects of scale are not important and where they can make use of their flexibility and proximity to market. Therefore, the impact of size on innovation is always greater for process innovations because large firms have more facilities for this type of innovation. Thereby small firms focus less on process innovations, but on products or services because small firms invest less effort in develop “absorptive capacity” for process innovations.

Some companies from transportation to manufacturing industries are concerned to develop technologies to achieve the best fuel efficiency performance and reduce CO₂ emissions and PFCs in their operations, for example, low CO₂ – emitting production technologies. The overall implication that can be drawn from the findings consist in indentify a harmony between people, society and environment, and sustainable development of society through innovation. In addition, ethical climate can influence social performance because innovation and creativity of employees and cultural dimensions are considered the underlying determinants of organizational performance.

In this paper we have argued that CSR initiatives allow organizations to develop human resource capabilities. Specifically, they asset that CSR is a labour market screening strategy that enables the firm to attract highly motivated, talented and productive employees. The blending of customer orientation and innovation orientation should lead to the generation of an operant resource capable of enhancing concretion opportunities. A dynamic capability of customer orientation may affect both volume and radical of innovation.

Our findings help organizations to improve their innovation potential through CSR initiatives. Although our analysis only explored associations between the corporate social responsibility and innovation, there is a need for further investigation on the causality, direction and quantification of each contribution of CSR initiatives. We encourage future research to investigate how the impact of CSR investment on innovation may change the organization performance.

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RISK MANAGEMENT AND THE IMPLICATIONS TO BUSINESS SUCCESS

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Abstract: *In business, risk lurk at every turn, competitor innovations that threaten the viability of the products or services of a company, new players in the market place, adverse trends in commodity prices, currencies, interest rates or the economy. The paper aims to highlight the implications of risk management to business success. We analyzed different types of risks and pointed out that risk management is an important part of planning for businesses.*

Key words: risk management, business risks, operational risks

JEL classification: G32

1. Introduction

Risk - one of the "key mechanisms" of economy evolution - represents a concept which in specialized theory was not discussed enough, people not managing to master the techniques of identification and avoidance during their activity.

The notion of risk is used in a series of sciences. The law studies the risk depending on its legality. Theory of the accidents explains this term for description of damages and disasters. There can be found studies over risks in psychology, philosophy, medicine and in each of these fields the study on risk is based on the object of the given science and, of course, on own methods and approaches. Such a variety of risk study explains itself by the diversity of this phenomenon.

Risk management is a process for identifying, assessing, and prioritizing risks of different kinds. Once the risks are identified, the risk manager will create a plan to minimize or eliminate the impact of negative events. A variety of strategies is available, depending on the type of risk and the type of business.

2. Risk management - an important part of planning for businesses

Risk management involves internal and external environment analysis in which the organization operates, identifying risks, assessing their quality and quantity, development and implementation of the response plan, risks monitoring, identifying new potential hazardous situation and develop an enabling environment for ensuring communication about risk.

There are many different types of risk that risk management plans can mitigate. Common risks include things like: accidents in the workplace or fires, tornadoes, earthquakes and other natural disasters. It can also include legal risks like fraud, theft, and sexual harassment lawsuits. Risks can also relate to business practices, uncertainty in financial markets, failures in projects, credit risks, or the security and storage of data and records.

As regard to the economic risks, it's necessary to observe that the past years there appeared scientific works where considerations over planning, economic activity of companies, the ratio between demand and offer, approach the issue of risks.

The process of risk management is designed to reduce or eliminate the risk of certain kinds of events happening or having an impact on the business.

The risk is basically the threat that an event or an action to affect the capacity of a company to operate and/ or to follow the fulfillment of its strategic objectives. The risk generally appears not as the probability that something good will not happen, but from the possibility for something wrong will happen.

The definition of economic risk given in „Dicționarul de economie” (en. Dictionary of Economy) by Niță Dobrotă is the one of “*unsure and probable event or process which may cause a*

damage, a loss in an economic activity, operation or action". Unlike uncertainty, the economic risk is characterized by the possibility of describing a law (rule) of probability for the anticipated results, as also by the fact that the ones interested know this law.

The illustrated encyclopedic dictionary defines **risk** as "*the possibility to confront with a danger, a damage, a disturbance*" or "*possible danger, inconvenience*".

The English dictionaries mention the linguistically accepted standard definition: **risk** represents "*the possibility of occurrence of an event with adverse results for the subject*". The modern financial theory brings influences of this definition, considering that the sign of equivalence should be put between **probability** and **risk**: *in fact, probability constitutes the measurement unit for risk and a mean for quantifying it.*

The definition which illustrates the most comprehensive the risk belongs to the work "Băncile – Mică Enciclopedie" (en. Banks - small encyclopedia) (Kirîţescu and Dobrescu, 1998), whereby the authors define **risk** in a business as "*future and probable event of which occurrence might produce some loss*".

Certain risks are easy to identify: for example the risk for a person to suffer an accident or the risk for a building to be affected by a fire. Although, risks can be more complex. Basically, every decision involves risks with positive or negative effect.

The idea behind using risk management practices is to protect businesses from being vulnerable. Many business risk management plans may focus on keeping the company viable and reducing financial risks. However, risk management is also designed to protect the employees, customers, and general public from negative events like fires or acts of terrorism that may affect them. Risk management practices are also about preserving the physical facilities, data, records, and physical assets a company owns or uses.

The process for identifying and managing the risk is fairly standard and consists of five basic steps, while a variety of different strategies can mitigate or eliminate risk. First step - threats or risks are identified. Second step - the vulnerability of key assets like information to the identified threats is assessed. Third step - the risk manager must determine the expected consequences of specific threats to assets. The last two steps in the process are to figure out ways to reduce risks and then prioritize the risk management procedures based on their importance.

The importance of risk for adopting the decision is certified by its place within the decision-making theory and management ideology and the constant interest to assess the management risk. Anyway, the empirical investigations over the decision-making process were not directly oriented towards the risk concept and risk assumption, promoted by managers; therefore, empirical investigations over the risk involved by adopting the decision were not oriented towards management behavior. The relationships between decision theoretical conceptions of risk and the conceptions of risk promoted by managers, remain relatively of mark.

John W. Pratt (1964), Kenneth J. Arrow (1965) and Stephen A. Ross (1981) considered that the individual decision factors are opposing to risk assumption. This means that when they are confronted with two alternatives, one which leads to a certain result, and the other one being risky, but leading to the same result, the first will be the one preferred. This way, the decision factors should have a compensation for the variation of possible results, such as increasing the benefit forecasted for the investment made although the investors are don't want to change the benefit. Is not certain if managers believe that the risk and benefit are positively correlated.

The attitudes to assume the risk are, usually, described as stable attributes of every individual, probably connected to the issue of personality or culture development. There were attempts to associate the preferential risk with the sizes of personality, so as to obtain motivation. The global differences between the probable individuals who assume risk and others who lack culture remain, in any event, indistinguishable. Risk assuming, as attribute of managers, was studied on subjects who waived their management tasks, becoming business man and who were compared with ordinary managers but, in the end, no difference between their preference for risk was determined.

It is possible that the preference for risk to be a stable part of the individual personality, but a number of variable vectors such as emotional state, feelings and the way problems are raised affect the perception of the risk and the attitude of assuming it (Cornescu, Marinescu, Curteanu and Toma, 2004). Particularly, Kahneman and Tversky (1979) observed that when a contact is established with a risk alternative, of which possible results are generally good (good financial results), the human subjects are opposing to the risk (Kahneman and Tversky, 1979, p. 263-291); but if they are dealing

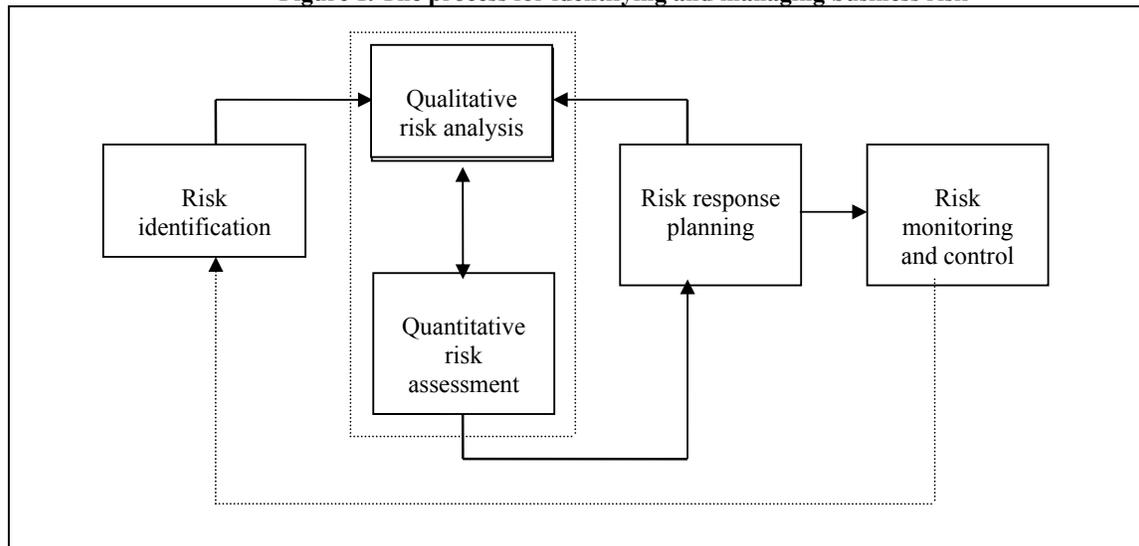
with a risk alternative of which possible results are generally modest, the human subjects have the tendency to research (study) the risk (Maynard, Smith, 1978; Kahneman and Tversky, 1979; Lopes, 1986; March, 1988).

A variety of different risk factors can affect the ability of a business to operate effectively. Risk management is a process by which the most important risks can be identified, prioritized and mitigated or eliminated. The strategies used to deal with risks break down into some main categories: getting insurance; eliminating high-risk areas or reducing them. Also, an organization can accept the consequences of a risk and budget for it.

The process for identifying and managing business risk is fairly standard and consists of five basic steps: identify the company's risks assets; measure, quantify, and qualify possible damages; come up with strategies to limit the damage; implement the strategies and finally, the organization and its risk managers must continue to monitor the risk to see if the implemented strategy is effective.

This process is represented in the diagram below.

Figure 1. The process for identifying and managing business risk



Source: www.jiscinfonet.ac.uk

Risk management is a systematic process of identifying, analyzing and responding to project risk. Risk identification and analysis it is important to the project management. The project manager has to start looking for risks relating to:

- the project plan - one of the key sources for identifying risk. For this it is necessary to understand the importance of Critical Path (the shortest time needed to complete the project) and the nature of task interdependencies;
- stakeholders - the project manager should identify who are the stakeholders for his company and undertake an analysis of their perceptions of the company and attitudes to it;
- resources - people, budget, time;
- organizational environment - risks associated with organizational environment may be general or specific. General risks are related to the organizational culture and specific risks are associated with the institutional mood at that point in time;
- external environment - a change in government, a change in the funding model, a change in the market for particular subjects are risks from external environment that may affect a company, economic recession.

3. Types of risks

Business risks can take a wide range of forms, which means that business risk management plans must cover an equally wide range of policies. On a very basic level, ensuring employee and equipment safety by preventing accidents is important. Disaster preparedness is also an important component of business risk management and should include things like fire, flood, and critical

incident plans. Another important part of a risk management plan is making sure that data are backed up regularly and are secure so they cannot be accessed by unauthorized personnel.

Risks to the financial resources are often treated differently from other sources of risk when coming up with a risk management plan. Financial risk management plans often include guidelines for how to make financial decisions. They also codify how much risk and what kinds of risks are acceptable for the company to take. Plans to handle strategic risks are similar in that they would lay out how decisions about how to make advertising, research, and development, and other business practices.

Operational risks are risks that come from the way the business operates both internally and externally. External risks are things like changes in political climate, regulations, suppliers, and contracts. Internal risks include the possibility of the failure of internal systems or processes. Loss of physical assets to disasters like fire or flood is an example, as is loss due to the computer system crashing. A business risk management plan would also need to address human error, as well as fraud, theft, and other illegal activities.

Business risk management planning includes the consideration of a wide variety of risk factors, including those to people, property, financial assets, strategy, and operations. It's an important precaution to have a plan in place for as many of these factors as apply to a business.

A very specific type of risk management relates to financial decisions taken in a business. In this context, risk management is not about eliminating risk but rather about controlling the way to take risks. It's different from some other types of risk management.

Risk management is a process for mitigating or eliminating risk in a variety of different areas that may impact the operation of a business. Different strategies are used to manage risk depending on the business and the type of risk. In the case of financial risk management, this means making sure the financial risks that are taken are sound risks. This usually means codifying how the company makes these decisions as well as what constitutes a good financial risk.

When companies make financial decisions, they always assume some degree of risk, especially when they're making decisions about investments. Financial risk management is a set of practices that allow a company to optimize the way it takes financial risk. A financial risk management plan may include things like how the company monitors risky activities and applies the risk process. The company's board or senior management decides the plan to guide how financial decisions are made.

As with other types of risk management, in financial risk management there are a variety of different types of risks the risk managers must take into account and evaluate. Market risk, the exposure to financial loss because of the uncertain future value of stocks, is a key component of financial risk. This type of risk is managed by avoiding day-to-day losses on the stock market. Risk management procedures might impose a level of acceptable risk in investing to mitigate market risk.

Credit risk is a type of risk that comes into play when a company is making loans, issuing credit cards, insuring, or investing in the debt of other companies. In these cases, the risk they're assuming is that the other party will default, in which case they'll lose the investment. A risk management plan for credit risks would apply a procedure for determining how much of a risk a particular investment is. It would also detail how much risk is too much and how much is acceptable.

An operation risk is slightly different from market risk and credit risk because it concerns the internal operation of a company, rather than an exterior source of risk. Operational risk is the risk of a loss because of the failure of internal systems or processes or the errors of people working for a company. These may include system errors like computer failures, or losses to physical assets like fire, floods, or earthquakes. It may also include employee-caused problems like errors, fraud, theft, or other criminal activities.

Financial risk management involves protecting a company against financial loss due to a variety of factors. While this type of risk management only provides guidelines by which financial decisions should be made, it is still an important safeguard against loss.

Risk management is the natural result and the purpose of the other two essential stages: their identification and ranking, meaning prioritization of their approach within the company. Ranking is made also depending on the frequency, and depending on the severity of the impact that the business may have. It follows the quantification of the potential impact of the respective risks over the business.

When the company has a clear image over the risks to which it is exposed, has their ranking, decides over the risks to manage. The risks with the largest impact, with the largest frequency and

possibility of occurrence, are the ones to be approached. The management refers exactly to the measures which the company takes regarding the risks they identified and ranked. The risk reduction measures would be the first step. It's about the risks which the company decides to keep and assume, because its financial capacity allows it to withstand certain risks.

The following step would be to transfer the risks which cannot be controlled by a third party, which in fact is the insurance company. It's about the risks which the company decides to remove, the ones that cannot be assumed, because the impact would be major over the business. Among these, the company transfers them to an insurance company, against a premium which represents the price of taking over the risks by the insurer. The advantage of concluding insurance is the fact that the company protects its business, protects its balance, and the impact may not destabilize the company.

The risk manager is an administrator of the company's risks. Because only one part of the risks can be insured, the risk manager intervenes, who, having a very clear image over the risks to which the company is exposed, should reach the optimum balance between the risks kept by the company and the ones for which the insurance is made.

The risk manager should interact every day, both with his own people and business, and with the eventual consultant of risk management, with the insurance consultant, with the insurance company, with the economic environment etc. There are companies who want to spend less and to keep one part of the risks and there are companies who want to be very well protected against more and more risks and are capable to invest more in order to reach this objective. The risk manager should establish together with the top management the risk policy and to transpose it in practice. He is an executive person.

His training depends on the activity object of the company. It's good to be a specialist in that field and not only on one branch of the activity. Generally, they should also have experience in that field, because there should be very well known all the details of the business, the production process should be known, regarding constructions, equipments, machines, they should know how are built, where they are from, bought, what possibility exists to be replaced, fixed. It's a Senior position. They report to the general manager, because they should not be subordinated to the commercial or financial interests. For example: many times, the companies are interested to sell more and therefore, sometimes, waive the quality. If the products are not made with care, the company is exposed to risk.

The risk manager should have the overall vision of the activity, to follow the day to day evolution, because the risks can change from one day to the other, from one hour to the other, and from minute to minute. The risk manager should have knowledge of human resources, because the loss of key personnel is a high risk, it may influence the business very much.

Although the business men are aware of the fact that such risks are threatening in large extent the survival and future development of the company, in a large part of the cases they don't trust in the actions performed to manage those risks. The managers should find solutions in order to keep risks under control and to ensure future development of the companies.

4. Conclusions

Awareness of risk has increased as we currently live in less stable economic and political environment.

We can say that the risk and uncertainty play a very important place in the economic activity, including contradiction between planned and real, meaning the source of developing the activity of management. The managerial risk has an objective base because the uncertainty which comes from outside the company. The external environment includes objective, social and political economic conditions, within which the company develops its activity, being required to adapt to their dynamic. The uncertainty of the situation is predetermined by the dependency of the multitude of variables, agents and individuals, of which conduct cannot be always provided with an acceptable exactness. It equally affects the lack of clarity in defining the purposes, criteria and parameters of their estimation (the changes as regard to public needs and demand of consumption, occurrence of technical and engineering innovations, changing the market conjuncture, natural unpredictable phenomena).

The organization is always connected to unforeseeable and uncertainty of the economic conjuncture which comes from the inconstancy of the demand/ request for goods, money, productive factors, from the variety of the criteria of preference of investment of the means, from the mediocrity of knowledge in the fields of business and commerce and from several other circumstances.

The economic conduct of the manager under the conditions of a market economy is based on the chosen activity, on its risk, individually achievable, within its possibilities, coming from legislative acts. Every participant to the market relations is initially deprived from the guarantee of success: market share, stability of the purchase power, accessibility to industrial resources, constancy of the legal norms etc.

Senior management must demonstrate leadership in championing and funding this initiative because organizations indicate that they expect having trouble finding the time, budget and people necessary to implement or maintain a strong risk management program.

Companies protect their ability to compete by implementing an effective risk management program. Nothing is more fundamental to business success.

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TEAMS AND THEIR ROLE IN MODERN ORGANIZATIONS

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Abstract: *Nowadays the economic environment is characterized more and more by the need for competence, which has entailed an increased focus on the human potential and its capacities. Thus, competitiveness and development in modern organizations are often connected to their capacity of valorising the human resource and to the necessity of using teamwork. Hence, in order to accomplish targets successfully teamwork becomes one of the main factors that may offer a solution to the problems faced by organizations and contemporary society and may also provide development and progress in the future.*

Therefore, the theoretical approach of some aspects concerning the definition, place, role typology and characteristics of an efficient team as well as their investigation within the modern organization are important matters in this field of social reality and issues which are the object of our concern in this study.

Keywords: *team, team leader, team typology, modern organizations, efficiency.*

JEL Classification : M 12

1. Introduction

The manager and his work within organizations is a debated and sometimes controversial subject both in theory and practice. All the persons involved in the managerial process concentrate their attention on the human potential and propose new solutions which take into account aspects that are ignored or partially known at present (Nicolescu, 2004, p. 331). Thus, modern economic organizations modify their structures, abandon rigid hierarchies, look for organizational solutions to valorise the creativity and talent of their members, use more and more often teamwork. In any type of activity success is most of the times the result of common effort, of teamwork. Accomplishments or defeats are caused neither by the manager nor by the employees only, they are the result of the cooperation between both sides. Reality proves that it is not enough to have a group made up of strong, competent and experienced personalities. If there are not compatibilities between the two teams, mutual agreement, ideas and common motivations focused on accepting a collective aim, solidarity and comradeship excellent result cannot be obtained. Valorising each person's working potential or evolution in one's career cannot be obtained without working and respecting the requirements imposed by the formation and maintenance of the teamwork spirit. This state of mind which increases the quality and productivity of a person's work can be reached only when people understand that the whole does not mean making a sum of the parts involved, but something more which springs from the interaction with the group, from the harmony of interpersonal relations, from the identification of the individuals with the values and aims of the entire group. Working in a disunited group – where quarrels or misunderstandings are frequent, egos resent, alienation, disregard or indifference predominate and each person tries to solve problems on one's own while criticizing the others – becomes a serious obstacle against the concept of working with pleasure. In order to avoid this situation, each person should contribute to transforming a number of people who work together in a homogeneous and functional group. (* * *

<http://www.munca.ro/articole/?idarticol=117>, last accessed: 07.03.2012).

The advantages of teamwork are obvious, starting from valorising in a better way each member's resources, from solving complex problems which require opinions and special knowledge to the fact that teamwork represents an excellent learning environment. Also teams are more target oriented than the organization as a whole, being able to establish their own opinions and aim easier, are more flexible than organizational groups because they can be formed in a simpler manner, dissolved, rearranged, resized and favour responsibility delegation since they offer the guarantee of

controlling its members' behaviour by specific norms.

The principle according to which they function, namely "all for one and one for all" puts forward the condition of learning loyalty and of solving efficiently the problems of the organization. That can be achieved best by knowing the content, typology and characteristics of the team very well.

2. Team typology

Several types of team typologies can be found within organizations (Lefter, Deaconu, 2008, p.308) and depend on the situation at the moment or on the complexity of the problem to be solved.

a. In order to solve some problems *special teams* are formed, being generally made up of 5 – 10 members whose role is:

- to analyze a certain state of affairs;
- to eliminate a problem;
- to optimize a certain field;
- to improve the general working environment.

When an agreement is reached, the members of a team suggest possible solutions to the management. After solving the problem, the team is generally annulled. This type of team does not always work easily. Many of its members participate in the given project only because they have to and are only partially involved. They often consider that their involvement within such a team prevents them from solving their own tasks within the department where they work and are displeased.

b. In other cases, the management needs to reduce the activities imposed by a traditional working context and pay more attention to observing the environment and the strategic positioning of its organization. This becomes possible when it works with *self-led* teams (first appeared after 1990). These teams are made up of 5 – 15 creative, qualified persons with cross-functional training, who interact and have the responsibility and authority to fulfil a series of specific activities. They plan, organize and control their activity taking into account some directions and minimal interference from the part of the management. Self-led teams are more and more numerous: on the one hand they are required by the business environment nowadays, on the other hand they are preferred by the employees who want greater freedom at work. In addition, the speed of changes demands permanent adaptability from the part of the employees.

To provide the success of a self-led team, the manager has to select carefully and train well its members.

c. The necessity to focus on a specific objective imposed the creation of *cross-functional teams*, made up of members belonging to different functional fields of the organization (marketing, finance, human resources, production, etc.). Coming from different departments, the members of such a team have the necessary knowledge to fulfill the tasks they have and they can cooperate efficiently with their departments. In the category of cross-functional teams there are the following types: teams created to select and implement new technologies; teams created to improve the efficiency of marketing, teams created to control production costs. The three types of teams can often combine: a special team made up for solving a problem can be at the same time both a self-led and cross-functional team. Before creating a team, managers have to analyze carefully the concrete situation within the organization and build the sort of team which best serves the current needs.

In the process of team forming, the experience of the members is very important, but that can also have a negative connotation – habits or old practices, the fear of doing new things, namely conservativeness and routine. Forming a team means harmonizing different personalities. Proving one's ability as team leader also depends on one's capacity of creating a working team which should achieve the wanted targets (Oprean, 2006, p 309 - 310).

Obviously, fulfilling such an important objective is conditioned by the field where the team works, by the resources it detains, by the particularities of its creation, by its evolution and development.

3. The stages of team evolution

In order to enable some fundamental relations between the leader and his team, the former has to adapt himself to the specificity of the members and also to know the stages (Lefter, Deaconu, 2008, p.310) and characteristics concerning each stage of the team's evolution, namely:

a)The formation. During this first stage, the members of the team become familiar with each other. They acknowledge the problems they will face, the requirements they have to meet, the type of authority within the team, the person in charge, the traits of the team. The stage of team formation is generally characterized by uncertainty and stress. Knowing that the team members try to adapt themselves both to their new working situation and to each other, managers should tolerate the long informal conversations where specific elements of the team are explored and should not consider them a waste of time.

b)The storm. After the formation process, teams are confronted with this stage – characterized by conflicts and misunderstandings connected to the clarification of the individual roles of the members. The way of functioning is permanently contested and the team seems to lack unity. To help the team get over the storm, managers have to encourage its members to feel free, to criticize any problem that concerns the team and to state their points of view completely and correctly. Moreover, managers have to favour the harmonization of opinions within the team in order to make the fulfilment of the objectives possible.

c)Normalization. During this stage, the members of the team begin to understand and accept their roles, to obey the rules and adopt proper attitudes for teamwork. The conflicts appeared in the previous stage are now solved. During this stage, norms, values and behaviours established within the team are transferred to the organization and may be essential to its success. At the level of the team, the achievements obtained now can favour its future productivity.

d)Annulment. This stage marks the end of the team's mission and prepares its dissolution. Suspension appears only with the teams created for a limited period. During the dissolution period, the members of the team are generally disappointed that the team disappears, as that involves losing some personal relations and / or some pleasant working situations. Managers have to be aware of the state of mind created within the ex teams and make efforts to integrate their members in new teams or activities that should be as challenging and attractive as the former ones. It is not compulsory for all the teams to cross these stages. However, knowing this cycle enables managers to:

- get useful information about the way in which teams function;
- adapt their action in accordance with the characteristics of the new or mature teams;
- accelerate the maturation process of teams in order to benefit from their maximal productivity.

At the same time, for teams to function well and be successful within organizations, their managers have to take care of respecting some basic requirements, among which we mention:

- Positive interaction. Good cooperation between the members of the team facilitates obtaining the desired results and offers satisfactions to all those involved. Obviously, individualists have their place in the team, but the feeling of satisfaction grows if cooperation appears.
- Actual involvement. A team functions well if its members have direct contact with each other. There are more and more situations when they are at a distance of hundreds of miles or even on different continents (the virtual team).
- Learning within the team. The members of the team learn from each other and transmit their own knowledge.
- Developing certain abilities that make the team function normally (communication, cooperation).

The stages of a team's evolution have deep social, psychological and ethical implications and shaping the members of the team in accordance with all these values is a dynamic process which requires taking into account the level of homogeneity and heterogeneity of the group, the structure of the relations between members, the opinion phenomenon existing at a certain time. All these aspects, if known thoroughly by managers, give the opportunity of acting operatively, reasonably in order to achieve in an optimal way each stage of a team's evolution.

4. Characteristics of an efficient team – case study

A team's efficiency is commonly believed to be given, in the first place, by the trust, reliability, capacity and integration of its members. We cannot speak about efficient teams if its members do not trust each other or the leader of the team – the person invested to make decisions. Also, the management of the organization plays a very important role in increasing the efficiency of teamwork.

In order to identify the necessary characteristics of an efficient team we made a case study using survey as a method and the questionnaire as a means of research. Starting from delimitating our aim here as realistic as possible, we have established the following objectives:

General objective

Outlining the traits a team should have in order to be efficient.

Specific objectives

Establishing the main contributions of a team's members in order to make it efficient in influencing the members of an organization.

The analysis of the main characteristics belonging to the team leader.

The identification of a correlation between the capacity of the team's members and its results.

The elaboration of some conclusions and favourable, constructive suggestions in order to improve the performance of teamwork.

Hypotheses

The starting hypothesis in our investigation was already suggested in the theoretical part of the paper, where it was asserted that the efficiency of the team depends on certain factors and the members of the team as well as its leader have to possess certain qualities.

General hypothesis

The efficiency of the team is influenced by the capacity of each member.

This hypothesis can become operational and the following enunciations result:

1. The more the members of the team prove tolerance, flexibility, adaptation to changes, the more their decisions and actions provide efficiency within the team.
2. The achievements or the failures of the team are determined, in the first place, by the situation of the action.
3. If the team leader is a capable person and pays attention to the cooperation between the members, the quality and efficiency of the team increases.

Research methods

Since this research intends to take into account the opinions and attitudes concerning the traits of an efficient team, to focus on the way in which a certain situation influences the members of the team and on the qualities that the members need to fulfil in order to make an efficient team, we considered best to use the survey as research method and the questionnaire as a study instrument.

Sampling

Research was made on a representative sample made up of 50 persons working for SNR Rulmenți Sibiu and selected arbitrarily. Our attempt was to choose persons from different environments, belonging to both sexes and of different age. The sample obtained is rendered in the table below:

Status	Members within the team		Team leader	
Sex	Feminine	Masculine	Feminine	Masculine
Number of persons	16	25	4	5

Results and discussions

After using the questionnaire and analyzing the data, some answers were obtained and a part of them is presented in what follows. Thus, the focus is on the opinions of the questioned persons concerning the characteristics of an efficient team and of a competitive team leader.

Question no. 1: We would like you to estimate the following contributions of the team members in order to obtain efficiency by giving marks from 1 to 5 (1 – Not important at all; 2 – Little important; 3 – Neither / nor; 4 – Important; 5 – Very important):

Variable	
a. Quick identification of opportunities	f. Working under pressure
b. Working with different types of people	g. Continuous training of the team members
c. Producing ideas easily	h. Getting objectives in due time
d. The increased capacity of attention	i. Communication within the team
e. Offering without bias, if needed, alternative viable solutions	

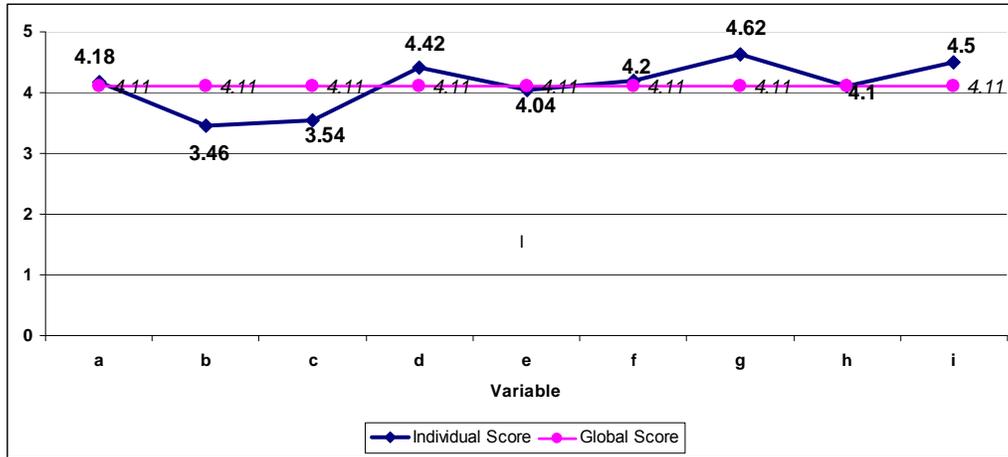


Figure no. 1 Interpreting scores for question no. 1.

Taking into account the collected data, both the score for each factor and the global score was rated. By analyzing the answers it is noticed that the questioned persons consider *the continuous training of the team members* to be the most important contribution to the team’s efficiency (score 4,62). *Communication within the team* (score 4,5) is also very important, being followed by *the increased capacity of attention* (score 4,42) and by *working under pressure*, whereas the global score is 4,11

Question no. 2: Which is the most important trait you consider a team leader should have?

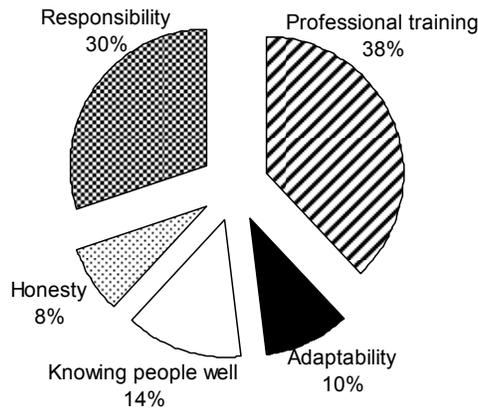


Figure no. 2 Necessary traits for a team leader

After analyzing the given answers, it can be noticed that professional training, which has a percentage of 38% , is the most important characteristic in the opinion of the persons questioned, followed by responsibility – 30 % (fig. 2).

Question number 3: Is trust within a team essential in order to perform efficient activities?

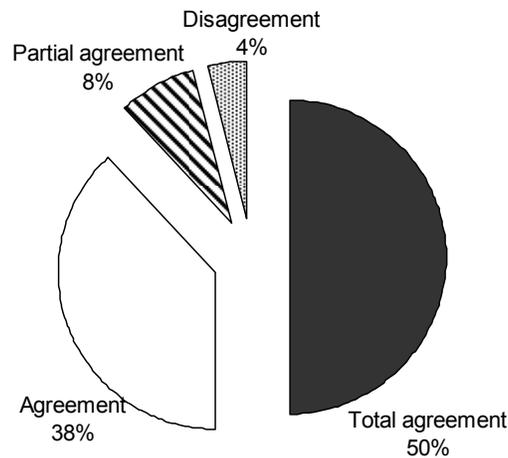


Figure no. 3 Trust within the team

Trust within the team is an essential condition for the team to be efficient; 50% of the people questioned totally agree that trust must exist, 30% agree with this and nobody chose the variant “Total disagreement” (fig. 3).

Question no. 4: Do you consider that decision making is the exclusive task of the leadership within the team?

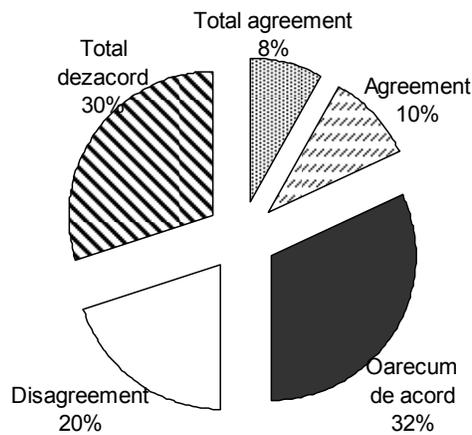


Fig. 4 – The distribution of the answers concerning decision making as the exclusive task of the leadership within the team

8% of the persons questioned consider that decision making is the exclusive task of the leadership within the team and 10% agree with this matter. 32% partially agree, whereas 20% disagree and 30% totally disagree with this. Thus, the necessity of paying much attention to all the members of the team when making decisions is outlined. (Fig. 4).

Question no. 5: How can the team leader contribute to the formation and consolidation of an efficient team?

The persons questioned consider that the team leader has an important role in consolidating an efficient team and that means communication with the team members, great involvement in task

solving, agreeing and cooperating with the members of the team. The motivation of the members also has an important role.

Question no. 6: Do you think there is a balance between your job description and the things you are asked to do within the team?

94% of the people questioned believe there is a balance between their job description and the work proper and the cases when they have to fulfil tasks that are not mentioned in their job description are very rare, which proves that the responsibilities of each member are well identified and respected.

Question no. 7: Is there a favourable environment within the team in order to express and put into practice the ideas of its members?

The majority of the persons questioned consider that teamwork takes place in an extremely attractive environment, which favours expressing points of view and new ideas. Thus, cooperation within the team is present and means finding some opportunities rapidly and solving problems efficiently.

Question no. 8: Do you consider that your relations with the other members of the team are strictly professional or do they also involve friendship?

80% of the persons questioned have both professional and friendly relations with the other members of the team due to the good cooperation within the team. That is mainly facilitated by the favourable environment and by the team leader who manages to create union and maintain cooperation within the team.

Question no. 9: Do you help the other members within the team to solve tasks, if necessary?

- a. Yes. Why?
- b. No. Why not?

85% of the people questioned help their colleagues in need due to the existing team spirit and to the wish of succeeding, considering that the efficient team functions in accordance with the principle "all for one and one for all". Those who do not provide assistance have this attitude because they do not understand help or they lack knowledge in the field.

Question no. 10: Which are the main causes that generate tension within the team?

The main tensions are caused by deadlines when tasks are not solved yet, or by the ideas that are not accepted by the other members of the team. Tensions also appear when the tasks of each separate member are not very well understood.

The fact that the opinions of the persons questioned differ is not new, irrespective of the field or subject under discussion. The problems discussed with the individuals participating in this questionnaire are not an exception from the rule.

In order to develop a qualitative activity within an efficient team, thorough professional training is necessary. This is not the only requirement, but it is an important one. This aspect, combined with responsibility, with continuous learning and communication within the team can lead to efficiency.

Thus, efficient teams successfully fulfill the needs of organizations and the capable team leader contributes to task solving and to the creation of a favourable environment in order to put into practice new ideas.

5. Conclusions

The conclusions of this research on efficiency within the team led to the idea that the permanent training of the team members is an essential condition nowadays to keep up with requirements and high standards. Therefore, team leaders should not get involved only in identifying problematic situations and finding solutions, but they should also consider the responsibility of valorizing information and making decisions in accordance with the contribution of the collaborators and preceded by shaping situations and simulating the consequences of the options considered plausible and favourable.

Thus, through real involvement of each member within the team, through cooperation based on trust, through respecting the job description, through consolidating the relation team leader – team member, as a condition of a lasting organizational development, it is possible to obtain the performance required in order to successfully fulfil the objectives of the organization and to permanently identify new opportunities.

As shown in this study, the efficient team possesses those indispensable qualities connected to trust, responsibility, professional training and permanent learning which enable the team to fulfil tasks and identify opportunities. That is why team leaders must pay much attention to the force of the human mind, to participate in training programmes concerning influencing techniques and be aware of the importance of certain personal qualities which help the motivation process, more specifically to train these qualities.

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INFLUENCING FACTORS OF PRICE AND ASSOCIATED STRATEGIES

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Abstract: *The price is an important element in product position; it is a means of sending signals to consumers about the nature and quality of the product. When, for a certain business environment, the demand curve is known in relation to market (competition) costs and prices, the firm can choose a pricing policy simultaneously with business strategy. This study synthesizes the key-factors occurring in choosing a business strategy and the game of price and cost on the market. As an approach to pricing policy was defined method of cost analysis based on which we can establish the opportunity of engaging in a business strategy with related pricing policy. In conclusion, companies have to establish first of all which are market constraints and their marketing objectives and the price strategy will be adopted depending on them.*

Key words: pricing policy, cost, analysis, factors.

JEL classification: D, F, G, L, M, O

1. Introduction

The price is used as an active element in formulating the marketing strategy by companies being, as we all know, the only element of the marketing mixture that generates incomes. The price is an important element in product position, it is a means of sending signals to consumers about the nature and quality of the product. Price decisions at international level are usually located, because elements like the local demand, competitors, costs, exchange rates vary from a country to another.

In specialized literature there are three big categories that have influence over the price:

a) Company related factors: production costs, transport costs, indirect duties, costs of the distribution channels chosen by the company (Stigler, 1972; Buell, 1984; Kotler, 1997; Beju, 2000; Siggelkow, 2003). We also have to consider the price discounts provided to distributors in order to get access to a new market as well as distribution costs related to distribution channels length, the increase of every channel and logistic costs and efficiency. The smaller the acquisitions volume is, the more necessary is a longer distribution channel that comprises specialized intermediaries that apply higher increases and consequently distribution costs will be higher (Jayachandran et al., 1999).

b) Market related factors: incomes level, competition, consumer's culture, product life cycle (Stigler, 1972; Porter, 1985; Kotler et al., 1998). Countries that have high incomes usually have a smaller elasticity as far as price is concerned for strictly necessary goods like food, shelter and medical services, because they lack alternatives of natural economy that exist in countries with smaller incomes. The differences between the level of population incomes of various countries determine different prices for the same product on various markets (Jeannot and Hennessey, 2004).

c) Environmental factors: legal regulations of the market, inflation rates, control over prices, hidden subsidies, currency (Beju, 2000; Kotler et al., 1998; Jayachandran et al., 1999). Any time there are differences between the prices of a product on various markets there is the risk of parallel imports or grey markets. Price differences have to be at least 15% in order for products sold in a country at small prices to be exported towards other countries where their price is higher (Mercado et al., 2001).

2. Internal factors influencing business and profitability

Objective price or acceptable price is within a range whose superior limit is the maximal price that the client is willing to pay for a product and whose lower limit indicates an acceptable quality of

the product. Psychological price determination is made as a result of investigations that comprise two questions: below what level of the price, you think that the product is not of good quality?, over what level of the price, you think that the product is too expensive? (Neamțu, 2004)

Psychological price is an useful information for the company, used for fixing prices for consumers' products. We should mention that there is the risk of information irrelevancy with the help of investigations because the information concerns the purchase intentions of interviewed subjects, intentions that cannot be materialized.

Strategic orientations regarding the prices are the result of a permanent information activity and maximal responsibility. The substantiation and achievement of every variant has to be developed with the help of a clear and precise action, using various methods. The method of price setting based on the criterion of production costs plus a profit quote is and remains interesting within the current business context. (Beju, 2000)

They take into consideration the expenses made with products making and sale. In order to determine the point in which incomes are equal to total expenses depending on the price level, the rate of return is used (critical point method). For a product meant for selling on market, we can create the model from table 1 (*Costs and prices for a certain production level*), which renders the image the company has on the price practised depending on its own costs involved, considering a small number of products created (ten), with the possibility to calculate prices next, irrespective of the size of the series of created products, using the same standardized algorithm.

We can notice that while the production volume (Q) increases, variable and total costs also increase, only the fixed ones remaining constant. Marginal cost records a decrease at the beginning for every additional unit, and from a certain level (after the third product) it has an increase trend, explained through the action of the so-called law of decreasing return or decreasing marginal productivity of production factors according to which while a producer increases the quantity of production variable consumed factors (manpower, raw materials and materials, fuels etc.) in order to increase production, the return of successive factors decreases because a greater amount of variable factors is combined with a constant amount of fixed factors (CF). With every extra production factor, production can increase in a less and less extent.

Production increase under the conditions of production factors return decrease determines costs increase and causes a cost increase phenomenon.

In the graph from figure 1 (*Average and marginal costs*), we notice that a company can be in various cases by manufacturing a certain amount of products. We can say that profit is achieved for a certain minimal amount of products and to an amount of sold products, under the conditions of determining a price at least above the critical price, considered in the minimal curve CTM «(C(7,83))», established randomly for 105 money cost units (points C' and C" on the axis).

In the break-even point, where the profit is zero (the fourth product), the selling price is equal with the total average cost (105 money units). Up to this point, the company records losses, and starts making profit from this point on.

We can see next that the profit of a producer becomes maximal for the production volume for which the selling price is identical or close to the marginal cost (product 8). On the axis, this balance price A' appears at the intersection of the price line with the marginal costs curve (between 7 and 8 physical units of product).

The stop or closing point for production is recorded when the price goes up to the level of average variable cost, at its minimal point and the average variable cost curve crosses the marginal cost curve (product no. 6) on «(B(6,51))» coordinate.

The critical point in which profit is zero and marginal costs are minimal «(A(4,30))» shows that beginning with the sale of the fifth product, the company starts to achieve profit, which will increase more and more, along with the sale of every additional product unit (eighth product) after which this profit will start to decrease, implicitly resulting in a decrease of the profit rate.

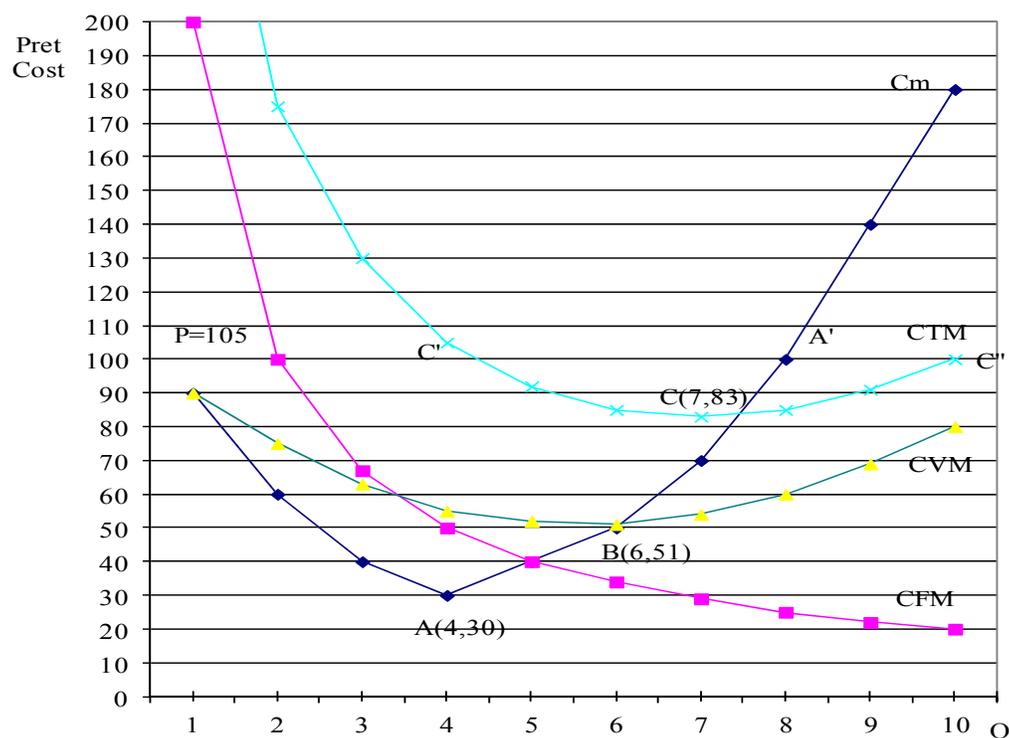
Costs analyzed from the point of view of the manufacturer are called *individual costs* and are used for determining the supply price through which these costs are covered and profit is achieved.

Manufacturers have to be concerned especially with reaching, through their individual costs, *balance costs*, recognized on the market, through price, based on the demand - supply ratio and which are considered optimal costs. Free prices under the conditions of real competition tend to be close to the balance price which in turn supposes a balance cost in relation to which *conventional cost* is determined, that is the cost with the lowest level.

Table 1: Costs and prices for a certain level of production

Activities volume	Fixed cost	Variable cost	Total cost	Marginal cost	Average unit costs			Marginal income	Total income	Profit (loss)	Rate profit %
Q	CF	CV	CT	Cm	CFM	CVM	CTM	Vm=P	VT	Pr	Rpr
1	2	3	4	5	6	7	8	9	10	11	12
			$4 = 2 + 3$		$6 = 2/1$	$7 = 3/1$	$8 = 4/1 = 6+7$		$10 = 9 \times 1$	$11 = 10 - 4$	$12 = 11/4$
1	200	90	290	90	200	90	290	105	105	-185	-63.7
2	200	150	350	60	100	75	175	105	210	-140	-40
3	200	190	390	40	67	63	130	105	315	-75	-19.2
<u>4</u>	200	220	420	30	50	55	105	105	420	0	0
5	200	260	460	40	40	52	92	105	525	65	14.1
<u>6</u>	200	310	510	50	34	51	85	105	630	120	23.5
<u>7</u>	200	380	580	70	29	54	83	105	735	155	26.7
<u>8</u>	200	480	680	100	25	60	85	105	840	160	23.5
9	200	620	820	140	22	69	91	105	945	125	15.2
10	200	800	1000	180	20	80	100	105	1050	50	4.7

Figure 1: Average and marginal costs



Conventional cost acts through individual cost decrease trend which, in turn creates a decrease of prices. We can say that direct price competition is always based on indirect cost competition (Beju, 2000).

Every company is interested in real dimensioning of production factors consumption, by the choice of optimal comparison variants of results with expenses and prices that cover them, on one hand expenses and on the other hand providing the achievement of a minimal profit (if not a big one).

Direct costs are based both on quantitative elements expressed through consumptions of resources, labour objects or product unit as well as value elements, expressed by prices or tariffs that measure material and living labour consumptions. Direct costs comprise raw materials and materials, technological fuels, direct salaries, sale expenses etc., and indirect expenses usually comprise general and consumption expenses of the company, indirect salaries, etc. (Stigler, 1972)

All these costs as a sum form the complete, total cost considered when determining the final, selling price and that provide the image of the latter size.

The premises for company's activities capitalization is reduced to the optimal dimensioning of production costs without affecting the quality of provided merchandise and services. If the selling price is considered by the final merchandise, service beneficiary as being fair in relation to quality, to its use it receives in return, then the final objective of the company is fulfilled, of achieving profit as a result of selling its creations expressed through supply. (Kotler et al., 1998)

3. Strategic solutions for the management of price based on market

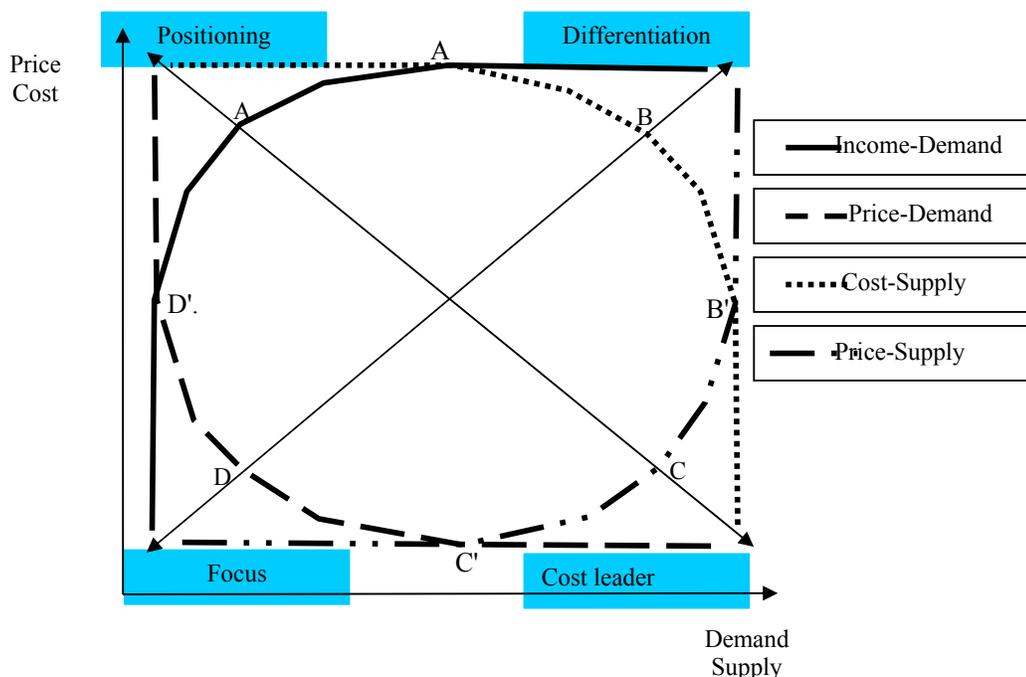
When, for a certain business environment, the demand curve is known in relation to market (competition) costs and prices, the firm can choose a pricing policy simultaneously with business strategy. In this manner, company will choose one of strategic solutions illustrated in Figure 1, determining if volume policy selection (cost leadership) is adequate or not. The figure no. 1 synthesizes the key-factors occurring in choosing a business strategy and the game of price and cost on the market. (Neamțu and Neamțu, 2009)

The level of costs determines the minimal price desired by producers, but buyers have often a reference cost different from that of the producer because of its relation to its own incomes.

There is therefore an objective cost determined by demand also called reference cost and a subjective cost as a result of the free game between competitors on a certain market. At the same cost value there will always be a discrepancy between demand and supply. Therefore, at a minimal cost the level of demand can be maximal, while the supply one will be minimal.

Therefore, producers are very rarely willing to fight within the segment of prices even if they are continuously concerned with the decrease of costs. Competition and replacement products provide an average value regarding the values of costs on the market.

Figure 1: Criteria for choosing a business policy



where:

- A - average value of market incomes;
- B - average production costs in the business field;
- C - balance price of the supply;
- D - balance price of the demand;
- A' - balance point incomes-costs;
- B' - balance point costs-prices;
- C' - balance point demand-supply;
- D' - balance point incomes-prices.

4. Associated strategies. Price-Quality correlation

The fulfilment of clients' needs is estimated not only based on price, but also depending in the noticeable qualities of the product. The study of price-quality relation indicates that a high price is associated with higher quality.

This alignment policy to competition prices causes production and marketing production costs adjustment of the company at the level of market price. It is a reactive action that can cause problems when the volume of sales does not reach levels high enough to provide market input costs recovery. Although companies usually use price as an element of differentiation from competition products, there are cases when the company does not have any solution that to accept the market price.

This is the way to avoid the war of prices and at the same time the company can get a reasonable part of the market and an adequate profit. By means of these prices, the company can consolidate its position on the market on long-term.

The product has to be unique and there is the need for a market segment that wants to be able to pay a high price. Sony company used the strategy of high price in 1976, when it started to sell Betamax video recorders in the USA for a price of 1,295 dollars. Clients paid this price because they could watch a film or a show at any hour they wanted. (Kotler, 1997)

In this way, the company will produce for a part of the market and will be able to have a high price because of the limited supply and high value of the product. The success of these prices depends on the ability and speed of the competition's reaction. While the product is offered to several market segments and other similar products enter the market, the price will decrease gradually.

By establishing a high price, the company can develop a quality image. It is considered that the product will not have a safe future in other countries because there will be many competitors. Reynolds Pen Company, for instance, introduced many years ago, pens for a price of 12,5 dollars and then they were produced and sold by other companies for several cents. The advantage of this strategy is that it generates substantial profits, but it will draw competitors that practice lower prices. (Kotler, 1997)

Price strategies depending on market instability and demand heterogeneity want to valorise the differences occurring on the markets, depending on which it can have the following forms (Beju, 2000):

- conjuncture prices
- stable prices and benefit quotes
- differentiated prices.

Conjuncture prices are met in the case of powerfully affected merchandise by the demand and supply ratio. We generally follow the level of demand elasticity depending on the price, calculating the elasticity coefficient with the relationship:

$$E_p = \frac{C_1 - C_0}{C_0} \cdot \frac{P_1 - P_0}{P_0} \quad (1)$$

where:

C_1 = demand at time 1;

C_0 = initial demand;

P_1 = price at time 1;

P_0 = initial price.

Depending on the variation of the external demand (big, small, inexistent) prices levels and alterations are determined catching also the optimal conjunctural moment.

Prices and benefit quotas stabilization have the purpose of absorbing the fluctuations caused by the market status on prices and their maintenance within controlled variation limits. This option is suitable for basic, non-processed products that sometimes exceed the possibilities of company. This is why we find some attempts at microeconomic level or within regional economic mechanisms.

Differentiated prices are based on market heterogeneity which allows to use differentiated prices depending on products or variants of the same product (for instance, new and old), higher prices on supported demand markets, or with partners, different prices depending on time (high price at the beginning of the season, then gradually decreasing).

Techniques are used for fixing price levels are based on products comparison, being able to determine the export price in relation to the price per tone achieved by the competition for simple products, without sensitive differences of technical-functional parameters, or depending on the technical-functional parameters of actual products, using correction coefficients. Using the comparison principle, the company establishes the differences existing between the technical parameters of its own product or of one or several competing products.

In products where only one parameter adequately characterizes the product, the method of specific price is used which consists in calculating the unit price in relation to the basic parameter. The calculation relationship is based on the principle of simple proportionality, as follows:

$$P_r = P_c \left(1 + \frac{N_n - N_c}{N_c} \right) \quad (2)$$

where:

P_r = followed product price

P_c = competing product price;

N_n = followed product parameter;

N_c = competing product parameter.

Often, the technical level and the price of a product are established by analyzing several parameters. Therefore, various variants can be considered, that of parameters that have equal importance for determining the correction coefficient or differentiated parameters.

If the product has a mass production, the method of standard prices will lead to lower prices fixing, because of unit fixed costs decrease. The method can also be used on technology based products. In this case the company is trying to use similarities rather than differences between the markets. The problem raised in the case of standard prices is that in the markets with high customs tariffs and other commercial barriers, the profit margin decreases.

Ideally, the standard price is established at a level that maximizes its acceptance by the consumer. But, practically the standard price is given by the lowest level necessary for the company to remain competitive on a large potential market.

The use of uneven prices, and even price strategies will become a solution for several companies. The solution is not to align prices, at their highest level (clients will be lost in markets with smaller incomes, that cannot afford to purchase the product at the high price) or at the lowest level (profits will be lost by offering the product at a smaller price to consumers that can afford to pay more), but rather to form a corridor of prices.

This corridor of prices will consider the elasticity different from that of the price from different countries and will try to maximize the potential profit per product unit. The narrower is the corridor of prices, the higher is the prices harmonization level. Unilever has forecast a price difference of 10% in Europe for its pan-European products. (Mercado et al., 2001)

Companies have to establish first of all which are their marketing objectives and the price strategy will be adopted depending on them: do they want to increase their market share at the level of the entire region or only at the level of a country? A study made with 25 American companies that operate in Europe showed that they adapted the prices in Europe 10%% for consumption products and only to the extent of 60% prices for long-term products and 62% for industrial goods. (Mercado et al., 2001)

5. Conclusions

The price of a product is for the client both a cost that has to be compared with the advantages of product's purchase and a source of information.

Starting from the well-known principle, the quantity varies reversely proportional with the price, we can say that price decrease results in clients' expansion.

The main hypothesis that this approach is based on is that a small price will increase the sales, which can sometimes be verified, other times not. The basic idea is to establish a price low enough to conquer a part of the market fast. The starting premise is that by establishing a low price, a great amount of products will be sold, achieving a profit. Moreover, the demand has to be elastic or foreign buyers have to purchase goods only depending on price.

Within possible variants regarding production that can be achieved and related unit costs, the producer finds the decrease of the unit cost while the total production increases. The experience curve will be used by the producer as a strategic game - using the quantities of product depending and cost ad benefit margin in relation to the free price formed on the market.

In this way, the enterprise has to choose the price and make an estimated quantity of products, in order to reach this price. Such a decision is based on careful examination of the market. This approach can be used in order to discourage competitors to enter the market. Low price can be successfully applied on short term, it tends to discourage competition, it can also decrease its part of the market, and profits can be low. It can also create the impression of a bad quality or that the

tenderer does not want to involve on long term on that market. Moreover, prices can be considered dumping prices, which can draw counter measures from foreign markets governments.

Prices quantification on market differs from the moment of entering the market to establishing further prices but it has to objectively take into consideration the classic principle of covering production costs, at least to the critical point and costs occasioned by the payment and financing of the delivery process.

In order to enter the markets, companies have various possibilities to establish the approach strategies through their prices and depending on their objectives. Whichever the solution is: small prices, high prices, unvarying prices, differentiated prices, the starting point is prices sizing realistically, starting from the cost elements and intrinsic qualities of the product, that is from price sizing starting with the calculation of the break-even point, beyond which any additional unit of newly created product can bring profit.

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SOLUTIONS FOR MARKET DOMINANCE THROUGH COST LEADER STRATEGY**NEAMȚU Liviu**

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Abstract: *In order to enter the markets, companies have various possibilities to establish the approach strategies through their prices and depending on their objectives. The global domination strategy at the level of costs is an excellent method of dominating the market through lower prices in comparison with competition ones. The paper emphasizes solutions for cost global domination and reveals the main phases and activities that successively help to permanently reduce the costs. We proposed a model for the strategy of cost leader based by simultaneous analyses about five factors whose confrontation will allow to determine one or several possible prices tested before choosing the final solution: legal constraints; enterprise objectives in the matter of price; demand; product characteristics; competition. In relation to the criteria of price setting, we propose four application variants of the cost leader policy: market cost leader, product cost leader, channel cost leader, field cost leader.*

Key words: strategy, cost, price, activities.

JEL classification: D, F, G, L, M, O

1. Introduction

The global domination strategy at the level of costs is an excellent method of dominating the market through lower prices in comparison with competition ones. For this, it is necessary that the firm has a large, stable market, be organized adequately and efficiently, has the advantages of experience in the field, promote a policy in which productive and logistic costs be permanently analyzed and optimized, supply options be directed towards using adequate materials and especially a permanent concern has to be maintained for increasing labour productivity (Jayachandran et al., 1999).

The cost domination strategy does not lack risks; a technological revolution that places competition on favourable positions is enough annihilating all the advantages resulting from the accumulated experience and adopted economic measures. The literature shows that this strategy has two major lines of action: costs and prices (Buell, 1984; Duro and Sandstrom, 1988; Kotler et al., 1998; Russu, 1999).

The main characteristic of the global cost domination strategy it focuses on the need to support a permanent technical and technological research in order to decrease any type of costs (Jayachandran et al., 1999). Entering the cost strategy also requires making important investments, in order to provide mass production together with optimization and simplification of the fabrication process with results in promoting the effect of accumulated experience and bone-stock. Adequate computer and communication system must be updated as appropriate to ensure internal efficiency and to work with supply and distribution sales partners. A cost leader strategy is primarily a volume strategy based on market development and adequate distribution even on internationalization, both at sales level and production level.

Organization implications of the cost domination strategy concerns: clear definition of duties and responsibilities and a management system based on correctly sized, realistic quantitative objectives. The management analysis and control system must be oriented towards the analysis of product value and cost audit.

A second course of action dominated the cost leader strategy is the pricing policy. The price is formed under the influence of numerous factors depending on evolution of the economic,

technological, political and financial framework of the market. Among them are several key factors (Stigler, 1972):

- cost level and movement
- volume, structure and elasticity of demand and the ratio between demand and supply on products and groups of products;
- exchange rates fluctuation of the main currencies used as payment means;
- inflation characteristics and dynamics;
- commercial policies of the countries and groups of countries that hold powerful positions in international trade with various products and multilateral arrangements for regulating international markets;
- the policy of various states and groups of states and transnational companies in the matter of prices;
- climatic conditions in the main agricultural and food products areas.

In determining the price of a product, objective and subjective components have to be included, like (Neamțu, 2004; Neamțu and Neamțu, 2009): product cost price, whose level depends on the company's internal conditions, suppliers, distribution system, taxation policy; manifestation mode of demand, considering the size of the potential market existing at a certain price level along with consumers' sensitivity to price; competition and its price strategy both on internal and international market; regulations in the matter of price fixing and competition protection; as well as strategic options of the company.

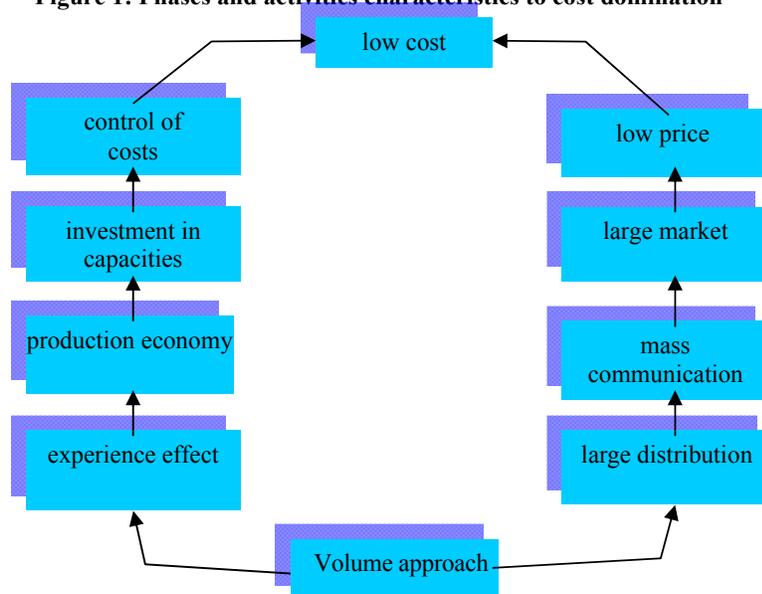
In establishing the price for a market, several answers to the following questions have to be considered (Jeannet and Hennessey, 2004):

- What price policy is representative in accordance with the position strategy and necessary sales margins?
- Can this price apply on this market?
- Money fluctuations can be a problem for the unit price strategy?
- Which is the company's price policy on the market, considering all the necessary factors?
- Which are the competition's prices in comparison with the ones practised by the company?

2. The cost and price management solutions to support a cost leader strategy

Before determining the action ways in a cost leader strategy we shall reveal the main phases and activities that successively help to permanently reduce the costs. Thus, costs control allow a low fabrication cost and selling prices decrease based on unit costs decrease providing therefore a larger market and even business internationalization among with bigger bone-stock that requires a policy of investing in high productive plants, determining factor in costs decrease. According to this reasoning is produced the virtual circle of cost global domination (figure 1) (Neamțu and Neamțu, 2009).

Figure 1: Phases and activities characteristics to cost domination

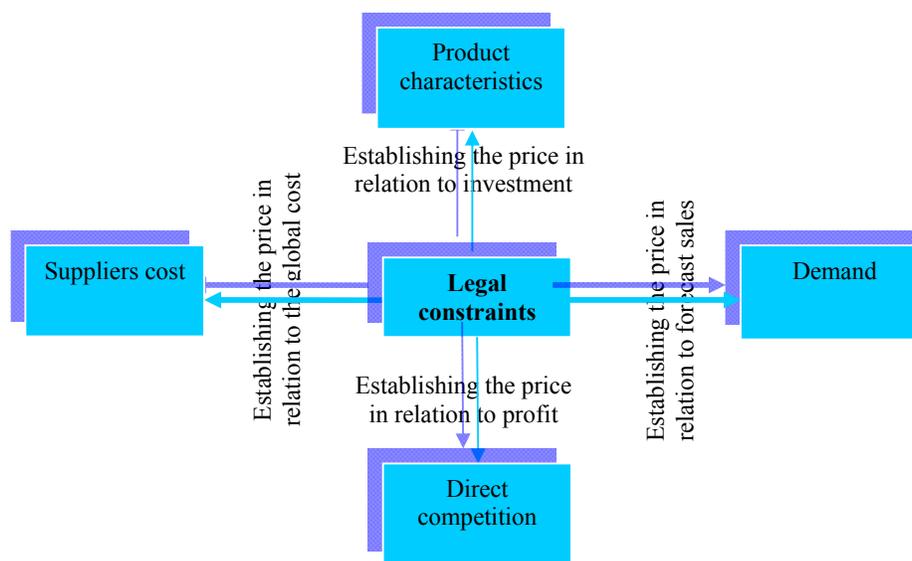


The price is the expression form of expenses or investments. Demand and competition are generally prompter to act to price alterations than in alterations of product images. Prices are the expression of a conception or policy with certain objectives that will be achieved through the decisions made in the field of prices. Such objectives can be: profit increase; investments profitability and their recovery at the planned term; entering a market and then maintaining and developing the position; resistance to competition or discouraging it.

Price formulation has to be accompanied by simultaneous analyses about five factors whose confrontation will allow to determine one or several possible prices tested before choosing the final solution (Cook, 1998). These five factors are: legal constraints; enterprise objectives in the matter of price; demand; product characteristics; competition.

If we take into consideration that the selling price has to reflect both the profitability of invested capital and the profit part owed to intermediaries or in other words commissions given to sellers depending on their turnover, there are a series of methods for selling price setting starting from costs, useful in choosing the most adequate price policy for a company. Figure 2 shows price setting model in relation to four basic elements: suppliers, demand, competing, product.

Figure 2: Price setting criteria



a) Price setting reported to suppliers: is based on determining the global cost of a product, fixed and variable, increased with a profit margin.

b) Price setting reported to product which establishes both the profitability that the invested capital to achieve the product and profit rate estimated from product sales and profit margin in absolute value.

c) Price setting reported to estimated demand that start from the value of the total profit for the entire produced quantity. If we take into consideration the critical point (break-even point) where the turnover equals total costs, therefore the profit is null and the company has set an objective within the terms of quantitative sells the ceiling price that allows to reach the critical point can be determined.

d) Price setting reported to direct competition it strictly takes into consideration the calculations concerning competitors' prices and different versions of price that can be used in the market..

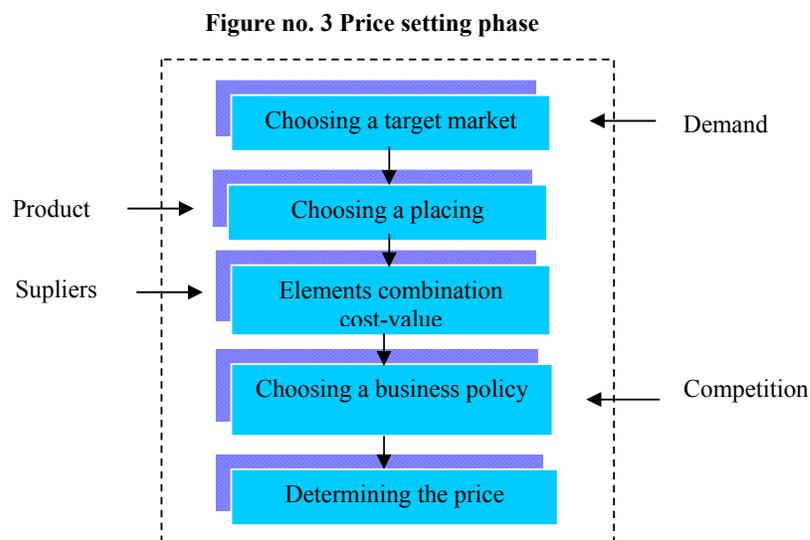
Depending on the company's expenses coverage level and the contribution to the expected profitability, three types of prices that can be used in competition against other competitors::

I. limit price which is equal with the direct costs of the product and is the lower limit below which we cannot go, the company accepting to sell at this price hoping to decrease the future costs as a result of an efficient use of production capacity ($P_v = C_u$);

II. technical price, called like this because it corresponds to the critical point and provides the recovery of the variable cost and fixed cost depending on the activity volume ($P_v = C_u + C_f/Q$);

III. **objective price** which allows to recover variable and fixed costs and achieving a profit.

It is interesting to note that price setting is studied depending on the mathematical models that integrate the influence of various market, environmental and company variables (figure 3).



In a policy of cost leader, the price does not usually allow to cover the advertising expenses or selling agents that use clients' personal contact and these efforts can be taken over by intermediaries.

The introduction of new products that have increased characteristics and functionalities can create a more powerful attraction for buyers than the smaller price of simpler equivalent products provided by a company directed towards a cost leader policy. In the same meaning, a convincing advertising campaign or a powerful fidelity for a trademark can contribute to the acceptance of higher prices payment, making the volume policy inefficient (Nicolescu, 1996). While the seller's market turns into the buyer's market, clients become more and more interested in the other parameters of the product rather than in the price.

Price setting is made in relation to standard prices, average prices of the market. From case to case, market price comprises a series of product accessories or a series of services like installation, transport, etc or on the contrary it can refer only to the actual product (Olteanu, 2002). In a cost leader policy, the goal is that along with market selection, the average and minimal price of the market be established in relation to which the real possibilities of the company to follow this policy will be established.

Price occurs as a contact and harmonization element between the product and the environment it addresses to, between supply and demand.

Being an objective component of the product, price can be adapted to it to the requirements and exigencies of various market segments.

Strategic element, the price does not interfere with advertising, contributing to the recovery of the investments made in the field, and through its level it can replace some promotion efforts or can result in their increase due to the need to argue it.

The higher is a product price, the more will the buyer think that the product is of high quality.

At last, the price reflects also the distribution policy through the possibility it offers to open and maintain target channels through a differentiated reduction policy, to cover the costs of the distribution apparatus. All these correlations have to be integrated in the general business orientation.

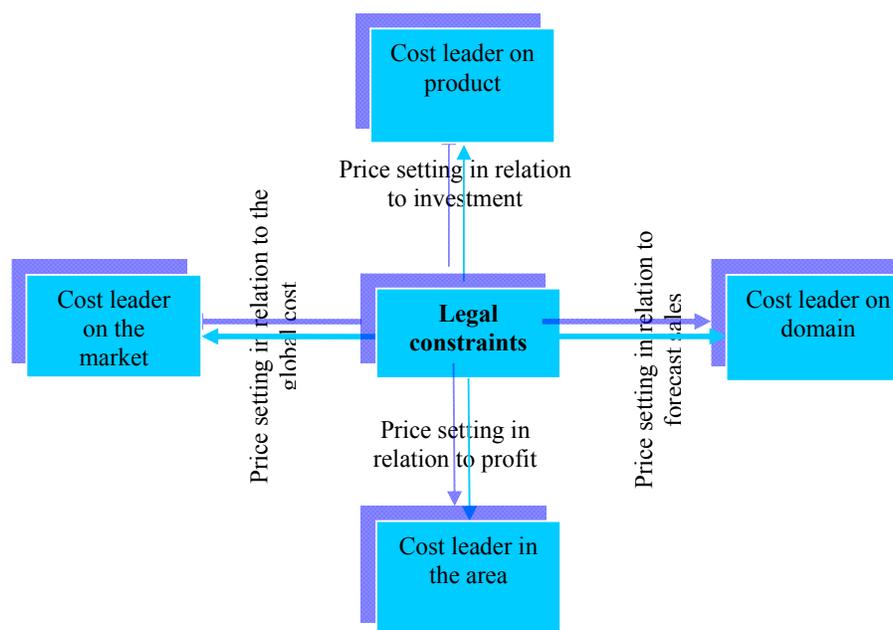
Price is a strategic variable, because it is the main criterion for production structuring and future allocation of resources as well as determining parameter of product and enterprise placing on the market and their economic future.

On price setting depend product accessibility to the client and the extent of the demand, market share and competitiveness, choosing the segment we are following and its behaviour, the nature of competition's reactions, profit and company's development. From these reasons, the cost

leader policy has to be framed as a way of approaching businesses focusing mainly in price and on its ratio with costs evolution at the level of company's activities.

In conclusion, in relation to the criteria of price setting, the cost leader policy can have four variants of application: cost leader on the market, cost leader on product, cost leader on domain, cost leader in the area (Figure no. 4). The company must choose one of four solutions to cost leader policy (figure 4), because dragging to a middle way does not lead to benefits for the organization.

Figure no. 4 Models of cost leader policy



Among the risks that threaten the good operation and use of the global cost domination strategy, we mention (Dundas and Richardson, 1980; Neamtu and Neamtu, 2009):

- market saturation; especially because the product is in decline and its modernization requires an emergency policy;
- technical ageing of productive plants; old plants are generally energy consuming and do not provide the necessary qualitative level, resulting in a lot of scrap;
- losing the competition advantage due to the technical progress made by the other competitors;
- newcomers from countries with cheap manpower;
- the risk of losing the technological innovation capacity to the disadvantage of cost domination;
- decreasing the power of negotiation with suppliers.

3. Offensive choices for market dominance

Offensive approach requires the company should try to have and maintain the initiative in terms of price compared to direct competition, forcing thus other competitors to react defensively.

Depending on prevailing available capabilities, the firm may engage in one of the following strategic cost leader to establish and maintain its competitive advantages (Russu, 1999; Neamtu and Neamtu, 2009):

a) *Frontal attack on the strengths of competing firms*, a strategy that is clearly bold and whose success will depend on the firm commitment and his competitive force in terms of costs and power response of competitors.

b) *Attack the weaknesses of competitors*, based on the concentration of resources and competitive force of the company to promote a competitive range of products with lower prices in areas where competitors have no competitive bidding. In such an offensive strategy, which have significantly higher chance of success than previous, the main lines of attack concerns, most commonly, the following weaknesses of other firms in the market:

- market segments that competitors have neglected or not have the necessary resources and skills to properly serve them;

- areas where competitors have a lower market segment and are not capable of sustained competitive effort;

c) *Frontal attack* performed on a broad front is based on a range of low prices in various areas of business activity while increasing R & D and the rate of product trade and improving performance that leading to significant cost reduction.

d) *Selective frontal attack* means selecting products that will be at the center of attack in the field of costs. This strategic option is often restricted to a range of very important product of the company. Selective frontal attack means the initiating company to provide similar products to the leader company of the market but at lower prices. Success of such an attack depend upon the relations price - cost - volume of the firm offer, in the sense that discounts reduces the profit margin and increases in sales compensate this reduction (Kotler, 1997).

e) *Simultaneous attack on several fronts*, which is a very aggressive strategy that relies on multiple initiatives to reduce prices, launched simultaneously in different activity areas of the company, so that competitors are surprised by the intensity and extension of the attack and be bound to defend simultaneously at different levels. Specific actions of this strategy are to reduce costs and gain new groups of buyers with specific needs while expanding covered market segment. Multiple fronts attack strategy must be sustained by a considerable level of resources that the firm to consume in its efforts to accede to the cost leader position in the market and to create substantial and lasting competitive advantages.

f) *"Guerrilla" type offensive* which consist of an attacking campaign with reduced prices for a defined time period and a range of products for which a more modest company can successfully compete other competitors. Range of products that will run the campaign must comply with its central core portfolio of products in order to have a market impact. This strategy of "harassment" is indicated for small companies lack the necessary resources and competitive force to engages in the previous types of strategies

4. Conclusions

In this context the strategy of global domination at cost is a great way to dominate the market with lower prices than the competition. This requires the firm to have a large and stable market, properly and efficiently organized in order to benefit from experience; to promote a policy that costs of production and logistics to be constantly reviewed and optimized; options supply to be directed to use appropriate materials; and must be maintained concern for productivity growth.

Minimum cost strategy is not without risks. To be efficient it takes to be a leader company in terms of cost, on a range of products or all its fields of activity. Two or more companies seeking to become leaders in cost can engage in fierce competition, which will result in lower profits up to a very low level.

Therefore, the company should have an advantage in terms of cost that can not easily be imitated, and also to keep up with new technologies that can lead to changes magnitude of costs. If these conditions are not met, competitors applying a policy of differentiation can seduce customers by offering products or services with superior characteristics.

Planning and operational programs will operationalize the overall strategy of the company, specifying the necessary details about how the company should act to implement cost leader strategy. Stating the functional programs that permits the understanding of the overall strategy by the majority of its constituents and clarification of those parts of the strategy covering specific functional areas.

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THE MAIN INDICATORS OF DEVELOPMENT OF MECHANIZED FARMING IN BUZAU COUNTY

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Abstract: *By analyzing the evolution of the investments in agricultural machinery and tractors and other agricultural equipment with statistical indicators that characterize the evolution of the park ensures the informing upon agricultural mechanization level for taking the decisions more effective.*

The mechanization is manifested as the main factor of labor productivity growth and the growth factor of agricultural production because it offers opportunities to perform agricultural work in the best agrotechnical periods and at a high quality level, also the mechanization is the crucial condition for the valorization of the other factors of production that enhances agricultural production (chemical fertilizers, irrigation, the agrobiological progress).

Key words: dynamics, quadratic regression, mecanisation

JEL classification: Q - Agricultural and Natural Resource Economics; Environmental and Ecological Economics; Q19 - Other

1. Introduction

The number of tractors and agricultural machinery in Romania decreased at the beginning of the transition period, then began to rise, but gradually. The park of tractors and combines for grain production was the most affected. The number of combines represented about 77% in 2005 compared to 1989 and 90% in 2010 compared to 2000. On the other hand, the number of tractors has increased slightly, and the arable land load per tractor improved, dropping from 62 ha in 1989 to 54 ha in 2005, arriving in 2010 at 52 ha.

However, the current fleet of agricultural machinery is largely outdated, which leads to large crop losses. According to the data from international organizations, the technical equipment of agriculture is now and in future will be one of the essential elements in capitalizing the potential in this sector, including food security of humanity. (Neculai C., 2005)

FAO report in 1999 estimated that 30% of investment in agriculture in the developing countries will do to mechanization, which is absolutely necessary to increase agricultural production. Embodying this study World Bank Staff Working Papers no. 673 Agricultural Mechanisation (author Hans P. Biswangher) states that the speed of these investments and their realization are generated by the degree of endowment land and labor and the demand for agricultural products.

Based on these considerations, the National Institute of Agriculture Mechanization together with specialists from the Ministry of Agriculture, Food and Forestry conducted a comprehensive study on Romanian agriculture mechanization. The study includes a detailed radiography of technical equipment of the sector, proposing actions and providing technical solutions to optimize the agriculture.

To be noticed is that in countries such as Finland, France, Denmark, Norway, Belgium, Austria, there are more tractors than the number of people active in agriculture. This means that a farmer has more tractors, by different powers, which they use depending on the requirements of the agricultural works.

In terms of mechanization, in September 2009 is as follows: Romania has an endowment of tractors and agricultural machinery among the poorest in Europe, each tractor load is about 54 hectares, compared with the EU, where the average is of only 13 hectares. The internal fleet of tractors amounts to approximately 170000 units, of which about 80% are aged. Unlike the West, where tractors are considered old at 3000-4000 hours in Romania, the load on the tractor it reaches

even over 12000 hours of use (Article - Chinezii încep producția de tractoare la Râșnov , 11 septembrie 2009).

A large load is found also at combine harvesters for agricultural crops, where we are in a unfavorable place 7, after Albania, Bulgaria, Greece, Macedonia, Czech Republic and Spain.

We have over 100 hectares/ combine, 20% higher load than the European average of 79 ha.

Unfortunately, in east and southeast areas where otherwise the share of agriculture is high, the charge is extremely high, reaching 84 hectares per tractor and for the combine more than 179 ha. And this makes difficult the agricultural work, with negative implications on agricultural production (Bogdan M. , 2003).

Also contributing to this is the fact that, especially in these areas, much of the technical park has exceeded the functioning time, leading to expensive maintenance default, the delay of works and high fuel consumption.

2. Material and Methods

In the next study we appealed to the use of statistical indicators showing the time evolution of the fleet of tractors and agricultural machinery: the average annual rate, the livestock values reported in percent, the quadratic regression.

Regarding the use of quadratic regression we used the approximation on the criterion of least squares to determine a function $F(x)$ which does not pass through points of definition, but among them, so that the sum of squared deviations between the functions $F(x)$ and $f(x)$ at these points to be minimal. (Draghici M, 1974)

$$\sum(x_n - X_n)^2 = \text{Minimum}$$

By the application of the criterion of least squares, solving leads to the form of the quadratic regression: $F(x) = a + bt + ct^2$, and the system of linear equations whose solution provides the least squares minimization is:

$$na + b\sum t + c\sum t^2 = \sum x$$

$$a\sum t + b\sum t^2 + c\sum t^3 = \sum xt$$

$$a\sum t^2 + b\sum t^3 + c\sum t^4 = \sum xt^2 \quad \text{where:}$$

$f(x)$ - number of tractors and machinery,

$F(x)$ - the approximation of the number of tractors and machinery calculated by quadratic regression,

t - years,

n - number of years

The simulation model involves calculating the number of tractors and agricultural machinery for the next year and calculate the confidence intervals for the number simulated. The data used had as source: The Romanian Statistical Yearbook and the Statistical Yearbook of Buzau County.

3. Results and Discussions

After analyzing datas from table 1 we can note the following:

On the total country developments in investment in agricultural machinery for the period analyzed we can notice a dynamic trend oscillating slightly , only to certain categories. It is known an increase between the years 2000-2010 , which at the end of the period investments in agricultural tractors have increased with 12.7 % , plows for tractors with 15.8 % , the mechanical cultivators had recorded an increase of 6 % and the mechanical drills with 20.1 %.

Table 1. Technical and material dynamics during 2000-2010 per total country and in Buzau county (2000 = 100%)

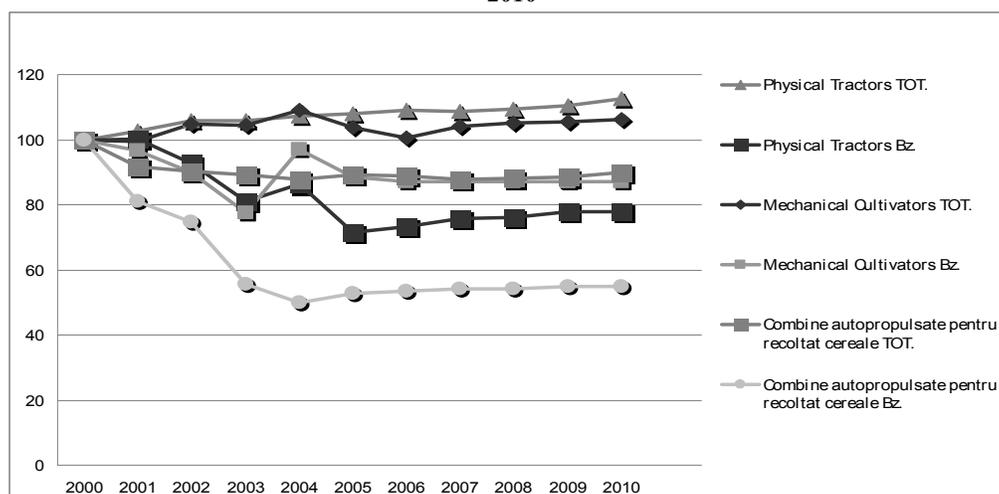
It. no.	Categories of tractors and agricultural machines	Areas	2000		2001	2005	2009	2010	Average Rhythm	Annual Rhythm
			No.	%						
1	Physical Tractors	TOT.	160053	100	102.6	108.1	110.5	112.7	107.2	1.21
	-	Bz.	4101	100	100.2	71.4	77.7	77.7	83.0	2.5
2	Plows for tractors	TOT.	123192	100	103.0	111.2	115.7	115.8	110.1	1.5

	-	Bz.	3130	100	95.3	99.0	95.1	95.1	93.9	-0.5
3	Mechanical Cultivators	TOT.	26212	100	99.3	103.6	105.6	106.0	103.8	0.6
	-	Bz.	710	100	96.5	88.5	87.0	87.0	89.5	-1.4
4	Mechanical seed drills	TOT.	57709	100	103.9	115.6	119.4	120.1	112.9	1.9
	-	Bz.	1423	100	95.5	77.3	80.9	80.9	84.7	-2.1
5	Combines self-propelled grain harvesters	TOT.	28084	100	91.8	89.2	88.7	90.0	90.2	-1.0
	-	Bz.	649	100	81.2	52.7	55.0	55.0	62.3	-5.8
6	Combines self-propelled forage harvester	TOT.	1655	100	76.6	43.7	47.1	48.2	57.3	-7.1
	-	Bz.	49	100	67.3	20.4	18.4	18.4	36.4	-15.6
7	Vindrovere forage	TOT.	1780	100	93.3	68.8	71.0	69.3	77.7	-3.6
	-	Bz.	69	100	79.7	84.1	84.1	84.1	81.2	-1.7

Source: (Own calculations based on data from Statistical Yearbook of Romania 2000-2010 and Statistical Yearbook of Buzau County 2000-2010, datas from the INS).

Following the evolution of the investments in other agricultural machinery we observe a decrease up to 50% of their number in 2010 compared to 2000 (at self-propelled Combine grain harvesters -10%, combines self-propelled forage harvester-51.8% and at Vindrovere forage - 21.7%)

Figure 1. The endowment with tractors and agricultural machinery during 2000-2010



Source: (Own calculations based on data from Statistical Yearbook of Romania 2000-2010 and Statistical Yearbook of Buzau County 2000-2010, datas from the INS).

While at the entire country level we can see some growth, in terms of the endowment with agricultural machinery, in the dynamic of the Buzau county we observe a downward trend in all categories of tractors and agricultural machinery analyzed: agricultural tractors decrease in 2010 compared to 2000 with 22.3%, cultivators and mechanical drills reach a total of 13% and 19.1% decrease, the most drastic decline is suffered by investments in self-propelled combine grain harvesters, reaching in 2010 a total of 98.6% lower than in 2000.

Table 2. The average charge on the tractor and on combine cereal, on total country and in Buzau county (ha / tractor or machinery)

Year	Physical tractors		Combine grains	
	Total	Buzau	Total	Buzau
2000	58.61	62.57	201.37	275.26
2001	57.25	62.62	244.14	362.03
2002	55.53	67.56	238.52	383.72
2003	55.65	77.46	221.25	475.13
2004	54.84	72.6	254.14	614.06
2005	54.44	88.03	234.11	504.86
2006	54.05	85.8	204.78	490.97
2007	54.16	83.01	208.03	467.36
2008	53.87	82.92	210.37	605.87
2009	53.28	81.16	212.15	507.88
2010	52.12	81.16	199.35	489.3
Normal charge for Romania	23-35		175-200	

Source: (Own calculations based on data from Statistical Yearbook of Romania 2000-2010 and Statistical Yearbook of Buzau County 2000-2010, datas from the INS).

Increasing the number of tractors during 2000 - 2010, has reduced workload on the tractor, 52.12 hectares/tractor of arable land in 2010 compared to 58.61 in 2000 (Table 2). However, the value of this indicator remains high above normal parameters for Romania's current conditions (25-35 ha / tractor).

Regarding the charge on the combine grains, we can see a drop in ha / combine in 2010 compared to 2000, respectively from 201.37 to 199.35 ha ha.

Analysing the data in Table 1, we could consider that the charge - ha / combine would have to increase due to their number that has declined but we find a decrease on the load - ha / combine and this decrease is due to the reduction of the surfaces cultivated with grain cereals (in 2000 the surface of grains was 5655182 ha in 2010 decreased by a factor of 5040646 ha).

Table No. 3. The synthesis of the endowments of park tractors and agricultural machinery in the county of Buzau.

Anul	Tractors		Plows		Combines		Drills	
	f(x)(nr)	F(x)(nr)	f(x)(nr)	F(x)(nr)	f(x)(nr)	F(x)(nr)	f(x)(nr)	F(x)(nr)
2000	4101	4271.44	3130	3030.44	649	639	1423	1447.22
2001	4109	3948.37	2984	2950.48	527	539	1359	1351.18
2002	3810	3677.06	2786	2893.05	484	457	1350	1271.82
2003	3327	3457.52	2575	2858.15	361	395	1105	1209.12
2004	3549	3289.74	2867	2845.78	323	351	1247	1163.08
2005	2927	3173.72	3099	2855.93	342	326	1100	1133.72
2006	3004	3109.46	2978	2888.62	347	320	1101	1121.02
2007	3105	3096.97	2978	2943.83	352	332	1121	1124.99
2008	3127	3136.24	2978	3021.57	352	364	1151	1145.62

2009	3187	3227.28	2978	3121.84	357	415	1151	1182.92
2010	3187	3370.07	2978	3244.63	357	484	1151	1236.89
2011		3564.63		3389.96		572		1307.53

Source: (Own calculations based on data from Statistical Yearbook of Romania 2000-2010 and Statistical Yearbook of Buzau County 2000-2010, datas from the INS).

Based on data from Table 1, we performed an approximation model based on the quadratic regression to a time period of 11 years, respectively 2000-2010, for the evolution of the number of tractors, plows, cultivators and drills by the type of regression equation: $F(x) = a + bt + ct^2$.

After solving it, the result has the following functions $F(x)$:

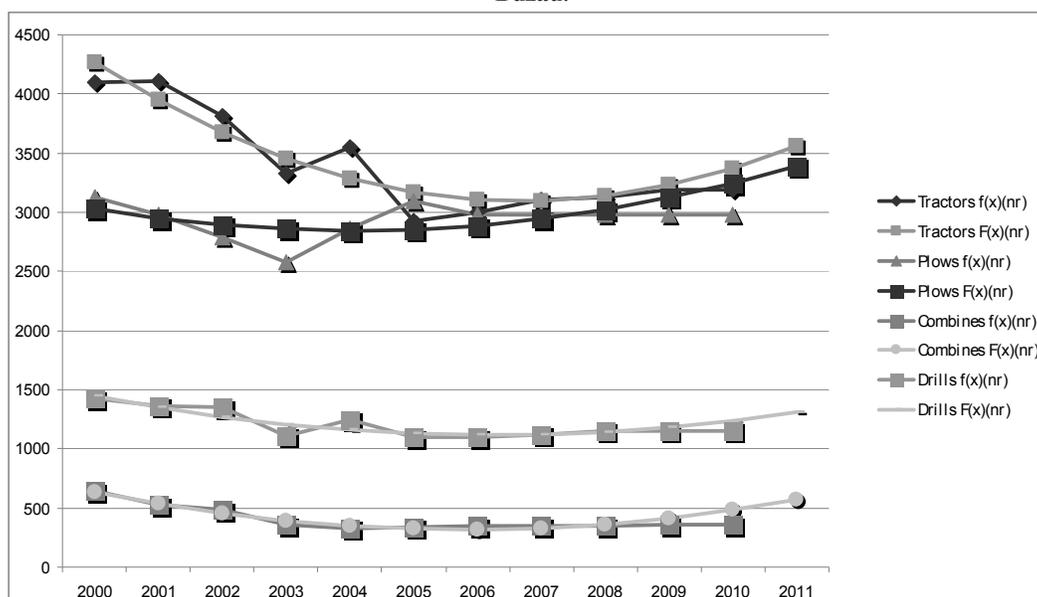
- at tractoars $F(x) = 4646.26 + (-400.71)t + 25.88t^2$
- at plows $F(x) = 3132.93 + (-113.75)t + 11.26t^2$
- at combines $F(x) = 758.60 + (-128.77)t + 9.44t^2$
- la drills $F(x) = 1559.92 + (-121.04)t + 8.33t^2$

Based on these equations we simulated the evolution of mechanical resources for 2011.

The regression equation shows a decrease in the number of tractors and agricultural machinery until 2006-2007, with an increase in the next three years, however insufficient to reach more than 7400 tractors required to have a load comparable to the normal in Romania, of 25-35 ha / tractor and the necessary number of combines over 1000 , for the surface cultivated with cereals(176,679 ha).

For the year 2011 (simulation model), the categories studied present a trend of slightly increasing their number, which could show an improvement of the technical and material base in Buzau County in coming years.

Figure 2. The synthesis of the endowments of park tractors and agricultural machinery in the county of Buzau.



Source: (Own calculations based on data from Statistical Yearbook of Romania 2000-2010 and Statistical Yearbook of Buzau County 2000-2010, datas from the INS).

4. Conclusions

One of the main problems of the present stage of development of society is to increase agricultural production with minimum expenditures of labor and means. Opportunity and quality of their processes require mechanization – a high performance factor of productive work for growing. For this purpose , it requires a large number of agricultural machinery and tools, with which may make the execution of technological operations in accordance with the agrotechnical requirements .

The major problems of agriculture in Romania are: lack of major investment in agriculture (not because of lack of funds for financing, but rather the difficulty of accessing them), fragmentation of land, property disputes and poor technology.

In an agriculture under technical and social restructuring, as shown in the present Romanian agriculture, increasing technical equipping depends mainly on the orientation of public policy to investment activity (the amount of budgetary resources and financing credit guarantee etc.), and the possibility of accumulation and credit to farmers.

Romania has an endowment of tractors and agricultural machinery among the poorest in Europe, each tractor load is about 54 hectares, compared with the EU, where the average is only at 13 hectares. Internal fleet tractors amounts to approximately 170000 units, of which about 80% are aged. Unlike the West, where tractors are considered old at 3000-4000 hours in Romania the load on the tractor reaches even over 12000 hours of use.

The regression equation shows a decrease in the number of tractors and agricultural machinery until 2006-2007, with an increase in the next three years.

To reach the number of over 7400 tractors required to have a load comparable to the normal in Romania, of 25-35 ha / tractor and necessary of combines over 1000 it is required to make a strong investment in tractors and agricultural machinery.

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2011 NATIONAL MANAGEMENT PERFORMANCE AND STATUS

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Abstract: *This paper is based on the interviews from more than 400 company managers, university professors, consultants and trainers in the management field. It presents in the international comparative approach the status and performance of Romanian management at the national level in 2011, there are comparisons between Romanian management, EU management and Central-East European management. A special attention is paid to the Romanian management ability to deal with the crisis and its consequences at national level and at the level of SMEs, large companies, multinational companies, central administration and local administration. Psychological impact on the crisis on the entrepreneurs is also analysed.*

Keywords: management, management performance, management analysis, Romanian management, European management, central European countries, economic crisis

JEL classification: Q44

1. Introduction

The great American economist Domar has conducted a study on the economic development of the USA, across one and a half century, based upon which study he has come to identify four essential factors having led to this country becoming the first economic power – and not only economic – in the world. The first two such factors have been **management and education**, followed by technology and finance. Following the same line of events, the greatest management specialist in the world – Peter Drucker – has stated in several of his works and also brought arguments to the fact that science and management practice stand for one basic vector of economic growth. Starting from this very paradigm, we shall further on focus on the national management status and performance, in terms of its impact on Romanian economy functionality and performances.

Based upon the macroeconomic vision, as adopted by the aforementioned specialists, we shall commence our managerial analysis in Romania, starting from the management at the level of the entire country. It is obvious from the very start that one such analysis is something very difficult to achieve, due to the special heterogeneous and complex character of the elements under analysis.

Following a number of researches, it has come out that there are **four types of optics, where one may and, it is also recommended that one conducts any such analysis** of the national management.

a) **The field of activity where any such management is exercised:** economic, political, social, educational, technical – scientific, cultural – artistic, legal. Within the present document, we focus our analysis on the management from the economic field, however in a close relation with the other fields as well, that the latter cannot be separated from, in terms of either its functionality, or its outcomes. Consequently, whereas the current structure of the Romanian society and economy, the analyses shall be conducted:

- Globally, at a national level, with a focus on economy;
- At the level of the public administration, which has a major involvement in the economic, social, political, educational, scientific and cultural management, etc.;
- At the level of economic agents, where the largest part of economic activities is being carried out, with a direct and decisive impact on the entire economy status and performances and, indirectly, on the quasi – totality of the other fields;
- At the level of managerial training and consultancy management, which, by virtue of the quality, nature and costs of the services, as supplied, has a substantial impact upon management functionality in all fields.

b) **Nature of managerial issues, as approached:** strategies, policies, managerial system,

decisional sub – system, methodological – managerial sub – system, informational sub – system, the structural – organizational sub - system, human resources management sub – system, managers, leadership, organizational culture, efficacy, competitiveness and sustainability. Naturally, one shall consider the above mentioned matters, however not so analytically, but grouped as per strategies and policies, managerial system and sub – systems, managers and entrepreneurs, leadership, the economic – organizational culture and managerial performances.

c) **Level of territorial aggregation where it is present:** the national, regional and local level. The present paper shall focus on the managerial issue at the national level, however in correlation also with references to variables, functionality and performances from the other economical – social aggregation levels, as well.

d) **Basic elements of the managerial processes taken into consideration:** inputs, processes and outputs. Without any intent to be an exhaustive approach, within the present paper one shall consider at both national level, and at the level of the other four components under analysis – namely administration, economic agents, training and consultancy -, the most significant aspects in terms of inputs, processes and outputs, from a managerial perspective.

Therefore, given the aforementioned, we shall have a **relatively comprehensive approach, from several angles**, by which one aims at characterizing the defining elements in terms of the current Romanian management, within the context of the internationalization of economic activities, as well as of our country's integration into the European Union.

2. Evaluations regarding the quality of the management practiced in Romania, as compared to the European Union management

The evaluation of both quality and efficacy of a given field or process may be absolutely achieved – by using certain indicators actually measuring such elements – or relatively, by means of a comparison with the quality and efficacy of the field or process run within other systems.

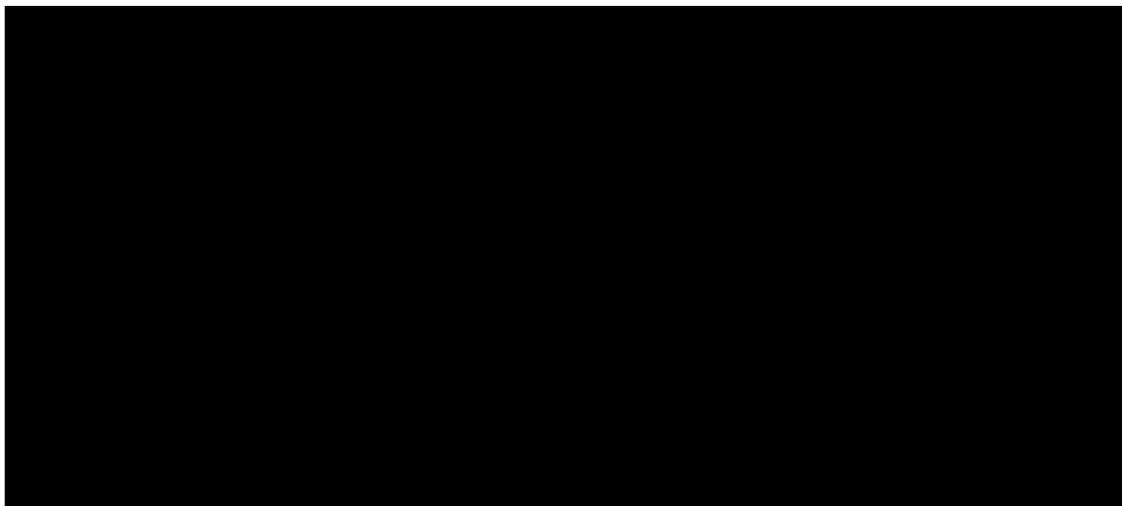
In terms of the management field, which we deal with in the present paper, we shall make use of the second approach, since the use of any performance indicators in order to measure the 2011 management quality and efficiency faces at least **two quasi – insurmountable difficulties**:

- There are no management exclusive performance indicators, the management performance being indirectly measured, by virtue of the performances of those systems the management is exercised upon.
- The assessment of Romanian management quality and efficacy, in terms of the performances of those systems run in 2011 is not fully edifying, due to the complex economic situation and the partial extension of the economic crisis from 2009 and 2010, as well as of the latter's effects, which comes to alter the economic performances at all levels, the management impact in such an exceptional case being lower than usual.

Given the circumstances, **the main method to assess the autochthonous management quality and efficiency is represented by comparing it with the management in other countries and its evolution in dynamics to the previous year** (Nicolescu O., Verboncu I., Profiroiu M - 2010).

The replies filled in within the questionnaires that a number of specialists have answered to (see pictures no. 1 and no. 2 and table no. 1) enable us to have several findings and comments, which we shall describe hereunder, as follows:

a) **The management practiced in Romania**, in comparison with the predominant management from the European Union is **inferior** – according to the opinion of more than 72% of the respondents –. More than a sixth of the aforementioned find it to be approximately the same, and a little more than 7 %, find it to be even superior than the European average (see picture no. 1).



Picture no. 1, Quality and efficacy of the Romanian management, comparative to the European Union average

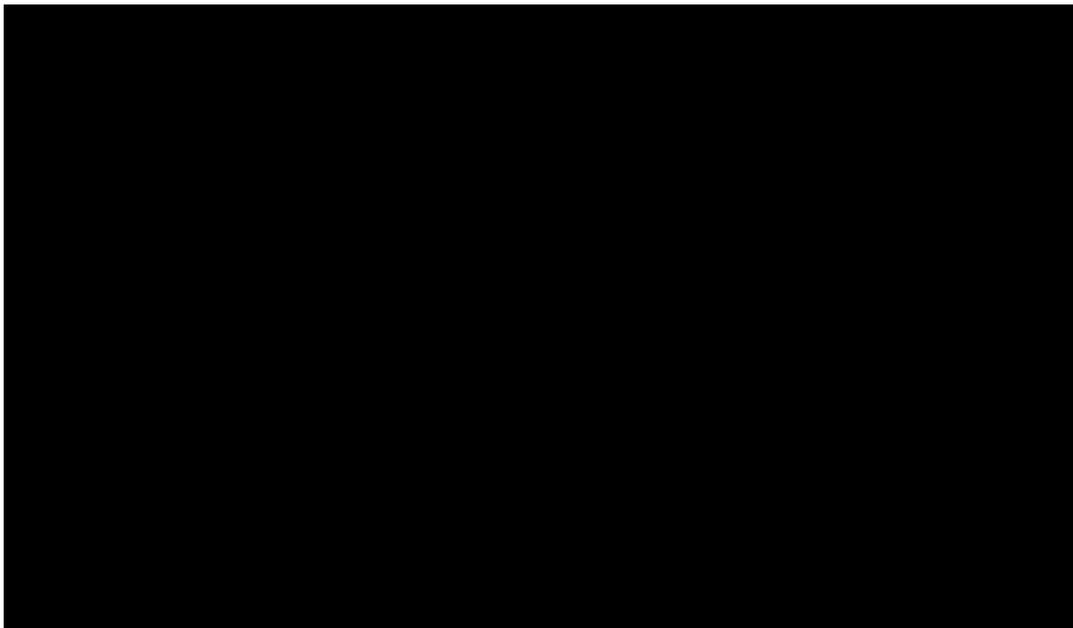
Table 1: Romanian Management Quality and Efficacy, as compared to other European Areas, per categories of respondents

Assessment of the efficiency and quality of the management under practice within Romanian companies in 2010	Approximately the same	Better	Inferior	I don't know
<i>A. Teachers, researchers and management consultants</i>				
European Union predominant management	18.95%	8.42%	69.47%	3.16%
Average management practiced in Central European countries	32.63%	6.32%	45.26%	15.79%
<i>B. Managers and specialists</i>				
European Union predominant management	14.47%	6.58%	73.36%	5.59%
Average management practiced in Central European countries	25.08%	10.89%	49.17%	14.85%

b) Assessments are partly different at the level of teachers, researchers and consultants, in comparison with the evaluations of managers and economy specialists (see table no. 1). Almost 70% of the former believe that Romanian management is inferior to the one under practice in the European Union, in comparison to almost 74% as it is the weight of managers and specialists holding the same opinion on the matter. It is our belief that this big difference in terms of assessment may be mainly explained by two causes:

c) The 2011 Romanian management quality and efficiency, as compared to the management from the Central European countries are slightly closer, just as it comes out of picture no. 2.

Picture 2: Quality and efficiency of Romanian management, comparative to the average management practiced in Central European countries



Over one third of the respondents (36,68%) believe that Romanian management is the same, or even superior to the management under practice in Central European countries economy. The percentage is over 50% higher, in comparison with the one relating to the management under practice in the European Union. We notice, however, that almost half of Romanian specialists believe that the management in Central European countries is superior to autochthonous management.

d) By getting deeper into the analysis, as per the two groups of respondents (see table no. 1), one notices some differences between those assessments on the part of teachers, researchers and consultants, on the one side and on the part of managers and specialists, on the other side. Given the aforementioned, we notice the fact that a higher percentage – of over 70 % - of practitioners believe that Romanian management is superior to average management in Central European countries. This observation is counterbalanced to a great extent by the fact that only one fourth of those practitioners assess Romanian management at the level of the one under practice in Central Europe, in comparison with almost one third of teachers, researchers and management consultants, who have released the same judgment.

The overall conclusion that one may depict, is that – from a qualitative perspective – **Romanian management is below the level of the management practiced at the level of the European Union, as well as at the Central European level.**

3. Management ability to deal with the crisis and its consequences

When any such crisis occurs – and this is what the quasi – totality of management specialists say – the quality of the management exercised within the previous period of time, has been “suffering”. One good management is countering the occurrence of any such crises, or – when the latter’s causes lay beyond the area of its direct intervention – it diminishes the same.

The recent years economic crisis has been and still is first and foremost a global crisis “starting in” the USA, with a substantial “contribution” particularly on the part of the financial – banking management and the federal administration management. This crisis has rapidly increased and, by has been indirectly felt in Romania as well, becoming more and more acute, mainly due to the “cranky” state of Romanian economy, which, although it has rapidly developed during the period between 2000 and 2008, it has done so in a relatively “Brownian” style, with the full negative consequences, in terms of both structure and competitiveness and, of course, due to an inefficient management, as well.

Romanian crisis in 2009 and 2010, as well as its continuance in 2011, raise serious signs of

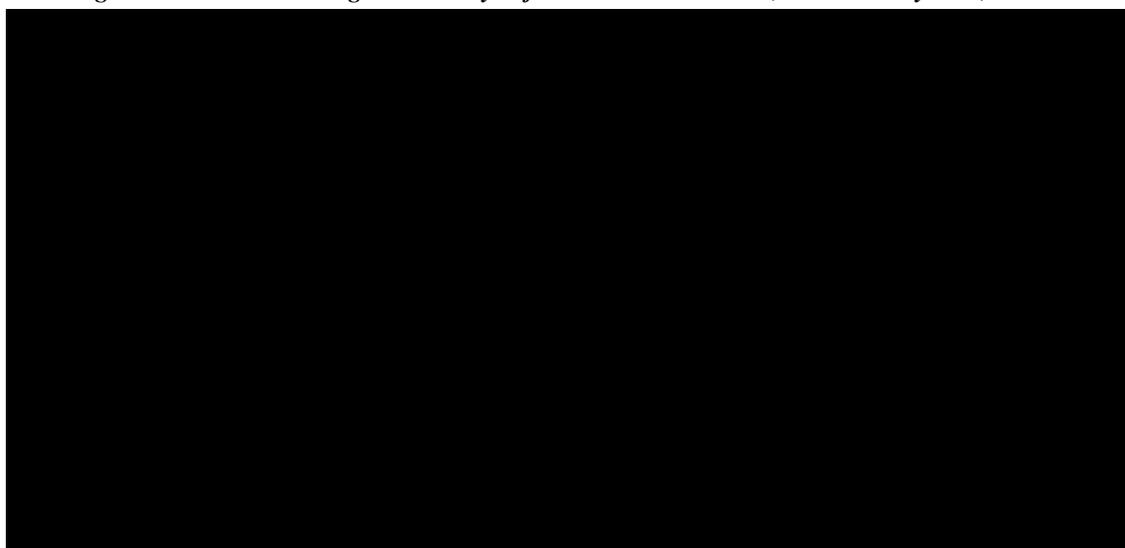
concern in terms of the quality of the management under practice, starting from the one at the national level and up to the level of economic agents. There have been some positive signs in 2011, when the Romanian economy registered a positive economic growth, holding the fifth position, in terms of the pace of GDP enhancement in all European Union.

Within this context, it is highly important to estimate – particularly from a future perspective – which is the **ability of the management to deal with any such crisis**. This latter assessment shows some **major significance, at least from two perspectives**:

- That of diminishing the effects of the current Romanian complex economic status, within the context of international contradictory evolutions;
- That of strongly getting ready for re - launching the Romanian economy.

Upon summarizing the answers of the specialists whose opinion has been asked, one found that – in terms of the overall country – almost **2 / 3 believe that there is a low managerial ability to deal with any such crisis** (see picture no. 3) **and one third of them find any such ability to be average**. The significance of these numbers is worrying, although in 2011 the economy has re - started to have a slightly upward trend.

Figure 3: Romanian management ability to face the economic crisis, at the country level, in 2011



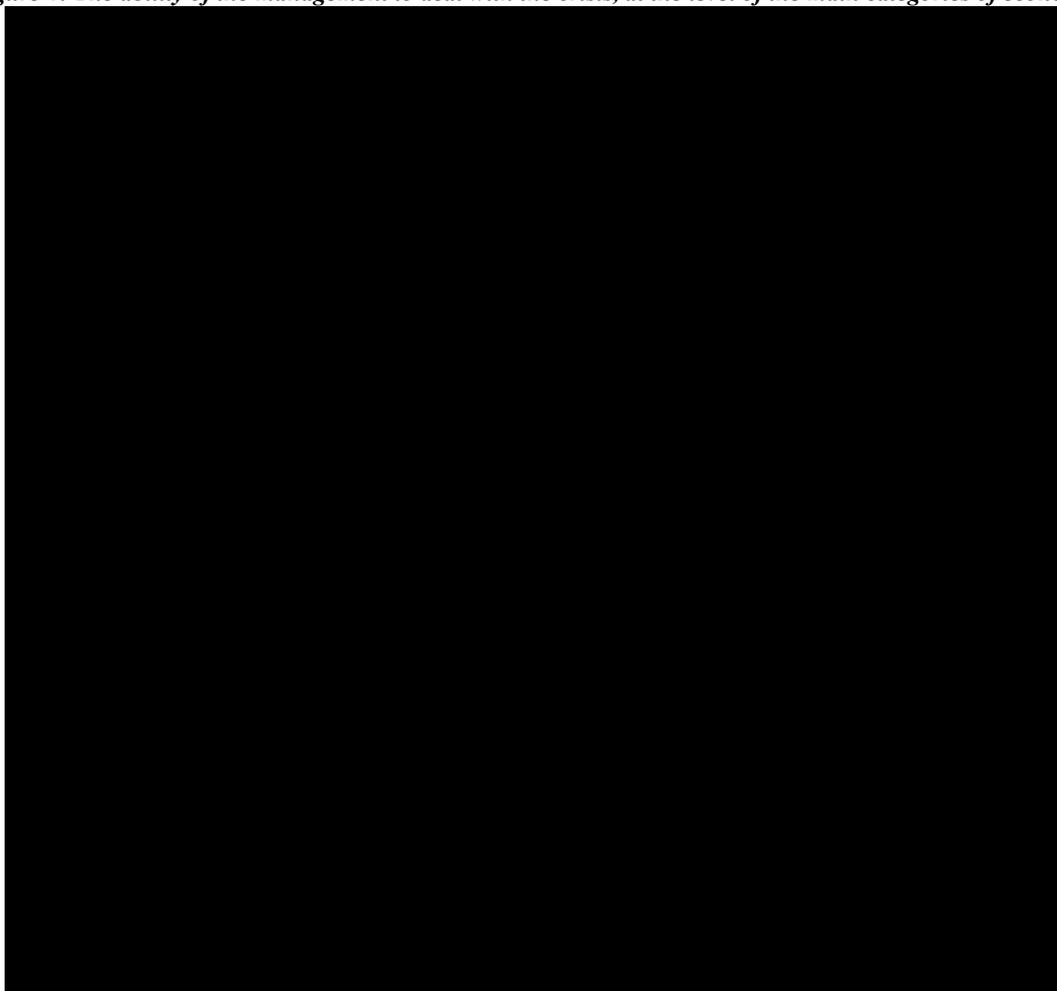
The detailed analysis conducted in 2010, as per the two categories of specialists shows some differences which, without being very high, are still significant, just as it comes out of table no. 2. In the opinion of a larger part - of 17.15 % larger, as compared to the second category of specialists – the national management has a low ability to deal with the crisis. The difference is even more relevant in terms of the average ability to face any such crisis – 56.21 % lower in the opinion of teachers, researchers and consultants.

Table 2: Management ability to deal with the crisis, at the country level

Management ability to deal with the crisis at the country level	%			
	High	Average	Low	I don't know
Teachers, researchers and consultants	5,26	23,16	70,53	1,05
Company managers and specialists	2,30	36,18	60,20	9,18

Going further with the detailed description of the analysis shows the fact that the assessments on **the ability to deal with the crisis, at the level of the various categories of companies and administrations, differs in between some very broad boundaries**, as also shown in picture no. 4.

Figure 4: The ability of the management to deal with the crisis, at the level of the main categories of economy



The highest managerial potential to deal with the crisis is identified at the level of those multinational companies – which is assessed as being high and average – by 78,92% of the respondents, followed by big companies (77,28%) and – at one considerable distance – by SMEs (52,00%). **The lowest potential to deal with any such crisis is identified at the level of the central administration (68,18%) and of the local administration (61,21%)**. These are numbers which, by their significance, are “overwhelming” anyone and which, in fact, do nothing but show the findings and assessments of management specialists over the years 2009 and 2010, as related to the public administration feedback in terms of crisis.

The structuring of the answers, as per the **two categories of specialists under consideration** (see table no. 3), shows several relevant differences, that we shall enumerate below:

Table 3: Management ability to deal with the crisis

Management ability to deal with the crisis	High	Average	Low	I don't know	%
<i>A. Teachers, researchers and consultants</i>					
At SMEs level	8.42	46.32	37.89	7.37	

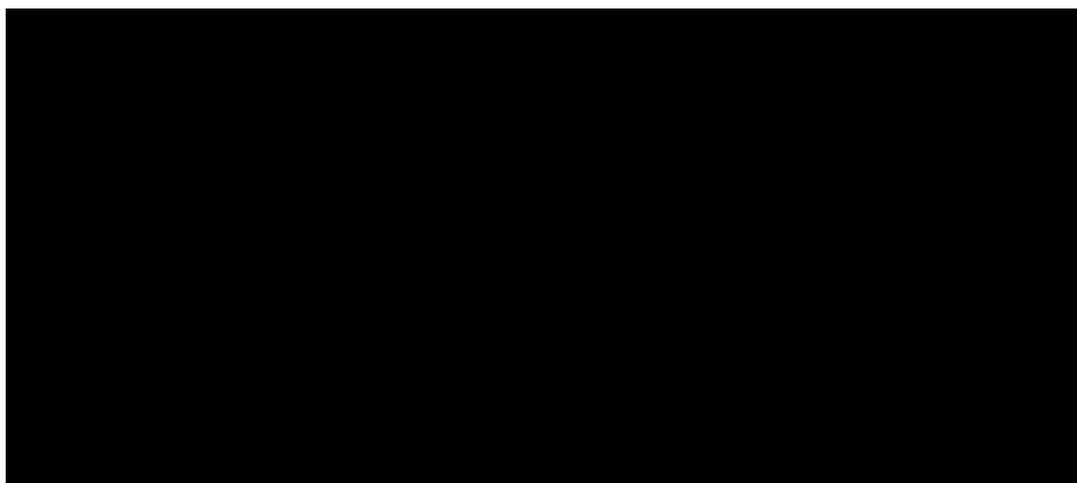
Management ability to deal with the crisis	High	Average	Low	I don't know
At the level of big companies	14.74	55.79	20.00	9.47
At the level of multinational companies	43.01	44.09	5.38	7.53
At the level of central administration	5.26	16.84	73.68	4.21
At the level of local administration	10.75	31.18	55.91	2.15
B. Company managers and specialists				
At SMEs level	8.52	42.62	39.67	9.18
At the level of big companies	15.69	51.96	21.90	10.46
At the level of multinational companies	37.29	36.96	10.23	15.51
At the level of central administration	3.65	26.91	66.45	2.99
At the level of local administration	4.28	30.59	62.83	2.30

- The considerable differences occur between the two categories of specialists, in terms of the ability of multi – national companies to deal with any such crisis, where we have 17.3 % more teachers, researchers and consultants than managers and specialists, who believe that multi – national companies have a high and average ability to deal with any such crisis;
- 10.80 % more teachers, researchers and management consultants, as compared to the second category of specialists, assess the central administration ability to face the crisis as being low;
- The assessments in terms of the local administration are opposite, almost symmetrically: 12.39 % more managers and economy specialists believe that the local administration ability to face the current crisis is low. This latter opinion is based upon the closer contacts that managers and company specialists have with the local administration.

4. Psychological impact of crisis on the managers and entrepreneurs

One significant aspect, particularly from the perspective of settling the complex issues as related to the crisis, and the latter's consequences, is represented by the **psychological negative impact that the crisis has on both entrepreneurs and managers**. The study (Nicolescu O., Haiduc I. C., Nancu D., Isaic-Maniu A., Isaic-Maniu Irina, Nicolescu C., Oana Bâră, Mirabela Borcoş, Anghel F.) conducted in the spring of 2010 using 1.723 entrepreneurs and SMEs managers, showed a strong negative impact of the crisis on the latter (see picture no. 5). Three of ten such entrepreneurs feel that they are threatened by the crisis to a very high extent, 42,22% are affected only in an average manner, while 22,75% of businessmen psychologically feel the decline of crisis to a very small extent; 4,36% of entrepreneurs feel no fear of recession.

Picture5: Psychological impact of economic crisis on entrepreneurs



By getting deeper with the analysis, subject to the size of the managed companies, we find that there is a certain **correlation between the size of the managed companies and the intensity of feeling the negative psychological impact**, just as it also comes out of the information included in

table no. 4.

Table 4: Psychological impact of economic crisis on managers and entrepreneurs, subject to SMEs size

Psychological impact of crisis on entrepreneurs	Companies' size		
	Micro – companies	Small companies	Medium – sized companies
High	31.43	27.53	30.21
Average	41.28	46.52	38.54
Low	22.46	23.10	27.08
No impact	4.83	2.85	4.17

More to the point, we find that micro – companies and small companies – as compared to the other two categories – feel the crisis to a higher extent. Studying the extension of the psychological impact on companies management, subject to the field of activity, shows some quite significant differences. Just as it comes out of studying the information in table no. 5, **the highest negative psychological impact is felt by those managers and entrepreneurs in the tourism and industry fields** (see row 3 in the table) and **the lowest negative impact is felt by the ones in the services field.**

Table 5: The influence of economic crisis on managers and entrepreneurs, subject to SMEs fields of activity

Psychological impact of crisis on entrepreneurs	SMEs, as per fields of activity					
	Industry	Construc-tions	Trade	Transpor-tation	Tou-rism	Services
High	33.95	35.29	35.12	29.86	36.56	21.86
Average	42.20	31.76	40.04	27.00	33.33	44.13
Total	76.15	67.05	75.16	76.13	69.89	65.99
Low	20.64	29.41	19.10	21.64	23.66	30.36
No impact	3.21	3.53	5.75	2.24	6.45	3.64
Total	23.85	32.94	24.85	23.88	30.11	34.00

5. Conclusions

The final conclusion which one may depict is that one major part of management specialists in education, research, consultancy and companies, finds that the Romanian management ability to face the crisis is low, the negative maximum being registered at the level of public administration, and the minimum being registered with the multi – national companies. In its turn, the crisis has a significant psychological impact on managers, more intensively in the tourism and industry fields, namely in terms of micro – enterprises and small companies.

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THE ACCOUNTING DUALISM – STRATEGIC BASIS OF THE FIRMS DURING THE ECONOMIC CRISES

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Abstract: *The present scientific article has as an objective demonstrating the necessity of the existence of a dualist accounting system in taking decisions at the management's level and to expose different techniques and strategies which can be used by the management of the firms in the conditions of the economic crises.*

In the article it is explained which are the objectives of the management during the economic crises and the steps which are to be taken – from the evaluation of the actual economic crises up to the taking the most adequate decisions, which allow the firm to pass over this period.

KEY WORDS: economic crises, dualist accounting, the management's objectives, financial situation's diagnoses, methods to optimize the efficacy.

COD JEL: G01, L25, M11

1. Introduction

It is not easy to act during the crisis time. A bad decision taken by the management of the firms can be damaging to the firms, and still during this period it is the moment of the big opportunities.

This research proposes itself demonstrating the necessities of an accounting dualist system in order to take decisions at the management's level and to expose different strategies-techniques which can be used by the management of the firms in the conditions of the actual economic crises.

The method of research is a qualitative one. It has been realised a synthesis of the indicators financial-economic proper to the financial accounting and a synthesis of the techniques and strategies of the management accounting which can be used by the management of the firms in the conditions of the actual economic crises.

2. The accounting dualism

The dualism represents the conception which considers as principles of existence two different and irreducible elements. It manifests especially in the continental Europe and according to this conception the accounting system comprises two subsystems: the financial accounting and the management accounting. These are two types of different accountings, with final different users, but which have an "interdependence relation" in the way that they "complete each other informational, as instruments of the decisional process" (Neculai Tabără, Sorin Briciu, 2012).

The financial accounting "is based on unitary norms of organising and leadership, compulsory to all the patrimonial units" (Neculai Tabără, Sorin Briciu, 2012), supplying public information destined to the external users –clients, suppliers, financial institutions, credit institutions, shareholders, etc. "The financial information that are elaborated by the firm offer transparency and viability on managing the firm and more over a better image and reputation, but they also bring additional costs of elaboration and sometimes, an inconvenient because they bring into light data that the competitors can use in their favour" (J.L. Gallizo Larraz, 2006).

The information from the financial accounting are used inside the management accounting, by the managers of the firm, in order to produce confidential information, destined to the internal usage of the firm, such as calculating the production costs, determining different bottom lines, of the basis of evaluation of the patrimonial elements of the analytic results on products or activities, of capitalisation, elaboration and budget control.

Therefore, the need of different information of the different types of users determines "two representations of the same realities – an internal one and an external one" (Neculai Tabără, Sorin Briciu, 2012). The way of organising the factories' accounting system into two individual informatics circuits, or in a single one, has been a discussion scientifically point since the beginning of the XX th century and it still exists today.

”This recent opposition between the general accounting and the analytical one, this dualism, deserves to be analysed: firstly because the analytical accounting takes several information from the general accounting; then because elaborating a balance sheet and of an result account in the general accounting asks for costs calculations which come mainly from the analytical accounting and the viability of some information which it contains depends on its existence or inexistence”.....”It is possible that the debate to be crossed by the new technology and mostly by the integrated programmes, as they allow the independence of the two types of accounting, in interdependence” (Bernard Colasse, 2011).

We consider that it is necessary this separation of the two accounting systems, as the supplied information of financial accounting refers to the passed activity and they are public information, being comprised in the synthesis documents specified by the International Standards of Financial Report, and the information generated by the management accounting are confidential, being necessary to the managers in order to plan the future activity of the firm and taking strategic decisions of it. Therefore the financial accounting has a passive role of information, and the management accounting has an active role of analysing of the financial information and looking for new strategies, of action directions.

3. The objectives of the management of the firms during the economic

During the economic crises it is extremely important getting the information in real time and also a correct and complete image on the situation of the firm. The crises periods are characterised in general at the firms’ level by reducing the sales, uncasing in time the bills, fact which influences negatively the benefits of the firms and the level of cash.

The human behaviour is a very strange one. For example, when the price of the houses rises, people spend more, have the feeling of wellness-their home is more expensive. When the price of their house drops, they feel poorer and reduce their expenses. The same thing happens with the firms during the economic crises, when they manifest a pessimist behaviour, which most of the times is unjustified.

The management has to secure the vitality and strength of the organisation in front of the change. During the economic crises the main objective of the management of the firm has to be the assurance of the balance or the optimum function of the three major points:

- guarantee of the necessary cash to develop the activity;
- the position on an acceptable level to the risk;
- obtaining maximum profitability;

Most of the times in these periods are being taken unpopular measures, the expenses are reduced, but this can be the moment in which the true leaders can demonstrate their abilities- the ability of convincing, the internal and external communication, obtaining the consensus, team work, the ability of negotiation with the costumers, suppliers and employees. The most important thing is not to panic and to realise a rational analyses of the situation.

The steps which are to be followed are:

- realising a diagnoses of the financial situation of the firm;
- deciding the future actions as to improve the financial situation;
- Adopting optimisation methods for efficacy and profitability.

3.1. SWOT Analyses

In order to realise a diagnoses of the real situation in which is the firm the management will realise a SWOT analyses. This analyses will take into consideration both qualitative factors and quantitative ones which influence its activity.

From a qualitative point of view questions will be asked connected to WHO the owners of the firm are or WHO the managers are and the employees and which are the strong points and the weak points which they generate.

Secondly questions will be asked connected to WHAT kind of activity the firm develops, in WHAT sector activates, WHAT produces or WHAT kind of competitors has and which are the threats and observed opportunities. We must take into consideration the fact that the crisis has not affected all the economic sectors equally. The most affected sectors are the construction, the cars, the banks and trade in general, but there are sectors in Europe which are developing, such as the private sanitary sector, the service sector for the third age, the renewable energy, telecommunications, telemarketing.

Finally the management will orient its attention on HOW the firm functions taking into consideration the given conditions.

The quantity factors are patrimonial and financial. It will pass towards a financial analysis of the firm, based on the Balance sheet and the Account of the profit and lost, following this way the identification of the strong and weak points, of the opportunities and threats. In this way in order to obtain a complete image on the situation in which the firm is it will calculate a series of economic and financial factors, by the help with it will be analysed: the financial structure of the actives of the society, the money on the short time of the firm, the way of handling the actives, cashing and payments, the ability of the firm to generate incomes, the profitability of the firm or the self financing ability.

3.1.1. The financial structure of the society assets

To its analyses there can be calculated the following indicators:

- The financial stability instalment (represents the report between the permanent capital / totally passive) $\times 100$ or (the own capital + debts on medium and long term/ total passive) $\times 100$ and it reflects the way in which the financial sources what remain at the firm's disposal for a period longer than a year in the total of the covering sources of the economic means.

- The financial indebt instalment (represents the report between total debts / total passive $\times 100$) and it reflects the weighting of the financial sources attracted in the total of the passives of the society. The subunit value of this indicator indicates a certain financial independence.

3.1.2. The solvent of the company on a short time can be appreciated calculating:

- The instalment of the global autonomy (it is calculated as a report between the proper capital/ total passive $\times 100$) and the solvability of the firm is good if the value of the report is over 30%.

- The global liquidity (current actives/ current debts) measures the capacity of the firm to pay the debts in a short time using the actives from the balance sheet in a short time. The perfect value is between 1.5 and 2.5. To detail we can calculate too:

- the reduced liquidity (current actives/ stocks/ current debts $\times 100$) measures the capacity of the firm to pay the debts in a short time using the actives with the highest level of liquidity from the balance sheet, the perfect value being 1.

3.1.3. In order to manage the cash and payment terms it is analysed the relation between the current active and the current passive of the balance sheet, the indicators which can be calculated being:

- The revolving fund which is calculated as a difference between the permanent capital and the net fixed actives and express the statement of realising the financial balance on a long time and its contribution to the financial balance on a short time. This indicator is a synthesis of the current interests and the future ones of the firms. To a fair appreciation can be calculated too:

- The necessary revolving fund which comes from the relation (actives on a short time/ passives on a short time) or (Stocks + Receivables) – (current exploiting debts). If the result is positive it indicates an unfavourable gap between the liquidity of the stocks and the receivables and the retention of the exploiting debts. If the result is negative it indicates an extra source over the needs of the unit, which can be a favourable situation in the case of accelerating the spinning speed of the stocks, or unfavourable if it can not assure the necessary stocks.

- The net treasury (cash-flow) it is calculated as a difference between the revolving fund and the necessary revolving fund. The positive result expresses an efficient economic activity and it creates the possibility of investing, which can strengthen the position of the firm on the market, and a negative result indicates a financial imbalance which can be covered by new credits.

3.1.4. The way of managing of the actives can be appreciated calculating:

- The spinning speed of the costumers-debits (Sold costumers $\times 365$ /business figure) allows the evaluation of the performance of the firms on what the relation with the beneficiary, having an extremely importance in the case of the firms which realise credit sales. (Commercial ones).

- The spinning speed of the fixed actives by the business figure (the business figure / fixed actives) evaluates the efficacy of the management of the economic agent in what the using of these patrimonial elements is concerned in order to obtain incomes, and the recommended value higher than 1 as possible.

- The spinning speed of the total actives (business figure / Total actives) is an indicator which reflects the efficiency of using the actives found in the estate of an economic agent.

3.1.5. The ability of generating benefits is expressed by the help of the commercial margin rate which represents the result of the report between the net profit and total incomes X100.

3.1.6. Creating value and profitability to the firm results from calculating and analysing the following indicators:

- Financial profitability rate Rata (it is calculated as a report between the net profit/ the own capital X100) marks the yield of the own capital, respectively of the placement made by the investors of a certain firm by buying the shares of another firm. The registered value by this indicator must be higher than 5% this way can be stated the fact that activity developed inside the society was efficient from the point of view of valuing the own capital.

- Rate value of the advanced capital is being calculated as a report between (the current result/ fixed actives + circulating actives) x100.

3.1.7. The self financing capacity is the indicator which reflects the financial potential of economic developing of the firms, meaning the financial necessary source, which is obtained from the firm's activity after eliminating the payable expenses from cashable incomes. The profit is an important source of financing, of developing the activity, paying the participating of the shareholders by the means of dividends and the current needs and the firm's future ones. As a result of the complete analyses of the firm it will be obtained a clear and complete image of it. A highest attention will be paid to the threats and the weak points will be corrected. At the same time the strong points will be taken into consideration and they will take advantage of the found opportunities. This type of complete analyses should be made periodically, but this is absolutely necessary during the economic crises. Correcting the weak points will help the firm to overpass the critical period of economic crises. Finally the firm will take measures which will allow:

- To obtain a strong financial structure, with adequate levels of liquidity and risks;
- To improve efficacy, as to obtain a better profitability.

3.2. Obtaining a strong financial situation

The manager has to concentrate its attention towards things really important- products, costumers, employees. If he is stressed by the idea that he will not be able to pay the debts in due time, he will lose sight what really generates long time competitively. Therefore the manager will make sure that the Financial Situations are CORRECT and they express the real situation of the firm. Then he will concentrate on some important aspects.

It will check which the relation between the net estate is, the permanent capital and debts as well.

In order to have a healthy financial structure it is extremely important that the net estate to represent an important part of the investment.

It also has to be checked the situation of the firm's solvent on a short time, meaning the relation between the current active and the current passive. The loans on a short time must be paid without problems from the current actives. Contrary the firm has to increase the capital from internal incomes of the owners and shareholders, getting subventions or active sales. The problem is that during the crises time it is not easy to sell at a good price. If any of the previous measures does not succeed the loan must be renegotiated, and the part that can not be paid in a short time to be passed on a long time payment contract.

While the position to the risk is concerned we can say that the derived financial instruments can help to the prevention of the risks connected to the different types of exchanges or interests. It will not be lost from the sight the fact that they can generate important problems when they are used for speculation. It will be used those financial instruments whose way of functioning has been clearly understood and for which are known the consequences which it produces.

3.3. Methods of optimising the efficacy and productivity

The next step is the one of maximising the efficacy of the firm's activity. In order to do this there are more approaches, the contribution of the firm's management being fundamental from this perspective. Now that it has all the necessary information, and the financial structure is a healthy one he has to act in order to raise the profitability. Here comes into stage the role of the management accounting.

3.3.1. Methods related to the data from the balance sheet

In order to manage to reduce the costs the manager has to obtain a maximum efficacy in using the actives. Therefore can be taken measures for:

- Reducing non current actives, loaning instead of buying, or selling the actives which are not needed.

- Reducing the stocks – using methods such as” Just in time”, producing during the transport and reducing the deposit space. ”this method is a means of eliminating the malfunction and to reduce the waste from the production systems, fact that will lead to a better stage of the global performance.” (Neculai Tabără, Sorin Briciu, 2012)

- Reducing the production costs, meaning the production cycles, reducing the period the period between the moment in which are bought the prime staff and the moment in which there is a selling and cashing from the costumers. It is about adopting a correlation strategy of the period of transformation of the circulated actives into liquidities with the terms of paying the debts by the suppliers. This is a technique of improving the relation with the treasury in the way of negotiation with the suppliers with a 50 days payment, for example, combined with the reducing of the production cost, so that the product to be sold and posted in the 20th day for example, and the cashing from the costumer to be made in a week’s time. This way it is obtained a cashing in the 27th day, 23 days sooner than paying at the supplier.

Buying prime staff	Selling product	Cashing costumers	Payment suppliers
0	20	27	50

- Reducing the balances of the costumer accounts by the ”credit management” techniques;

- Managing the treasury as reducing or minimising the negative balances.

3.3.2. Methods related to the data from the account profit and losses

During the economic crises in order to raise or maintain the level of sales it is necessary to reduce of the expenses which can be obtained in different ways:

- Transforming the expenses in cashing. This method is used for example by the airlines ”law cost” which eliminate the free food served during the flight and replace it with product selling.

- Reducing the expenses ”by law”. This method is not always recommended because it does not base on rational analyses of the expenses. It is simply communicated to the cost centre responsible the percent they have to reduce. Each responsible has to find the proper way to reduce it up to an established datum.

- Reducing the expenses with the materials. In order to reach this objective it can be re-planned the need for materials, it can be reduced some components, it can be finalised some long term contracts with the suppliers or cooperation with other firms. During the crises it can be negotiated or re-negotiated in order to obtain important sales, because the suppliers are interested to sale and they also want to have constant costumers. It is advisable concentrating on few but very good suppliers and having contracts on a long term with them.

- Reducing the procedures and useless operations. It is about analysing the production process and reducing those operations the operators do and which are not absolutely necessary. It is about the identification and standardise some methods which with less operations and moves to give the same result or a better one. ”it is about simplifying the processes, using all the skills of the people and new technology” (Neculai Tabără, Sorin Briciu, 2012).

- Transforming the fixed expenses into variable ones to obtain a more flexible structure. For example, the externalisation of some services or operations such as logistics can raise the productivity and efficacy and it can generate substantial savings.

- Reusing or selling the tailings or waist products. It will be tried a transformation of the transport expenses or to destroy the tailings or waist products into a cashing that results from their sale.

- The organization chart of the firm can be a source of efficiency or inefficiency. In some cases it is better to be split into cost or profit centres, to raise the responsibility of the management of the

centres. Before making any change it is necessary to realise an evaluation in order to see what is more advantageous for the firm; a decentralisation or a centralisation of functions.

- Some firms use the concept of "excellence centre". It is about the multinational firms, which have different branches or centres in different countries or areas and which concentrates each activity in the centre that executes best the activity. For example, the marketing department can be fixed in a centre and the accounting in another centre.

- It can be asked the help of a specialist in reducing the costs. These firms cash generally a percent of the obtained results.

- Using the new technology, of the internet for example, can be useful in reducing the expenses by reducing the personnel or some operations of the production process.

- Reducing the costs by the method of continually improvement "Total quality management". It is the case of IKEA, which has fixed as an objective the continuous improvement."

We intend to do the things better, to simplify things, to do things more efficient and with efficient expenses. We try to maintain our prices at the most low possible level, to be accessible to most of the buyers". The secret of this model is the low prices, simplicity in the process of buying and own models. A weak point would be the low level of the costumers' service – they have few salespersons, the client transports himself the merchandise and assemblies, but these inconveniences are proportional to the low level of the price. It can be used the technique of the "objective price". The objective consists in touching the target costs." (Neculai Tabără, Sorin Briciu, 2012). This consists in calculating the maximum price of a product, before being projected. The starting point is the sale price that the costumers would pay for the product and it is projected a product with a lower price than the selling price. For this it can externalise a part of the processes that, it can be negotiated with the suppliers the price of the prime materials, end contracts on a long time, etc. "the target costs are instruments of the management accounting in the conditions in which the accountants develop an activity as important as the other specialists from the firm...they help to fix the future objectives, the strategic planning" (Neculai Tabără, Sorin Briciu, 2012).

- Using the ABC system or the Method of the Costs Based on Activities to eliminate those activities that do not bring any value. This way the method" assures a more efficient management of the firm" (Neculai Tabără, Sorin Briciu, 2012) and allows" the analyses of the reducing of the costs or rationalising the production by reducing the number of components or limiting the specific series" (Neculai Tabără, Sorin Briciu, 2012).

- Optimising the costs using the technique of the Basic Budget 0 which helps eliminating the prodigability. By the help of this method, when the budget is being made for the following period they start from 0, ignoring the structure of the existing costs up to that moment. "It leads to a restructure of the factory, without taking into consideration the past, retaining only the useful methods" (Neculai Tabără, Sorin Briciu, 2012). This method comes in contrast with the "traditional vision, in which the establishing the budget for the following period being the tendency to start from the existent level in the previous year" (Briciu Sorin, 2006). Then main objectives of this method are" reducing the level of the expenses generated by the administration, getting all the available resources, planning, favouring the exchanges inside the organisation" (Neculai Tabără, Sorin Briciu, 2012).

To conclude, a healthy financial situation generates liquidities. An adequate business strategy, based on a continuous improvement of the efficacy generates benefits and therefore liquidities, and all these methods determines a better functioning of the firm on a long time.

If the firm has liquidities it is the moment to buy competitive firms at a very good price and also can be the moment to innovate in order to magnify the price on the market.

We can notice that as the types of accounting work separately or interact in order to reach the same objective, the functioning of the firm on a long term in the conditions of efficacy and profitability. The financial accounting makes the Annual Financial Situations based on pre established standards (IFRS), offering information to all the categories of interested users. These financial situations contain the necessary data to calculate the financial economic indicators which help to diagnose the real situation in which the firm is at a certain time. These data are necessary to the management accounting, to the manager, who will evaluate the strong and the weak points, the opportunities and threats acting mainly to obtain a healthy financial structure, and then it will be applied the optimisation of the efficacy and profitability of the firm. These methods, strategies are proper to the management accounting and the data are confidential which help to getting the competitive advantage, mostly during the period of economic crises.

4. Conclusions

On this article it could be noticed how the two types of accounting- financial and management- interact and bring their contribution to analysing the real situation of the firm and fundament the future strategy of it during the period of economic crises. We agree with the dualist concept and we consider that it is necessary the separation of the two systems of accounting. It is indeed about a double representation of the same reality, but we consider it legitimate, considering the fact that it is based on the same data, meaning the ones offered by the financial accounting. The problem is that the analyses must be made by the management accounting, together with the manager's knowledge can bring the competitive advantage so necessary during the crises time.

At the firm's level, the periods of economic crises complicate even more the possibilities of action. The managers must have the necessary knowledge, information in due time and initiative.

During the crises time the manager will evaluate the actual situation and the perspectives of the firm, in order to take the most adequate decisions, which will allow the firm to get over this period. With the help of a correct diagnoses, it will be taken those measures which will correct the weak points or face the threats and take advantage of the strong points and opportunities, so that the firm to become a motor generator of benefits.

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INNOVATIONAL STRATEGIES

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Abstract: *In the view of those who are studying the strategy field, the eternal competitive battle of any sector or industry is a confrontation (or competition) for advantages. In this paper we propose to present some interesting considerations on the concept of innovation, in the competitive context. Aspects will be analyzed regarding rules on boosting innovation, typology of innovational strategies, implementation of innovational strategies, etc. Also, an important issue that is covered refers to the assumptions that must be taken into consideration, regarding the successful implementation of innovational strategies.*

Key words: innovation, strategy, competitiveness, strategic management, competitive advantage

JEL classification: O32, L1

1. Introduction

Strategy as a result of the prediction function previews the development of each organization, the adaptation of the organizations, to the environment, depending on its content, the extent in which it maintains and enhances the occupied market segment, profitability obtained. The aim of the strategy is to achieve competitive advantage.

To achieve and maintain a competitive advantage, it is necessary that companies show interests for innovation, which can take place in some industries - through the self-effort of each company, and in other industries (those using leading technologies) - through the collaboration of several companies (Borza A, 2012).

Innovation influences the behavior and short-term results of a company, especially medium and long term. Medium and long term influences are more important, as an "advance" or a "falling behind" in terms of technical, managerial, etc., are strengths and threats, which can be very difficultly "recovered" to mitigate the negative consequences for "lagging behind", that are significant entry barriers, in case of favorable positions (Carstea, Deac, Popa, Podgoreanu, 2005).

As Radu and Grigore (2010) mentioned, as a result of an empirical study, "organizations need to increase their intelligence in order to develop competences that should enhance their level of competitiveness", while considering also human capital as a more "stable" competence than technology.

The concrete forms of innovation manifestation are (Popa, 2004):

- Product innovation - refers to the appearance of a product that combines a new form with known attributes, or introduces new attributes that were not previously available. The novelty of the new product is directly related to the difference between the new and its predecessors.
- Process innovation – implies perfecting, modernizing the methods for obtaining the product, in order to generate a growth of economic efficiency (in general, by significantly reducing manufacturing costs)

It must still make some nuances in the identification of innovation as a potential source of creating competitive advantage, at the micro level. There are industries where innovation is the only way to ensure survival of the company on the market and not a means to secure a privileged position. We mention here the computer industry, where the pace of innovation records very high values. In other sectors, on the contrary, the degree of innovation is traditionally very low, and firms are seeking for other means of achieving economic competitiveness. However, there are companies that, through

significant research and development expenses, rely on innovation. In this case, the economic dimension and financial potential of the firm are often decisive. Also, the internal structure of the company, the way of organization of the activity is at all negligible in supporting innovative processes.

The intensification of innovation requires substantiation of all managerial work on the basis of a set of rules (see table 1), which reflects both the need to achieve organizational objectives, as well as the specific of the innovation process and particularities that are common in people, who possess a remarkable capacity to create (Nicolescu O, Verboncu I, 2005).

Table 1: Rules for amplifying innovation

No. Item	Indicators
1	Maintaining a permanent contact between managers and executants, especially between those that are in a direct subordination relationship
2	Recognizing and encouraging the individuals that possess a remarkable creative capacity
3	Establishing an ambient atmosphere, conducive to new, and flexible, within the organization
4	Protecting and maintaining the self confidence of the creative
5	Creating possibilities for the creative to work independently
6	Tolerance towards the failures of the creative
7	Refraining from expecting, from the company employees, a total creative spirit
8	Quick evaluation of the new ideas, by the managers
9	Overlooking certain oddities of the creative, by the managers and co-workers
10	Moral and financial motivation of the creative, according to the generated or facilitated performance, through applying the innovations

Source: Nicolescu O. Verboncu I. (2005) *Management*, Editura Economica, Bucuresti

In order to successfully innovate, companies must give up their old products and methods, outdated, that can “poison them”, must organize their abandonment, action not at all easy as it has to overcome the emotional attachment to the products and methods which have established the companies activities, for a long time.

Innovation is not exclusively of a technical or technologic nature. It can be produced, just as well, in the channels of distribution, management, organization, adopted strategies, the initiation of a new business, etc., so in any area where better allocation and use of resources, productivity growth, yields, greater levels of efficiency, can be ensured.

To strategic management, managerial innovation is of great importance, manifested in the ability to define new and bold strategies, to establish policies based on their effective implementation, to quickly find corrective solutions when the adopted strategy does not yet give the expected results.

Successful adoption of innovative strategies is based on the integration of the five functions (operations) of a company: production, research-development, commercial, finance-accounting and personnel. Analyzing the implications of the five sections, in the process of developing new products, we can draw the following conclusions:

1. The research-development function acts both on the commercial function (by providing new product design) upon the production function (by providing manufacturing technology). Both implications are important, because for nothing is developed a new product that meets consumer demands, if the technology used is expensive, causing a high price of the product.

2. Commercial function is that which initiates and concludes the development process of new products. In the initial stage, consumer needs are analyzed, which are then transmitted to the research-development function. In the final phase, the commercial function deals with the promoting and harnessing the new products provided by the production function.

2. The Typology of innovational strategies

Innovational strategies are classified into two categories:

1. Reactive innovational strategy (refers to approaching and solving problems, as they occur). An example of reactive approach is to wait for the competition to develop a new product following that subsequently, if that product is successful, to copy it (for lawful purposes).

2. Proactive innovational strategies (aims to allocate resources to prevent unwanted future events). An example of proactive approach is to overcome competition by being the first on the market with a new product, which the competitors can difficultly replicate.

Reactive innovational strategies are divided into to categories:

a) *Defensive reactive strategy* (aims to protect their products that are competing with the new products of the competition).

b) *Imitative reactive strategy* (targets quick copying of a new product developed by competition). This strategy is specific to the fashion industry, fashion design, furniture, appliances, and electronics.

c) *"Second but better" reactive strategy* (in this case, companies do not stop at copying the product of the competitors, but also subject it to a process of improvement).

d) *Response reactive strategy* (aims at creating a new product, exclusively based on the opinions and recommendations of clients). It is the only type of reactive strategy that does not put competition in the spotlight. Such strategies can be applied in the field of scientific laboratory equipment, furniture industry (where it can be seen how shoppers have changed their furniture so that it better meets their needs). The best example is the use of Teflon pans in the kitchen, at the request of the consumers.

Proactive innovational strategies include the following types:

a) research-development proactive strategy (is specific to large corporations, who can afford the financial support of a research-development department, able to provide new products). Such strategies have been adopted by IBM (\$5 billion USD in 1995 for research, representing 7.1% of company sales), HEWLETT-PACKARD (1.3 billion, in 1995, representing 10.3% of sales) and Microsoft (180 million USD in 1995, representing 15.3% of sales).

b) *Entrepreneurial proactive strategy* (an individual, entrepreneur, has some idea of success, which he puts into practice, creating new products). Ex: the vast majority of companies from Silicon Valley (California) have adopted such a strategy.

c) *Proactive acquisition strategy* (this strategy implies the acquisition by a company of another company, along with all new products and its research potential). The purpose of this strategy is to develop new products by combining the research potential of the acquired company with the financial resources at the acquiring company's disposal. Acquisitions can take "friendly" or "hostile" forms. In the first case, there is cooperation between the management teams, in exchange for maintaining the positions and correct rewarding of the managers position of the acquired firm. In the second case, it is a struggle between the company trying acquisition and the victim- company.

d) *JOINT VENTURE proactive strategy* (this type of strategy implies the cooperation between two or more companies, in order to develop new products). Example: GENERAL MOTORS and TOYOTA cooperation, to produce small sized cars on the USA market. The advantage of this sort of strategy is the shared access to technology, market, research potential and geographical experience for all alliance members. The main role of the joint venture is to internationalize the business. By setting up their companies and depending on the structure of participation of business partners, to ensure the development of productive activities, consulting services, shared experiences, a new infrastructure is built, etc. Also, joint ventures are designed to provide the instrumental and conceptual means that change the physiognomy of the activity of the local partner: an infusion of capital, technological modernization, development of strategic management, change of views and attitudes towards work and others.

Depending on the possibilities of growth, innovation protection, market characteristics and competition, a firm may adopt a reactive or proactive strategy. In general, reactive strategies are adopted in the following situations:

- There is little protection of copyright on innovation;
- When it is necessary to focus attention on existing products;
- When markets are too small to cover the costs of developing new products;

- When there is danger of being overtaken by the competitors imitations;
 - When the distribution channels are dominated by competition;
- Proactive strategies can be adopted in the following situations:
- Requires a rapid increase of sales;
 - When markets have a great potential;
 - When there is sufficient time and financial resources to develop new products;
 - When the company has a strong distribution channel;
 - When there is a real protection of patents for new products.

3. The implementation of innovational strategies

For the successful implementation of strategies, it is necessary to employee receptivity towards the innovative elements, presumed by the strategic management process. In this sense, the following assumptions must be taken into considerations (Popa, 2004):

- Confidence that the innovative elements proposed in the strategy will facilitate the realization of individual needs.

A new organizational structure, a new management style, a new wage policy and modification of the senior management optics on staff development creates a sense of hope and confidence in the existence of more favorable circumstances for fulfillment and personal development, as well as satisfaction of individual needs.

- Awareness that the developed strategy is necessary to avoid adverse or risky situations.

Change is seen as a remedy: a sequence of actions available to the organization to solve problems or mitigating anticipated risks, as a result of environmental analysis. The loss of market share, job security, organizational survival, and any other crisis situation are decisive arguments in supporting the "breaking" of the status quo.

- Confidence that the innovational elements contained in the strategic model are consistent with personal values.

When constituents believe that the application model is a learning opportunity and a beneficial experience for them, they will join the process easily.

- Confidence in the professional capacity and managerial competence of the team, the conviction that the process of change is managed in an appropriate manner.

Respect and trust of the members of the organization in management and ensuring a transparent visibility of the results and successes obtained by them, can decisively influence employee attitudes and behaviors towards further organizational transformations. It takes courage, perseverance, enthusiasm and a high degree of involvement and commitment to continue change, attributes that not all leaders of a company can achieve and maintain. Therefore, the role of the visionary leader becomes essential to continuously challenge its team to imagine the unimaginable, to reconsider the basic methods and old favorite success recipes (Smith, D., Popa, I., 2012).

- Conviction that applying the strategic model will have the expected results.

Belief in the opportunity and value of the strategic management model, belief that it is time for the proposed changes and adequate resources are allocated, facilitates joining the staff and creates commitment.

In the process of employee receptivity growth towards innovative elements contained in the strategic management model, the primary responsibility returns to the company's senior management.

The main directions and measures to be initiated in this regard are:

- a. Clear explanation, for the entire staff of the company, of the innovative elements contained in the strategic model and their beneficial effects to the development prospects of the enterprise;
- b. Employee involvement-participation in innovative, transforming activities, promoted by the strategic management model;
- c. Ensuring that the participants of the change process, appropriate the knowledge and skills necessary to properly achieve actions in which are involved;

This will be achieved by organizing training and retraining programs for staff, primarily managers, focusing on issues of change and innovation.

The effects of these programs will not be felt soon, but participation will allow managers to acquire knowledge and skills needed to conduct successful change and, in addition, will largely eliminate concerns raised by its production.

d. Amplification of creative potential of employees.

An increase of the creative potential of the company will imprint it with a strong innovative character, expressed by the following:

- High adaptability to the change requirements - technological, organizational, managerial - the degree of adaptation conditioning company performance and the competitiveness, its philosophy, practices and company-specific achievements, which become benchmarks at a national and international level, explaining the primordial character it has within the industry, and, therefore, it has significant influence on economic growth;
- Focusing the strategy on the planned response to environmental changes, and not the adjustment, or passive adaptation, resulting in significant changes in the optics of management and action, in dealing with the environment;
- Intensification of creative activities (research-development, marketing), whose specific requirements imply corresponding changes in the structure of the company;
- Expansion of participatory management style, at all hierarchical levels within the company, and first of all, in activities with a strong creative character.

The increase of the creative potential of the company includes not only the ability to be innovative in terms of products/services, technologies, and to generate new ones always, more or less distant from the existing ones, but also the opportunity to be innovative in terms of management, to identify ways and solutions to solve specific problems, which will break the pattern of existing ones. Managerial innovation differentiates, as sensible as possible, firms - in terms of performance achieved with relatively similar conditions and similar levels of resource consumption, as opposed to technological innovation, applied in different companies, which generates virtually the same results.

4. Conclusions

The research and study that were the basis for the current paper, reflected the link between the integration of the five functions of an organization and the successful implementation of innovational strategies; and moreover the fact that innovation, not only, is a survival method for companies (in an increasingly more competitive international economic environment), but it also represents a source for obtaining competitive advantage.

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POSSIBLE REMEDIES FOR THE CRISIS, REGARDING EMPLOYMENT AND WORK CONDITIONS IN ROMANIA

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Abstract: *This paper presents the considerable impact of global economic crisis on the business environment, on employment, and on working conditions of employees. In this paper, a study is made, on employment status and working conditions in the textile-clothing sector in Romania. This sector is representative, in that it is most affected by the job crisis, concentrating the largest number of SME's. The paper identifies possible remedies towards increasing employment and promoting the concept of decent work.*

Key words: unemployment, decent work, worldwide economic crisis

JEL classification: J 60

1. Introduction

The global economic crisis and its consequences have forced the world to face a prolonged employment crisis, a deepening of poverty and inequality. OIM estimates that over 34 million people are now unemployed, as a result of the crisis. Combating unemployment and trying to achieve decent work, by all, must be a priority, because the global economy is attempting the re-launch process. Employment needs several years to recover after recovery.

In Romania, the unemployment rate rose, in 2010, to 8.5% (more than 800,000 unemployed from the total labor force of 9.2 million active employees).

In long term, continuation of structural reforms is meant to encourage the increase of labor productivity, and on this basis, to reduce the gap to that of the European average. In detail, the structural reforms imply simplification of the taxes and fees system, by far the densest in the whole EU, the overall reduction of administrative bureaucracy, which delays all the infrastructure projects and last but not least, to increase labor market flexibility.

Structural reforms, essential to the economic future of Romania, are still far from the truth. Instead of stimulating job creation, even not guaranteed, but with the necessary mobility, current labor laws push a part of the working population to migrate.

The limited effect of contamination of the Romanian financial system, by the international financial crisis, does not exclude the effects on the real economy, in virtue of its opening to the world economy. Any delay in the approach of further structural reforms will make the recession shocks, from other regions, to be more painfully felt by the Romanian economy and to shatter the little consumer exuberance, after decades of deprivation, and so poorly distributed, of millions of citizens (Pop, Fugaru, Ioan-Franc, 2010).

Enormous social and economic changes in Europe, in the recent years, have had a considerable impact on the business environment of companies, especially that of small and medium enterprises (SME's). Currently, to respond to these changes and stay competitive, companies must constantly adapt and learn to innovate. Traditionally, restructuring processes are generally considered to cause job losses. However, in recent years - and as a result of the need to create more and better jobs, in the EU, according to the EU 2020 Strategy initiatives, especially the three flagship initiatives and "industrial policy in the era of globalization", "A new agenda for jobs "and" New skills for new jobs ", a lot more attention has been given to the creation of new businesses, which follows the restructuring and the importance of " restructuring in a socially responsible way".

The biggest problem with which the world, and Romania, is facing, today, is job crisis. Unemployment has increased, FEPAIUS (Employers Federation from the Light Industry), for example, estimates that: over 71,000 workers lost their jobs in this crisis in different ways: firms that went bankrupt, companies that have reduced the production activity, employers have moved production outside the EU, etc.

Also, for the time being, the Romanian industry is not prepared to guarantee to the Romanian workers the same salaries and conditions offered by the countries to which they emigrate. The main cause of emigration, among people, is related to job and career opportunities and, also, the quality of life. In this regard, most employers are pessimistic, when referring to the evolution of employment in the near future. Thus, in the present, it is estimated that the number of people working abroad is about 2 million people. At the same time, in Europe, and in Romania, a demographic decline is recorded.

Globalization, technological change and the emergence of more flexible work patterns are challenges, with an impact on job security, work conditions and the transformation of the labor market. Costs of occupational safety are among the first to be reduced by the employer, in times of crisis. In addition, the crisis itself implies a worsening of work conditions, e.g. in the context of increased work-related stress.

2. Study regarding the state of employment and work conditions in Romania

Given that the textiles and clothing industry in Romania concentrates the largest number of SME's, of the industry, and that it is one of the sectors most affected by the labor crisis, we considerate to be a representative industry, for identifying the courses of action necessary to create jobs and promote the concept of decent work.

This research pursues the following objectives:

- Identification of the current state of employment and work conditions in textile-clothing sector;
- Identification of initiatives taken by government bodies and trade unions to implement the Social Pact for recovery of the textile-clothing sector from Romania;
- Substantiation of possible courses of action to increase employment, improve skills, and promote the concept of decent work.

To identify the current state of employment and the work conditions in the textile-clothing sector a review of the current number of companies, their structure after size, analysis of the main indicators of dynamics, is necessary.

In 2009, the textiles and apparel industry, from Romania, reached 1.5% of GDP, 2.72 of the country's industrial production in volume, 10.2% of exports, 6.83% of imports and 14,54% of the total workforce. In 2011, the textile-clothing sector ranked third, in Romania's exports, and fourth in the textiles and clothing exports of the EU. In 2011, there were 8,878 companies, in the textile-apparel sector (6,455 in apparel, and 2423 in textiles). Private enterprises are responsible for 97% of the production and exports.

Considering the size of companies, a predominance of micro-companies is observed, representing 69.66% of the total, followed by small, accounting for 19.27%, medium-sized companies with a rate of 8.91%, and large firms with 2,16% (table 1).

Table 1: Structure of companies from the textile-apparel industry, from 2011, by size

Sector	TOTAL	Large (over 250 employees)	Medium (50-249 employees)	Small (10-49 employees)	Micro (1-9 employees)
Apparel	6455	160	630	1346	4319
Textile	2423	32	161	365	1865
TOTAL	8878	192	791	1711	6184

Source: Ministry of Economy, Trade and Business Environment, Institute of Management and Informatics, 2012

The dynamics of exports, imports, and of the number of employees, of the textile-apparel sector, between 2005 and 2011, is the following (table 2):

Table 2: Structure of companies from the textile-apparel industry, from 2005 to 2011, by size

Indicator	U.M.	2005	2006	2007	2008	2009	2010	2011
Export	Mil. EUR	4243	4196	3933	3524	2972	2502	2930
Import	Mil. EUR	3236	3271	3509	3318	2657	2304	2677
No. Emp.	1000 pers.	325	312	272	270	199	166,2	168,9

Source: National Institute of Statistics

A correlative analysis of the exports, imports and the number of employees is relevant because most textile-clothing sector companies work in lohn system. Thus, the textile-apparel products destinations, until 2009 were of over 90% for export, and below 10% for the domestic market. From 2010, the destination of products was over 60% for export, and to under 40% for the domestic market.

A steady fall is observed, in the exports of the textile-apparel industry, from 2005 until 2010, while imports increased, until the year 2007, registering declines in 2008 amid plummeting exports. The continuous decline in exports had, at first, as the main cause, the decrease of lohn orders, which later were added to the economic crisis. The year 2011 is the first year of increased export, import and number of employees, against the previous year. Thus, exports increased by over 17%, and the number of employees by 1.6% in 2011, compared to 2010.

Although the educational system for the textile-clothing sector is well organized in Romania (there are five academic centers in Iasi, Sibiu, Arad, Oradea and Bucharest, R&D institutes, training centers for craftsmen and technicians), attractiveness for jobs related to this industry is low, on one hand, due to difficulties faced by companies in this sector, and on the other hand, due to low salaries in this field. (Visileanu, E., Cărpuş, E., Teodorescu, M., Vinegar, B., 2010).

To improve the attractiveness, namely to increase the number of jobs, but also motivation, it is necessary to revitalize these industries. For employers, in crisis conditions, it is difficult to keep jobs. In this context, the re-launch of the industry is an essential condition for employment growth.

Since 2005, the Ministry of Economy, Trade and Business Environment has moved to the implementation of the Program for increasing the competitiveness of industrial products. Some of the main activities of this program are: the implementation of OHSAS 18001-1999 (management of the work health and safety system) and SA 8000 (Social Responsibility) - (Smith, D., Radu, C., 2011).

Since 2005, 275 projects have been financed within this program, for companies in the textile-apparel industry, with a total value of 4.9 million (Table 3).

Table 3: Projects funded by the Ministry of Economy, Trade and Business Environment (OHSAS 18001/1999 and SA 8000)

Year	Number of financed programs	Value (Euro)
2005	76	830.472
2006	84	1.457.635
2007	54	1.502.567
2008	43	812.250
2009	10	123.317
2010	8	193.952
Total (2005-2010)	275	4.920.193

Source: Ministry of Economy, Trade and Business Environment

In this time of crisis, the number of companies seeking public funds, for the implementation of occupational standards, has decreased, compared to their other priorities, but according to government representatives, the trends presented, on various occasions, are positive.

3. Initiatives taken by the government and by syndicates to implement the Social Pact for the Re-launch of the textile and apparel industries, from Romania

Social partners, together with the government have adopted, on September 24, 2010 the Social Pact for the Re-launch of the textile and apparel industries in Romania. All parties involved have agreed to this pact, and have mandated the National Steering Committee to disseminate its content in all events dedicated to the re-launch process of the textile-apparel sector, and to ensure the correct implementation. The main role of the CND was to find ways to maintain employment during the crisis, and with this, to be ready to restart the process to normal, after the crisis.

The initiatives taken by the Ministry of Work, Family and Social Protection have focused on the following directions:

- Developing a national operational plan for employment and abilities;
- Providing future oriented qualifications plans;
- Supporting the development of skills, with a special focus on generic skills and competencies;
- Developing tools for forecasting, regarding employment and skills requirements;
- Creating tools for effective exchange of information on the labor market;
- Developing strategies for lifelong learning and job creation;
- Providing incentives for job creation, for SME's (Law 76/ 2000);
- Developing a national policy to promote geographical and occupational mobility;
- Making the vocational training accessible to everyone, especially to employees with low skills;
- Developing anti-discrimination policies and programs, equal opportunities, as well as focused measures, particularly for vulnerable groups;
- Strengthening inter-governmental cooperation (Ministry of Economy, Commerce and Business Environment, Ministry of Public Finance, Regional Development Agencies, etc., and other entities, such as The National Research Institute for Labor and Social Protection);
- Coordination of POSDRU Operational Sector Program for the Development of Human Resources, with structural funds.

Also, unions are the main partner of management in the process of restructuring. Representing the work force, they are in place to ensure that employees' interests are protected. They must be involved and actively participate in all the anticipative measures and permanent mechanisms established by the company internally and externally. Thus, their full participation in the entire process of adapting to change, and restructuring is vital.

The concrete initiatives taken by the trade unions to implement the Sectoral Social Pact are:

- Participation in the permanent monitoring of the situation and probable evolution of the economical and financial situation of the company, as well as that of the technological development;
- active participation in the strategic and specific decisions of the company, as well as in all the appropriate information and consultation procedures, with regards to future employment and planning of skills;
- participation in all the discussions with the management of the companies, regarding possible alternatives to layoffs;
- contribution through negotiation in the flexible and sure contractual arrangements (flexibility of the working time in long term, / employment / training / career development / mobility);
- participation in defining, negotiating and implementing equal-treatment, , anti-discrimination and support of policies for vulnerable groups;
- active participation in training and individual support measures;
- monitoring the health and safety of employees, with a specific focus on elements of the decent work agenda (employment, investment, work conditions, wages, new skills required, etc.);
- promotion of exchange of information with other unions, at various levels (sectoral, national, European).

Courses of action to increase the number of jobs in the textile and clothing sector

In order to increase the number of jobs, but also the motivation from the textile-clothing sector, it is necessary to re-launch this sector. The directions of re-launch are:

- gradual transition from Lohn system to create its own brands (currently about 40% of companies own brands, very few of them are known abroad) – (Popescu, D., Băgu, C., Popa I., Hâncu, D., 2009);
- increased cooperation and exchange of knowledge between SME's, academia and the public sector, by creating clusters, in addition to that already exist (North-East and ASTRICO Romanian Textile Concept Bucharest-Ilfov);
- initiating programs to perfect young entrepreneurs;
- promoting research and development topics, specific to the products with added value, from the Sectoral Plan for industrial research;
- creation and development of the SME's in accordance with the Small Business Act for Europe, by supporting the modernizations of the industrial process through programs financed from structural funds;
- improving the promotion of exports of the textile-apparel, through the participation ad fairs and international exhibitions, economic missions, etc.

Courses of action to improve skills and promote the concept of decent work

In order to improve the skills, retraining, and to promote the concept of decent work, the courses of action are:

- identifying new skills requirements (quantitative and qualitative), articulated with the innovation and development strategies;
- preparing packages of training and re-qualifications, in collaboration with the external actors (authorities, universities, research and development institutes, training centers, training providers, etc.);
- promoting equal treatment and access of women to technical occupations and of minorities and vulnerable groups to all the levels of competence and functions;
- promoting innovative social measures to improve internal and external mobility of workers (e.g. development of personal / family support service);
- facilitate short-term access and return of employment from vulnerable groups (low skilled, temporary employees, part-time employees, etc.);
- considering the differences between workers statutes, to avoid discrimination and to address the problem of growth and improvement of the skills of the vulnerable employees;
- creating favorable conditions for an effective social dialogue with the unions, on the elements of the decent work agenda (wages, employment, investment, work conditions, new skills required, etc.
- monitoring the health and safety at work of employees with a specific focus on adapting to change, by accessing public and structural funds to increase competitiveness;
- exchange of best practices and experiences with the member states and non-EU countries, to try to limit the effects of the global crisis;

4. Conclusions

The study performed in this paper revealed the necessity of the re-launch of the textile and apparel industries, being the most affected by the job crisis. The study identified, besides the economic re-launch, the next possible courses of action to increase employment and promote the concept of decent work. Also, there were initiatives of government agencies and unions to implement the Social Pact of Re-launch, for the textile and clothing industries, from Romania.

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GENDER DIFFERENCES IN LEADERSHIP

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Abstract: *This work presents an overview of the research on gender differences in leadership, examines the impact of sex stereotyping, looks at the organizational effects of various types of leadership, and argues for the acceptance of a diversity of non gender linked leadership styles. The topic of gender differences in leadership style has been of great interest to researchers in the fields of psychology, management, and sociology, especially in recent years, as women have begun to assume more leadership positions. The field of gender differences in leadership styles is an area that is still full of ambiguity and paradox.*

Key words: leadership styles, gender differences, androgynous orientation, gender stereotypical behavior

JEL classification: M12

1. Introduction

The purpose of this article is to present an overview of the topic of gender differences in leadership style and to provide a synthesis of the voluminous amount of material that has been written on the topic, primarily in the literature of management, psychology, sociology, and political science. First a brief overview of the way women have been viewed as leaders will be presented, and the impact of sex-role stereotyping will be discussed. The next section will provide a historical perspective on how thinking about gender differences has changed over the past century. Here some of the most important literature on the subject will be reviewed. Then the effects of various leadership styles on organizations will be examined, and the concept of the androgynous leader will be discussed. Finally, a concluding section will focus upon the changes in thinking about gender and leadership that will be necessary to bring about "reinvented" organizations. There will be no specific references to libraries and librarians in this article because there has not been a great deal of research focusing on leadership styles in the library profession. Furthermore, there is no reason to think that gender differences in leadership styles in libraries would be any different from those found in other types of organizations. Two points of clarification are necessary at the beginning. First, the focus will not be on men and women in biological terms, but on the social roles of the genders in contemporary society since these roles are determined primarily by culture. Second, this article has been derived from the current writings on gender differences in leadership, and because this literature usually looks at this phenomenon in an organizational setting, there is an overlap in the way that many researchers use the terms *leader* and *manager*. Although there are some commonly accepted differences between leaders and managers for the sake of discussion the terms are used synonymously throughout this article. Most experts agree, that women share many views and experiences, and some generalizations are warranted). Nonetheless, the reader should always keep in mind that there are many exceptions to the notion of typical male and female leadership behavior. The accommodation of different leadership styles is an increasingly important issue for today's organizations. As women become a proportionately larger part of the work force, one of the greatest challenges for organizations will be to assimilate a more diverse labor force into higher level management roles. The presence of a so-called "glass ceiling" is said to have inhibited women from advancing to the highest level of management in most organizations. (The glass ceiling also affects minorities in organizations. This article, however, focuses only on gender differences in leadership.) This glass ceiling is an almost invisible barrier that prevents ambitious women from moving up in the organizational hierarchy. Although in the past two decades women have made significant progress into lower and middle management positions, there is still a dearth of women in the most senior management positions.

2. Literature review

Over the centuries, femininity has been stereotyped as dependent, submissive and conforming, and hence women have been seen as lacking in leadership qualitiesThe male bias is reflected in the false conception of leadership as mere command or control. As leadership comes properly to be seen

as a process of leaders engaging and mobilizing the human needs of followers, women will be more readily recognized as leaders and men will change their own leadership styles (Burns, 1978, p. 50). For the past three decades, gender differences in leadership styles have been the most intensely studied topics in the field of leadership. Are there inherent differences in the way men and women function as leaders and, if so, are these differences gender linked? This question has commanded attention because researchers have been trying to provide an explanation about why there have been so few women leaders. Even though women have become an increasingly large proportion of the work force, they still do not hold a proportionate of the top administrative positions. Most of the gender difference research has focused upon whether women's comparative lack of success in attaining high positions could somehow be related to differences in their leadership style. It has examined the personality characteristics and behavior patterns of women as possible explanations for their lower status. A recent Department of Labor study (Rivers, 1991) reports that the glass ceiling effect is a real one and not just a figment of feminist imagination. It is clear that women have found it more difficult to move up the organizational ladder. But is it a difference in leadership styles that has impeded women's progress?

The reader who turns to the vast body of literature on gender differences to find the answer to this question will likely be left in a state of confusion. The studies report a number of contradictory findings. There is basic disagreement focusing upon the primary question being examined-i.e., is there really a difference between the leadership styles of males and females? Some authors argue strongly that there are differences, while others assert just as strongly that there are none. (For authors asserting there are differences, see for example, Statham [1987] and Winther and Green [1987]. For those asserting no differences, see for example Powell [1990] and Donnell and Hall [1980]. Before one can fully understand the contemporary thinking on gender differences in leadership, it is helpful to survey, at least briefly, the changes that have taken place in our thinking about leadership over the past century. It is telling that the topic of gender differences was completely ignored in the early writings on leadership. The original conception of leadership was founded on the assumption that all leaders possessed certain universal characteristics that made them leaders. These traits were largely inborn, universal, and fixed (Hollander & Offermann, 1990). Since this conception of leadership is often called the "Great Man Theory of Leadership," it should not, perhaps, be surprising that gender differences were not of interest. The concept of a woman as a leader would have been completely alien to the nineteenth and early twentieth century proponents of the trait theory of leadership. Much of the early research on gender differences was done in the field of psychology. Understandably, the focus of the psychological research has been on the personality characteristics and behavior patterns of women as explanations for their low job status (Riger & Galligan, 1980). Person-centered variables, rather than situational factors or environmental factors external to the individual, were identified as explanatory factors. This focus led to a concentration on changing the person, or, as Riger and Galligan write: "[When person-centered variables become invested with causal significance, people become the targets, sometimes inappropriately, of ameliorative efforts" (p. 902). Most of the early popular literature on women and leadership, especially in the field of management, reflected this point of view. For instance, Hennig and Jardim (1977) and Harragan (1977) focused on women's characteristics and job behaviors. These writers suggested that, if women wanted to succeed, they needed to learn to act more like men and to learn to play those male games "their mothers never taught them." It was asserted that women had not been socialized in ways that allowed them to compete on even terms with men, and the remedy lay in having women develop new skills that would allow them to succeed in organizational leadership. Hennig and Jardim compared the business world to a foreign country and advised women to learn the language and the customs of this male realm.

This type of literature told women how to change themselves rather than their places of work. Gradually, however, interest grew in the situational variables that might explain the lower status of women.

A review article in *Psychological Bulletin* (Eagly & Johnson, 1990) provides the most recent comprehensive look at the differences in leadership styles of males and females. The authors present a meta-analysis of a large amount of the research that has been done on the topic. In their literature review and background section, Eagly and Johnson echo many of the same themes reported earlier. In general, they found that authors with extensive experience in organizations who write nontechnical books for general audiences and the general public are the proponents of sex differences in leadership styles. These nontechnical writings of ten report gender stereotypical leadership styles, with males

preferring competitiveness, hierarchical authority, and high control for the leader, and women preferring cooperation, collaboration between managers and subordinates, and lower control for leaders.

Nonetheless, some differences were found even in the organizational settings. The overall trends showed that women were more concerned with both maintenance of interpersonal relationships and task accomplishment—a finding that both confirms and refutes the stereotypical view of women as leaders (conventional wisdom has it that women are more concerned with relationships than with task accomplishment). The strongest difference found was that women tended to adopt a more democratic or participative style, and men tended to adopt a more autocratic or directive style. Eagly and Johnson provide two possible explanations for this difference. First, women who have managed to succeed as leaders might have more highly developed interpersonal skills. The other explanation is that women are not accepted as readily as men as leaders and, as a result, have to allow input into their decision making. “Thus proceeding in a participative and collaborative mode may enable many female leaders to win acceptance from others, gain self-confidence, and thereby be effective. Because men are not so constrained by attitudinal bias, they are freer to lead in an autocratic and nonparticipative manner should they so desire” (p. 248).

In conclusion, Eagly and Johnson claim that both views need to be revised: the one accepted by social scientists that men and women lead in the same way and the one proclaimed in popular management books that men and women are different. Their review established a more complex set of findings. It must be remembered that this meta-analytic research did not produce evidence about whether men’s or women’s leadership styles are more effective. It probably depends on the situation. “No doubt a relatively democratic style enhances a leader’s effectiveness under some circumstances, and a relatively autocratic style enhances it under some other circumstances” (p.249). The authors point out, however, that recent management writings have stressed the importance of moving away from hierarchical autocratic management and toward the more democratic and participative leadership styles that the meta-analysis suggests are more prevalent among women than men.

Eagly and Johnson’s results are corroborated by other research. In a study not included in Eagly and Johnson’s meta-analysis, Statham (1987) also found evidence of two sex-differentiated management styles. Statham reports that women used a more task-engrossed and person-invested style, while men use a more image-engrossed and autonomy-invested style. Statham does not argue that one approach is superior to the other; the point emphasized is simply that the two approaches are different, and these differences undoubtedly cause tremendous misunderstandings between men and women in the workplace. In a study that focused on gender differences in communication, Tannen (1990) provides a possible explanation of why these two different approaches have developed. Tannen points out that men and women have different experiences while growing up, and, as a result, have learned to value different things. Men are taught to prize status, independence, and individual power, while women tend to value connection, interdependence, and the power of community. These different values lead men and women to behave in different ways. The resulting differences in the communication styles of men and women can also cause misunderstanding in the workplace. Again, the dangers of overgeneralization must be emphasized. Some women have become leaders and instead of bringing a “softer” approach based on supposedly inherent female characteristics of submissiveness, passivity, and caring—they have demonstrated that women can be competitive and assertive, in some cases trying to be more “male” than the males (Hearn & Parkin, 1986-87). On the other hand, some men have exhibited the softer approach traditionally associated with women. There is a real danger of encouraging new stereotypes when asserting that there are different gender-linked leadership styles. But it does seem safe to say that the typical male and typical female at this point in time practice distinct leadership styles. What needs to be explored is whether either of these two styles is more functional in today’s organizations or whether a blend of both might be the best solution.

3. Paper Content

3.1. Women as leaders

Although more women are assuming leadership roles today than before, the notion of a woman as a leader is still foreign to many individuals, male and female alike. Changes in perception are difficult to achieve because the traditional norms of leadership are firmly entrenched. In our society, as in most others, leaders have customarily been males. In the past, leadership opportunities for women tended to be limited to all female organizations such as sororities, convents, and female

institutions of education-but even there the presidents of women's colleges were almost always men. From this phenomenon the generalization was made that leadership implies maleness and that, since women were not men, they lacked the qualities that are necessary to be leaders. The assumption that leadership equates with maleness *is* deeply embedded in both our thinking and language. Leaders are of ten described with adjectives such as "competitive," "aggressive," or "dominant," which are typically associated with masculinity. A female leader is frequently regarded as an aberration and "women who become leaders are of ten offered the presumed accolade of being described as being like men" (Hearn & Parkin, 1986-87, p. 38).

Despite the societal mandates used to increase the number of women in leadership positions (e.g., various legal measures such as affirmative action), the traditional stereotypes remain. These stereotypes still exert a powerful influence and are at least partially to blame both for women's difficulty in attaining leadership positions and for society's struggle to accept them. Because women do not fit the stereotypical leader mold, those who want to be leaders usually need to be extremely well qualified, have proven records of accomplishments, and be over prepared for their positions. Once these positions are attained, women are often expected to "behave just like their male counterparts rather than enhancing their roles with the new and varied talents and fresh perspectives they might bring" (Shavlik & Touchton, 1988, p. 101).

The female sex role stereotype labels women as less competent and warmer emotionally than men, but the stereotype of the effective manager matches the masculine stereotype of competence, toughness, and lacking in warmth

These gender stereotypes, based on historical roles, of ten lead to a substantial bias against women and present a major problem for those trying to function as leaders in organizations. As Bass (1981) states:

Stereotypes have their effects on behavior. We expect women to be more submissive, so we have trouble taking orders from women, no matter what they are like individually. Women leaders themselves are in conflict when facing divergence in what is expected from them in their roles as managers and in their roles as females, but do these stereotypes reflect reality? (p. 496)

3.2. The impact of leadership on organizations

In the past, most women who succeeded in becoming leaders did so by adopting the masculine style of leadership. There are now indications that women are beginning to make an impact on organizations using their own style of leadership. Rosener (1990) has studied what she calls the second generation of managerial women. The first generation of female managers had to adhere to the same rules of conduct for success that applied to men. This new generation is making its way "not by adopting the style and habits that have proved successful for men but by . . . drawing on what is unique to their socialization as women and creating a different path to the top" (pp. 119-20). Most of these women are working in medium- size organizations that have experienced fast growth and rapid change, organizations that have been most hospitable to women and nontraditional management styles.

Rosener (1990) attributes the behaviors of these women to two things-their socialization and their career paths. The average age of the women in the study was fifty-one, which means that they had life experiences that had been affected because of gender. As Rosener states, until the 1960s, men and women received vastly different messages about what was expected of them. While men were supposed to be competitive, tough, decisive, and in control, women were allowed to be cooperative, emotional, and supportive. This is one reason that the women of today are more likely to be transformational leaders. The other reason is that women's career experiences have differed from those of men who were more likely to have held staff, rather than line, positions. Lacking formal authority over others, these women had to find other ways to accomplish their goals.

Rosener contrasts the men's command and control style with the different style exhibited by the women and argues for an increase in diversity in acceptable managerial behavior. She cautions against linking transformational leadership to being female; women are capable of making their way up the corporate ladder using traditional management style, and some men are transformational leaders. She also fears that companies that perceive transformational leadership as "feminine" will automatically resist it.

Rosener argues for acceptance of this new type of leadership style because she sees it as working best in today's workplaces with today's workers. She is just one of the authors who point out

that the type of leadership style usually linked to women is also the type of leadership style that is most congruent with the changes going on in the organizations of today.

Helgensen (1990) describes the innovative organizational structures and strategies of a number of successful women leaders. She describes the organizations shaped by these women as being more like “webs of inclusion” than hierarchies of exclusion, and stresses the advantages found in this type of organization for information sharing, since there are more points of connection in a web than in a hierarchy, where the communication flow is usually vertical. She has written that “in the Information Age, the value of the old pyramid is being questioned as being too bureaucratic, lumbering and muscle-bound for a fast-changing global economy and far too expensive as well” (quoted in Eisler, 1991, p. 11).

Many other management experts have pointed out that today’s organizations need to be transformed if they are to be successful in the future. There has been much written about the demand for new managerial abilities, and there is a widely shared perception that the vertical skills of command and control need to be supplemented, or in some cases replaced, by a set of skills that includes negotiation, bargaining, and mediation. In addition, many authors extol the virtues of a more humanized workplace.

The changes that are occurring in the workplace are, according to Riane Eisler (1991), reflections of a larger societal transformation. Eisler describes two types of social organization models-i.e., the dominator and the partnership models. Dominator societies are marked by rigid male dominance, a generally hierarchic and authoritarian social structure, and a high degree of institutionalized violence. The partnership model is marked by more equal partnership between women and men, less institutionalized violence, and a more democratic or egalitarian social structure. She argues that society is being transformed from the dominator to the partnership model, and that the “contemporary re-emergence of a ‘softer’ or, in terms of dominator stereotypes, more ‘feminine’ style of leadership and governing ethos-particularly in the world of business and economics” (p. 17)-can best be understood in light of this shift between the two models.

According to Eisler, the modern workplace was patterned to conform to the requirements of the dominator model-hence, its hierarchic and authoritarian characteristics and its top-down chain of command. In this type of organization, women were under tremendous internal and external pressures to behave like men if they wanted to succeed. The author asserts that the workplace is evolving into a more humane, people centered place where the female style of leadership will be fully at home. It is the situational variables that have kept women from ascending to top leadership in modern organizations, the situational variables that have worked against them in the past will work for them if organizations continue their evolution into places where their style of leadership will fit nicely into the prevailing ethos.

Thus it seems that experts’ views of gender differences in leadership style have taken some curious turns over the past few decades. Originally, there was the idea that men and women had different leadership styles based on inherent sex linked characteristics. Then the view became that, even though there were differences, women could learn to succeed in organizations by being more like men. All along, however, there were social scientists who were asserting that there were few differences in male and female styles, and that once women became leaders they would act in the same way as men. Now the pendulum has swung once more, and there is again a perception that there are differences in the leadership styles of men and women. This time, however, assertions are made that these differences will work to the advantage of women because the qualities associated with their management style is what is needed today to make organizations more effective.

In some respects, it seems that women managers may be better prepared to cope with the challenges of the future than many traditional male leaders who succeeded in the past. For many of the characteristics being touted as critical for future success-concern for people, interpersonal skills, intuitive management and creative problem solving-are qualities that women as a group are encouraged to develop and rely on throughout their lives.

It is not an accident or coincidence that women are breaking into the executive market just when the key to success in executive work is working- with-each-other people skills. The controversy over whether women’s styles of leadership are better than men’s or whether there’s any difference at all is merely a signal that all leadership is becoming more feminized simply because it makes good business sense.

3.3. The androgynous leader

Does this interest in the strengths women can bring to leadership mean we have come back to that notion of the “androgynous” leader or manager? Androgyny is an amalgam of male and female styles. The androgynous leader blends the characteristics typically associated with males—such as dominance, assertiveness, and competitiveness—with those typically associated with females—such as cooperativeness and a concern for people.

On the surface, the androgynous manager concept is an attractive one, and there are still a number of advocates of this style of leadership. However, the androgynous manager concept is not a panacea and, indeed, has many pitfalls. To advocate this style as the “ideal” oversimplifies things. If there is anything we have learned from research in leadership, it is that the trait theory is not a particularly useful one. Leadership skills need to be varied to meet various tasks and environments. There is no one right style and no one right set of “traits” even if they are androgynous. Although androgyny is appealing because it incorporates what are viewed as the strengths of both males and females, it also perpetuates some of the same stereotypes that have hindered the development of leaders of both genders. Schein (1989) condemns the entire idea of an androgynous leadership style as a “foolhardy and dangerous one.”

It will not add to our understanding of leadership effectiveness, for it takes a narrow and simplistic approach to what is a broad and complex set of issues and activities. It will not promote equality of opportunity in the workplace because it perpetuates sex role stereotypical thinking that has no basis in reality. The androgynous orientation builds a managerial access bridge for women on a shaky foundation of sand. (P. 155)

We need to move beyond viewing any one style as the ideal and to strive to create organizational environments that will be receptive to many diverse types of leadership styles.

4. Conclusions and implications

The field of gender differences in leadership styles is an area that is still full of ambiguity and paradox. Despite the number of studies devoted to the topic, there are still unanswered questions. Researchers will doubtlessly continue to work on the topic, and perhaps, with time, we will arrive at some definitive answers to the question of whether there are really any innate differences in the leadership styles of males and females. Currently, the evidence suggests that there are some small differences; however, it seems likely that they are not innate but the result of differing socialization.

In conclusion, let us leave the vast, and often confusing, body of literature dealing with gender differences in leadership style and return to the quotation that began this article. Burns (1978) writes that when women are accepted as leaders “men will change their own leadership styles” (p. This phrase is a useful one to use as a springboard for some personal perceptions about the need for all of us to change our thinking about gender differences in leadership styles. In my opinion, Burns is right. When women are accepted as leaders, some men will change their leadership styles because that option will then be available to them. The maintenance of rigid gender role stereotypes has hurt not only women but men. We all need to realize that people, with their widely divergent abilities and advantages, should be looked at first and foremost as individuals rather than as simply members of one gender or the other. Many of the problems that have confronted women have also confronted men; these are human problems not women’s problems. When institutions are able to involve both men and women equally on the basis of individual merit, they will be better places for everyone.

There is, at the present time, a growing awareness on the part of many males that their options have been limited by societal norms about what is proper male behavior. The current rash of books and articles dealing with how men can reestablish connections with their emotions is evidence of the interest in this topic. The reshaping of tomorrow’s organizations will assist men as well as women since the traditional hierarchy has hampered the development of the full potential of both.

Men will have a vital role to play in this restructuring of the workplace. Qualities such as decisiveness, assertiveness, and risk taking that have been considered masculine will be valuable in creating the workplace of the future. Men and women have a great deal to teach each other about leadership and, as they learn from one another, they can bring strengthened leadership abilities to their organizations. Allowing women a greater role in leadership will provide a win-win situation for both genders.

The challenge to organizations of the future is to accept a variety of leadership styles. There is no one “best” style of leadership. It all depends on the organization and the task to be done. If

organizations continue to become flatter and less hierarchical, some of the leadership traits traditionally associated with women leaders will be most appropriate in those organizations. Both men and women should feel free to adopt leadership strategies that will help them succeed. The recognition of a diversity of leadership styles will allow potential leaders to lead in ways that will draw upon their individual strengths. The restructured workplace will provide a setting for a variety of leadership styles to flourish, and, as a result, it will gain in strength and flexibility. Clearly we are in a period of transition in regard to our thinking about gender differences in leadership styles. The cultural factors supporting differences in leader behavior are in a period of flux. It seems likely that as more women assume leadership roles and as sex role stereotypes fade away, the very notion of gender differences in leadership style will also disappear. We will recognize that different leaders have different styles, but we will not automatically associate one style with women and another with men. Males and females alike will be challenged to develop the type of leadership skills that will be needed to lead the organizations of tomorrow

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RELATIONAL STRATEGIES – A MANAGERIAL SOLUTION DURING THE CRISIS

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Abstract: *One of the most important strategic alternatives specific to the companies that afford playing on several markets or fields and need a strategic vision of operation in this regard is represented by relational strategies.*

The relational strategies represent therefore a combination between the offensive and defensive character of the organizational behaviour and the preponderantly offensive managerial vision, focused on development and progress both at the level of the organization value chain and at the level of market performances.

Key words: relational strategies, managerial vision, organizational behaviour, sectorial cooperation strategy

JEL classification: M10, M 21, P 13

1. Introduction

During the current crisis, the organizations are continuously looking for strategic solutions that offer them the certainty of a favourable evolution on the market and the perspective of developing a long-term viable offer structure.

One of the main dilemmas in this demarche is whether it is appropriate to adopt an offensive strategic behaviour or on the contrary, a defensive one. In other words, whether to attempt a business development or consolidate and make it efficient at the level of the current development parameters.

The current crisis caused uncertainty in the managers' decisions who are trying to find the optimal means of action. Their major worries aim at reducing the uncertainties and identifying a competitive climate, favourable for the business perpetuation and development.

One of the most important strategic alternatives specific to the companies that afford playing on several markets or fields and need a strategic vision of operation in this regard is represented by relational strategies.

Among the most significant phenomena of global economy in the last years is the increase and spread of the number of strategic alliances – varied forms of collaboration between the companies at international scale (Dicken, 1992).

However, can relational strategies represent an efficient solution in this context?

2. Arguments for the relational strategies during the crisis

The relational strategies (also named alliance or cooperation strategies) are differentiated from the generic and competitive strategies through the fact that they propose to generate win-win situations (Pricop, 2011). The strategic alliances are different inter-organizational agreements created by companies from different countries to obtain strategic advantages on different markets and in different business mediums (Peters, 1995, p.172).

The description of a cooperation strategy can be synthetically achieved in the following manner:

Table 1: The description of relational strategies

Strategy object
<ul style="list-style-type: none"> • Partnerships for resources • Partnerships for production capacities • Partnerships for key competences • Partnerships for research-development
Concentration/Key elements
<ul style="list-style-type: none"> • Development • Production

<ul style="list-style-type: none"> • Distribution
Means
<ul style="list-style-type: none"> • Group strategies • Segmentation • Passive differentiation • Cooperation
Main objective
<ul style="list-style-type: none"> • Developing the field of activity • Developing/ conserving the business • More favourable positions or the consolidation of the existent ones
Secondary objective
<ul style="list-style-type: none"> • Better and more pertinent products and services • Satisfied clients

As shown in the table above, even if the key elements of a relational strategy have a dynamic structure, the objectives aimed at must not necessarily lead to an offensive demarche. From this comes however the advantage of relational strategies during the crisis: they can produce development effects even if the managers proposed a defensive objective. This happens just because the key elements that are at the basis of the strategy are of dynamic nature.

The arguments laying at the basis of the achievement of a relational strategy can be structured in relation with the dynamics of the life cycle existent at the level of a certain market/industry (Pricop, 2011):

Table 2. Arguments for the development of relational strategies

The dynamics of the market life cycle	Arguments for the development of relational strategies
<i>Market with slow life cycle</i>	<ul style="list-style-type: none"> • gaining access on protected/restricted markets • developing franchises on a new market • maintaining a stable market
<i>Market with normal life cycle</i>	<ul style="list-style-type: none"> • gaining power on the market • exceeding or sometimes avoiding the commercial barriers • identifying the competitive opportunities • insufficient resources for developing magnitude projects • acquiring new techniques, abilities, a good business practice
<i>Market with fast life cycle</i>	<ul style="list-style-type: none"> • increasing the speed of entering with new products or services, or on new markets • maintaining the leader position on the market • imposing a technological standard in the industry • dividing the risks and expense occasioned by the research-development activities • uncertain level of profitability and success of the business

As we notice, the relational strategies are trying to reduce the level of the organizational risk by distributing it between the partners so that each has the capacity to manage more efficiently these risks through the competences they dispose of. Moreover, these partners' competences not only contribute to a better control of risks but they can generate through annexation synergic effects with potentiating character on the business.

Thus, we identify another major advantage of relational strategies during the crisis: achieving a development effect at the same time with diminishing the degree of managerial uncertainty.

During the crisis period, a great part of organizations have reduced their promotion budgets with the purpose of decreasing the total costs. The consequence was however the decrease of trademarks' notoriety and attractiveness. A strategic alliance may have benefits including in the

direction of dividing the promotion costs. At the same time, such a partnership can ensure a better coverage of the new communication and promotion channels that appeared because of the mass-media specialization and fragmentation on product-market couples (for example the alliance between Tnuva and Vel Pitar from 2009 with the purpose of reducing the promotion costs).

3. The relational strategies – offensive or defensive

At the level of a business from the economic point of view, the relational strategies have the following forms of manifestation:

- Complementary strategic alliance (horizontally or vertically);
- Strategies for reducing uncertainties;
- Strategies for reducing the competition
- Strategies of competitive reactions (strategic answers of competitive nature).

The complementary strategic alliances may be developed both horizontally and vertically. The complementary strategic horizontal alliance occurs between the companies situated on the same level within the distribution chain, which usually are in competitive positions. The purpose of the relation is that of compensating their lacks or multiplying their strengths in view of achieving a long or short-term common objective. The complementarity level of the strategy is determined through the analysis of the value chain of each of the two partners and by identifying the connection elements. Most of the times, the complementarity is achieved on the same types of activities (support or basic activities), the mixture situations being more difficult to implement. A successful example in this regard is the alliance from 2006 between Dacia-Renault-Nissan which aimed at achieving a unique sales division on the territory of Romania (5). The complementary vertical strategy is usually established between a producer and a provider or one of its distributors. This type of vertical integration is based on a cooperation agreement and not through the procurement or fusions. In 2009, an example of strategic alliance of vertical type was that between Orange and eMag that aimed at promoting some discounts and a complementary offer solution (internet services and laptops/notebooks).

The two types of complementary strategies (horizontal and vertical) can be used alternatively or concomitantly, with different partners.

The strategies for reducing uncertainties are used for reducing the risks and uncertainty of an organization. This type of alliances are the most encountered ones on the markets with a fast life cycle. Usually, the strategy aims at reducing the existent uncertainties and dangers when launching new products on the market or implementing new technologies, or new technological standards. An example is that between Samsung and Google which in 2011 helped launching two new products.

The strategies for reducing competition are used to avoid the destructive or excessive competition situations. This type of strategic relation can be often illegal if it leads to disfavoring the other competitors, the consumers or to the creation of monopole situations. The strategy has two forms of manifestation:

- *explicit secret agreements*: the companies negotiate directly the sales volumes, the quality of products, the delivery conditions and the prices with the purpose of eliminating competition or reducing its power. Most of the times these actions are illegal.
- *tacit secret agreements*: several companies from an industry indirectly coordinate their decision regarding the conditions and level of deliveries and regarding the sale price, based on the observations of the other companies and the implementation of similar strategic reactions.

The competitive reaction strategies occur when several companies unite their force with the purpose of responding to a strategic reaction of other competitors. The strategy is difficult to apply because it is difficult to estimate the competitors' strategic reaction, and even if this is achieved the costs are very high. For this reason, we could moreover speak of a counter-attack strategy to a tactical reaction and not to a strategic reaction which is more complex to be anticipated even for an alliance of organizations.

Apparently, the relational strategies can be integrated both within an offensive managerial vision and within a defensive one as well. From the point of view of the analysed classification, we notice that the strategies for reducing uncertainties and those for reducing competition propose to increase the degree of control on the variables that influence the business environment in the key moments (launching/developing products, intensifying competition). Even if they represent an adaptive demarche, these strategies suppose an offensive managerial vision because the final purpose is eliminating some mobility barriers and not avoiding them.

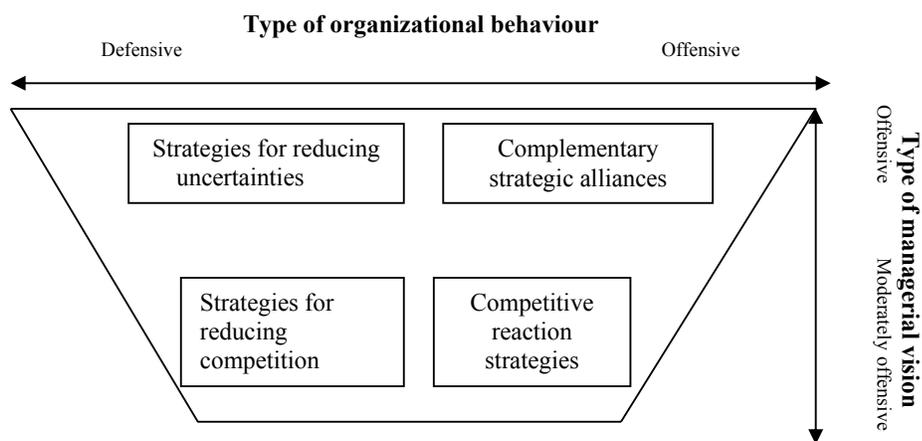
The strategy of complementary alliances represent a demarche of business development but out of offensive managerial reasons, meant to consolidate the organization's existent positions.

The competitive reaction strategy also supposes, a defensive organizational behaviour but it corresponds to an offensive managerial vision.

We notice it is necessary to dissociate the organizational behaviours of managerial vision which lays at the foundation of relational strategies, more exactly to dissociate the means of action from their motivation. This strategic duplicity refers to the construction of relational strategies that are based on partnerships meant to dilute or complicate the organizations' intentions (especially those of competitive nature).

Synthetically, we can express the managerial vision-organizational behaviour relation within the relational strategies, in the following manner:

Figure1. The characterization of relational strategies according to the type of managerial vision and the organizational behaviour



From the competitive point of view, the relational strategies offer considerable advantages and the possibility to compensate the missing competences. However the time horizon differs, in which the competitive advantages can be protected. Thus, the vertical complementary strategic alliance most often lead to the creation of sustainable competitive advantages. The horizontal ones are usually difficult to maintain on the long term since they take place between the competitors. The competitive advantages resulting from the strategies for reducing the competition and uncertainty tend to be temporary.

A special category of relational strategies derive from the types of partnerships that a company develops in relation with the state organizations. From this point of view we can identify the following types of relational strategies (Ciobanu, 1998, p.236):

1. *The national protection* is a situation encountered in the case of national companies that benefit from the protection of their own state especially in relation with the external competitive companies. This type of protection is manifested through direct measures (of fiscal, tariff or commercial nature), or indirectly (under the form of contingencies, quality conditions, preferential orders etc.)

2. *The club of state providers* comprises the companies selected based on political criteria or based on clan interests to which the state distributes either directly certain preferential orders, or in a disguised manner. Sometimes the support is offered to the companies operating on external markets in view of consolidating the country image or developing strategic economic partnerships.

3. *The political-technological strategies* represent a specific situation especially in the case of countries with a centralized or semi-centralized economy where the state plans and monitors the competitive relations between the companies. The situation can also be found at a reduced scale in the free economies as well, in the fields where the state has a strategic interest of political or technological nature.

4. *The political-syndicate strategies* represent situations of pseudo-intrusion of the state in the business sphere, its role being often an indirect one, of negotiator or intermediary of the relations between the organizations management and syndicates. However, because of the social and political connotations involved within the discussions between the syndicates and organizations, discussions that sometimes have as starting point the national economic-social situation, the state involvement cannot be excluded.

A distinct form of strategic alliance between the state organizations and the private ones is represented by what we may call *sectorial cooperation strategy*. The purpose of the alliance is promoting the sectorial interests of some fields considered key in the competitive gearing of a nation. In Romania, an example in this regard is represented by Digital Alliance for Romania 2020 initiative group, a partnership signed this year between Internet Society Romania and the Ministry of Communications and Information Society. We consider that the relational strategies of public-private type are based on a rather defensive than offensive behaviour, their purpose being that of protecting the organizations and consolidating their market position. The managerial vision is an offensive one since it wants to obtain a certain control on the resources or levers specific to the state.

Both the strategies between the companies and those between the companies and the state organizations can be classified from the point of view of the complexity of forms of manifestation in strategies of X or Y type (Porter, 1986).

The strategies of X type are those in which the organizations put in common the competences from different sectors within the value chain (for example the alliance between Flanco and Credisson).

The strategies of Y type are those in which the organizations put in common similar competences within the value chain. The purpose is most of the times increasing the capacity of exploitation of an opportunity at the level of inputs (organization resources) or at the level of outputs (organization products). A recent and very complex example through the generated strategic structure and values involved is that between Rosneft Russian company and ExxonMobil American company. They signed a strategic alliance regarding the off-shore exploitations for several projects in North America. However, specific to this strategic alliance was the achievement of a XY cooperation form since ExxonMobil ceded shares in parallel to the Rosneft branches (30% of the ExxonMobil projects from Western Texas, Canada and Mexican Gulf).

The dynamics of the current economic environment creates opportunities for the development of relational strategies. The on-line environment facilities represent key factors for substantiating such strategies via Internet. A few of the most usual forms of cooperation in the on-line environment are:

- Developing promotion sites (the most used are the cross-promotions, consisting in using the electronic coupons obtained when purchasing a brand for acquiring another brand)
- Sales partnerships (especially IT products or services).

The relational strategies represent therefore a combination between the offensive and defensive character of the organizational behaviour and the preponderantly offensive managerial vision, focused on development and progress both at the level of the organization value chain and at the level of market performances.

4. Conclusions

Certainly, the relational strategies represent a suitable choice for the crisis period. The main arguments are:

- Distribution of risks
- Diminishing the organizational vulnerability
- Increasing the exploitation potential
- Increasing the resources
- Increasing the market flexibility
- Diminishing the competitive intensity

At the basis of the relational strategies there is always an offensive managerial vision that aims at reaching a superior level of business development. This vision is however implemented both through adaptive organizational behaviours and through offensive organizational behaviours according to the nature of the chosen strategy.

In a more and more vulnerable economic environment and more exposed to some uncontrollable factors, the relational strategies manage to consolidate the activity of a company by

anchoring it with the help of other companies. The essential conditions in such a demarche is however the desire of reciprocal progress and the existence of some functioning alliances parameters, extremely rigorously determined and respected.

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ACTIONS, METHODS AND TOOLS FOR THE QUALITY EVALUATION OF EDUCATIONAL SERVICES - A COMPARATIVE APPROACH

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Abstract: *A specific characteristic of the academic education is particularly the multitude of stakeholders types (students, employers, the community and parents, alumni, members of the education bodies, government bodies, auditors and assessors, users of research). This fact triggers the need of a high level of flexibility in order to meet the diversity of the needs and expectations shown by the categories involved. Since perpetual modifications take place at the level of all these elements and at the level of the workforce market, a continuous research and analysis of the changes is necessary, so that the educational content is permanently adapted to the external and internal reality.*

Therefore, several universities in Romania were subject to study, in order to identify the internal assessment procedures used. The current study does not intend to offer positive or negative examples, but rather a comparative analysis of the internal assessment procedures identified in the public information made available by the education bodies.

Keywords: internal assessment, quality standards, procedure, stakeholders

JEL classification: I 21

1. Introduction

Quality insurance is not simply an option, but rather a duty for organisations, being a must in the relationship with the clients, the main beneficiaries of the offer, as well as in the relationship with all those having direct or indirect interests connected to its existence and functioning. The extension of the focus from the client-centred quality to the quality for all those interested is an essential component of the philosophy of total quality management (TQM) and the starting point in the implementation of continuous improvement strategies. For the educational services this approach becomes more important if we take into account the role of education in the development of modern society. In this context, the analysis of the preoccupations of higher education institutions for a better understanding of the stakeholders' requirements regarding the quality of the performed activity and of the degree of satisfaction generated by the performance and the offer to the society becomes a fairly significant action. Starting from these considerations, we will identify and present hereafter several best practices used in the relationships with three stakeholder groups: students, graduates and employers. The approach should be extended as well to other groups of stakeholders (high schools, community, etc.) but the existent studies show less and irrelevant interest in this direction.

2. Stakeholders and education quality

In the context of the permanent socio-economic changes and the high demands towards educational services, education quality is more and more connected to the needs and expectations of

society (Sangeeta, Banwet, 2004, Osoian, Zaharie, 2010). This approach towards the needs and expectations of different groups of interest (stakeholders) and/or clients implies the achievement of a set of quality standards, among which:

- a) highlighting the benefits associated with the investment in education, both at an individual and social level;
- b) guaranteeing the credibility of diplomas issued, the quality of the graduates' training;
- c) ensuring transparency and monitoring the educational system.

Moreover, the pressure of the highly utilitarian governmental expectations on the educational systems (from an economic standpoint, the increase in education productivity is more stringently aimed at), triggers the need to increase the degree of reactivity of educational systems and the adjustment to the economic needs of society. Furthermore, the occupation of labour force having graduated from higher education institutions (graduates' employability) becomes a performance indicator for the higher education quality forcing the educational institutions to pay increased attention to this issue.

Following the model of the industrial sector, the educational system has adopted the notion of quality as a central element for the appreciation of performance. In spite of this, quality has remained a long-debated conceptual notion, for which no consensus has been reached and which is still defined from multiple perspectives. Due to the numerous approaches, quality has not yet been given a universally accepted definition either within higher education, remaining a debated concept on account of the perspective it is seen through, *stakeholder relative*. Given the difficulties encountered when trying to define *quality* in higher education, it becomes necessary to confine the quality evaluation criteria used by the various groups of clients and to integrate them in the strategies aiming to improve the educational process (Lagrosen, Seyyed-Hashemi, Leitner, 2004). In this respect, for instance, quality represents a preoccupation of stakeholders' groups, being attractive for employers, both as „users” of graduates, and as collaborators in scientific research or training activities (Harvey and Green, 1993).

2.1. Groups of stakeholders

The diversity of groups of stakeholders and/or clients makes the identification of their needs more difficult and thus the development of mechanisms ensuring their identification in due time represents a necessity of educational institutions. Obviously, the perspectives of these distinct categories are not entirely the same, the more so as in the case of higher education institutions. We should notice though the use of two terms: *stakeholders* and *clients*.

Taking into consideration the criticisms regarding the implementation of total quality management in the educational system, the specialty literature has distinct opinions about the appropriate use of the term *client* for higher education. One of the solutions proposed to avoid these misunderstandings is to use the less used notion of „stakeholders” (interested parties). Srikanthan and Dalrymple (2003) identify four categories of stakeholders, which they relate to the quality approaches proposed by Harvey and Green (1993): providers, users of products, users of results, organisation personnel.

The quality of educational services is of interest for clients and other parties involved, yet it is systematically evaluated through specially designed methods and procedures by the providers of these services (educational institutions) and by external specialised bodies.

In compliance with the legal provisions, the education quality insurance is an obligation applying to all institutions part of the national higher education system. The education quality insurance is compulsory and comprises the internal evaluation, conducted by the institution itself, and the external assessment, regularly performed according to legal provisions.

2.2. Quality evaluation by the providers of educational services

The analysis of specialty literature and of practices in different higher education institutions highlights a wide range of methods and techniques used in the relationships with stakeholders:

- questionnaire-based surveys
- scales of expectations/perception evaluation and clients' satisfaction (SERVQUAL, SERVPERF)
- the critical incidents technique
- observation studies
- focus-group discussions

- in-depth interviews.

3. External evaluation of education quality

The external evaluation is based on the ability of higher education institutions to provide proof of the learning and research results and performances and on the check-up of their mirroring the reality, including the verification of students' activity in relation to the assumed standards.

The Romanian Agency for Quality Insurance in Higher Education (ARACIS - Romanian abbreviation) applies the principles and approaches of academic quality insurance in compliance with the legal provisions, in order to strengthen their applicative feature and to better serve the beneficiaries according to the activities run in universities and their actual requirements. To this aim, ARACIS closely cooperates with all the universities involved, with the Ministry of Education, Research, Youth and Sports, as well as with students' representatives, unions, professional associations and companies.

As far as education quality insurance is concerned, three fundamental fields of organisation and functioning are taken into account when an organisation already is or attempts to become a higher education provider. The criteria, standards and performance indicators are stated so that the focus should not only be on the compliance of an organisation with a predetermined or predefined set of quantitative and qualitative conditions, but also on the deliberate, voluntary and proactive involvement of that institution in order to reach performances translated into effective results.

The areas of quality insurance are the following:

A. **Institutional capacity**: the institution has a coherent organisation and an adequate management system, it has the necessary facilities and financial resources necessary for a stable short- and medium-term functioning as well as human resources on which one can rely in order to achieve the mission and the objectives.

B. **Educational efficiency** refers to the organisation of teaching, learning and research processes in terms of contents, methods and techniques, resources, selection of students and teaching and research staff, so that it obtains the learning or research outcomes clearly stated in its mission. The quality management focuses on those strategies, structures, techniques and operations helping the institution prove that it evaluates the performances of education quality insurance and improvement and it possesses information systems testifying the learning and research outcomes.

The importance of this area resides on one hand, in the focus on the management of quality insurance for all the organisation's activities and, on the other hand, in making public the information and data proving a certain quality level.

The three areas are interrelated and their use is mandatory.

4. Quality evaluation by means of measuring the stakeholders' requirements and satisfaction

Given the multitude of stakeholders' groups in higher education as well as the variety of their requirements, one of the methods to solve the potential differences implies the identification of the common points that may bring them together. In this respect, for each of the groups of stakeholders it is necessary to identify their perspective, which should be integrated as equitably as possible in the institutional strategy.

Another solution was to make a hierarchy of the groups of clients in relation to their importance. Owlia and Aspinwall (1996) conducted a study applied on authors which had published works on this topic, requesting the hierarchy of higher education's clients. The highest importance was assigned to the students' category (1), followed by employers (2), society/state (3), institution's employees (4) and students' families (5). In our opinion, such a hierarchy has certain constraints, of which: those generated by the characteristics of the sample of the responding population (teaching staff from various fields), the impossibility to set a general classification of clients, without specifying at least a certain component/dimension of the educational system; the lack of criteria/benchmarks for hierarchy. Therefore, we believe that the most appropriate manner to integrate the perspectives of several groups of clients is to identify their common and different aspects on the relevant elements for education quality.

Having in view all these, when implementing the total quality management the higher education systems should consider the clients' input and use it in order to improve the educational process and implicitly the final product. On the other hand, it would be good for any prevalently client-oriented organisation to become aware that it should not entirely depend on the expectations and

needs stated by the clients, or at least not on a single group of clients. Regardless of the existing debates about the possibility and justification of integrating the clients' requirements, their needs should be well known by the educational institutions. The expectations of groups of interest and the level of satisfaction concerning the service quality may be identified by means of the systematic analysis of their perspective, using various methods such as: focus groups, questionnaires/scales for satisfaction evaluation, in-depth interviews, observation studies, the critical incidents technique. An important element is the regularity of these analyses, both at labour market level and students' level who opted for another institution. The information obtained is essential for the decisions taken at institutional level.

Starting from the directions identified by the specialty literature as being definable for service quality and in order to offer a synthetic image of the factors that may influence the quality perceived by the client, we believe it is necessary to include both the clients' expectations and certain factors depending on the external context. Thus, the clients' expectations may be determined by their previous experiences, by the clients' needs (which may be implicit, explicitly present or potential), by the value that the client assigns to that respective service as well as by the advertising manner of that service on the market (the marketing-related aspects). On the other hand, the expectations and the quality level perceived may be also influenced by economic, social, cultural or institutional factors (the labour market characteristics, the training level of the workforce, values, financial resources, organisational culture, and interpersonal interactions).

Thus, we may ascertain that a specific feature of higher education is the multitude of stakeholders' types (students, employers, community and parents, alumni, members of educational institutions, governmental parties, auditors and evaluators, end-users of research) that can be classified in four big groups: education providers, educational services users, product users and the employees from the educational institutions (Srikanthan and Dalrymple, 2003). This fact implies the need for a high level of flexibility that should meet the diversity of needs and expectations expressed by the categories involved. Since at the level of all these elements and namely at the level of labour market permanent changes take place, it is necessary to study and continuously analyze the changes, so that a permanent adjustment of the educational content to the external and internal reality should occur.

The internal dimension of the academic quality is built based on the legislation in force and according to the specific characteristics of each university, to the customs and the cultural patrimony of the academic education in our country. With this approach, quality assurance becomes a process adapted to the institutional specific characteristics and is a mechanism that always helps the academic results or performance improve.

According to the principles governing the university autonomy, the responsibility of guaranteeing procedures and instruments for assessing quality in education is held by each and every institution, as long as it complies with the national regulations.

In education quality assurance, three fundamental fields are to be mentioned when it comes to the administration and functioning of an organisation that wishes to become or already is an academic education body. The performance criteria, standards and indices are uttered in such a way so as not to stress only the meeting of a predetermined or predefined set of quantitative and qualitative conditions, but also the institution's deliberate, volunteering and proactive commitment to fulfil certain performance criteria that can be proved by means of actual results.

To identify the internal assessment instruments used to find out the requirements and fulfilment of various customer categories, the following universities have been studied: "A.I.Cuza" University of Iasi, the University of Bucharest, "Babes Bolyai" University of Cluj Napoca, the Bucharest Academy of Economic Studies, the West University of Timisoara, University of Oradea, "Valahia" University of Târgoviste, "Vasile Goldis" West University of Arad.

4.1. Internal assessment regarding the students' requirements and fulfilment

This type of assessment is done using specific instruments, usually questionnaires, and aims at measuring the performance in the educational process by means of assessing the teaching staff. Considering their purpose, that is, the assessment of the teaching staff, these questionnaires identify above all the fulfilment, to the disadvantage of the requirements.

Following the requirements of the national standards for the assessment and certification of the study curricula, most universities use questionnaires for the assessment of the teaching staff or of the activity during the lectures and/or seminars. These questionnaires are also intended to assess the

teacher's activity in order to continuously improve the teaching and planning activities, as result of the students' suggestions. The questionnaire templates used highly differ from one university to another in terms of the content, size and the obtained information. Three types of questionnaires are used:

- Questionnaires to assess the teaching activity (courses);
- Questionnaires to assess the activity during seminars and laboratory practice;
- Questionnaires to globally assess the teacher's activity (during the lecture and seminar activities).

All the assessed universities have a Commission for quality assessment and assurance, whose purpose is to systematically survey the students' fulfilment, to assess the quality of the teaching activities every semester, to permanently improve the content of the subjects and the structure of the education curricula, based on the feedback received from students.

To measure students' fulfilment regarding the teaching activity (lectures and seminars), all the assessment tools used are based on three important axes:

- teaching-learning activity
- material basis
- fulfilment regarding the services and facilities they enjoy within the university

The purpose of assessing the lectures/seminars and the teaching techniques is to provide information for the teacher in order to improve the teaching process, as well as for the faculty management team, helping them make decisions regarding the teaching staff and the courses.

In short, the situation in the assessed universities is the following:

Table 1: Assessment of the students' perception and fulfilment

		UAIC	UB	UBB	ASE	UO	UVTG	UVTM	UVG
Indirect assessment	Assessment of the professors	x	x	x	x	x	x	x	x
Direct assessment	Assessment of the students' fulfilment	x		x		x			
	Assessment of the learning environment		x						x

UAIC - "Al.I.Cuza" University of Iași

UB - University of Bucharest

UBB - "Babeş Bolyai" University of Cluj Napoca

ASE - Bucharest Academy of Economic Studies

UO - University of Oradea

UVTG - "Valahia" University of Târgoviște

UVTM - West University of Timișoara

UVG - "Vasile Goldiș" West University of Arad

4.2. Internal assessment on the analysis of alumni's requirements and fulfilment

Due to the fact that the national education assessment standards set as a compulsory requirement that no less than of 40% of the alumni from the first three series should have a permanent employment contract on jobs corresponding to the specialty obtained at graduation, universities set their own procedures to measure the level of insertion of graduates on the employment market rather than the level of their fulfilment. Clear examples are the following types of questionnaires used by the assessed universities:

Al.I.Cuza University – Alumni Questionnaire

Babes Bolyai University – Alumni's Opinion regarding the Quality of Education

Oradea University – Alumni Registration Form

Vasile Goldis Arad University – Alumni Questionnaire

4.3. Internal assessment on the analysis of employers' requirements and fulfilment

Taking into account the methodologies described by the publications related to this field, we identified a large number of studies approaching the perspective of employers on different levels. There are also many ongoing investigations on the international level (aiming to compare the methods and criteria of selection used by employers in different countries), on the national level (analysing the employers' requirements which should cover the total number of graduates of different educational agencies), as well as on an institutional level (ongoing investigations regarding the employers' requirements aiming to adapt the educational offer to those requirements).

Universities perform the internal assessment correlated with the employment market during certain projects on a less regular basis.

4.4. Internal assessment on the analysis of employees' requirements and fulfilment

Since they are not compulsory according to the education assessment standards, the determination of methods for identifying the employees' requirements and fulfilment does not represent a priority for the university management.

The following aspects shall also be considered:

- The need of further study both in the same and in related fields;
- Requirements on the development of management and the quality assurance;
- Factors impeding the need of further education (lack of time, lack of resources, family problems, poor quality of courses, etc.);
- Requirements on the organization of courses;
- More options among the educational offer.

5. Conclusions

Analysing the documents provided by the institutions, we have noticed that all universities have certain good practices for identifying the students' fulfilment level. We consider that all these procedures shall apply since this is mandatory in the authorization/accreditation process. Due to the fact that they are not compulsory, according to the national assessment standards, the interest in identifying the employees'/employers' requirements and fulfilment is rather sporadic and usually raises on the occasion of certain projects.

Conclusions on the analysis of students' requirements and fulfilment:

- between 50% and 90% of the students favourably appreciate the assessed aspects
- the most appreciated is the information regarding:
 - admission
 - specialized knowledge obtained during the course
 - the class rooms
 - access to information on the faculty
- approximately 50% of students positively appreciate students' counselling services

Conclusions on the analysis of alumni's requirements and fulfilment:

- Both the questionnaires constructs and the measuring scales are oriented towards the determination of the following elements:
- Employment percentage – how many alumni were employed after the graduation (acceptable ceiling of 70%)
- The time span between graduation and employment (max. 18 months)
- Percentage of postgraduate studies

Conclusions on the analysis of employers' requirements and fulfilment:

- If it is not a compulsory requirement, the analysis of employers' requirements and fulfilment will only be a desired element
- "Babes Bolyai" has already undertaken such a study, nevertheless it was done during a project
- "A.I.Cuza" University has also developed a similar study, also during a project in 2000.

Conclusions on the analysis of employees' requirements and fulfilment

Due to the fact that they are not compulsory according to the education assessment standards, the determination of methods for identifying the employees' requirements and fulfilment do not represent a priority for the university management.

Once the requirements and fulfilment of the interested parties are identified, universities shall focus on developing the necessary processes in ensuring the growth of the fulfilment level. The mere recognition of the stakeholders' problems is not enough and, therefore, establishing strategies in solving them should also be considered.

We should emphasise the fact that the list of criteria is neither normative nor exhaustive. Every institution may implement additional criteria regarding the internal assessment.

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DIAGNOSIS OF STRESS FACTORS IN MILITARY ENVIRONMENT

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Abstract: *This paper aims to highlight some aspects of military personnel and to identify sources of stress in military organizations, different levels of organization. The military is a pretty average applicant stress factors have a high enough frequency, and individual personality that supports entry in this environment suffer certain changes that do not have certain characteristics which may facilitate increased tolerance to stress. Therefore proceed from the following hypothesis: (Hs) a rigid professional environment lead to organizational stress. Military environment involves stress, due to its specific applications are considered rigid and authoritarian. Lot of subjects is homogeneous, consisting of 80 subjects, gendarmes, contractual employees, military personnel with permanent contracts and civilian employees of the Romanian Gendarmerie, the OSI questionnaire applied. (Organisational Stress Inventory). Responses of the trial reveals the existence of rigid structures and distorted thinking of reality.*

Key words: stress, organization, personality, employees

JEL classification:

I1 - I - Health, Education, and Welfare

I14 - Health and Inequality

I15 - Health and Economic Development

1. Introduction

Early life events research link to the publication in 1967 of methods for quantifying the action of these events by life events scales of Holmes and Raheem, saying that the various changes of life (or death of spouse, relocation, change of employment, divorce, etc..) involves the same load, recovery and therefore, the basic idea consists in assessing situational stress, stressful process intermediaries between stimulus and stress response remained ignored. Whatever the significance of Han, the frequency of various stressful life events (ie death of partner, moving, changing jobs, etc..) entail significant adaptation reactions of the individual. If they do not fire because the requirements are beyond the resources objectives and / or the individual's subjective, mental decompensation may arise and / or physical.

Critical concept of life events (Filipp, 1981; Katsching, 1980) refers to the failure of their emotional quality assessment, placing them poor in the context of individual biography and the omission affected the perception, evaluation and treatment specific person. In addition, consider Petermann (1981), retrospective assessment of life events does not allow an assessment of conditional and causal relations between event and its consequences. Because life events have specific quality and their effect only through perception, evaluation and intrapsychic processing, they need not only have pathogenic action, but may also have contributed to personality development (Baltes, 1979; Filipp et al., 1980). Research results, and those of Olinger, Kuiper & Shaw (1987), Kuiper and Olinger (1986) etc. studies show that pathogenic action should not be thought life changes in a linear fashion, but probably requires a multidimensional and optical tranzacționistă mediation as performed by cognitive stress theory of Lazarus and Launier (1978). Resources and individual skills (coping behavior) decide on whether an interaction between body and stressors lead to pathological consequences

However, Moss (1990) believes that sufficiently differentiates between negative life events and current stressful life circumstances (health, family conflicts, etc..). Of the many research topics devoted depression Fiedler (1991) off four areas:

- 1) social stress and social support as antecedents of depressive disorders;
- 2) social stress and social support as a result of mental depression;
- 3) moderate effect, protection of personal resources and coping behavior;
- 4) the significance of personal moderating variables.

But, as stated Schwartz & Leppin (1989) from a meta-analysis of 70 empirical studies supported interdependence between the values of popular disturbances as consequences of SP and

social support variables may be only partially glimpsed as they appear inconsistent. The differential construct "social support" is the social network. It should be understood as a model of social relations and can be described accurately with features such as size, density, durability and consistency (Sommer & Fydrich, 1989), being considered as more oriented sociological concept. Social support is more psychologically oriented and it would be the result of social interactions and their processing by the individual. Meet here the structural features of social networking, social interaction features as individual characteristics. For some authors (Sommer & Fydrich 1989, Cohen & Syme, 1985) containing components of social support are: emotional support (eg, proximity, trust, acceptance), informational support (eg, relevant information for action); practical support and / or material (financial support, material support, etc..) social integration (insertion in the network of social interaction, agreement on values and perceptions).

Barrera (1986) suggests a different perspective analysis of social support: structural - people who help in a situation or help, cognitive - that perception of support and certainty or awareness of social support (perceived social support and social cognition); interactive - action support. As stated G. Richter (1996), individuals objectified and reflected deficits in social network can be clarified by their meaning rather idiografică by cognitive processing and coping strategies of the subject or the subjective perception of social support it. The theory of cognitive, psychological stress is an imbalance as intense, subjectively perceived, of the demands imposed on the body and its response capacity. To describe SP, Lazarus introduced the following concepts: threat (treath), evaluation (Appraisal) and adjustment (coping). The threat is defined by three characteristics:

- a) anticipates facing a dangerous situation or a negative experience;
- b) guiding future conduct;
- c) is dependent on cognitive processes (perception, thinking, memory, learning).

It is shown that SP occurs when anticipated threats, real or imagined, on: the physical, the mental state and positive interpersonal and social relations. Also, the distinction between anticipated threat, which is a subjective, and confrontation, the objective phenomenon. Studies conclude that anticipation is more intense psychophysiological responses than confrontation. Where there is no time anticipatory, psychophysiological reactions may occur after the confrontation. Sometimes sources intrapsychic threat lies in the dynamics of the individual and are aware only events that cause (anxiety, restlessness, depression, etc..)

Resulting from the anticipation of threat stimuli are appreciated by the individual as harmful, neutral or beneficial cognitive evaluation processes, understood as mental activity involving judgment, reasoning, deduction, discrimination, options which data are assimilated into a cognitive framework.

Lazarus distinguishes three stages of evaluation: 1. Primary assessment - that the situation is defined as harmful or not, ending with a sense of self confidence, or rather of weakness. Two. Secondary Assessment - that the subject must choose the adaptive alternatives are close at hand. Three. Reevaluation, which refers to the initial perception of benign changes in harmful, or vice versa, as a result of new information, including success or failure of the first attempts adaptive. Stressful nature of the stimulus is determined by two broad factors:

- a. factors - related to the configuration of stimuli, the ambiguity of indicators of the nature of confrontation arising from lack of information or conflicting data, the balance of threat stimuli and producing individual and environmental resources.
- b. dependent internal factors of the individual psychic structure: the set of reasons, belief systems, beliefs and attitudes up to the various aspects of the environment and to themselves, intellectual resources and education.

If the stimulus is evaluated as threatening to trigger processes to reduce or eliminate it, called adjustment processes (coping).

Adjustment, considered a key concept in understanding the psychological stress is defined as cognitive and behavioral efforts to reduce body, tolerance and environmental control requirements that exceed individual resources (self-assessed). It emphasized the distinction between adaptation, which often means the automatic responses, well established, especially biological and sensory adaptation and adjustment that occurs when there is valid and requires an effort that involves cognitive and behavioral strategies.

Lazarus and Miller are two types of adjustment strategies: direct action, directed at changing the intensity or eliminate stressors (strengthening individual resources, attack, avoid, block), and indirect actions aimed at controlling emotional responses to stress (strategies "palliative" and

unconscious psychological defense mechanisms) and which Pearlin add "change mode of looking at it in a manner to reduce the threat".

Showed that adjustment strategies aimed at the following: maintaining distress tolerable limits, maintaining self-esteem, preserving interpersonal relationships, placing the situation in other circumstances. To achieve these objectives, the individual may use multiple strategies to adjustment (Lazarus identifies a number of 68 forms) simultaneously or sequentially, with different levels of consciousness.

The central feature of the SP theory of Lazarus et al. is revealing in assessing cognitive factor in determining the pattern of responses and the choice of adjustment methods. Selye describes three distinct stages in the evolution of general adaptation syndrome:

- 1) alarm reaction stage, which comprises two phases: Phase of "shock", Phase "contrașoc";
- 2) stage of resistance (to return or "extended anti shock");
- 3) stage of exhaustion.

In the current period gendarme is subject to numerous and varied applications for which was and is more or less trained and motivated. This is beginning to feel gradually but steadily, I own an area more frequently and assaulted interest (sometimes affected) that is what his own psyche, as the soldier is in contact with the environment, contact is / becomes a bi-univocal relationship , the interference and influence. Thus both "equation terms" man and the environment is in a sustained transformation, formation, structure due to internal or external influences last being bi-univocal. From internal sources can be retained: personal insecurity, family conflicts, financial problems, physical health.

Of the foreign service may be given to applications demanding repeated blockage problems, equipment failure, inadequate leadership, lack of team cohesion. From all this we can say precisely that the military is constantly confronted with a process of adaptation-integration / and the environment which in turn registers its assimilation process (altering their structure) of individual and / or group. All these very complex processes, the continuous recording block, recovery, intensity fluctuations, etc.. Produce the effect of stress on the individual. To better understand the complexity of action agents stressors and their influence on military can present some findings of the special circumstances of the battlefield and their aftermath.

Most wounded and showed less anxiety and other symptoms of combat stress, unless continuous mutilation. Paradoxically, wounded, anticipating a solution to escape from the stressful situation of the battlefield, remove source of anxiety. Also some soldiers hospitalized for physical injuries, even in more severe such as paralysis or amputation of limbs, mental disorders do not show appreciable. In contrast, some of those hospitalized due to mental problems such as severe symptoms of depression, obsessive thoughts and delusions were more psychologically disturbed for some minor adverse psychiatric reactions than acute trauma.

In studies of personality traits of Israeli soldiers who won the Yom Kippur war shows that over 25% of them were treated before the war psychological and 12% of them have had difficult experiences before the Six Day War. Around 37% of soldiers had clear history of instability that may be prone to the psychological stress of combat action, on the other hand the other 63% have not shown too early problems and could not be considered a risk to combat stress. Other soldiers were so accustomed to anxiety, that could cope with it almost automatically, while soldiers suffering serious anxiety for the first time can be traumatized psychologically acute, and thus removed from the battle.

The military is a pretty average applicant stress factors have a high enough frequency, and individual personality that supports entry in this environment suffer certain changes that do not have certain characteristics which may facilitate increased tolerance to stress. Lack of understanding from superiors, bureaucracy, many approvals necessary for solving personal problems keeps the military in a state of tension stress triggers. Stress factors is one of the causes that can lead to personality disorders, which can lead to extreme situations identified that may endanger not only their own lives and others lives.

2. Methology of research

2.1. Objectives of research

2.1.1.General objectives

- identify stress factors within the organization;
- stress-level description of the organization;

- capture dynamics of the stressor and the individual;
- exploring means by which individuals cope with unwanted events.

2.1.2. Specific objectives

Identification and the stress factors in a military style organization.

2.2. Hypothesis of research

HS1. Voltage sources are perceived differently according to the department in which subjects work;

2.3. Tools

The research used a questionnaire related stress (OSI - Organizational Stress Inventory). Questionnaire contains 126 items, divided into seven dimensions:

Dimension I: image of the service they provide - 12 items; dimension II: the current state of physical and mental health - 18 items, size III: daily behavior of respondents - 10 items; Dimension IV: sources of stress at work - 40 items, dimension V: how to adjust to stresogenă - 10 items; dimension VI: the extent to which the subject controls the situation stresogenă - 16 items - size VII: axiological system of respondent - 20 items.

2.4. Participants

Lot of subjects is homogeneous, consisting of 80 subjects, gendarmes under contract, permanent contract military personnel and civilian employees of the Romanian Gendarmerie, UM 0615 Tulcea. Homogeneity lot of subjects is given both by profession and gender distribution of the sample: 78 men and two women.

3. Data analysis and interpretation

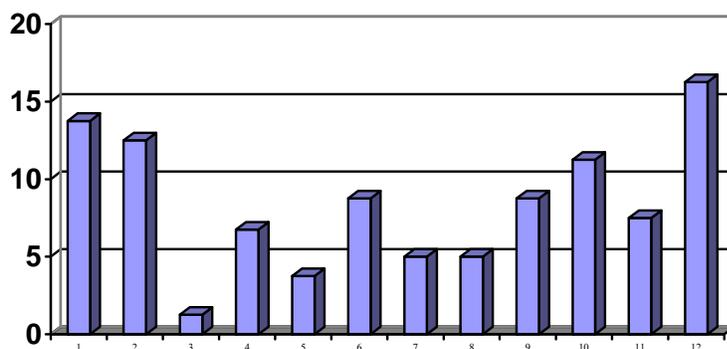
In the entire sample chose to research 16.25% of the subjects considered the most important stress factor is the lack of professional satisfactions, followed in descending order of compliance (13.75%), relationship with superiors (12.5%), relationship with colleagues (8.75%), possibility to sanction (8.75%), overload of work tasks (7.50%), opportunities for promotion (6.25%), relationship with subordinates (5%), skills needed (5%), responsibility for the action of others (3.75 %) and job security (1.25%).

Table 1. A hierarchy of stress factors in the organization

Rank Item	not at all important	Very less important	less important	Important	very important
Relationship with colleagues	30 %	22,50 %	28,75 %	10 %	8.75 %
Relationship with subordinates	30%	33,75%	20%	11,25%	5%
Compliance	17,50%	25%	26,25%	17,50%	13,75%
Job security	41,25 %	33,75 %	20 %	3,75 %	1,25 %
Opportunities to promote	27.50 %	31.25 %	22.50 %	12.50 %	6.25 %
Responsibility for the action of others	18.75 %	43.75 %	28.75 %	5 %	3,75 %
Special skills required	42,50 %	30 %	15 %	7,50 %	5 %
Relationship with superiors	13,75 %	20 %	27,5 %	26,25 %	12,50 %
Possibility to sanction	25 %	18,75 %	27,50 %	20 %	8,75 %
Relationship with person who violates the law	8,75 %	22,50 %	28,75 %	28,75 %	11,25 %
Overloading duties	18,75 %	26,25 %	28,75 %	18,75 %	7,50 %

The absence of professional satisfactions	17,50 %	22,50 %	28,75 %	15 %	16,25 %
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Figure 1. Hierarchy of stress factors in the organization



Following the hierarchy of stress factors by employees of the organization, it appears that they consider that internal compliance and relationship with superiors is a potential stressor factors higher than the relationship with people who break the law.

This part of research aimed at the general objective of this paper, "identifying stress factors within the organization," specific objective "ranking of stress factors within the organization", the study confirmed the hypothesis number 1, in which the formula presumption "voltage sources are perceived differently by the subjects, according to the department in which they work."

Trying to do an analysis on the dimensions of the questionnaire, the interpretation of data obtained we can draw the following aspects.

Dimension I. The picture on the service they provide

Only 6.3% of respondents say they feel a lot of dissatisfaction related to the job they perform. Their discontent is how communication within the organization, how they feel stimulated by the work, since they feel they can develop and fulfill the existing service and psychological atmosphere in the military unit. A lot of satisfaction in relation to organizational climate showed 18, 75% of subjects batch.

Only 1.3% of subjects gave answers indicating lot great satisfaction, and that only 5 of the 12 items of size. Six and six answers indicating "some satisfaction" gave 41.3% of the lot used by research subjects.

Dimension II, the current state of physical and mental health

Subjects requires an assessment of personal health and has two parts:

- Part A, which includes 12 items and requires a subjective assessment of health;
- Part B, with six items require an objective assessment of health, emphasizing the existence of somatic symptoms accompanying stress accumulation

Table No. 2. Descriptive statistics for dimension 2 OSI

	never	Very rarely	rarely	sometimes	frequently	very frequently
Number of subjects	80	80	80	80	80	80
Mean	1.2000	2.7125	2.5500	2.7125	2.4125	.4250
Median	.0000	2.5000	2.0000	2.5000	2.5000	.0000
Module	.00	2.00	1.00	2.00	3.00	.00
St. deviation	1.8920	1.9106	1.9481	1.8225	1.2994	.8827

Subjects who claim never to have ridden past mistakes or actions that never happened that during a working day to feel disturbed without clear knowledge of this state or the reasons that have

never put signs questions about its capacity for judgment and have never felt a loss of confidence in itself constituted only 5% of subjects batch.

Subjects who stated that very rarely have moments of doubt about their work, that very rarely feel overworked, that rarely worry about any or very rarely happens that the assignments seem to be too many are just 10.1% of subjects batch. 36.3% of subjects stated in items 3 and 4 of the scale that sometimes happen to feel a disturbance, without clear reasons or that are often times when they feel that life requires much effort. 8.8% of respondents felt these things more often, the answer of "sometimes" was given at 6 and 8 of size items.

– 21.3% of respondents gave an average of at least one response confirming that often have problems and feel the tension in the workplace.

– 23.8% of respondents admit to two of the items size, often doing their worries are tense, and often make them feel a strain that struggle.

– 36, 3% of subjects gave the answer that shows the frequency responses indicating tensions at the three scale items.

Level I of dimension II. part B

- 37.5% of subjects used in research have avoided lot in their choices to "never" when they were asked about frequency of physical problems manifest. They have been reluctant to say they never felt unexplained fatigue or exhaustion, or that have never tended to eat and drink more than usual and that never had a choking sensation and dizziness.
- 11.3% of subjects gave lot never answer one of the six items of the scale. They have never been questioned about the above symptoms as tingling sensations and about twinges in certain parts of the body, and of weight to get up from sleep in the morning.
- 22.5% of subjects gave the answer only twice and never
- 18.8% gave the answer three times.
- Only 2.5% of respondents said that they could never have had these symptoms before

Dimension III: daily behavior of the respondent

It is, again, consists of two parts:

- Part A - containing 6 items - try to capture the degree of influence of external events on subjects behavior.
- Part B, containing four items - try to establish how these events are internalized.

Table No. 3. Descriptive statistics for dimension 3 OSI

	disagreement pronounced	disagreement moderate	disagreement easy	agreement easy	agreement moderate	agreement pronounced
Number of subjects	80	80	80	80	80	80
Mean	.5375	1.8125	1.6500	1.2500	.5625	.2125
Median	.0000	2.0000	1.0000	1.0000	.0000	.0000
Module	.00	.00	1.00	.00	.00	.00
St. deviation	.9270	1.6466	1.5435	1.2679	.9917	.5441

Nonparametric distribution of scores, L-shaped, when the Media = 0.537 and median = 0.

- 66.3% of research subjects are reluctant to express strong disagreement when the items they require to recognize that there are people without ambition, and recognizing the need of self. They do not check in any of the items size, response option "strongly disagree".
- 5% of subjects there is a strong disagreement when asked to confirm the assertion that there are people willing performance, and that they need to excel in everything they do. Distribution of scores is here nonparametric form and letter, Average = 1.8 and median = 2.
- 27.5% of respondents did not express their disagreement (not checked "moderately disagree" to any of the 6 items of size) on claims aimed impatience, sufficiency, lack of ambition and lack of affirmation.
- 32.6% of subjects instead disagree with statements like "Since I'm happy with life, not a very ambitious person to feel the need to succeed in their careers."

Subjects, the percentage of 20.1% choose one response that expresses a "slightly agree" with statements of the questionnaire in half and half thousand items than size.

- if 68.8% are reluctant to agree with statements such as "not one person willing performance, which always behave as if they are in competition and a need to excel in everything he does" ;
- 6.3% of subjects but recognize its convenience, lack of ambition and that is not action-oriented.

Dimension III, Part B

The results on this dimension presented in the following sunrise, respectively, 90% of respondents have never checked to "strongly disagree" when they were asked about how unpredictable and hazard related to the events happening around them.

- 74% of subjects in the group studied never checked or not checked only once to "slightly disagree" when items of the questionnaire stated that "performance appraisals do not reflect how much work and as individuals".
 - only 6.3% of respondents expressed disagreement with these statements.
 - a percentage of 12.5% of subjects expressed a moderate agreement between the two items of size III Part B, items containing statements like: "Even if some tried to steer the course unit, taking part in social activities or different applications, most of us are subject to influences that can not understand nor control. "
 - 11.3% of respondents expressed agreement with statements easily with two items of size III, items that support, among other things, that "order can be unfair in assessing subordinates, because their performance is often influenced by random events"
 - 5% of respondents expressed agreement with three statements items easier this part of the third dimension.

Dimension IV. Source of tension

This dimension comprises 40 items that correspond to potential sources of tension, specific organizational environment in which general well researched. Subjects were asked to assess the intensity you feel that each of them carries on his person.

Table No. 4. Descriptive statistics for dimension 3 OSI

	definitely not	generally not	rather not	rather yes	generally give	definitely yes
Number of subjects	80	80	80	80	80	80
Mean	1.9250	4.0250	3.9625	9.5625	17.3250	3.1250
Median	.0000	2.0000	4.0000	9.0000	15.5000	2.0000
Module	.00	.00	4.00	8.00	14.00	.00
St. deviation	3.7477	5.2554	3.1681	6.0375	9.4732	3.8595

- 71.3% of subjects used in research have avoided lot to tick option "certainly not a source of tension" when items indicated that the sources of tension: the lack of consultation and communication, subsolicitarea (to work at a lower level skills yourself), poor quality or poor professional or vocational training leading carts.
 - only 1.3% of respondents gave this response option more than half the size of items. Percentage of subjects who did not tick "is generally not a source of tension" in any of the items or a check to one or five of the 40 items of the scale is 73.8% of the batch used in research.
 - subjects one never elected or chose "rather is a source of tension" in only 1 to 5 items of 40 items, the report size is 26.3 "from subjects participating in research.
 - subjects were given the option to respond to more than half of the items size confirms that discrimination and favoritism, lack of positive feedback from superiors or enhance the feeling of isolation felt by the team (lack of cohesion of the group) are rather a source of tension felt acutely by 6.3% from lot.

An analysis of how to distribute the scores on this scale level IV, reveals that the subjects felt that "in general is a source of tension":

- lack of social support from colleagues;
- direction and supervision of a job;

- lack of understanding life partner to work and his career; overtime;
- disagreement between different tasks and requirements;
- obligation to take risks;
- involvement in ambiguous or "delicate";
- no stability or confidence in life;
- consequences of their mistakes;
- possible lack of affirmation;
- making important decisions;
- damage the relationship with their spouse as a result of service requests;
- lack of feed-back on how to achieve tasks;
- unclear prospects of promotion;
- lack of emotional support from family;

Table No. 5. Descriptive statistics for dimension 5 OSI

	never	rarely	Not use	use	often	frequently
Number of subjects	80	80	80	80	80	80
Mean	.1250	.5625	1.3544	4.2250	2.9750	.7750
Median	.0000	.0000	1.0000	4.0000	3.0000	.0000
Module	.00	.00	.00	5.00	.00	.00
St. deviation	.4321	1.0043	1.6333	2.6240	2.2500	1.4318

91.3% of subjects were chosen in their responses to "never use" when you were asked if, in trying to cope with stress, resort to hobbies and discussions on ways of organizing working time or ordering the urgency of solving problems and importance.

Choices expressed for this option are irrelevant response being expressed by only 8.7% of subjects, and they are just using an item more than 2 of the 10 items of size. The same avoidance of inclusion between the variant options "rarely used" when asked about the coping mechanisms used.

- A percentage of 67.5% of subjects never voted on this variant;
- 17.5% of respondents chose this answer just one of the 10 items of size
- 10% of respondents chose to answer only two of the 10 items.
- 43% of subjects avoided the alternative choice "rather not use"
- 12.7% of respondents opted for it only once;
- 1.3% made a significant selection on this variation using it to answer half of the items size;

Dimension VI. To what extent do you feel master of the situation at work?

This dimension of the questionnaire includes 16 items, subjects were asked to express opinions about jobs in general and not about their current service.

They must evaluate items on a scale with six response options, from strong disagreement to strong agreement, items that show how they feel that they master the situation at their workplace.

- choice "strongly disagree" was never chosen in response to the items size by 78.8% of subjects.
- to "strongly disagree" was preferred by half of the items size of 2.5% of subjects.
- the alternative dispute usoir subjects have opted for it than against very small:
- 63.8% opted for it to only 0-4 items of the 16 items have size, so their choice can be considered irrelevant.
- 22.5% opted for it over half the items size, their choice may be considered relevant. Thus we can say that:
- 63.8% of subjects are inconsistent with statements such as: "a job is what you do in he "," in most jobs, people can do largely what they aim to achieve "," if you know what you get from a job, you can find the job to satisfy your desire "" If employees are dissatisfied with a decision taken by their boss, they must do something to remedy the situation "," those with good performance at work are usually rewarded "a 22.5% of the respondents opted for "slightly disagree" on items that have a

content such as "getting the job you want, is more of chance", "promotions are usually a matter of luck" "the money is primarily a matter of chance" when it comes to get a good job is more important than who you know you know ", the main difference between those who earn well and those who earn low is luck" in most services have to have luck to be considered a good employee "

Dimension VII. We cherish in life?

Subjects, in a proportion of 38.8% choose the response "very important" by half the size of items, items that support the values related to their job. Of the statements contained in items I could quote: "to have enough time for personal and family life", "to have good working conditions (ventilation, adequate light, suitable workspace, etc.)", "To have good working relationships the head", "to have security service", "to work with people who cooperate well with each other", "to be consulted directly by the head of the decisions that it must take", "to have the opportunity to be promoted", "may contain elements of various and adventure at your service "

How frequently are subordinates afraid to express disagreement with their superiors?

Another item in the size of VII, with custom response variable is one that measures the degree of rigidity and authority leadership style used in the military. Subjects are interviewed about the frequency of feelings of fear when you need to express disagreement with their superiors.

Dimension VII. Disbelief, distorted perception of reality

This dimension is divided into six items and asked subjects to express agreement or disagreement with the statements contained them.

Subjects to express agreement or disagreement with statements like: "most people can trust", "can be a good manager without having precise answers to most questions that subordinates raised in relation to their work", "an organizational structure that subordinates have two bosses should be avoided at all costs", "Competition between employees usually do more harm than good", "rules apply in an organization must not be violated, even when the employee believes it would be the interest of the organization", "if one fails in life, often his own fault "

All these items try to capture the rigid structures and distorted thinking that reality is perceived. Research has shown that reality is less important than is actually how it is perceived by the individual. A distorted perception of reality may be a result of accumulated stress on the individual as a product of his work.

4. Conclusions

Under pressure from environmental factors can record substantial changes in attitude and behavior plan, resulting in negative effects in terms of performance at work and social life of prison staff, with time instaurându the symptoms of chronic stress, so that our research results allow to give a number of recommendations:

- an identification of stress factors and individuals vulnerable to stress;
- avoid or eliminate a physical or psychosocial ambient noxious agents;
- choosing a profession based on personal bias and check the possibilities of implementing the best of it;
- an approach based on an algorithm professional duties involving the hierarchy of objectives, deadlines, tasks breakdown in stages, improving communication within relationships work group;
- an award of moral and emotional support employees.

After identifying and ranking stress factors, at the top we find the lack of professional satisfactions (16.25%), followed in descending order of compliance (13.75%) and relationship with superiors (12.5%).

Analyzing hierarchy of stress factors, made by the subjects, it is noted that, at a rate of 11.25%, employees of the organization were designated as the highest source of stress, relationships with prisoners, they exert a great psychological pressure on the supervisors. Not infrequently, given the overcrowding in the prison system, NCOs are insufficient, failing to cope with everyday business applications.

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TECHNICAL EFFICIENCY ANALYSIS AT S.C. AVICOLA CREVEDIA

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Abstract: *Given the importance of poultry products and the need to increase production, which can only be based on resources that are limited, it is necessary to provide maximum efficiency at minimum costs. Its purpose is to conduct an analysis of technical efficiency indicators at Avicola Crevedia, compared to national results and determine the degree of efficiency. Since it is the oldest poultry company in Romania is still on top in terms of technical performance indicators, managing to overcome problems caused by avian influenza and the global economic crisis.*

Key words: technical efficiency, European Economic Index, Avicola Crevedia

JEL classification: A12, O1, R11

1. Introduction

Given the development of society, leading to increased needs, increased production is necessary based on technical and scientific achievements, so the problem of efficiency, since higher production can be based on resources. And most of the resources are limited, while the needs are endless. This should ensure maximum efficiency at minimum costs.

Efficiency is synonymous with the absence of waste or use as good as it can, economic resources to meet human needs and desires. (Scholty B., 2007)

Efficiency is the ratio between results and resources consumed and therefore, the effort made to a unit should be up on the effort to obtain a unit of effect must be minimal. The conclusion is that the idea that maximize impact is done simultaneously with minimizing effort is wrong.

Usually increased efforts happen with growth effects. (Roșu I, 2007) But maximize the effects should be made with the preservation of ecological balance.

Development of poultry farming was necessary due to increasing world population and urbanization, so due to growing needs for animal protein. But because it is a source of organic fertilizer to increase crop production. And it was due to the appearance of the intensive industrial system in the United States, in early 1940. System that has spread to Western Europe, so that in the 60's, it have removed U.S. supremacy. (Ketelaars, 1982)

In Romania there were increasing concerns to turn poultry from traditional to economic sector of agricultural production. Thus in 1860 the world-renowned scholar Ion Ionescu de la Brad establishes first poultry breeding model farm. And Professor C. Baicoianu makes the first experimental poultry resort "Baneasa Bucharest" in 1940. (Bălășescu, 1980)

In 1961 the first industrial poultry company in Romania is established, Crevedia poultry factory. With a capacity of 1000 tons of meat and 10 million eggs per year, becoming the first poultry complex of the former socialist countries. (Avicultorul, no.1/2011) Since 1990, Avicola Crevedia through the privatization process in 2006 became part of the group Agrolis Group, applying integrated management.

Vertical integration is the most common form of organization of poultry production, since it deals with the production of biological material to finished product marketing. Efficiency and integration advantages are provided by the good organization of production, easy transfer of technological innovations, performance management through rigorous cost control. (Chebuțiu M., Chiș M., 2008)

Genetic performance, nutrition and technology made it possible to reduce production cycle from 84 days for chicken from 1.2 to 1.4 kg in 1976 to a cycle of 52 days for a chicken with an average weight of 2, 2 to 2.3 kg. Also specific feed consumption decreased from 2.7 to 3 kg / kg live weight before 1989 to 1.6 to 1.7 kg / kg of body weight at the moment, and meat production per square meter increased at 15-16 kg 42-48 kg. (Lumea Satului, 2009)

Romanian poultry faced over time with various problems. Thus we can remember energy and financial poverty during the communist period, state of uncertainty and instability due to restructuring and privatization of poultry companies in the early 1990s, bird flu worldwide since 2006 and the crisis of 2008.

Because of the degradation during the 1990s, and 1993 it established the Poultry Breeders Union in Romania whose aim was to save the poultry farming, given that many manufacturers could not adjust to new conditions of production and market sales. In 1994 prepared a short-term strategy 1994-1998 "restructuring and privatization strategy for industrial birds growth in Romania", and in 2003 a medium and long term strategy "The development strategy of the national poultry farming - Horizon 2025". They had to increase average daily gain to 35 grams in 1998, 50 grams in 2013 and 54.3 grams in 2025, lower specific consumption of feed and rate of mortality, which had to reach 10% in 1998, 5% in 2013 and 4.7% in 2025. (Avicultorul, no.4/2008)

The start of economic crisis in the United States of America in 2008 and expansion in Europe, led to negative effects in Romania. Increasing cereal prices due to biofuel production, encouraged by the European Union in view of environmental concerns, (The state of food agriculture commodity markets, 2009) led to higher feed prices for poultry diets the result is an increase price for poultry fall under revenues, so the purchasing power.

Its purpose is to conduct an analysis of technical efficiency indicators Avicola Crevedia the unit compared to national results and determine the degree of efficiency.

2. Material and methods

Given the specific activity approach to meat poultry breeding is necessary to use a system of indicators with which to calculate and interpret various aspects.

This system of indicators used to determine the technical efficiency of the company Avicola Crevedia are: average daily gain, mortality rate, feed conversion ratio, slaughter age and European economic index.

$$\text{Slaughter age} = \frac{\text{average weight at delivery} - \text{average weight of day old chicks}}{\text{average daily gain}} \quad (1)$$

$$\text{European Economic Index} = \frac{\text{viability} * \text{weight}(kg)}{\text{age of slaughter} * \text{specific feed consumption}} * 100 \quad (2)$$

Research method used is time compare based on indices with fixed base and comparison in space. Comparison over time based on indices with fixed base includes examining the phenomenon at different times from the reference. And comparing the results of the comparison space unit provides the results of other units.

3. Results and Discussion

Although Romanian poultry has had problems, both during and after communism, managed the improvement of technical efficiency. Thus these indicators are currently comparable with the one of the European country with developed poultry. If the technical efficiency Romania can boast performances, the same can be said about economic efficiency. However Romania managed to pass the global economic crisis with remarkable technical performance.

3.1. The national evolution of technical performance during 1950-2010

We can observe the evolution of technical performance in Romania during 1950-2010, in Table 1. Such slaughter age reduced from 90 days to 36-40 days in the years 1950-1960 2005-2010.

The most significant decrease occurred in 1960-1970 to 15 days. Lowering the age of slaughter increased the number of sets / year, so to produce more meat.

Average weight at slaughter increased from 1 kg to 1.8 to 2.2 kg during the years 1950-1960. Achieving good results in the last decade because of improved genetic selection, which has made available 2.5 kg broiler's after only 39-42 days with a feed conversion ratio of 1.6 kg / kg body weight. (The State of Food and Agriculture, 2009)

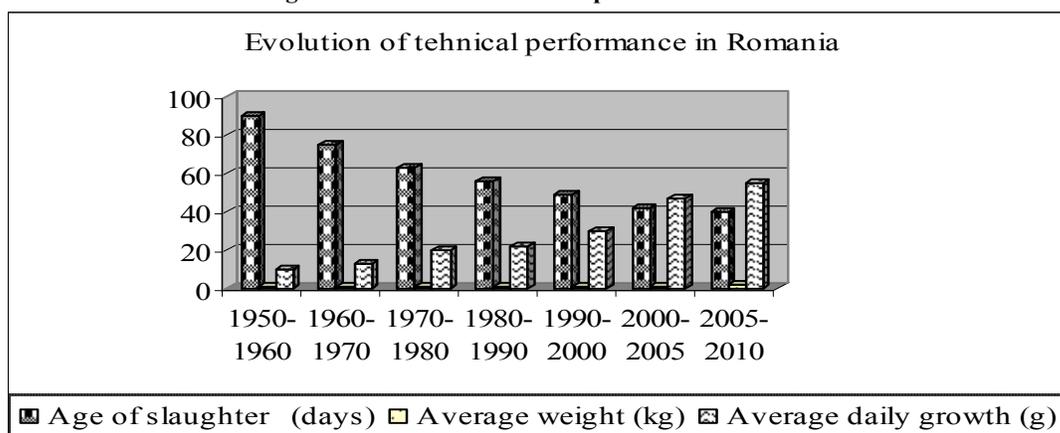
Table 1. Evolution of technical performance in Romania

Years	Age of slaughter	Average weight	Average daily growth
	days	kg	g
1950-1960	90	1	10,5
1960-1970	75	1	12,8
1970-1980	63	1,3	20
1980-1990	56	1,3	22,5
1990-2000	49	1,5	29,8
2000-2005	42	1,6-2	37-47
2005-2010	36-40	1,8-2,2	50-55

Source: Avicultorul no2/2009, pag 17

In terms of average daily growth shows a continuous increase from 10.5 grams to 50-55 grams in the years 1950-1960 during 2005-2010, also large increases in the last decade.

Figure 1. Evolution of technical performance in Romania



Source: : Avicultorul no 2/2009, pag 17

These achievements were possible since grown hybrids are becoming more proficient. We have taken steps to combat diseases such as infectious bursitis, coccidiosis, colibacillosis and other diseases increase and diseases of nutrition. But they introduced modern equipment feeding, watering, air, increasing the degree of mechanization, automation and computerization.

3.2. Technical performance at Avicola Crevedia compared with those obtained nationally.

Average daily growth is an indicator of efficiency and gain and is achieved on average a day feeding. The efficiency of this indicator is even greater as its value is higher.

Table No. 2. Evolution of average daily gain (grams)

Average daily growth	2007	2008	2009	2010	2010/2007 (%)
Avicola Crevedia	55.35	55.3	59.4	58.75	106.14
National Level	51.43	52.22	52.53	54.19	105.36

Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

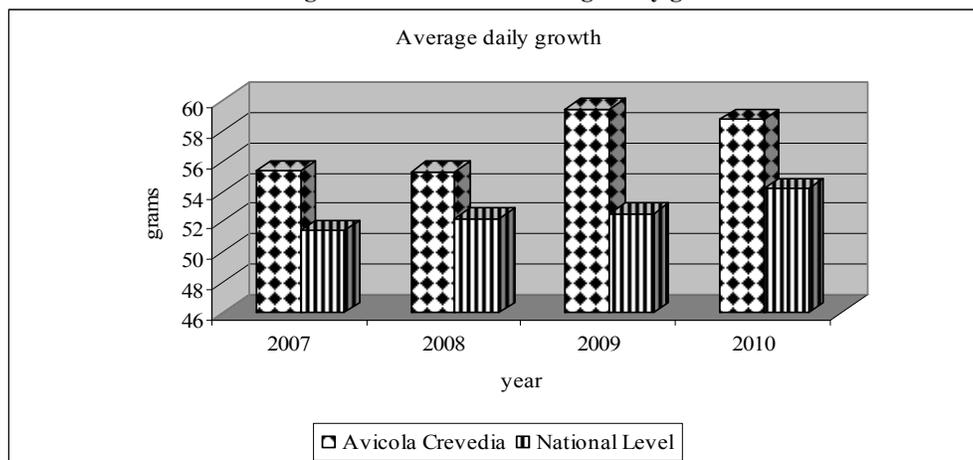
Notice that both nationally and in the unit that we analyze average daily increased. Growth is higher in the 6.14% Crevedia Avicola unit in 2010 compared with 2007, while national growth in 2010 compared to 2007 is 5.36%.

The company Avicola Crevedia's daily average grows steadily until 2009, in 2010 with a slight decrease. Loss that is due to management decisions aimed at reducing costs has been given the economic crisis that caused in Romania decreased wages and increased VAT from 19 to 24%.

Also you can see that the national average daily is lower than that of Avicola Crevedia because companies that have this indicator lower.

Increase average daily gain can be achieved by using hybrid performance, but also by improving the growth and nourishment.

Figure 2. Evolution of average daily gain



Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

Mortality losses indicate the health of the flock and need to be reduced as the economic implications in the proper conduct of this business.

Table No. 3. Evolution of mortality losses (%)

% mortality	2007	2008	2009	2010	2010/2007 (%)
Avicola Crevedia	4.24	5.80	5.56	4.09	96.4
National Level	5.7	4.15	4.39	4.24	74.4

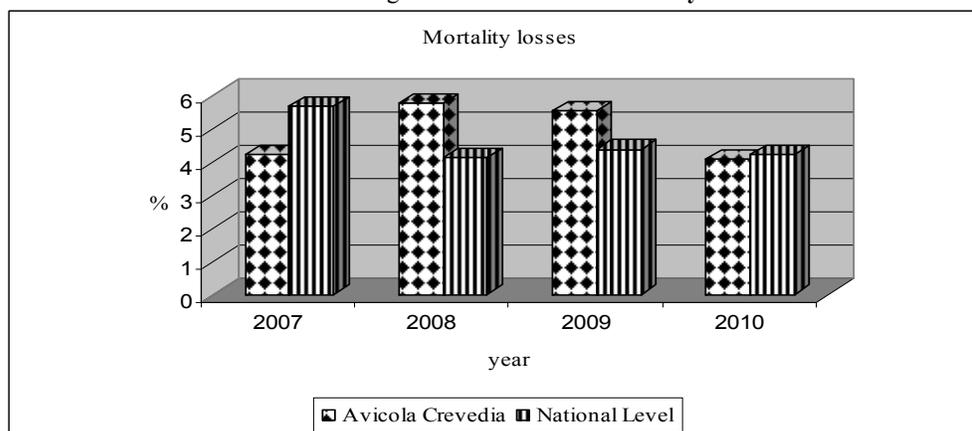
Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

National mortality losses decreased by 25.6% in 2010 compared to 2007, in 2008 was recorded the lowest percentage of mortality, 4.15% respectively.

The company Avicola Crevedia mortality losses decreased in 2010 compared to 2007 by 3.6%. It can be seen a continuous variation of this indicator. Thus in 2008 was recorded the highest mortality rate of 5.8%, while nationally was 4.15%. In 2010 the percentage of mortality in the company Avicola Crevedia is below the national level.

The high mortality may occur due to poor health status and to avoid losses by mortality measures necessary to meet growth and feeding, but also biosecurity.

Figure 3. Evolution of mortality losses



Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

The specific consumption of feed or feed conversion ratio is the amount of feed consumed to obtain a kilogram weight gain. If the value is lower much better is the performance.

Table no. 4. Evolution of specific feed consumption (kg feed/kg gain)

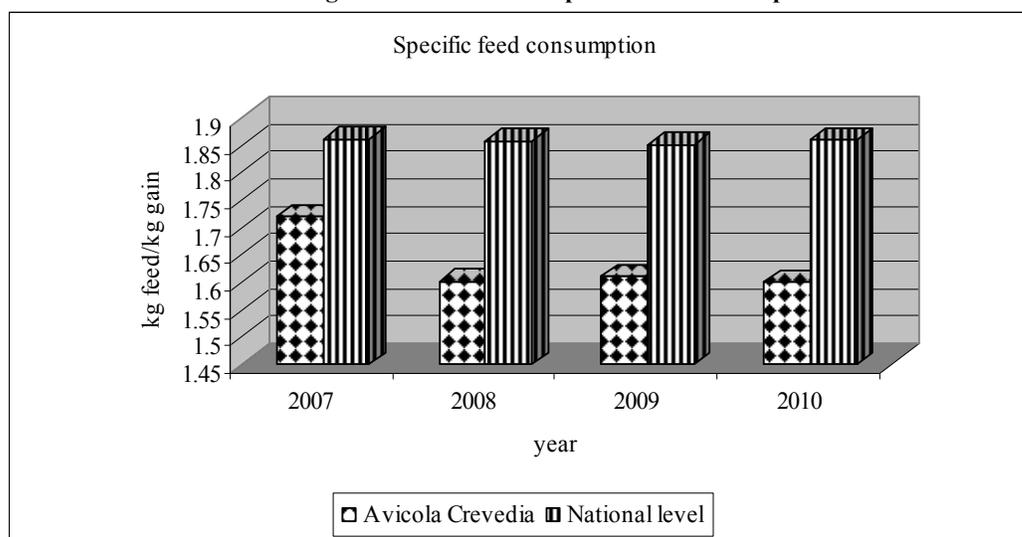
Specific feed consumption	2007	2008	2009	2010	2010/2007 (%)
Avicola Crevedia	1.72	1.601	1.61	1.60	93.02
National level	1.861	1.857	1.851	1.859	99.9

Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

Analyzing the evolution of the specific consumption of national feed, there is a slight decrease of 0.1% in 2010 compared to 2007. At the observed unit the specific feed consumption the decrease in 2010 compared to 2007 is 7%. Also notice that during the analyzed period the decrease is continuous. Decrease is due to new equipment that reduces waste feeding.

To improve this indicator nationally is necessary the decrease of the specific consumption of feed in all units. And this can be achieved by using modern equipment to reduce waste, the use in production of hybrids with high performance, and choice of feeding programs that provide the best conversion.

Figure 4. . Evolution of specific feed consumption



Source: Avicultorul no1/2011, pag 51-53: Internal regulation Avicola Crevedia

As the slaughter age of broiler chickens, it appears the world tends to decrease it.

Table No. 5. Evolution of slaughter age (days)

Age of slaughter	2007	2008	2009	2010	2010/2007 (%)
Avicola Crevedia	37.2	37.3	37.9	35.1	94.3
National level	41.0	41.3	41.0	40.7	99.3

Source: Avicultorul no1/2011, pag 51-53: own calculation based on internal regulation Avicola Crevedia

As the slaughter age of broiler chickens, it appears the world tends to decrease it. We can observe in the table 5 that the national slaughter age decreased by 0.7% in 2010 compared with 2007. At the observed unit the slaughter age decrease in 2010 compared with 2007 with 5.7%.

The choice of slaughter age is based on a number of factors such: feed prices, the price of the day-old chicks, or destination after slaughter.

So if the feed price increased, knowing that 50-60% (Avicultorul no 4/2009) of offspring are represented by the feed, it is recommended lowering the age of slaughter. If the price of the day old chicks grow, knowing that 11-13% (Avicultorul no 4/2009) of the cost is represented by the day-old chicks it is recommended to increase the age of slaughter.

In terms of destination after slaughter, the recommended low age of slaughter for carcass meat sold and increasing age of slaughter if desired cutting and obtaining varieties with high added value.

Given the above, we can say that the company Avicola Crevedia sells its products mainly in the form of carcass meat.

Advantages lower slaughter ages of the offspring are:

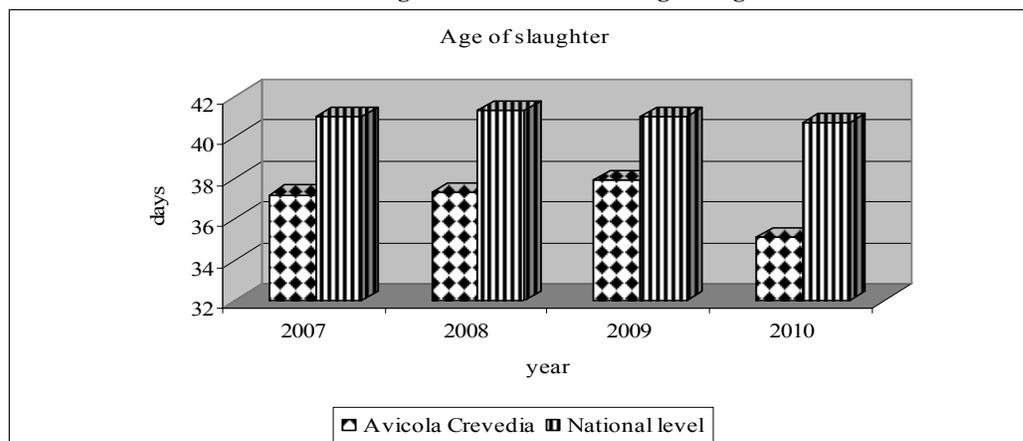
- ❖ Reducing of the specific consumption of feed and production costs
- ❖ Increase the number of sets per year, thus increasing the amount of poultry meat surface, because shortening the production cycle.

But low slaughter age presents disadvantages, and most important are:

- ❖ Increase the number of day old chicks

- ❖ Increased costs due to increasing health gaps, the greater need of bedding and fuel for heating halls.
- ❖ Greater quantity of water in the housing, lead to lower nutritional value.

Figure 5. Evolution of slaughter age



Source: Avicultorul no1/2011, pag 51-53: own calculation based on internal regulation Avicola Crevedia

European Economic Index, European efficiency factor or the broiler efficiency index measures the technical performance. In Romania was introduced in 1970 under the name of the production index. The higher is the value the technical performance is better.

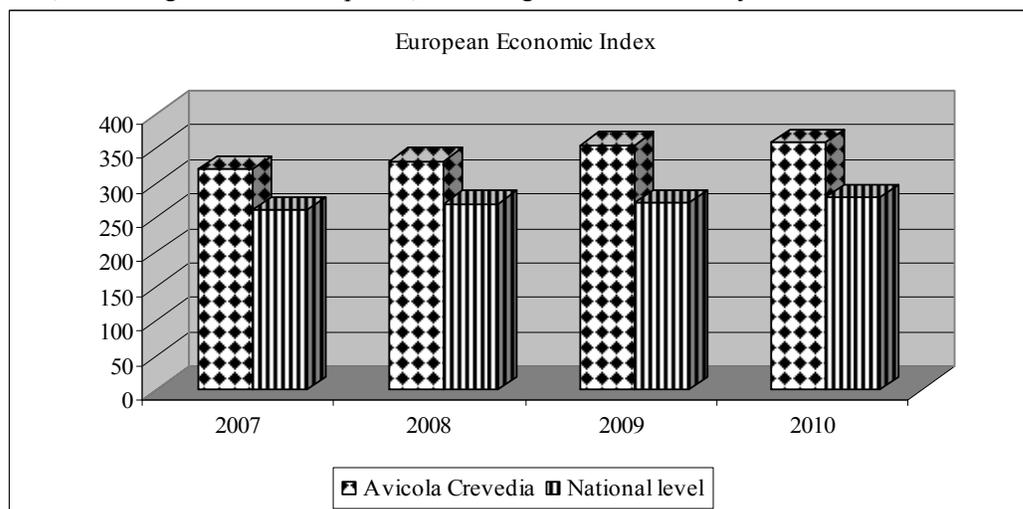
Table No. 6. Evolution of the European Economic Index

European Economic Index	2007	2008	2009	2010	2010/2007 (%)
Avicola Crevedia	320.2	331.7	354.89	358.97	112.10
National level	260.66	269.37	271.35	279.15	107.1

Source: Avicultorul no1/2011, pag 51-53: own calculation based on internal regulation Avicola Crevedia

Analyzing European economic index shows that at national level in 2010 compared to 2007 was an increase of 7.1% and the company Avicola Crevedia increase was 12.1%.

Can be noticed that Avicola Crevedia had a European Economic index exceeding the national level, exceeding over with 300 points, indicating an efficient society.



Source: Avicultorul no1/2011, pag 51-53: own calculation based on internal regulation Avicola Crevedia

4. Conclusions

Romanian poultry sector over time was not exempt from problems, but managed to recover, reaching technical performance, similar to European ones.

If the medium and long term strategy Union of Poultry Breeders in Romania aims at increasing the technical efficiency indicators and increasing average daily gain to 54.3 grams in 2025, it was almost realized in 2010 when it reached 54.2 grams.

As the percentage of mortality, even exceeded the strategy, since they wanted to achieve a 4.7% in 2025 and in 2010 achieved a rate of 4.24%. Good results at national level are recorded for of the specific consumption of feed and slaughter age of the European Economic index.

After analyzing the technical efficiency indicators Avicola Crevedia society, the oldest poultry company in Romania, shows the following:

- ❖ Average daily growth rate slightly decreased in 2010 compared to 2009 due to management decision to reduce spending, but is higher than the national average.
- ❖ As the percentage of mortality rate, has high throughput. Being recorded variations from year to year in the period analyzed, but in 2010, manages the reduction of this indicator, falling below the national level of 4.24%.
- ❖ The specific consumption of feed to the unit, recorded a decrease of 7% in the period, is below the national level by about 0.2 kg in 2010. Which indicates the use hybrids with high performance, equipment that avoids waste and feeding programs that ensure a good conversion.
- ❖ Age of slaughter unit is very low level of 35.1 days in 2010, and nationally is 40.7 days. Lowering the age of slaughter in the period analyzed was due to higher feed prices, but that is marketing products mainly in the form of housing in stores.
- ❖ European society economy index is high, exceeding the national average. Throughout the period analyzed the European Economic index has a value greater than 300 points indicating an efficient society.

So we can say that society is a society Avicola Crevedia performance in terms of technical performance indicators. Performance that could be achieved given the vertical integration that enables application performance management. Thus Avicola Crevedia oldest poultry in Romania, occupies a central position nationally. Problems seem to have in terms of mortality rate, but in 2010 managed to decrease.

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THE MANAGEMENT OF SUPPLIERS SELECTION OF DANGEROUS SUBSTANCES FROM MINING INDUSTRY USING FUZZY LOGIC

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Abstract: *This paper aims to develop a model or a tool based on fuzzy logic in selecting the most suitable suppliers of hazardous substances used in the mining industry, especially of those associated with the cyanide. In order to reduce the risk of having an ecological accident during transportation of dangerous substances from supplier to the mining site and implicitly in the discharge phase, but also and for economic reasons, I proposed a decisional selection model based on fuzzy logic, which takes into account the subjectivity of the human reasoning and which can be successfully applied within "Roșia Montană project", but not only.*

Keywords: selection, supplier, mining, fuzzy logic.

JEL classification: C52, C65, C67, D81, L72, L91, Q53, R41, Z00.

1. Introduction

Given the extremely market competitiveness in the contemporary period, we can state that a proper management of supply chain may represent the key to success of any company in the world. This topic has been the focus of numerous theoretical and practical studies. Dickson's paper (1966) is one of the first studies in the area of suppliers selection, the author identifying 23 criteria for evaluate the performance of suppliers, having at base the responses of 170 managers.

The suppliers play an important role in the production chain of a company and in its long term viability, thus the buying decisions are becoming primordial in achieving a sustained profitability. The constantly changing preferences of customers, the environmental issues, the changes of government regulations, the trade globalization or the internet are tendencies more and more pronounced of contemporary world and which have an impact on the complexity and importance of purchasing decisions and of supply chain (Yucel and Guneri, 2011). These decisions are often made in an uncertainty and vagueness environment, so that in this direction there are several authors who have analyzed the sources of uncertainty surrounding in the selection of a supply chain and which classify the sources of uncertainty in three main groups: demand, process/production and supply (Wang and Shu, 2007).

As regards the choice of ideal supplier, watching this aspect both in terms of efficiency and effectiveness, but also of quality, reliability and safety in delivery, here referring to the ecological aspect, there are more references in the literature regarding to the identification of the attributes of suppliers and then to the use of various techniques for assessing these attributes and for choosing the best supplier, among which we mention the Monte Carlo simulation technique (Thompson, 1990), the supplier evaluation using AHP (Teng and Jaramillo, 2005), the multi-object fuzzy programming and risk modeling (Dash Wu et al., 2010), the max-min fuzzy model (Amid et al., 2011) or the integrated fuzzy TOPSIS and MCGP approach (Liao and Kao, 2011).

Most times, after setting of attributes or criteria of performance of suppliers, it is questioning the method of making a final classification of these suppliers, in accordance with the weight of importance of each established criterion and with their performance with respect to these criteria. Referring on these aspects, of establishing the weight of importance of criteria and of assessing the performance of each possible supplier with respect to this criteria, we mention that most of the times take place under the spectrum of subjectivity and uncertainty of the human factor decision maker reasoning, which does not express in precise figures, but in an ambiguous, linguistically and subjective language.

A methodology that allows to decision maker to express his preferences in linguistics terms and which to model this uncertainty and subjectivity of human reasoning is based on the use of fuzzy logic and of its associated fuzzy sets. The fuzzy sets theory is a powerful tool for solving many problems in different areas, which involve certain degrees of uncertainty and ambiguity. Using the triangular fuzzy numbers and the fuzzy math operators, it is determined a fuzzy score for each

supplier. These fuzzy scores are then converted into fixed values by the defuzzification process and the supplier with the highest score in the rankings is selected. In the following, after reviewing literature in chapter 2 and after the description of methodology and research design from chapter 3, we will concretely see the application of this methodology in the selection process of suppliers of dangerous substances in the mining industry, respectively of cyanide, within “the Roşia Montană mining project”. The paper ends with a chapter of conclusions and with the related bibliography after browsing the specialty literature.

2. Literature review

In 1965, Lotfi Zadeh from Berkeley University, California, considered “the father” of fuzzy logic, published his paper related to fuzzy sets, about which Negoită (2003, p. 53) mentions the following: “Zadeh rediscovers the fuzzification and promotes it with new ideas, thus becoming the master of fuzzy logic. Zadeh was the one who created the “fuzziness” term, when he referred to the vague set and the one who noted that the accuracy and the certainty are incompatible. He created the “fuzzy” word and also he said that the words can be represented as vague sets”.

In addition of those mentioned before, the Romanian authors such as Constantin V. Negoită or Dan Ralescu must be also specified, because they had and still have an outstanding contribution to the development and promotion of the idea and concepts of fuzzy logic, through their books and treatises, among which we mention “Application of fuzzy sets to systems analysis” (1975), “Expert systems and fuzzy systems” (1985) sau “Vague sets and their applications” (1974). Recently, Negoită (2003) wrote his book entitled “Vaguely”, which in my opinion, in addition to the classical mathematical aspects about fuzzy logic, contains also a very large dose of philosophy regarding to the world in which we live viewed from a fuzzy perspective, this book being, therefore, especially for an inexperienced in fuzzy logic, a very effective pathfinder in discerning this concept, because the language and the manner of explaining as well as the analogy with the surrounding real world give a deep understanding of the concept of fuzzy logic and of fuzzy sets.

The fuzzy sets theory has various applications in different fields and it is used in the managerial decision making process for controlling the uncertainty and the imprecision of informations involved in the process. As a consequence of this fact, the technique or procedure of fuzzy multicriteria decision making (FMCDM) represents another aspect on which I will focus in continuing of my article and in the mirror to whom I will design the selection methodology of the best supplier. In the specialty literature have been published different approaches of various aspects of decision problems concerning to the implementation of the FMCDM technique regarding to the management of supply chain selection and not only, among which we mention the following authors: Chang, Wang, and Wang (2006); Xu and Chen (2007); Yang and Hung (2007); Chou, Chang, and Shen (2008); Wang (2008); Chang et al. (2011) or Buyukozcan and Cifci (2011). A revolutionary system has been used by Shemshadi et. al (2011) in order to assess the performance of suppliers in a supply chain, while Awasthi et. al (2010) have applied the fuzzy set theory for evaluating the environmental performances of suppliers, while Kuo et al. (2010) have applied the fuzzy neural network model for selecting the best supplier which takes into account both qualitative factors, but also the quantitative ones.

The recent findings integrates the FMCDM practice in a problem of fuzzy decision making at the level of a group, as it is shown by the researches of Chang and Wang (2006), Liu and Chen (2007), Yeh, Cheng and Chi (2007), Zeng, An and Smith (2007), Chang, Wu and Chen (2008) or Sanayei et al. (2010). Wu, Lu and Huang (2007) have combined the hierarchy analytical fuzzy process on several levels with the decision making process within a group for seeking a consensus regarding to the direction of action.

3. Methodology and research design

In the specialty literature there are a lot of attributes or criteria after which the management of a company should focus in the selection of a supplier (Kahraman et al., 2003; Ohdar and Ray, 2004), among which we mention: the quality of products (services) provided; the level of prices of products (services); the delivery time of products (services); the additional services offered at delivery; the guarantees granted at purchase; the applied payment terms; providing assistance in the use of products; the innovation capacities; the financial position; receptivity; packing; the experience in business; the geographical location; reliability; safety; empathy; R&D capacity; flexibility; professionalism and not

least the competence or expertise. Of course that the factors that are taken into account in the selection of suppliers are specific to each situation of the company concerned that will make appeal to them, so each company will develop its own selection criteria when will face with the election or finding of the most suitable suppliers.

Once that these criteria have been established, by the methodology of this article I propose the following directions: firstly to give a weight of performance to each selection criterion and secondly to evaluate the performance of each supplier with respect to these criteria. Both stages involve subjective assessments and estimates materialized by linguistic expressions and for handle with this ambiguity of information we appealed to fuzzy logic, which is a powerful tool for modeling of human subjective thinking by extending of traditional logic for including instantiations of partial truth.

3.1. Basic notions of fuzzy logic

It is well known that the purpose of all organizations in a competitive environment can be summarized in four words: to work more efficiently. Therefore, the business processes are under the imperative of taking the best decisions, otherwise they will not be able to be perform efficient in the increasingly more competitive global environmental specific to information society and that's why the informatization in enterprises primarily aims to achieve this target: more rapid and more efficient decisions.

The fuzzy logic reflects what people think and is proposing to shape the meaning of terms used in a context or another, the way how decisions are taken and the use of knowledge related to good sense or to the common sense. As a result, it helps the artifacts systems to become more human, that is intelligent systems. Zadeh (1965), considered the father of fuzzy logic, states the fuzzy term has concreteness, is immediately and descriptive and the fuzzy representation consists in using fuzzy sets theory and especially fuzzy logic as part of theory. The term of fuzzy logic in a broad sense, according to Zadeh (1965), is defined as: "The fuzzy logic is determined by a set of mathematical principles for knowledge representation based on degrees of membership and not on precisely in the sense of classical logic". In the abstract of his masterpiece article in this field of fuzzy logic, entitled "Fuzzy sets", which was practically the starter of new research, development and approach directions regarding the fuzzy logic, Zadeh (1965) defines the fuzzy sets as follows: (p. 338):

"A fuzzy set is a class of objects with continuous degrees of membership. Such a set is characterized by a membership function (characteristic) that assigns to each object a degree of membership which varies between 0 and 1. The notions of inclusion, union, intersection, complement, relation, convexity and others are extended to such sets and different properties of this notions are established in the context of fuzzy sets. Particularly, a separation theorem for the convex fuzzy sets is proven without the necessity that the fuzzy sets to be separated".

According to this definition, we can conclude that a fuzzy set can be metaphorically defined as a classic set with fuzzy limits. Let's take the variable X , considered the universe of discourse and its elements denoted by x . In the classical theory of sets, a set A in X is defined by relation (1) as a function $f_A(x)$ called the characteristic function of the set A , thus:

$$f_A(x) \rightarrow 0,1$$

(1)

$$\text{where } f_A(x) = \begin{cases} 1, & \text{if } x \in A \\ 0, & \text{if } x \notin A \end{cases}.$$

Such set does nothing more than maps or overlaps exactly the universe X on a set composed of two types of elements. For each element x of universe X , the characteristic function $f_A(x)$ has value equal to 1 if x is an element of the set A and 0 otherwise.

In the fuzzy logic case, a fuzzy set A in the universe of discourse X is defined by the function $\mu_A(x)$ called the membership function of the set A by the relation:

$$\mu_A(x): X \rightarrow [0,1]$$

(2)

where $\mu_A(x) = 1$ if x belongs entirely to A ;

$\mu_A(x) = 0$ if x does not belong to A ;

$0 < \mu_A(x) < 1$ if x is only partially from A .

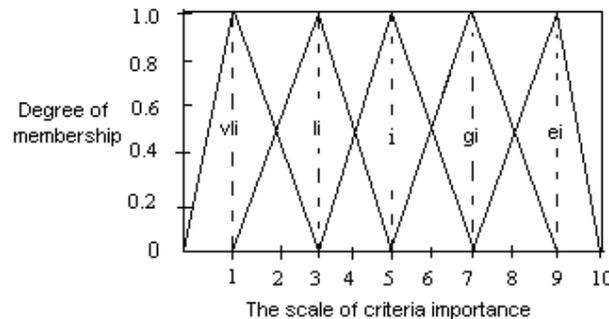
Is observed how the fuzzy set allows a continuous range of options. For each element x in X , the value of function $\mu_A(x)$ indicates the degree of membership of x to A or the value of membership of element x to the set A . In other words, only the fuzzy set is able to offer an overrun of boundary between 0 and 1 of representation. This is the way in which it may represent linguistic values like: very small, small, medium, high, very high and others of this type. The fuzzy logic works with linguistic values, modeled by fuzzy sets, which in turn include fuzzy numbers, these combining them together using fuzzy math operators and being converted into real numbers by different procedures of defuzzification.

3.2. The evaluation of criteria importance and of suppliers performances with respect to criteria

The importance of supplier selection criteria it will be establish by the special expert nominated by the company concerned through a linguistic evaluation of the weight which is assigned its in the value chain of supply process, which then it will be converted into the corresponding triangular fuzzy number. This expert may be an employee of the company, specialist in the supply chain issues or may be an employee of a third party, employed by the company concerned, a person who has the necessary skills, knowledge and competencies to assess the importance of factors that contribute to the smooth conduct of the supply process. Of course that in this case we are witnessing to what is called the outsourcing of consultancy services and we must ensure that our objectives and goals are well understood by the consultancy firm concerned.

In figure 1, I represented the membership functions of weight of importance of supplier selection criteria, weights expressed by the decider expert through linguistic terms, as it follows: "very little important" (vli), "less important" (li), "important" (i), "great importance" (gi), "extremely important" (ei).

Figure 1: The membership functions of the importance of selection criteria



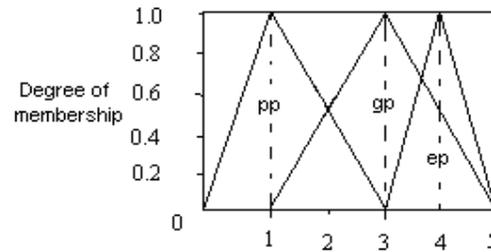
The weights above mentioned, according to design from figure 1, are converted into the related fuzzy triangular numbers according to table 2.

Tabel 1 – The linguistic scale of weight of criteria importance

Linguistic value	Fuzzy value
Very little important (vli)	(0,1,3)
Less important (li)	(1,3,5)
Important (i)	(3,5,7)
Great importance (gi)	(5,7,9)
Extremely important (ei)	(7,9,10)

The performance of suppliers with respect to each selection criterion is evaluated using three linguistic values, as follows: "poor performance" (pp), "good performance" (gp) and "excellent performance" (ep). These values correspond to some triangular fuzzy numbers represented on a numerical scale from 1 to 5. The membership functions are represented in figure 2.

Figure 2 – The membership functions of performance evaluation of suppliers with respect to selection criteria



The scale of performance with respect to criteria

The linguistic scale of the performance evaluation of suppliers with respect to each selection criterion is exposed in table 3, where are given the corresponding fuzzy scores according to the choice of model representation from the previous figure.

Tabel 2 – The linguistic scale of performance evaluation with respect to the selection criteria

Linguistic value	Fuzzy value
Poor performance (pp)	(0,1,3)
Good performance (gp)	(1,3,5)
Excellent performance (ep)	(3,4,5)

It is therefore apparent that the subjectivity of human factor decision maker reasoning, respectively of his linguistic evaluations, can be easily modeled using triangular fuzzy numbers, which practically represent some sets consisting of three real numbers, in which the middle one represents the maximum of membership function of an element from the universe of discourse to that set and it is equal with value 1, while the extremes of fuzzy triangular number, respectively the upper and the lower value represents its limits, respectively the values in which an element from the universe of discourse has the membership function equal to 0 to that set.

3.3. Development of methodology

The previous evaluations materialized in linguistic values and then converted into corresponding triangular fuzzy numbers will operationalize themselves in the methodology described in the following, appealing to the use of two algebraic operations specific for fuzzy sets namely the addition and the multiplication. Thus, considering that we have two triangular fuzzy numbers $X = (x_1, x_2, x_3)$ and $Y = (y_1, y_2, y_3)$, results the following algebraic operations between them:

- addition: $X + Y = (x_1 + y_1, x_2 + y_2, x_3 + y_3)$;

(3)

- multiplication: $X * Y = (x_1 y_1, x_2 y_2, x_3 y_3)$.

(4)

After all operations taking place after fuzzification stage, for each supplier will result a fuzzy score, which will have to be defuzzificated by the centroid method, for achieving to a fixed, real value, in the purpose of allowing determination of the best supplier, so that the one which will have the highest score will be that selected.

In figure 3, I will present in a schematic form the fuzzy algorithm which contains the steps to be followed to select the best option regarding to the supplier selection.

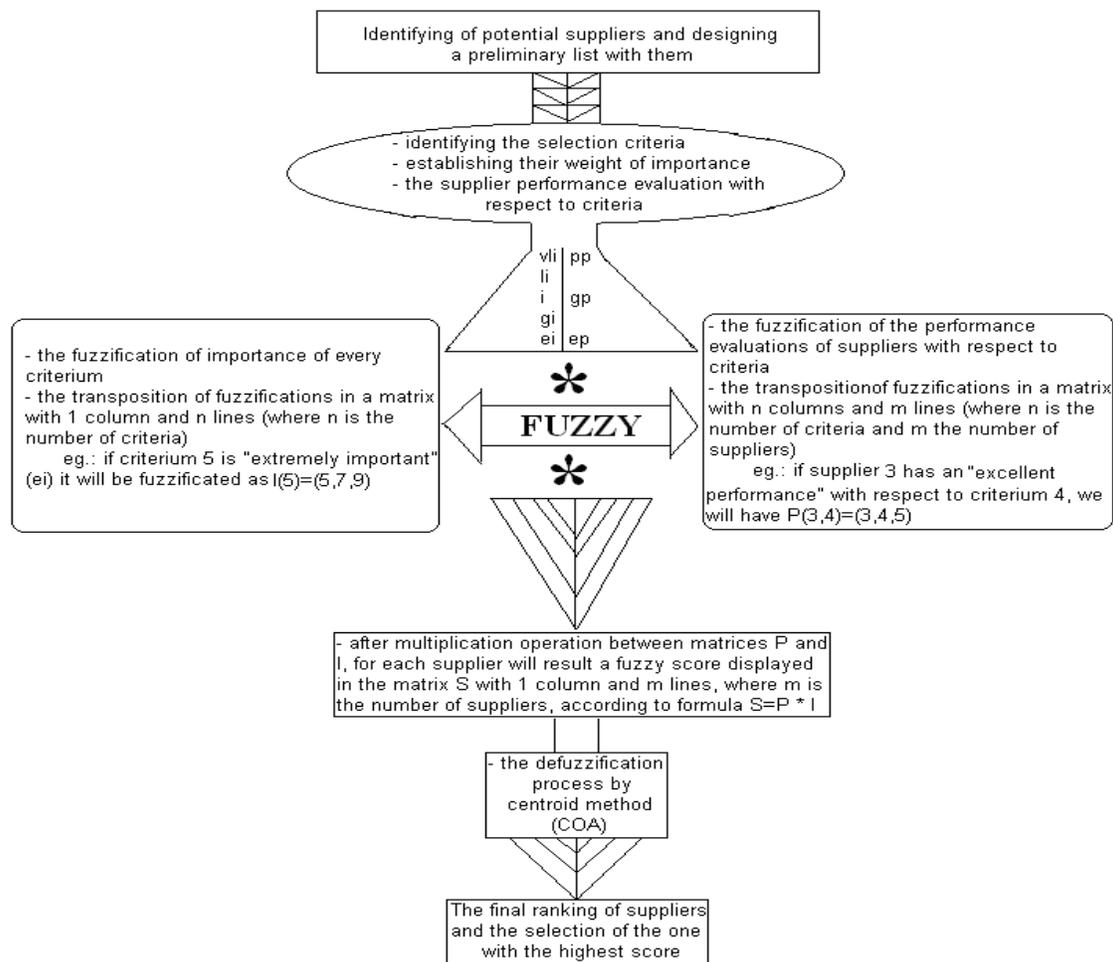
4. The application of fuzzy methodology for selecting the supplier of cyanide within "the Roşia Montană mining project"

The mining project from Roşia Montană, which lately is highly publicized in Romanian mass-media, but also international, is performed by the "Roşia Montană Gold Corporation" company (RMGC), which is a company with majority private capital, owned by the canadian company Gabriel Resources, in proportion of 80,46% and by the Romanian state through Minvest Deva and other small shareholders, in proportion of 19,54% and which is dedicated to responsible mining and to the sustainable development of the communities in which is conducting the activity that consist in exploitation of mineral resources of gold and silver in the Roşia Montană perimeter, locality located in the center of Romania, Alba county, at 80 km N-V far away from Alba Iulia municipality and 80 km N-E far away from Deva municipality.

The project is still in the exploration stage, because there are a whole series of approvals and certificates which must be approved by the Romanian state for entering in the operational phase itself. It should be noted that there are a lots of obstacles from certain human or social-human categories regarding the approval of this project, mainly due to the associated risk of pollution, both at local and national, but also at international level, especially from the government of Hungary. This is mainly due to the use of the substance called cyanide for extracting gold and silver within technological process.

Regarding to this aspect, it have produced a report of the study on environmental impact assessment for “the Roșia Montană project” (EIA, 2011), report requested by the Romanian and Hungarian Government and elaborated by the Independent Group of International Experts (IGIE), group composed from several specialists in the field. In this report is made reference, in addition to the classical problems of pollution from extractive mining industry, even to aspects related to the supply chain with cyanide, in which are debated more points that I will detail in the following and which will underpin to the implementation of the fuzzy algorithm of selection of the most suitable cyanide supplier previously designed.

Figure 3: The fuzzy algorithm of methodology of supplier selection



EIA (2011) report (Section 5 of Plan G) describes the supply with cyanide from international sources. The delivery of sodium cyanide by truck from Romanian sources was rejected, because the project proponents indicate that the Romanian manufacturers and transporters do not currently subscribe to the International Cyanide Management Code. At a consumption of cyanide of 11-13 kt/year, will circulate 500-600 trucks with dangerous cargo (on average two trucks per day) from port/factory on a network of roads of poor quality up to Roșia Montană. In the EIA documentation are

presented five alternative routes for cyanide transport and the project require the transport of cyanide in solid form in containers specially reinforced and sealed up to the project site. The company chosen for cyanide transport must be named and the certificates and its declaration of cooperation must be attached to EIA documentation (Environmental Impact Assessment) and it must be obliged to acquire itself the Cyanide Management Code and to respect its standards.

Next, the project proponents sets out certain criteria of choosing the supplier, thus, as part of contractual arrangements, they will prepare written agreements with the producers and transporters of cyanide which emphasizes the responsibility for health, safety and environmental issues arising during each phase of transport. Moreover, the project proponents indicate that these contracts will also specify that any responsibilities stipulated applicable to the RMGC, to the cyanide manufacturers and transporters are extending to any subcontractors used by these parts for any activity related to cyanide transport and that to all parties involved are required to them to inform the subcontractors about their responsibilities.

Also, it must be developed a plan of response and prevention of pollution accidents for the transport of cyanide and of other hazardous chemicals. The bridges over waters and the portions of road and rail along watercourses must be considered in this document as environmental hot spots and must be inventoried. It must be developed scenarios for accidental pollution events in these points.

Taking into account the fuzzy algorithm in figure 3 and the evaluation of the importance weight of those 14 selection criteria listed below in table 4, converted then in the related fuzzy triangular numbers, I propose a list of international suppliers of cyanide, four in number, respectively Metalor Technologies Corporation (USA), Xi'an Metals & Minerals (China), Goldmine Investment and Rimmyrose (Ghana) and SN Recovery Works (South Africa), of which it will choose the most convenient one after implementing the fuzzy algorithm.

Table 3 – The evaluation of weight of importance of selection criteria of cyanide supplier

Selection criteria	Linguistic value – fuzzy
1) The qualification of drivers/operators and the training for handling vehicles	gi - (5,7,9)
2) The training for accident prevention, reaction to emergencies and for safety of drivers/operators of transporters throughout the transport process (including the responsibilities for a strict maintenance of seriousness of drivers/operators during transportation)	ei - (7,9,10)
3) Packing	i - (3,5,7)
4) Labelling	vli - (0,1,3)
5) Storage before transport	i - (3,5,7)
6) The evaluation and selection of routes for reducing the risks, including community consultation and informing	ei - (7,9,10)
7) Establishment of protocols for driver-RMGC communication and automatically tracking of transport using the global positioning systems (GPS) or other automated methods	i - (3,5,7)
8) The storage and security at ports of entry and to the cargo transfer points	gi - (5,7,9)
9) Charging, storage and intermediate discharge during transportation	li - (1,3,5)
10) The transport to processing plant of "Roşia Montană project"	ei - (7,9,10)
11) Discharging at the processing plant	fpi (0,1,3)
12) Proper maintenance and operation of transport vehicles during each delivery	gi - (5,7,9)
13) The coordination of response actions to security and emergency during the entire transport process	ei - (7,9,10)
14) Elaboration and submission of transport reports and immediate reporting of transport hazards or of unsafe roads and transport conditions	gi - (5,7,9)

After this step, it will be evaluated the weight of each cyanide supplier's performance of the four ones proposed for selection regarding on how performing they are with respect to the selection criteria (table 5). Underline once again that the evaluations of RMGC company's expert are subjective, in the sense that are expressed by linguistic values, so that the proposed fuzzy algorithm in figure 3 is an effective tool for thinking modeling and approximating human reasoning manifested by linguistic expressions, in order to eliminate the uncertainty and the ambiguity.

Table 4 – The performance evaluation of suppliers with respect to selection criteria

Criteria	Suppliers performance - fuzzy			
	Metalor Technologies Corporation (USA)	Xi'an Metals & Minerals (China)	Goldmine Investment and Rimmyrose (Ghana)	SN Recovery Works (South Africa)
1)	gp - (1,3,5)	pp - (0,1,3)	gp - (1,3,5)	ep - (3,4,5)
2)	pp - (0,1,3)	ep - (3,4,5)	gp - (1,3,5)	pp - (0,1,3)
3)	ep - (3,4,5)	gp - (1,3,5)	ep - (3,4,5)	gp - (1,3,5)
4)	gp - (1,3,5)	pp - (0,1,3)	ep - (3,4,5)	pp - (0,1,3)
5)	gp - (1,3,5)	gp - (1,3,5)	gp - (1,3,5)	gp - (1,3,5)
6)	pp - (0,1,3)	pp - (0,1,3)	pp - (0,1,3)	gp - (1,3,5)
7)	gp - (1,3,5)	ep - (3,4,5)	gp - (1,3,5)	pp - (0,1,3)
8)	gp - (1,3,5)	gp - (1,3,5)	gp - (1,3,5)	ep - (3,4,5)
9)	ep - (3,4,5)	pp - (0,1,3)	pp - (0,1,3)	ep - (3,4,5)
10)	pp - (0,1,3)	ep - (3,4,5)	gp - (1,3,5)	gp - (1,3,5)
11)	gp - (1,3,5)	gp - (1,3,5)	ep - (3,4,5)	pp - (0,1,3)
12)	pp - (0,1,3)	pp - (0,1,3)	ep - (3,4,5)	gp - (1,3,5)
13)	ep - (3,4,5)	pp - (0,1,3)	pp - (0,1,3)	ep - (3,4,5)
14)	ep - (3,4,5)	gp - (1,3,5)	gp - (1,3,5)	gp - (1,3,5)

Next, after transposing the table 4 in the form of a matrix with 14 rows and 1 column denoted by I , respectively the table 5 in the form of a matrix with 4 rows and 14 columns denoted by P and after multiplying these two matrices according to formula 5, it will result a solution matrix denoted by S , composed of 4 rows and 1 column, which will contain those four aggregated fuzzy weights corresponding to scores of those four suppliers.

$$S = P * I \tag{5}$$

$$S = \begin{bmatrix} s_1 \\ s_2 \\ s_3 \\ s_4 \end{bmatrix} = \begin{bmatrix} p_{11} & p_{12} & p_{13} & p_{14} & p_{15} & p_{16} & p_{17} & p_{18} & p_{19} & p_{110} & p_{111} & p_{112} & p_{113} & p_{114} \\ p_{21} & p_{22} & p_{23} & p_{24} & p_{25} & p_{26} & p_{27} & p_{28} & p_{29} & p_{210} & p_{211} & p_{212} & p_{213} & p_{214} \\ p_{31} & p_{32} & p_{33} & p_{34} & p_{35} & p_{36} & p_{37} & p_{38} & p_{39} & p_{310} & p_{311} & p_{312} & p_{313} & p_{314} \\ p_{41} & p_{42} & p_{43} & p_{44} & p_{45} & p_{46} & p_{47} & p_{48} & p_{49} & p_{410} & p_{411} & p_{412} & p_{413} & p_{414} \end{bmatrix} * \begin{bmatrix} i_1 \\ i_2 \\ i_3 \\ i_4 \\ i_5 \\ i_6 \\ i_7 \\ i_8 \\ i_9 \\ i_{10} \\ i_{11} \\ i_{12} \\ i_{13} \\ i_{14} \end{bmatrix}$$

Following the calculations, resulted the matrix S with the aggregated fuzzy scores corresponding to each supplier in accordance with each row of the matrix:

$$S = \begin{bmatrix} (64, 208, 462) \\ (67, 203, 448) \\ (59, 224, 490) \\ (84, 246, 494) \end{bmatrix}$$

For a correct hierarchy of suppliers we will have to defuzzificate the triangular fuzzy numbers corresponding to the fuzzy scores of each supplier from each row of the matrix S in order to obtain a real value. For this we will use the centroid method (COA), which is the best known and the most used method within defuzzification process. Thus, if we have a triangular fuzzy number $X = (x_1, x_2, x_3)$, the center of gravity is calculated as follows:

$$COA(X) = \frac{x_1 + x_2 + x_3}{3} \tag{6}$$

After defuzzification, the matrix S will look like this:

$$S = \begin{bmatrix} 244,66 \\ 239,33 \\ 257,66 \\ 274,66 \end{bmatrix}$$

For a more coherent view of results and of final ranking for the selection of the best supplier, we have the following table:

Table 5 – The final ranking of suppliers

Supplier	Fuzzy score	Real value	Ranking
Metalor Technologies Corporation (USA)	(67,208,462)	244,66	III
Xi'an Metals & Minerals (China)	(67,203,448)	239,33	IV
Goldmine Investment and Rimmyrose (Ghana)	(59,224,490)	257,66	II
SN Recovery Works (South Africa)	(84,246,494)	274,66	I

As can be seen, SN Recovery Works company from South Africa is the one who got the highest score following the defuzzification process (274,66), therefore, being the most suitable for selection taking into account the correlation between the weight of importance of selection criteria and its performance evaluation with respect to each of these selection criteria.

5. Conclusions

Through this paper I proposed to develop an effective and performing tool to cope with uncertainty and risk to which are subjected the human decision makers in the contemporary world regarding the selection of suppliers, in the context of a globalization and of a global competitiveness of the market increasingly more pronounced and of development of information technology in a fast pace.

It is known that behind the production flow of a successful company is a logistics or supply chain very well done, that's why a good decision about choosing of the most suitable supplier of products and services represent the key towards an organization's overall performance and towards the survival and continuity in conditions of performance of its activities in an increasingly fierce and competitive environment.

The methodology used in selecting the most appropriate supplier and concretized in the fuzzy algorithm shown in figure 3 represents a very effective tool in choosing the most suitable supplier, taking into account as I mentioned earlier of increasingly higher difficulty of decisional process of acting in an environment surrounded by uncertainties, subjectivism and risk factors. That's why, the quality of decision is imperative to be one of high level, to bring economic, social and ecological benefits especially to a company within mining industry.

The proposed methodology can be also successfully applied even in other domains, given the circumstances and the degree of its applicability. It has to be mentioned once again that in the practical study that I exposed in chapter 4, both the weight of criteria importance, but also the evaluation of supplier performance with respect to the selection criteria, were established by the RMGC company after a subjective reasoning and evaluations of the expert, specific to human thinking and materialized through linguistic expressions. To cope with this uncertainty and ambiguity of human factor decision making, I appealed to a mathematical modeling in a fuzzy environment of linguistic values associated to linguistic variables specific to our situation, which through fuzzy addition and multiplication operators and then through defuzzification process gives us an effective solution for choosing the most appropriate supplier of cyanide for "the Roşia Montană project".

In the future it could develop certain computer programs or softs, implemented either in a programming language, either in a database, which based on the algorithm proposed in figure 3, after the introduction of input data and the application of fuzzy operators over corresponding matrices which incorporates the weight of importance of selection criteria and the performance evaluation of each decision alternative with respect to this criteria, to instantaneous and in the same time with accurately provide the solution, without errors, thus limiting the time period related to calculations in

the conditions of let's say a classical way of working or calculating, without using information technology and also contributing to the reliability and accuracy of results.

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BUSINESS LEADERSHIP BIASES: ANDROCENTRISM, ETHNOCENTRISM AND CHRONOCENTRISM

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Abstract: The aim of the paper is to explore the unconscious biases that accompany the business leadership icons. The main objectives of the paper are: to look for evidence of leadership biases on ground of gender (androcentrism), ethnicity (ethnocentrism) and age (cronocentrism); to look for potential reasons behind the biases and for potential effects at the organizational and social level. The article confirms some of the evidence from various international empirical or theoretical studies, and proposes some new perspectives.

Key words: Leadership, biases, androcentrism, ethnocentrism, chronocentrism.

JEL classification: D63, J24, J71, O15

1. Introduction

The starting point of this article is another article – “How (Un)Ethical are you?”. The question-title of this creative paper underlines the fact that the majority of us harbour unconscious and unethical biases, which prevent us from recognizing high potential individuals and taking good decisions. Implicit prejudice, as it is called by the authors, makes you overlook segments of the human capital and as a consequence generates a “stereotype tax”. Judging on the base of unconscious stereotypes rather than merit exerts a high business cost (Banaji, Bazerman and Chugh, 2003). “What makes implicit prejudice so persistent is that it is rooted in fundamental mechanics of thought. Early on, we learn to associate things that commonly go together and expect them to inevitably coexist: thunder and rain for instance, or gray hair and old age.” (Banaji, Bazerman, Chugh, 2003, p.57) Unfortunately this kind of functional associations can blind us in those instances when the reality is deeper than the one perceived.

A special breed of stereotype is considered “implicit stereotype”, the kind of stereotype that operates outside conscious cognition, and represents introspectively unidentified traces of past experiences that mediate attributions and qualities for members of a social category. For example, in a special test (Implicit Association Test) used at Harvard Business School, participants were asked to take split-second association between words with positive or negative connotations and images representing different types of people. The findings revealed that unconscious biases were present in 75% of the cases, and they show implicit biases favouring the young, the rich and the whites. The split-second reaction bypasses the conscious behaviour and reveals the hidden assumptions. Usually when people are asked if they consider themselves as ethical, the majority give a positive answer, but in fact, we have an illusion of objectivity, an inflated self-perception. (Greenwald and Banaji, 1995)

This might also be the case for the leadership models that people have in mind. Given a number of leaders that we have in mind by default, we automatically associate these specific examples with the idea of leadership (we associate things that commonly go together and expect them to inevitably coexist – as Banaji, Bazerman and Chugh (2003) said earlier). So, the main idea of the article is that these “emergency” examples of leaders we have, representing the most accessible and concrete information, and when accessed in hurry it might reflect unconscious biases regarding leadership.

Can we find something interesting when we ask people to name, in a split-second (actually a minute in our case), three business leaders that inspires them? Can we find evidence of leadership biases on grounds of gender (androcentrism), ethnicity (ethnocentrism) and age (cronocentrism)? If the answers to these questions are positive then we can assume a crisis of leadership, a crisis generated by faulty models and stereotypical thinking with long term implications on business environment.

2. Literature review

Leadership is gendered and this is a blunt reality even if in the last 50 years or so, the degree of social awareness gradually increased. The under-representation of women in top leadership positions is critical (Bass and Avolio, 1994; Gardiner and Tiggemann, 1999; Eagly and Carli, 2007; Torchia, Calabro and Huse, 2011). For example, only 6% members in the board of directors or CEOs for the Fortune 500 were women in USA and in the European Union the percentage goes down to 1%. In order to correct this kind of statistics it is vital “to ensure a critical mass of women in executive positions – not just one or two women – to head off the problems that come with tokenism” (Eagly and Carli, 2007, p.70). Tokenism is a term popularized by Rosabeth Moss Kanter in her 1977 book, “Man and Woman of the Corporation” (Zimmer, 1988; Yoder, 1991) and consists in a limited inclusion or representation of traditionally marginalized groups, creating a false appearance of inclusive practice. When an organizational subgroup is composed of less than 15% of the whole group, then a series of unwanted secondary effects start to manifest: first they receive heightened attention, visibility and pressure; secondly the boundary is heightened around the group and they are isolated from informal and professional networks, and finally, a series of incidents start to appear as a result of gendered-stereotyped roles (Yoder, 1991).

There are various proposed reasons for this situation: women lack the “envisioning” dimension of leadership (Ibarra and Obodaru, 2009); women are dropping out from the mainstream career due to demands in caring for elderly parents or children and the re-entry is difficult (Hewlett, 2002; Hewlett and Luce, 2005); women lack ambition – one third of the women consider themselves ambitious and fifty percent of the men consider themselves ambitious or very ambitious (Hewlett and Luce, 2005); and finally, maybe the movie industry is heavily biased by “macho” managers and organizational heroes and thus, from this process of social construction, emerges a patriarchal model of leadership (Panayiotou, 2010). A more historical reason is given by Messick and Bazerman (1996). They consider that we have a kind of historic inertia, and because twenty years ago almost all business people were men, there’s a good chance that people who come to mind as effective leaders are men. The optimism of some inspirational male authors (Peters, 2006) manifested in the title of one of his chapter (“Meet the New Boss: Women Rule”), is counterbalance by the harsh reality of numbers and the need for a “critical mass” (Eagly and Carli, 2007), a small critical mass of... three in some authors opinions (Torchia et al, 2011).

Leadership is cronocentric, meaning that it’s influenced by an age interval. In a classic article, The Seven Ages of Leadership, leadership practice has a certain age mark, reflected in the leadership style and efficiency (Bennis, 2004). A leader starts as an “infant executive”, frightened by the idea of leading. Then comes the “schoolboy with shiny face”, entering in a low key the leadership stage. The third age is “the Lover with a woeful ballad”, tackling the big organizational problems and confronting the difficulties of creating a trustworthy team. The fourth stage is “the bearded soldier”, hardened by the battles he fought, and comfortable with his role and with the young and promising competition. The fifth stage is “the general, full of wise saws”, a narcissistic stage accompanied by the danger of losing contact with reality in the light of his own achievements. The sixth stage, “the statesman with spectacles on nose” describes the years in which the leader’s power begins to wane, and the leader prepares to pass his or her wisdom in the interest of organization. Finally, the seventh age, “The Sage or the second childishness” is the stage of mentoring, when peering with young executives creates profound benefits, and when each experience is devoured and enjoyed, without the useless ambitions of the earlier ages.

Barbuto et al. (2007) identified a clear connection between age and leadership styles. For examples, younger leaders (22-35 and 36-45 years of age) were rated as more transactional and older leaders (over 46 years of age) were rated as more transformational. The main characteristics of transformational styles analyzed were: idealized influence, intellectual stimulation, individualized consideration and effectiveness. Considering that the leadership literature favours the transformational style and envisions a future dominated by this kind of leadership, it is possible that the “job specifications” for leaders to include more senior traits.

Bass and Bass (2008) reviewed of the literature between 1904 and 1970 found that connections between age and leadership differ in various situations. For example, in a highly organized institution like Roman Catholic church, rank was determined by age, but it was lower or negative in organizations that quickly promoted their “best and bright” (Bass and Bass, 2008, p.82).

Also he made a distinction between chronological age and mental age, underlining that usually the people with mature mental age have more chances to lead. But even if “usually great men tend to exhibit signs of outstanding accomplishments at a relatively early age... it usually takes time to rise to the top in a corporate or governmental structure” (Bass and Bass, 2008, p.97-98). This view is supported by current reports analyzing the age of the formal business leaders (directors, CEO’s, board of directors). For example in European Union, the average age for directors ranged between 62.4 in Netherlands to 54.1 in Poland, giving a European average of 58.4. This trend of employing senior directors seem to be influenced by the troubled economic times (European Corporate Governance Report, 2011). In USA, according to Spencer Stuart Board Index (2011), the average age for boards of directors is 62.4 and has an increasing trend since 2001 when the average age was 60.2. The CEO’s average age also started to grow, from 55.1 in 2001 to 56.5 in 2011, a 3% increase in a 10 years interval. So, a sweet-spot age, or a cronocentric interval starts to appear when we consider formal leadership.

Leadership is ethnocentric. Ethnocentrism is the characteristic of a “nation, group or culture to appear to us to be normal and ordinary, while others appear foreign, strange and curious... in the ethnocentric view, the world revolves around our group, and our values and beliefs become the standard against to judge the rest of the world” (Messick and Bazerman, 1996, p.15-16). Ethnocentric thinking exaggerates the differences between “us” and “them” in order to advantage “us, to create in-group favouritism. What is even more interesting is that the leadership concept is associated by some authors with the United States and thus the ethnocentrism of leadership might turn in US-centrism. Hunt (1999, p.130) rhetorical question regarding leadership origins “Was it really, as many Europeans argued, a U.S. phenomenon, overemphasized because of our individualistic culture?” seem to point at this idea. Collinson (2011), synthesising other authors views, underline in a critical manner that the majority of leadership studies are North American in origin and much research (unconsciously) articulates (positivist) US values. It is often acknowledged that US-centrism is an assumption that North American cultural values can be transposed to leadership theory, development and practice in quite different contexts. Cross cultural analysis of leadership development programmes in USA, Europe and China, point out the disproportionate influence of US values.

A more European form of ethnocentrism is present in Iain Pears writings (1997). According to Pears, the heroic leaders are the products of national cultures and their identities are usually constructed against an imagined “other”. The leader’s archetype is constructed trough mirroring contradictions of two leaders of neighbour nations: Wellington (UK) and Napoleon (France) in his study. Maybe in the same way, people need specific leadership models in order to be able to construct their own image of a leader, not necessarily as opposing ones but maybe as a point of reference in constructing identity. Considering this, archetypal national leaders and archetypal foreign leaders (neighbouring country) are important in the social construction of leadership.

3. Method

At the core of this article is a written exercise embedded in a focus-group. Focus-group was used in academic and professional awareness training mainly because this method has certain sensitivity to the idea of social construction of reality and in this case helps define the borders of leadership or the biases. The focus group contained a written exercise, as suggested by Patton (2002), in order to focus participants’ attention; to give them time to structure their arguments and to form a bigger picture before having group discussions. This way the spontaneous influence or the pressure of conformity in group discussions is diminished and the quality of group discussions is increasing. Information reflected upon in the written exercise was then discussed in the focus-groups as a catalyst, with the purpose of answering the research question mentioned at the beginning and develop on it: Can we find evidence of leadership biases on grounds of gender (androcentrism), ethnicity (ethnocentrism) and age (cronocentrism)?

The written exercise contained two tasks: The first one was: “Name three business leaders that inspire you”, with a time limit of one minute, and it was intended to eliminate spontaneous influence, peer pressure and to reveal the leadership “icons” that inspires participants, or the leadership “biases”. The second one was: “Name as many business leadership traits as you can”, with a time limit of ten minutes, and it was intended to stimulate the quality of group discussions and to allow collection of redundant information. This paper is centered on the first task, the second one being the resource for a future article. This written exercise, as already mentioned was inspired by Banaji, Bazerman and

Chugh, (2003), but also by the “audit tests” used by sociologists to investigate discriminatory practices in human resource recruiting (Bendick and Romero, 1996; Bendick, Brown and Wall, 1999; Riach and Rich, 2002, 2006, 2007a, 2007b; Wilson, Parker and Kan, 2007; Bennington, 2002). The audit tests consisted in sending fake peered actors (or their CV’s) to job opening. The actors had a similar professional background, but they were demographically different - one person was from the majority group and other person from the minority group studied. Translating this idea to our paper, in the same way as the recruiters discriminate on age when shortlisting candidates, students will reveal their biases regarding leadership when forced to shortlist their leaders. The difference is that now, the “leadership candidates” or “inspirational models” are their own spontaneous initiative, and the choices they made reflect hidden assumptions. Another methodological inspiration for this exercise was Palmore’s (2001, 2004) “Age Quiz”, an instrument developed in incremental steps starting with 1977, containing a set of questions with true or false options, probing the degree of age discrimination, both positive and negative. As in this case, the quiz had a multi-purpose: to facilitate discussions about age discrimination, to underline age biases, to measure group differences, to see the literacy level for this topic and so on. The discussions in the focus group, following the written exercise, were centered on specific trend identification (gender, age and nationality), causality (reasons behind their choices) and effects (at personal and social level).

The social unit studied in this paper included freshmen students at the Faculty of Business, Babeş-Bolyai University, Cluj-Napoca, Romania. This is a purposive sampling because probing the students in Business Administration we can obtain a better picture about the leadership models that inspire a specific group, of interest for us. Also, the results of the paper can be used for educational purposes, to generate interest and awareness on the topic of leadership unconscious biases. Students are more receptive to relevant studies that involve them directly, than to general studies disconnected from their academic and professional experience. Because they will be active social actors in the business environment, the awareness component of the study help the future decisions to be less biased.

The research was carried on in October 2011 during the leadership seminars. There were a number of 15 focus-groups organized, involving between 10 and 15 students. The total number of students involved was 178; 87 of them males with an average age of 20 years and 91 females with an average age of 19.4 years. The majority of them were Cluj-Napoca residents (59 students), and the rest of them came from various locations: Satu-Mare (8 students), Turda (7 students), Suceava (7 students), Dej (6 students), Zalau (5 students), Sibiu (5 students) and so on.

4. Findings

4.1. Let’s talk about gender. It doesn’t seem in this case to be enough women leader icons, to reach a critical mass. The percentage of female leaders that inspire participants (7% or 33 cases) is very low compared with the male leaders (93% or 458 cases) (Figure 1). Considering that tokenism starts to manifest itself below 15% representation of the minority group, we might say that the problems associated with tokenism are still present when we talk about gender and leadership.

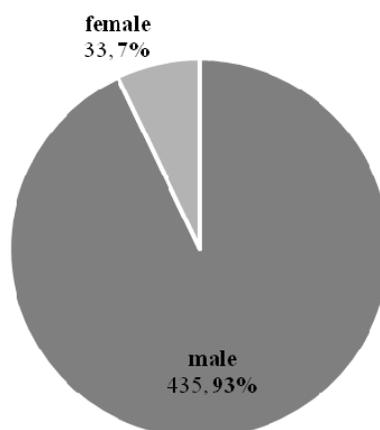
The classical reasons for this underrepresentation mentioned by the focus-groups participants were: the family life and the maternity leaves put women off the track, and this implicitly means less experience; the lack of aggressiveness or competitiveness; too much emotional input weakens credibility; women lack cohesiveness, and often manifest unfavourable towards their own kind. What was striking during the discussions was that, when students were asked about the causes for the gender bias in leadership, the starting interventions and arguments were given by male students, not by female. It seems like a polite thing to do, to help the other gender; or as a student female noticed, “maybe is the guilt talk”.

Is there a “stereotype tax” associated with this kind of leadership bias? Is someone paying for this kind of biases? Participants considered that for specific businesses, this “stereotype tax” is small and often is not perceived because “the businesses produce money and people make a profit, and this reality of leadership is satisfying enough”. It doesn’t really hurt financially if you are gender biased and those studies underlying the performance of businesses with female leadership have only academic notoriety, not a professional notoriety. When the discussion reached a bigger level, the social one, everyone agreed that considering the human resources of a society, this generalize behaviour, would have a devastating impact. The grades of female students are noticeably higher than those of male students, their involvement in extracurricular and voluntary activities outstanding, their

communication and persuasion skills impressive and still, once they leave the universities and boldly go on the labour market, their career encounter adversities. This adversities look at beginning as labyrinth (Eagly and Carli, 2007) and then, in the final stage, as a cynical glass ceiling (Bass and Avolio, 1994). From the human capital standpoint and regarding the efficiency principles of recruiting, a huge source of potential leaders are ignored or underutilized, almost 50%.

An interesting emotional marker was the reaction of the participants at the first two question of the focus-group, after the written exercise has ended. The first one was: “How many of you mentioned three men business leaders?” Almost 99% of the participants raised their hands. The second question was: “How many of you mentioned three women business leaders?” No one raised hands – the 1% remained didn’t react to the question. If uproar started in the room at the first question, an explosion of laughter accompanied the last question. One student intervened with a witty remark “Huston, we have a problem!”, and the participants exploded in a second round of laughter. This episode reminded us of Jaggar (1989), a fervent feminist author, and her concept of “out-law emotions”. These are emotional reactions banned by the social conventions in certain situations like those when people of colour are expected to laugh at a racist joke rather than be angry, or a female subject to a man sexual banter is expected to be flattered rather than uncomfortable. For them, it is expected to present a social facade and not suggest that they are “emotionally disturbed” by generalized androcentrism.

Figure 1: Number/percentage of male and female leaders named by participants



Finally, we have to notice that the most mentioned name of a woman business leader is that of Oprah Winfrey (entertainment industry), with 24 mentions, and second, the name of a Romanian woman business leader, Camelia Şucu (furniture industry), with only 3 mentions. When this aspect was discussed in the focus-group, the main reason advanced by the participants was the unique position Oprah Winfrey have in terms of visibility, due to the industry she is working in. Considering this, it might be possible that some cases with extreme visibility compensate the effects of tokenism. Also, as we expected, the majority of the students mentioning a woman as an inspiring business leaders, were women. So, who were the other women business leaders mentioned? They were: Coco Chanel (fashion) and Valerie Massey (IT).

4.2. Ethnocentrism or US-centrism: that is the question? There are no examples of leaders from our neighbour countries to mirror the national identity of Romanian Business leaders; the vast majority consists in examples from United States (Figure 2). So Pears’s (1997) central idea might be right but without the proximity factor. Our identity is socially constructed, but without mirroring another neighbouring European culture and the leadership archetype associated with it, but a “Far and Away” one, one with enough mythical potency to fascinate us. Maybe we do not have the “us” and “them” dimensions of ethnocentrism, but we have “us like them” dimension of US-centrism.

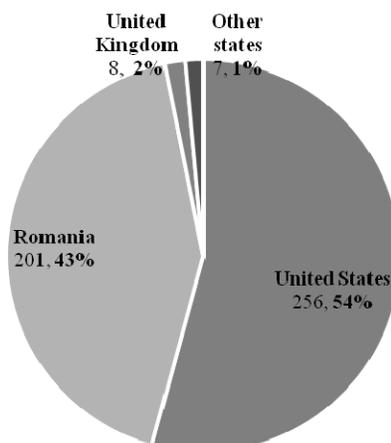
US-centrism of leadership is unexpectedly high in this case, higher than the ethnocentrism, or the local models. Why? One of the proposed reasons in the focus-groups is that the mass-media

industry promotes certain heroic business leaders, the kind of leaders that generate audience. Another is the fact that the literature in this field has its origins in US and basically, leadership being a new and hot topic, introduced in a post-communist Romania, the main literature served in the academic and professional circles was made in North American. After the revolution, lacking a better model we used the first coherent one we encountered. The third reason proposed by the participants is the “evangelical” influence the big American corporation (Coca-Cola, Emerson, Kraft Foods, Ford, Amway, Bechtell, Colgate, McDonalds, and so on) have in the countries where they externalize some of their work.

Another theoretical lens useful in the interpretation of this finding is the globalization framework.

“As companies become exposed to global markets, however, national leadership models no longer work as well” (Morrison, 2000, p.120). Basically globalization involves cross cultural models that work in a global environment and often, global leadership is quite different from domestic leadership. In this case, the globalization is not a cross cultural model but a bicultural one, American-Romanian. In Morrisons’ (2000) opinion, European, Asian and Latin American leadership models are quite different from the US approach, and we agree with that, but the strange thing for us is that we are a European Country, yearning for European Integration, but with US ambitions and values of leadership.

Figure 2: Number/percentage of leaders from different nationalities named by participants



An interesting idea came from a participant, suggesting that maybe there are certain similar cultural dimensions between Romania and United States. As a result we tried to compare the four classical cultural dimensions identified by Hofstede (1983) to see if there are similarities, using the author’s online comparison tool (<http://geert-hofstede.com>). On the “power distance dimension” (PDI), Romania, with 90 points qualifies as in favour of a highly hierarchical order without needing justification, while U.S. score was 40, favouring “liberty and justice for all”. On the “individualism dimension” (IDV), the Romanian score is 30 and the U.S. score is 91, suggesting that Romania is a “collective” society and U.S. an individualistic society. On the “masculine/feminine dimension” (MAS), the score for Romania is 42 and for U.S. 62, suggesting that Romania is a “relatively feminine society” and US a “relative masculine society”. On the “uncertainty avoidance dimension” Romanian score was 90 and U.S. score was 46, suggesting that Romania have a high preference for avoiding uncertainty and US “accepts uncertainty”. The result is not a surprise. There are no cultural similarities, on the contrary; it is like the reverse image of cultural dimensions. This result sends us back at the Pears (1997) and his bipolar model of leadership, and provides even more arguments for wishful thinking, when it comes to leadership models, and not for antithetic thinking.

Considering the names of the US leaders, we notice that the majority of answers target IT industry, namely Steve Jobs and Bill Gates, considered to be “alter egos” of the same person. Unfortunately Steve Jobs deceased on October 2011, and the focus-groups started the next week, so the publicity associated with his death might influenced the final result.

4.3. *How old are the “inspirational” leaders?* The average age of the “inspirational” leaders was 58,7 years with a maximum age of 86 years (Ingvar Kampard) and a minimum age of 28 years (Mark Zuckerberg). Considering the gender of the leaders, the average age of the women was 52,8 years and for men the average age was 59,1 years. It is noticeably that the women leaders have a lower age threshold. So is this a problem? The majority of the participants considered that in order to be successful and have a positive and conscious effect on other people you have to have a certain experience and implicitly a certain age (see Table 1.). This is strange coming from a group of young people, discussing the idea of leadership in a time of hyper-change. Their intergenerational politeness manifested here was surprising. In some authors’ view, even the generation X, those born between 1961 and 1981 were a rebellious generation (Erickson, 2010), rejecting conventional leadership norms. Why does the current generation, multitasking, connected, gadget addicts, basically the “digital natives” (Selwyn, 2009) seem so attached of classical leadership, and their heroic mythical leaders? We would expect a greater diversity of examples, especially in terms of age, and a more postmodern and unconventional approach to leadership.

Table 1: Most frequently mentioned leaders and their age

Most fervently mentioned United States leaders			Most fervently mentioned Romanian leaders			Most fervently mentioned leaders from other countries		
Name	No.	Age	Name	No.	Age	Name	No.	Age
Steve Jobs	72	56	Ion Țiriac	76	73	Sir Richard Branson (UK)	3	62
Bill Gates	65	57	Dinu Patriciu	47	62	Karl Lagerfeld (UK)	2	79
<i>Henry Ford</i>	25	84	Ilie Nastase	13	66	<i>Coco Chanell (FR)</i>	2	88
Oprah Winfrey	24	57	George Becali	12	54	Vidal Sasson (UK)	1	84
Walt Disney	19	65	George Copos	5	59	Sir Allan Sugar (UK)	1	65
Donald Trump	17	66	Dan Pascariu	4	62	Jamie Oliver (UK)	1	37
Mark Zuckerberg	6	28	Camelia Șucu	3	41	Florentino Perez (ES)	1	65
<i>John Rockefeller</i>	4	98	Arpad Pascany	3	41	Ratan Tata (IN)	1	73
Serghei Brin & Larry Page	4	39	Cristi Borcea	3	42	Andrea Tomat (DE)	1	55
Robert Kiyosaki	4	65	Irinel Columbeanu	3	54	Ingvar Kampard (SE)	1	86

Note: In the case of Henry Ford, John Rockefeller and Coco Chanell we looked at the age of their deaths.

This attitude of the participants is in congruence with the ideas of Bennis (2004), that we have certain developing leadership ages. According to these article findings, the perfect age to be a leader that inspires young students it is around the age of 58, and we can identify it with “the general, full of wise saws” or with the “statesman with spectacles on the nose”. On age, some authors consider that athletes and creative thinkers start earlier, but in order to reach leadership and eminence, one must wait “not upon the insight of the leader himself, but upon the insight of society about him” Lehman (1962, p.142). The same idea occurred during focus-group discussions, participants considering that in order to have a Leader we need layers of time and experience to sediment, and to be visible enough in order for that person to grow from an efficient leader to an icon status. The focus-group discussions reminded us of the of constructionist classical view that „layers of interpretation deposit over layers of interpretation just like layers of minerals do... the problem is no longer that of existential interaction with the world, but that of building upon existent theoretical deposits” (Berger and Luckman, 1999, p.82). So maybe the age bias in leadership is a social construct consisting in layers over layers of interpretation, and if we look at the process, we see that this topic gradually leaves the realms of existential interaction with the world and enters a theoretical and mythical realm, enhanced by various social actors (academics, leaders, politicians, mass-media etc.) and by time.

5. Conclusions

We found certain evidence of leadership biases on on grounds of gender (androcentrism), ethnicity (ethnocentrism) and age (cronocentrism), and the evidence is overwhelming in the studied social unit. The one “minute-split decision” revealed that all the biases anticipated and described in the review of the literature were present in the audit exercise, and we have a triple jeopardy that affects leadership construct. Let us look at the problem from the human resource point of view - leadership recruiting and development - and consider the “stereotype tax” paid by organizations. If from the total

pool of “candidate leaders” we are looking for male leaders, we lose almost 50% from the potential candidates on the market. Going further, if we are looking for certain values specific to certain cultures, nationalities or races, then we lose maybe another 10% and we remain with 40%. Finally if we limit our searches to a certain chronocentrism interval (45-65 years for example), we cut another let’s say 20% and we remain with only 20% from the original pool. So, what is the probability for a successful recruiting? These biases are bugs in the system and have to be removed in order to increase performance of the human capital. The lack of diversity in leadership, as a social construct, undermines a healthy, sustainable business system. These biases might be originated in the unconscious unethical choices of the participants, but at the roots of these leadership icons is a powerful and ubiquitous process of social construction. In the age of globalization and postmodernism we expected a more creative and vast range of business leaders examples.

This paper motivates further research. From a conceptual perspective we have the impression that the majority of the participants gave examples of rich business people and not necessarily business leaders, and this confusion needs future investigation. Considering the sample representativeness, this study stands to be an exploratory one, and can be upgraded to a research that has national representativeness. From an instrumental point of view, the results of the paper can constitute the base for an instrument development, a kind of “Leadership Biases - Self Awareness Quiz”, very useful for educational purposes in academic environment and for training and evaluation purposes in organizational environment.

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GENDER ISSUES IN WORKPLACE VIOLENCE

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Abstract: *This paper is a response to the problem of workplace gender violence and the power relationships between males and females in organizational theory. Victimization based on gender is afflicting society as a whole, but is also relevant to the construction of social attitudes at the workplace. Thus, we will present how the context of work relationships can be affected by acts of verbal and physical intimidation engaged by gender inequality and what are the consequences for managers. Moreover, we will focus on the legal determinations of gender based workplace violence, since it has a polymorph nature, and not all its forms are as visible to the public eye as are the incidents where persons are abused, threatened or assaulted.*

Key words: organizational effects of bullying, gender violence, management perspective

JEL classification: L2 - Firm Objectives, Organization, and Behavior

1. Introduction

In this article, we will examine the growing form of stress factors in organizational environment, more specifically the emergence of workplace violence. We will begin by presenting the way in which the Romanian society is aware of this rising problem by reviewing what is currently known about bullying, with a particular focus on public servants' behavior, and what are the conceptual premises mentioned in the significant literature on aggression, bullying and conflict management in organizations (Weiss, 2011).

The arguments and conclusions presented here are according to those of well known authors like Wilhelm Heitmeyer, Vittorio di Martino and Peter Randall. Our study tries to focus on the practical approach of workplace unacceptable behavior in the Romanian public service, after the institutional reform, in 2010. There are many forms of uncivil behavior where gender identity is relevant for perpetrators and victims (i.e. victimization, bullying, mobbing, sexual harassment), especially in gendered organizations (Zippel, 2006). Many of these forms of relational aggression are insidious, being invisible in the public, because victims are less likely to report and file a complaint against their colleagues or superiors when the actions can be interpreted as being not so drastic to be called harassment. Although previous international studies have addressed this problem, the relevance of gender issues in the context of workplace violence is not largely discussed by social actors and influential circles (Vittorio di Martino, 2005).

2. Key concepts: “unacceptable” behavior in the hierarchy of power

The Romanian public sector is a gendered institution, where gender identity plays a crucial role in the hierarchy of power, according to Archer's definition for gendered organizations: “*means that advantage and disadvantage, exploitation and control, action and emotion, meaning and identity, are patterned through and in terms of a distinction between male and female, masculine and feminine. Gender is not an addition to ongoing processes, conceived as gender neutral. Rather, it is an integral part of those processes, which cannot be properly understood without an analysis of gender*” (Archer, 1990).

From central administration, public forces and City Hall, men are more successful than women, as the internal guidelines for recruitment and advancement tend to advantage them. A recent study conducted in local administration institution showed that more than a half of respondents believe that is easier for men to succeed in public sector (Creta, Macarie, Sandor, 2011).

In this paper, the term “public service” refers to all public employees, while “civil service” is limited to the government employees who are appointed on the basis of the examination given by the civil service commission and who acquire civil service status after a probationary period. The Romanian Public Administration needs several transformations in order to become more efficient,

competent, self-confident and in order to earn the confidence and the respect of the political class. As the Code of Conduct stress, civil servants should become “self-confident, highly competent, knowledgeable, dedicated and result-oriented professionals that normally enjoy the respect of the political class regardless of the regime type”(Art.3 and 12 on the Code of Conduct for the Civil Servants published in the Official Journal of Romania, Part I, no 157 from 23rd of February 2004).

This analysis suggests that the economic crisis can affect the way in which the employees in public administration perceive the reduction of wages and the risk of being fired. These concerns and the growing competition between colleagues have affected the work motivation. In addition, the constant changes, reorganizations, recruitment of new managers in the public sector have created a crisis of legitimacy, as older and more competent civil servants find themselves subordinated due to politically appointed decisional factors. This void of authority is, in some cases, the main factor of unhealthy work relations.

In Romania, the present status of the civil service is the product of various changes resulting not only from the need to strengthen its capacity for the efficient and effective performance of governmental functions, but also from the seeming need to respond to the dynamic nature of the country's political, social and economic developments. The toxic climate marked by lack of collegiality creates the growing needs a new leadership. The implementation of internal codes of practice that prohibit corruption, the lack of collegiality, authority abuse, and disrespect can help rebuild the peaceful work environment.

Often, critics argue that the research on violent interpersonal acts at work must be focused on the multifaceted forms that aggression can take, such as ridicule, intimidation and exclusion, and not on the prevalence of variables that focuses predominately on the victims of this acts. By examining the first aspect, we must provide arguments supporting the idea that workplace violence has similar effects on men and women alike, and the harassing process is more relevant than its causes and results. Both individuals and their social counterparts derive their identities from the roles they play in society, the groups they belong to and their personal characteristics. Henceforth, gender and sexuality are strongly connected to the understanding of identity, as they represent a connecting point between body, self-identity and social norms (Leonte, Macarov, Buzarna-Tihenea, 2011). Gender categories and roles are, therefore, associated with stereotypical feminine and masculine traits (i.e. masculinities and femininities). Nevertheless, since identities are flexible and multidimensional, masculine and feminine identities are not fixed but fluid, i.e. they are constantly changing. As a male, he is constantly observing his environment and perceiving indications (symbols and signs) about the degree of his masculinity being manifest in the context. Such manifestations occur in his own behaviour (which is constantly being produced and which has meaning for him and for others in the respective context) as well as in the behaviour of others (Stets, Burke, 2009). From this point of view, the veracity of Robert Nye's statement made in his investigation of gender roles and sexuality is particularly prominent: “gender makes a social virtue out of the necessity of biological sex, policing the limits of what is sexually allowed and dictating the norms related to gender roles and to the sexual aim and object. The expectations related to gender identity standards influence (the characters') patterns of behaviour and interactions” (Nye, 2009).

As already stated, gender stereotypes of most societies have imposed what is valued and allowed in the area of sexual identity and behaviour within binary male and female orders that have reproduced themselves as systems of male dominance. Storr's belief according to which male sexuality bears the markers of aggression while the female is seen as passive and submissive:” Male sexuality, because of the primitive necessity of pursuit and penetration, does contain an important element of aggressiveness; an element which is both recognised and responded to by the female who yields and submits” (Storr, 1970).

Simone de Beauvoir's ideas about the objectification of women, ideas according to which “along with the ethical urge of each individual to affirm his subjective existence, there is also the temptation to forgo liberty and become a thing.” The ideas expressed by Stets who, in his analysis of the interconnections between gender role identities and person identities, relates the masculine gender role identity to the mastery person identity, by means of their shared meaning of “control”. Meanings of masculinity, such as dominance and competitiveness, are compatible with meanings of mastery that involve control over one's living environment. When the social psychologist examined the predictors of control over one's partner, she discovered that those possessing a more masculine gender identity

were more susceptible to control their partners than those possessing a feminine gender identity (Simone de Beauvoir, 1988).

Sexuality and sexual identities, as social and political constructs, are politically relevant as they are constituted within the fields of power; seen as the outcome of individual as well as collective formation processes which, in turn, are connected to relations of power, sexual identities and sexuality reflect the changes in government, citizenship and social contexts (Carver, Mottier, 1998).

3. The gendered nature of workplace violence in Romanian public sector

In our approach, we will address the theoretical idea based on the assumption that workplace violence is an abuse of power over both the victim and the bystanders who witness this abuse. There are some terms that must be defined for further understanding. Aggressive behavior in public administration, scandals of sexual harassment in the military and entertainment industry mainstreamed concepts such as *mobbing*, *bullying*, *violence*. Therefore, in most languages, there are phrases which now define the aggressive behavior in organizations (e.g. in French harcèlement moral). This diversity of terms can easily lead to confusion (Einarsen, Hoel, Zapf & Cooper, 2003).

The blurred line between concepts exists because of the large number of terms used in this area: *aggression*, *violence*, negative behavior, relational violence and *deviant* behavior (Vittorio di Martino, 2005). The World Health Organization defines *violence* as follows: "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in, or has a high likelihood of, resulting in injury, death, psychological harm, mal-development, or deprivation" (World Health Organization, 1996). Similarly, the European Commission has defined workplace violence as involving "incidents where persons are abused, threatened or assaulted in circumstances related to their work, involving an explicit or implicit challenge to their safety, well-being or health" (European framework agreement on harassment and violence at work, 2007).

This is a very broad, general definition that covers a wide range of potential actions. Its advantage is its breadth; however, it does not give us very precise indications of the types of behaviors that would qualify as violence under this definition. Nor does it clearly indicate what might be meant by an "implicit challenge" to people's sense of safety or well-being.

This definition spells out some of the specific behaviors that qualify as workplace violence. Being defined as actions that deliberately induce physical or psychical discomfort for those who are subject to aggression, aggressive behaviors are either express, explicit by the traces they leave, (e.g. bruises, abrasions) like assault, sexual assault, or hidden, implicit, insidious and imperceptible like the use of threats, intimidation (Strandmark, 2007). In empirical studies the specialist include in surveys or checklists examples like being yelled at, the use of derogatory names, the "silent treatment," having key areas of responsibility removed or replaced with more trivial or unpleasant tasks, spreading of gossip and rumors, making insulting or offensive remarks made about one's person (i.e. habits and background), one's attitudes or private life, being given hints or signals from others that they should quit your job, repeated reminders of one's errors or mistakes, making persistent criticism of one's work and effort, being given tasks with unreasonable or impossible targets or deadlines. (General Social Survey on Victimization)

In addition, it refers to factors that will affect the work environment, including verbal and/or psychological threats and harassment. These types of actions, as well as other means of intimidating and controlling people, are the kinds of behaviors that are often described as bullying or mobbing.

Of all the types of bullying discussed in the literature (e.g. Einarsen, Hoel, Zapf & Cooper, 2003), the behaviors most frequently cited in public services involve threats to professional status and isolation and obstructive behavior (i.e., threatening the target's ability to obtain important objectives). The long time effects of this destructive organizational behavior was the object of multiple studies including extensive interviews and personal accounts from targets (e.g., Radall, 1997; Westhues, 2004). From this previous research, we find out that the consequences of bullying can be quite damaging to individuals (physical, psychological and emotional damage), groups (destructive political behavior, lack of cooperation and interpersonal aggression) and organizations (organizational withdrawal behaviors, theft, lowered organizational commitment and sabotage). This diversity of forms of violence is the construct of the social dimension. The term "violence" has several meanings and can describe verbal and non-verbal communication, physical violence, and relational violence, individual and group aggression.

For more specific types of workplace violence, like sexual harassment, the process of codification has strong echoes, mostly due to feminist movements. International organizations, but also international institutions, such as OSCE, WHO, International Labour Organization, European Commission, the European Agency for Safety and Health at Work (EU-OSHA) and the Special UNO Rapporteur for forms of violence against women contributed in collective efforts to put an end to gender violence at the workplace.

Inappropriate behavior on the rationale of gender takes a more indirect form in the public sector. Due to specific legal constraints, it becomes a form of interpersonal aggression, which is also prohibited by internal regulations and labor law, but is more difficult to prove and is generally not perceived as a crime. The victimization of public servants is also affected by early socialization and the acceptance of gender stereotypes like "boys will be boys." Nevertheless, important social factors that can fuel this behavior such as: the organizational culture, the work climate, values of employees, individuals and work practices (e.g. the lack of a clear internal code of conduct that forbids inappropriate and aggressive behavior) (Acker, Joan, 1990).

There are a great number of studies revealing that both men and women experience different kinds of wrongful treatment at work, women being more likely to suffer from both relational aggression, like mobbing and gender based violence, like sexual harassment (e.g. Shallcross, Sheehan, 2008). When stating that gender based violence at the workplace is the most common form of internal negative behavior in public administration, we must take in consideration the fact that the aggressive behavior is a controversial concept and in Romania the jurisprudence is non-existent in this manner, but studies show that 5% of women are harassed (European Agency for Safety and Health at Work).

The multifaceted forms of violence challenge not only the international response, but the implementation of long term policies that can ensure the adoption of specific legislation and proactive strategies. These difficulties are well illustrated by the regime governing women empowerment and human rights. The feminist movement claims that not enough is being done in relation to the human rights of women hence we can explain the international organizations' attempts to achieve uniformity. Although still developing, gender violence is regulated in a series of international documents like: the Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) or the International Covenant on Civil and Political Rights. The European institutions seek to find a common position in this field as they are concerned by the victimization of vulnerable groups and has adopted a series of documents: the Recommendation R(2002) regarding women protection against violence, the European Council Directive no 76/207/EEC on the implementation of the principle of equal treatment for men and women as regards the access to employment, vocational training and promotion, and working conditions and the Directive 2000/78/EC of 27 November 2000 establishing a general framework for equal treatment in employment and occupation and protection of dignity.

In order to describe the forms of aggression at workplace, we must establish its rationale, ergo the power relationships in the group, which lead to the *negative attitude or clear intention of hurting the ones who occupy a weaker position in the group*. Therefore, the specialized literature states that there are several factors that determine the character of organizational violence, more precisely: group membership, status and power (e.g., Einarsen, Hoel, Zapf & Cooper, 2003).

The existence of a national definition and legislation against violence and/or harassment can be seen to express the state of awareness of these issues at national levels. All the definitions mentioned above are ambiguous. As mentioned above the jurisprudence in this field is non-existent mostly due to the fact the internal codes of conduct (e.g. Code of Conduct for Civil Servants) offer the solution of dismissal when the employee committed a serious or repeated disciplinary offence related to the labour discipline. The discipline committees can also stop the conflict and the appeal to justice is a final solution. A principal function of the justice system is to redress the harm another's careless or intentional actions has caused. But in labor regulations, the existence of a toxic work climate can cause the victim to suffer in silence. The pain and humiliation that one can perceive is inherently subjective, so individuals cannot control certain personal factors that influence their perception. Thus, the main concerns of the feminist movement are the fact the national courts will establish *in concreto* what can or can not be considered an abusive conduct at work. If the Romanian Criminal Code does not regulate mobbing, then the act is not considered a crime, like it is in the French law. Being considered an internal problem, when one is sanctioned a discipline committee or ethic commission establishes the facts. In the book "*Understanding workplace violence: a guide for managers and employees*", Michele Antoinette Paludi offers a strategy for dealing with sexual harassment:

“Avoidance: Employee attempts to avoid the situation by staying away from the harasser;
Assertion/Confrontation: Employee refuses sexual or social offers or verbally confronts the harasser;
Seeking Institutional/Organizational Relief: Employee reports the incident and files a complaint;
Social Support: Employee seeks the support of others to validate perceptions of the behavior;
Appeasement: Employee attempts to evade the harasser without confrontation, and attempts to placate the harasser” (Paludi (ed.), 2006).

A particular relevance to our paper is the effect of bullying among white collars, more exactly vis-à-vis job satisfaction, productivity/performance. Job satisfaction is well established as a key predictor of productivity and turnover in all employment settings (Sirota, Mischkind, & Meltzer, 2005) and can be an early warning of an invisible problem.

Due to the financial crises, the public sector faced the reduction of national expenditures that has led to an excessive workload for a specific group of workers in certain sectors like police, health and education (while others may be relatively inactive), as it has happened in Romanian public administration. Instead of achieving the good-governance model, public servants slowed down their performance, on one hand creating unjustified delays and public reprobation, and on the other fueling negative attitudes among their peers. Furthermore, what was before considered a job for life was now threatened by the reduction of personnel and competition between employees.

The endemic rudeness and incivility of which public servants are accused by media and the public can also be unintentional, generated by the general incivility that dominates the public administration. The institutional frame of administration reform did not transform the civil service in a transparent and participatory environment; in fact it had the opposite effect, establishing a “closed” authoritarian working environment, where people work in isolation, with mutual suspicion and defensive attitudes toward peers, which can threaten their job.

Like the concept of violence at the workplace, the national legal definitions of sexual harassment is greatly influenced by the way in which individual’s conceptualized sexual harassment. In order to fairly appreciate the circumstances, situations and contexts in which they may apply we will underline the prevalence of sexual component in white collars aggressive behavior as evidences by Robert Nye’s statement on the culturally constructed sexual attitudes, which influence behaviours and social expectations: “Within any society there is a correlation between gender systems and the sexual cultures that shape the behaviour and expectations of individuals who live within them. Sexual attitudes and practices (...) are constrained by the cultural and legal barriers that have historically protected gender hierarchies, gendered work, and gendered spaces from the threat of rapid change. Sexual discourses have always possessed the power to persuade us of the possibilities of pleasure or the dangers of transgression, but historically they have followed a master script dictated by the gender arrangements of society” (Nye, 2009).

Unlike other legal systems (United States), which defined sexual harassment as strongly being linked to the oppression and violence against women, the Romanian law framed it as a form of violence against sexual autonomy: art. 223 (1) The act of harassing a person by threat or coercion in order to obtain sexual satisfaction, committed by a person abusing his/her authority or influence provided by the office held at the workplace, shall be punished by imprisonment from 3 months to 2 years or by fine. This legal framing was preserved in the recent legal reform, suggesting that the rising awareness of values infringed by these acts were not taken in consideration by the Romanian legislator. In contrast, under the Romanian law, a male supervisor who fires a subordinate because she refuses to offer sexual favors with him has committed a penal misdemeanor punished by imprisonment from 3 months to 2 years or by fine. His action is not condemned as an instance of sex discrimination and the organization, that is responsible for implementing a safe work environment, is not held responsible (Zippel, (2006).

According to the Romanian Criminal Code, sexual harassment is similar to rape and is not used to assert men’s dominance over women and women’s subservience to men. The legal provisions for rape, sexual battery, exhibitionism and sexual harassment are collected under the 8th Chapter of the Penal Code, entitled Crimes against the sexual integrity. The concept of power and authority is also crucial, but unlike the French legislator, the public initiatives of introducing an amendment on art 223 for mobbing were not successful in Romania.

In the Romanian Labor Code, article 5 provides a clear regulation of the principle of equality between employees:

“1) Within the framework of work relations, the principle of the equality of treatment for all employees and employers shall apply.

(2) Any direct or indirect discrimination against an employee, based on criteria such as sex, sexual orientation, genetic characteristics, age, national origin, race, color of the skin, ethnic origin, religion, political options, social origin, disability, family conditions or responsibilities, union membership or activity, shall be prohibited.

(3) A direct discrimination shall be represented by actions and facts of exclusion, differentiation, restriction, or preference, based on one or several of the criteria stipulated under paragraph (2), the purpose or effect of which is the failure to grant, the restriction or rejection of the recognition, use, or exercise of the rights stipulated in the labor legislation.

(4) An indirect discrimination shall be represented by actions and facts apparently based on other criteria than those stipulated under paragraph (2), but which cause the effects of a direct discrimination to take place.”

The way in which the sexual harassment is understood and addressed has important consequences for gender equality, sexuality and the workplace, yet we know very little about why and how this problem has been conceptualized differently in European countries.

A great point is made by lobbying for transforming the sexual harassment in a form of interpersonal violence, rather than a form of sexual offence. International feminist activists have promoted an analysis of sexual harassment as a form of sex discrimination. In countries like France and the United States, key social actors, including feminists' non-profit organizations, lawyers and judges mobilized for a legal reform for sexual harassment legal provisions. In their actions, they encountered very different cultural constraints and resources, traditions and institutional networks that blocked the elaboration of a core protection against these acts (Zippel, (2006).

4. Conclusions

Through this paper we have tried to demonstrate that there are many types in with the complex and context-dependent the term “workplace violence “can be defined. Given the economical conditions that created a growing instability in the carrier of public servants, we must take into consideration that the fear of being let go is reiterated in the group, thus promoting exclusions and the growing recognition of differences (Zippel, (2006).

The question that puzzles the public managers is”do the dynamics of stereotyping men and women lead to workplace violence”? We think that recent studies have shown that not all work environments and scapegoating lead to an unaccepted conduct, because clear internal regulations and anti-violence provisions, the practice of managers and early intervention seem to be helpful in the defuse of dangerous situations. A focused leader should be committed to the development of knowledge and skills within his/her organization, particularly in terms of human resources coherence and technical resources. Thus, we believe that the leader must be committed in order to sustain the efforts of making clear policies and constructively manage these situations (Staiculescu, A.R., Grigoriu, C., Mina, S., 2010). By taking the example of a sexualized work environment, like the one existing in many public institutions, the manager or director is responsible for introducing several strategies in order to reduce the existing aggressive acts, by choosing formal and informal mechanisms like collegial decision-making processes, the implementation of a communication protocol in order to report any incident or clear guidelines of conduct (Shallcross, Sheehan, & Ramsay, 2008).

The possible solution is different when the perpetrator is the manager, because the imbalance between victim and bully can not change without an external intervention. Thus, the parties can try to mediate and diffuse their conflicts, or take active measures at the level of the department of human resources, and, in last instance, by addressing to justice (Paludi, Nydegger, Paludi, 2006). Another solution is to resort to arbitration, or to similar bodies, such as the office of the ombudsperson or the ethical committee. These entities are independent, neutral, confidential and informal resources for the institution and have the authority to handle conflict situations through fact finding, mediation and conciliation (Randall, 1997). Nevertheless, it is critical that all institutions subdue a re-engineering process of their management systems, and restore merit, professionalism and competences, in order to become value-based and result-oriented institutions with a non-toxic work climate. In order to

transform the civil service after the economical crisis, it is necessary to put an end to the destructive behaviors that flourished in this period.

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HUMAN RESOURCES MANAGEMENT EFFICIENCY IN THE MILITARY ORGANIZATION

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Abstract: *The effectiveness of resources available to an organization depends to an extent to a more effective use of human resources. From this point of view, people are not only very valuable or precious, but extremely expensive and becoming more expensive, requiring appropriate treatment and efficient use.*

The successful application of the human resources management implies a performance evaluation system, a system of employee incentives and results rewarding. This management system aims at the continuous cooperation of all employees in order to improve the quality of products and services offered by the company, its high performance and its objectives.

In this paper I will try to highlight the key ways of evaluating the effectiveness of human resources management and their application within the military organization and, last but not least, the effect they have on staff.

Key words: human resources, management, reward, employees, offered.

JEL Classification: M 12

1. HUMAN RESOURCES MANAGEMENT IN THE MILITARY ORGANIZATION

The military, through its structure, organization, activities, members, goals and objectives is an organization. As such, it constitutes a social system of the society in which it exists. In other words, the military is the social organization receiving from the society material, human, financial and information resources, manageable in full accordance with previously established goals and objectives. In this sense, a major role is granted to the defense resources management, in general, and human resources, in particular.

Detaching itself from general management, human resources management differentiated and automated, restricting its issue or subject matter and, consequently, has specialized, currently holding a well-defined place in general management.

Human resources management requires continuous improvement of activities of all employees to achieve organizational mission and objectives. Exercising that kind of management requires that each manager to be a model of behavioral attitude.

Human resources management possesses a number of features. The first one is of *quantitative order* in the sense that human resources meet a *finite number of people* who are members of a human group. A second feature concerns the human resources' *social character* from the military institution. A third defining feature of human resources is their *psychosocial character*. Basically, human resources from the military are found in the form of human groups, of different sizes with different compositions, both quantitatively and qualitatively, made up in strict accordance with the specific tasks of each military structure.

People represent “undoubtedly the most precious resource as well as the key to any company or organization” (Melamed and Jackson, 1995). Thus we deduce, naturally, that the functions and importance of human resources management are constantly expanding, and that policymakers need to apply the principle of placing the right man at the right time. In other words, people are “the most valuable asset of an organization” [1], a truth highlighted by the famous proverb “the man sanctifies the place”.

Unlike tangible or quantifiable resources such as money, materials and equipment, human resources are characterized by an intangible and unquantifiable side, because people play an important role in shaping the value of the organization, whether public or private, civil or military.

The human resources of a military organization consist of people - commissioned officers, non-commissioned officers and petty officers, military employees under contract, civilians - working

effectively and through their work ensuring the achievement of its objectives, highlighting the other resources and striving to use them rationally. In this context, human resources management represents all the activities promoted by the organization's leadership, at all hierarchical levels, to ensure optimal use of the available staff.

A coherent system of human resources management represents a necessity. This from a number of reasons, among which are the following:

- continuity of the activity specific to the military institution;
- relatively limited financial resources available for this purpose;
- complexity of the activity taking place in the military;
- different conditions in which military groups live, work and are required to act, in peacetime, during a crisis and at war;
- presence of the risk of injury or even death during combat missions;
- deprivation of certain civil rights (for example, to enlist in a political party, to be elected in public office).

The successful implementation of human resources management implies the existence of a performance evaluation system, of a system of incentives to employees and results rewarding. This management system aims at permanent cooperation of all employees to improve the quality of products and services offered by the company, the quality of its operation and its objectives.

2. PERFORMANCE EVALUATION, NECESSARY ACTIVITY IN THE ASSESSMENT PROCESS OF THE EFFICIENCY OF THE HUMAN RESOURCES MANAGEMENT

Performance evaluation can play an important role in fostering employee development: it strengthens their confidence, it can bring immediate material benefits by salary increases and awards, opens perspectives for promotion, clarifying certain career goals, enhances its ambition to raise his training level. As a tool that provides potential, human behavior and achievements assessment, performance evaluation aims at the optimal use of resources (Figure no. 1).

Also, performance evaluation is **a systematic and highly complex process**, which analyzes and assesses both the behavior work and performances of the members of an organization and the potential or its capacity to develop.

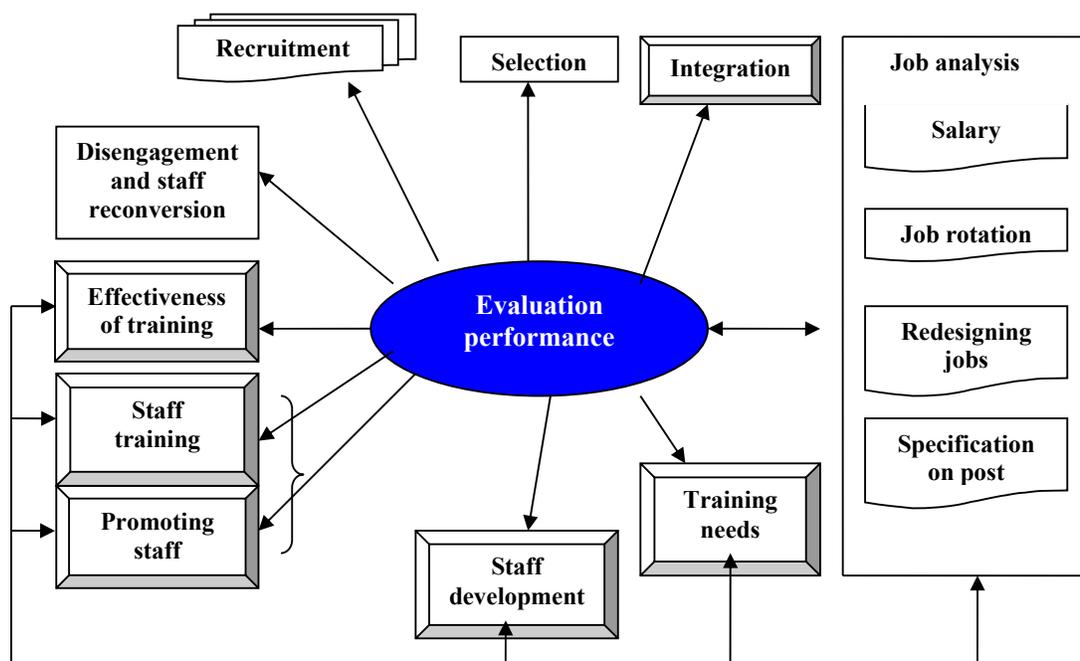


Figure no. 1. The role of the performance evaluation system [2]

Based on Figure no. 1, one can say that the role of performance evaluation is essential for an effective management of human resources, in the view of the many areas where this process is present. Assessment of human resources assumes the existence of criteria which can be used to measure the

standards which must be achievable, common and visible, and specifying the time intervals under evaluation. Since the evaluation of human resources “certain variables considered irrelevant are necessarily omitted” [3] one desires a time frame for observations, reflection and synthesis before the adoption of conclusions.

In general, performance evaluation respects the principle of hierarchy, meaning that individual performance will be measured by its direct superior, the performance of a subdivision by the next hierarchical level and the organizational performance by the top management.

The performance evaluation process is completed by providing ratings for employees who have undergone evaluation tests. Conventionally, five skill levels are allowed: very good, good and satisfactory (average), low and very low.

Performance evaluation is made on an ongoing basis by all managers in any organization. In military institutions the process includes all personnel, is conducted systematically and has an official character, trying a certain uniformity of assessment methods (by the existence of instructions). However, the analysis of the form used to assess military personnel (working assessment) does not conclude in a match between employee skills and job specifications, between activities and descriptions and it is quite difficult to direct individual efforts towards the needs of the organization.

In the military organization performance evaluation aims at highlighting the way in which a military fulfills his job duties and assignments in relation to professional military standards.

Issues to be taken into consideration are:

- Results in the performance of specific job requirements to which he belongs and of other duties / tasks all together, as well as results in the professional training in the analyzed period;
- Way in which he obtained those results, in terms of ensuring the necessary time and resources; obtained performance, compared to individual performance objectives and performance standards for all militaries evaluated. Also, each and everyone’s results and contribution will be identified in achieving the general objectives of the unit / subunit, as well as failures, shortcomings and needs to improve individual work performance in office.

A very important aspect to note is the successful completion of individual performance evaluation: weak performers always want the evaluation results to remain confidential, while outstanding performers wish that they be made public. Therefore the ones responsible for carrying out this type of activity must show tact in communicating the final results.

Performance of military personnel influences organizational performance itself. Management of military organization with the human resources department tries to obtain increased performance for employees through the various human resources activities. Thus, employee performance becomes a synthesis variable of human resources management efforts to ensure the right person at the right place and for the management organization to effectively use these people. Employee performance evaluation is used, therefore, to assess human resources management.

In addition to conducting assessments using other human resources management activities, they also serve to assess programs and policies undertaken by the Department of Human Resources for staff: training, job redesign, payroll systems, etc.

Methods and techniques of performance evaluation in work are numerous, and their evolution has been a continuous development. Also, these methods of evaluation in the organization consider both the assessments of managers on their subordinates and their self-assessments, and “colleagues and staff assessments and evaluation made by subordinates for managers” [4]. Thus, the evaluation processes would meet the expectations of the military institution and the imperatives of modern human resources management.

Our appreciation of people on the results obtained in different fields is sometimes done by endorsement and, sometimes, with the traditional grades of the school system or other grades.

When we are faced with choosing a method or technique for performance evaluation we must take into account the specific characteristics of the organization and its field of activity, the characteristics of the assessed person, the relevant dimensions of performance and specific goals pursued at individual, departmental and organizational level.

Theory and practice in human resources management highlights various attempts to **classify the methods and techniques for performance evaluation** [5] (Table no. 1).

Table no. 1.

ASSESSMENT METHODS	ASSESSMENT TECHNIQUES
Assessment scales	<ul style="list-style-type: none"> • graphic assessment scales • assessment scales with multiple steps • standardized scale • scale with points • assessment scales focused on behavior • behavioral observation scales
Comparative methods	<ul style="list-style-type: none"> • simple comparison or ranking • comparing the pairs • comparison through forced distribution

The management of organizations shows a growing interest towards the problem of employee performance. Performance of the organization is increasingly dependent on human resource mobilization. "In the new information society, human capital has replaced financial capital as a strategic resource" (Naisbitt and Aburdene).

3. HUMAN RESOURCES MANAGEMENT EFFICIENCY

Concepts circulated by human resources specialists develop year by year. We hear around us more and more often talks about EQ, NLP, EL, OB and many such abbreviations of very fashionable concepts: emotional intelligence, neuron-linguistic programming, experiential learning, and organizational behavior.

The human resources department could always return to the eternal problems still facing it: to justify if not your existence, then certainly your efficiency. Specifically, although the field of concerns of specialists in human resources has diversified, some old questions arising from the birth of the concept of human resources are still valid:

- How to measure the effectiveness of a human resource department?
- Can one measure the impact that human resources, both as a department and as integrality of people enrolled in the organization has on the organization?

While no one expects that the human resources department to produce money, it being eminently one of the departments that provide support to an organization, there is an increasing pressure to justify its existence by enhancing human capital. Human capital is also the most dynamic element of the organization; the staff may suddenly increase, employee motivation may vary, individual performance may show dramatic changes. As it is now clear that a computer will not become a server next year and then an entire network, so obvious is that a performing employee may increase even at this rate, investing in him being extremely profitable!

That is what human resources efficiency means: measurement, evaluation, comparison and improvement of indicators related to the management of the organization's human resources, in order to create its global development premises.

The principle of efficiency refers to the comparison of system inputs with outputs, or of results obtained by the system. In the case of organizations, inputs are the resources employed by them in their work (productive or not), and the outputs are the products / services obtained. Efficiency follows obtaining superior outputs in comparison to the inputs. Efficiency enhancement refers to maximizing outputs while minimizing inputs. Organizations will thus act on both factors involved: outputs and inputs.

In evaluating the effectiveness of human resources management we can stop only on the level of human resources management outcomes and assess effectiveness at this level. This assessment is the most common and easier. Even in organizations where there isn't a concern for formal evaluation of human resources management, one will always appreciate the results of this field, in terms of employment outcomes (within performance evaluation of employees) and of problems related to it.

The general management of the organization will appreciate that human resource management is inadequate when there are labor disputes, when staff resigns and leaves the organization, when it is difficult to recruit required staff, when employee performance and engagement at employment are weak, when between the existing staff and the necessary one there is a clear discrepancy in professional training.

On the other hand, when the climate at work is agreed both by the management and employees, the human resource is well motivated and involved in achieving the work assigned, when no major conflicts between employees and management exist, when the organization has the required human resource in number and quality and has no trouble maintaining it in the organization and attracting it for recruitment / selection / employment, human resources management is considered good.

These evaluations are common sense, which does not diminish their value. They are fair and justified, because they highlight the human resources management objectives and support for the strategic and efficiency objectives of the organization. These evaluations exist informally in all organizations, whatever the form of the personnel activity and the dimensions of the department. However, it is desirable that the assessment of human resources management is made in a formal and structured way, while ensuring its diagnosis. Early identification of deficiencies of human resources management will enable the organization to correct and eliminate many problems in the staff field.

Human resources management can be assessed through the objectives and results proposed and through the accomplishment of these objectives / results. Human resources management aims to meet the needs of the organization on labor. Human resources management is not limited only to managing the existing human resource at a specific time. It aims to develop human resources strategies to meet the organization's strategies:

- improving the quality of human resources, recruitment and training activities;
- maintaining or changing organizational behavior and organizational culture;
- stimulating long-term and short term labor so as to involve employees in achieving objectives;
- ensuring job satisfaction and stimulation of the creativity of employees.

Efficiency is the basic criterion for evaluation and management of an organization. But effective use of resources depends in an increasingly manner on effective use of human resources and increased employee performance.

Organizations generally expect two things from their staff: participation and effectiveness. The objective of participation is provided by the equity of the human resources management. The objective of participation is about ensuring staffing by hiring and keeping people within the organization. The second major objective, labor efficiency, refers to the ability to perform the required work by the organization. The two objectives are closely interdependent. As employees remain longer in a job, their experience grows and they become more able to perform job tasks. As they become more capable at work, their satisfaction and probability to keep the job increase.

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MANAGING CORPORATE SOCIAL RESPONSIBILITY IN FINANCIAL CRISIS

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Abstract: *The aim of the paper is to examine the effects of periods of crisis on Corporate Social Responsibility (CSR) practices. In order to make correct assessments, this material seeks firstly to examine the literature review related to various hypotheses in respect of companies affected by financial crisis, which operate through social actions addressed to different stakeholders. Moreover, this paper focuses on presenting and commenting a model prescribing that the reactions of CSR practices against the crisis change depending on the view of crisis events (i.e. whether are considered threats or opportunities).*

Key words: Corporate Social Responsibility, Financial crisis, Crisis Management

JEL classification: M14

1. Introduction

The financial crisis and CSR are issues which have very much attracted in both academic and non-academic areas, as reflected through an increased number of studies developed to these topics.

After the beginning of the financial crisis of 2008, various companies pursued cuts and savings strategies. Their objective was to minimize their expenses and to maintain their existence. Corporate social responsibility (CSR) activities were also influenced by these strategies exercised by enterprises due to the crisis. As a result, CSR projects started to be diminished.

However, other companies considered their strategy in respect of not affecting CSR projects. Their wish was to establish and to develop business positions on the markets thorough the financial crisis and post-crisis.

The main purpose of the paper is to identify companies' reactions in case of CSR projects and, subsequently, directions of CSR strategies in the period of crisis. This paper seeks firstly to examine the literature review in case of both events together: CSR and financial crisis.

Moreover, specific comments will consider the model developed by Yelkikalan and Kose (2012), which created the link between CSR and financial crisis by assessing together two different concepts: the savings reactions of individuals and companies due to crisis and the strategies of businesses continuing and developing CSR even in times of crisis.

2. Financial crisis and corporate social responsibility

Financial crisis and CSR – these two concepts together are important to be assessed within the framework of nowadays economic downturn. Many ideas, different samples, various conferences, great studies and important economic experts have tried together to join specific expertise in order to find a credible answer in respect of how CSR actions were affected by financial crisis.

The financial crisis brought worldwide issues to companies, especially due to lack of liquidity. Therefore, CSR projects, as additional costs to business financially in the period of financial crisis, seemed to be deeply analyzed by the companies' representatives.

As a result, following the last years' economic worldwide situation, some of the specialists tried to identify a clear link between financial crisis and corporate social responsibility (CSR). For example, Fernández and Souto (2009) investigate the results of the economic and financial crisis on CSR. They believe that both managers and stockholders are affected by the economic recession and it was difficult to identify a straight line in respect of the relationship between CSR and business economic performance. For many of the companies, CSR represent additional financial cost for the social initiatives. Moreover, by taking into account that a precise set of CSR framework is not to be known, seven issues were highlighted for CSR implementation in period of crisis: innovation, comfortable atmosphere, stakeholders' role, business strategy, market attitude, investor confidence and deep internal reflection. The problem of CSR implementation may be represented by the costs attached to this implementation.

Njoroge (2009) examines the relation between current financial crisis and Kenyan multinational companies, as well as the effects of multinational companies in social projects and labor standards.

The methodology of the research used consisted in a telephone interview survey and analysis of Covalence database. Njoroge's results were in the sense that economic downturn has no severe effect on labor standards while it has a negative effect on funding and implementing social projects.

Karaibrahimoglu (2010) observed CSR performance for 2007 (period before the financial crisis) and for 2008 (period of crisis especially in US markets). Methodology of the research consisted in a sample, based on Fortune 500 where 100 companies were randomly selected. The investigation of CSR performance was performed within content analysis of annual non-financial reports. Twenty nine indicators were investigated for estimating CSR performance and were classified into five stakeholders' areas for estimating CSR performance: employee, consumer, government, supplier and society. The presence of information for each of the indicators in CSR reports was scored with 1 and the absence of relative information with 0. Results of the research show that companies decrease CSR projects because of a financial downturn. In order correctly position the decreases of CSR project, USA was in top comparing to other European and non-European countries.

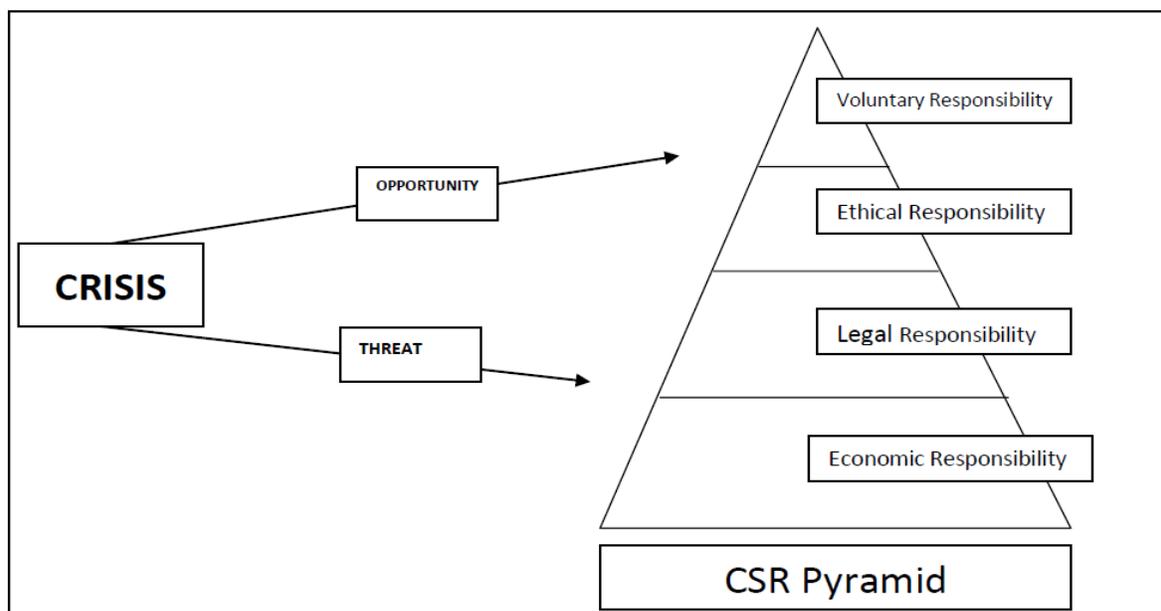
Arevalo and Aravind (2010) investigate the impact of financial crisis to CSR by considering a part of the US companies (i.e. 271) that adopt the principles of United Nations Global Compact (UNGC). The results of the study were that in some cases CSR was considered as a starting point for improving business operation. Companies that integrate UNGC principles with lesser conformity were to be affected more by the financial downturn while companies that adopt a proactive policy concerning UNGC were affected less. Within the analysis tool of CEO statements, there were main six CSR priorities highlighted in time of crisis: building strong leadership teams, applying innovation to solve the most complex global problems, forming partnerships with NGOs, maintaining core commitment to global citizenship, engaging in global dialogue on human rights and joining global discussions on climate change.

All these studies cannot bring a clear and solid opinion on examining the effects of the crisis related to CSR. On one side, authors that studied this issue have determined that the financial problems brought by the crisis decreased the budget allocated to CSR activities and, as a result, had a negative effect on the CSR actions. On the other hand, other opinions were that being engaged in CSR activities is a good method for applying the opportunities brought by the crisis due to the positive effects of CSR activities and businesses and, subsequently, they considered CSR as a part of the crisis environment. In fact, all these opinions were exploring different directions and no real guidance was to be obtained after a literature review.

3. CSR and financial crisis: a win-win situation for companies and stakeholders

Yelkikalan&Kose (2012) have recently developed a model in which they tried to explain the effects of the crisis on CSR in different directions, by using Carroll's CSR pyramid. The main arguments of the model were that the reactions of CSR practices against the crisis change depending on the location of these practices in different dimensions of the CSR pyramid.

Figure 1: CSR affected by financial crisis



Source: Yelkikalan&Kose (2012)

According to this model, there would be two major propositions that should be addressed:

- a) *“Proposition 1: The Crisis poses a threat to the responsibility dimensions located at the base of the CSR pyramid” and*
- b) *“Proposition 2: The crisis poses an opportunity for the responsibility dimensions located at the top of the CSR pyramid.”*

In order to review the model, specific comments will be presented in accordance with each of the above propositions:

a) On one hand, the authors make a reference to A. H. Maslow human needs grouped in his "Hierarchy of Needs" theory (Maslow, 1943: 370-396). They make the assumptions that lower needs in case of individuals are also similar for companies. According to this, they consider that if economic crisis bring a threat in itself, then businesses would focus on managing actions for survival. The results of previous years' crisis were: uncertainty, financing difficulties, and decline in production levels and, of course, reducing staff.

This first proposition tends to suggest that businesses made cuts to survive against the threats posed by the crisis, in order for companies to secure their first dimensions from Carroll CSR Pyramid. Moreover, it is believed that even the fact of keeping the business on-going could be seen as CSR for all the stakeholders. The size of the threat in relation with the crisis on the responsibility dimensions located at the bottom of the CSR pyramid is in parallel with the enterprise's rate of being affected by the crisis.

It is also believed that measures of the companies affected by the crisis were different from entity to entity, from sector to sector and, consequently, there would be differences in post-crisis CSR activities of the businesses in the sectors that have been the most affected by the crisis and the change for the businesses in sectors that have been less affected by the crisis.

b) On the other hand, it is believed that economic crisis after the 2008 financial crisis has also led to certain social problems. Social problems are referring to cut of jobs. In this context, it is believed that companies (i.e. especially large companies) tended to freeze their number of employees and, why not, to hire more stuff. It is practically a different situation compared to proposition 1. In this case, businesses desire to make use of the opportunities in the crisis and, as a result, want to put CSR activities at the forefront in the crisis periods since it makes positive contributions to the society and the corporate reputation of the businesses. CSR may be positively affected by using the crisis opportunity by transforming the fundamental values of the business into an advantageous position.

The authors make a reference also to Iwacewicz-Orlowska and their opinion about positive correlation between CSR and long-term company performance. In times of crisis, CSR will both allow a better risk management and strengthen the sense of confidence in the companies that would be required for performing the activities to be needed in the course of the crisis. (Iwacewicz-Orlowska, 2010). Due to reasons as such, especially large-scale and / or global businesses have chosen to maintain their

effective and active CSR practices they have been continuing for many years in the crisis period as well.

It is also reflected the companies' scale importance in front of the financial crisis. It is well known that huge MNCs are to be easily put in situation to fire personnel comparing to lower companies, which are interested to maintain and to conserve good relationship with their employees.

Proposition 2 of the model is also sustained by a study carried out by Giannarakis and Theotokas in 2011. The Greek authors have used Global Report Initiatives (GRI) in order to assess the impact of financial crisis on the performance of CSR. They conducted a study on 112 large companies for the period covering 2007-2010. According to this study, CSR performance increased in 2007 and 2008. The reason for this increase was suggested to be the businesses' aims for maintaining their brand value and previous gained assets.

Other argument used by Yelkikalan&Kose in order to sustain the use of opportunity during the crisis in respect of CSR actions is related to an increased number of organizations engaged in CSR ratings in recent years and the importance of these ratings.

Moreover, another study resulted in positive and significant correlation between different variables, which did not change in the pre-crisis and post-crisis periods (Selvi, Wagner and Turel, 2010: 285).

The study analysed above is relevant on both sides. Practically, even if negative and positive effects on CSR actions are presented, definitely the overall result may be seen as a fair attitude of companies faced with financial crisis. Many may argue that cost savings strategies were a method of CSR for companies, in order to avoid the disaster: bankruptcy. Others may argue that taking in front the crisis opportunity by developing CSR actions may result in good financial outcomes and a quick exit from financial crisis. There might be also specialists to consider the vice-versa of the situations and, why not, a mixed situation.

In all potential cases, Yelkikalan and Kose were cautioned and correct to present Carroll's CSR pyramid (derived from Maslow pyramid of needs) - related to the opportunities and threats of financial crisis, in respect of influences regarding CSR actions. The result of the study is that either strategy adopted by a company during the financial crisis in respect of CSR policy may be covered and explained by this model.

4. Conclusions

During the last decades, CSR has been dramatically increased, mostly in developed economies. This paper's objective was to examine the effects of periods of crisis on CSR practices. Initially, introspection through literature was accomplished, in order to assess a potential link between financial crisis and its effects on CSR. The results of the literature review were controversial, as the experts concluded differently: some of them considered that no precise link can be defined as financial crisis and CSR are two different concepts, while others considered both positive and negative reactions of financial crisis to CSR.

This study aimed to present, review and comment also on a very recent study carried out by Yelkikalan and Kose, from Canakkale Onsekiz Mart University from Turkey. Their research consisted firstly in establishing a parallelism between Carroll's CSR pyramid and Maslow's pyramid of hierarchy of needs and reflected on the necessity to consider primarily the needs/activities that are located at the bottom of the pyramid in times of crisis (threat component of the model).

Furthermore, it was presented the view of CSR activities, as a great tool for making use of the opportunities in the environment generated due to the crisis and indicated good results for "businesses adopting CSR concept and executing it at the level of philanthropy with a sense of continuity carried on their CSR activities without interruption in times of crisis" (opportunity component of the model).

By taking into consideration these components of the model (threat and opportunity), it should be concluded that different answers can be given to the "what is the direction of the impact of crisis on CSR activities?" question. The model presented in this study states that crisis encounters various effects on different levels of CSR and presents a different perspective for answering the question from above.

The conclusion of the model would be that business equilibrium must be applied in order to correctly develop CSR strategies during the financial crisis. It would be indicated that business responsible persons to perceive the crisis as a threat to their economic activities and take precautions on costs and, subsequently, on CSR programmes. At the same time, the business responsible persons

should continue to act responsible (i.e. through CSR activities) at least at a lower level (e.g. philanthropy) without interruption in times of crisis.

The strategy of perceiving the crisis both as opportunity and threat (i.e. related also to CSR activities) would help companies to continue their business in financial crisis and would assure their long-term profitability of the business.

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CRISIS AND CRISIS MANAGEMENT. CREATIVE ECONOMY AS A FEASIBLE OPTION. CHALLENGES AND OPPORTUNITIES

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Abstract: *We have chosen to write about the global economic crisis because it is the main cause of many unpleasant things happening across the world. People lose their jobs, salaries are diminished, the life standard is decreased, while companies are facing financial distress. This paper analyzes the effects of the crisis on the international markets and the potential impact of crisis on Romania's economy. The crisis management and the measures that might be taken in order to decrease the negative impact of the crisis will be an important aspect within this study.*

Key words: crisis, crisis management, creative economy.

JEL classification: D83, M12, A2.

1. Introduction

Crisis can strike in every economy and organization. It is important to have a detailed plan of action for every type of crisis that may occur. However, such a plan can make or break an organization in times of a crisis (Pheng, Ho & Ann, 1997). It is not a question of *'if'* an organization will face a crisis; it is a question of *'where'* and *'when'* the crisis will occur. Despite if it is an earthquake, a disaster or a strike, the crisis might hit the nations/regions and/or organization with full force. All that matters for the organization is how well prepared they are to handle it (Kash & Darling, 1998). A crisis is a high consequence, low probability action that strikes an organization, and has the potential power to threaten the entire business. A crisis endangers the entire public sense of values, safety and correctness (Alas, Gao & Vanhala, 2010; Hale, 1997; Pearson & Clair, 1998).

Due to all kind of crisis that humanity faces nowadays, crisis management has become one of the most controversial and advertized subjects. Crisis can have disastrous consequences upon us as individuals, state, economy and even at a planetary scale. Not to mention some critic examples that put humanity upside down: 2012 and 2004-Indian Ocean Earthquake, 11 March 2011 Earthquake in Japan, Chernobyl disaster, Rainbow/PUSH's (People United to Serve Humanity) boycott of Nike 1982 Chicago Tylenol murders, Dow Corning's silicone-gel breast implant and so on (Suciu, M. C, 2010), the 2008 financial crisis that we still resent today.

2. Brief literature review. Conceptual framework

The word *'crisis'* originates from the Greek word *'krisis'*-translated into English it would be similar to *'decision'* or *'choice'* (Paraskevas, 2006). Often, there are many solutions to situations where *'choice'* and *'decision'* are involved. So crisis includes both the idea of the *"problem"* and that of the *"solution to the problem"* seen as an opportunity to change something. A trade-off between important options often eases the situation and strategic plans are often utterly crucial for the organization to posses (Cutlip, Center & Broom, 2006).

The definition of crisis today deals with three elements: (a) a threat to the organization, (b) the element of surprise, and (c) a short decision time (Seeger, Sellnow & Ulmer, 1998). Venette (2003) argues that *"crisis is a process of transformation where the old system can no longer be maintained."* Therefore the fourth defining quality is *the need for change*. If change is not needed, the event could more accurately be described as a failure or incident, not necessary as a crisis.

Crisis has several defining characteristics. Seeger, Sellnow and Ulmer (1998) say that crises have four defining characteristics that are "*specific, unexpected, and non-routine events or series of events that [create] high levels of uncertainty and threat or perceived threat to an organization's high priority goals.*" Thus the first three characteristics are that the event is unexpected (i.e., a surprise), it creates uncertainty and is seen as a threat to important goals. Apart from natural crises that are inherently unpredictable (volcanic eruptions, tsunami etc.) most of the crises that we face are created by man. Hence the requirement of their being 'unexpected' depends upon man failing to note the onset of crisis conditions. Some of our inability to recognize crises before they become dangerous is due to denial and other psychological responses that provide protection for our emotions.

Where states are concerned, Michael Brecher, based on case studies of *the International Crisis Behavior (ICB) project*, suggested a different way of defining crisis as conditions are perceptions held by the highest level decision-makers of the actor concerned: threat to basic values, with a simultaneous or subsequent; high probability of involvement in military hostilities, and the awareness of finite time for response to the external value threat.

Crisis management is the process by which an organization deals with a major event that threatens to harm the organization, its stakeholders, or the general public. In contrast to risk management which involves assessing potential threats and finding the best ways to avoid those threats, crisis management involves dealing with threats after they have occurred. It is a discipline within the broader context of management consisting of skills and techniques required to identify, assess, understand, and cope with a serious situation, especially from the moment it first occurs to the point that recovery procedures start. Darling (1994) clarifies that crisis management is not equal to mismanagement, i.e. crisis type situations that occur due to inadequate or inappropriate planning or the complete lack of it. Therefore, as Chong (2004) concluded, crisis management serves as a crucial part of modern strategic management. It should be at the utmost importance that to secure an organization's existence before it can devote its efforts towards growth oriented objectives. According to Eliasson and Kreuter, the term crisis management can vary a lot between countries and even between organizations (in Khodarahmi, 2009). This is due to the level of dynamic that exists in different situations in different parts of the world. Crisis management in its essence is providing organizations with an organized response to crisis situations. Darling and Kash (1998) also define crisis management as 'a series of functions or processes to identify study and forecast crisis issues'.

In order to have a fully understanding of the concept, we will analyze what are the crisis' stages, events and several crisis classifications.

According to Fink, successful crisis planning removes much of the threat and uncertainty in potential future crisis, and allows for more control, should a crisis appear (in Paraskevas, 2006). More than 25 years ago, Fink stated that a crisis can consist of up to four different stages: (1) prodromal crisis stage; (2) acute crisis stage; (3) chronic crisis stage and (4) crisis resolution stage, and that any crisis can be described as being in any of the four stages. It is important to identify early warning signals for the crisis, even though it might be hard to recognize them, especially in a prodromal state. A crisis may even be apparent to an organization, yet no action is taken to prevent it. Once the organization has passed the initial stage, the crisis will start causing harm depending on the degree of effectiveness of the company. The third stage is the 'clean up' stage, when the organization tries to retrieve from the crisis, learn from its mistakes and achievements. In the final stage, the organization goes back to normality, and resumes with its business as usual (Paraskevas, 2006). When an organization is facing a potential crisis event, it is utterly important to identify all the potential problems that could harm it. Mitroff developed seven types of major crisis events (in Polland & Hotho, 2006):

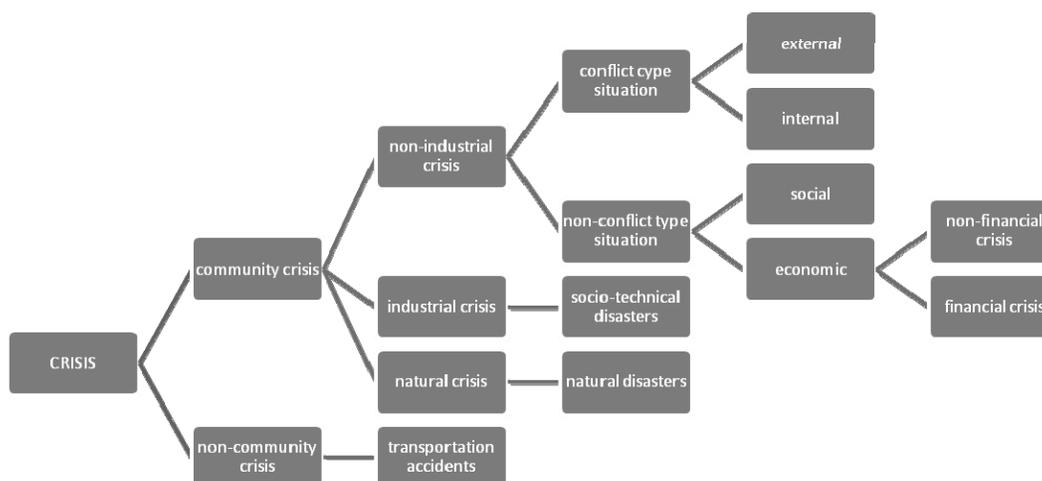
- *Economic*. Includes crisis such as labor strike, market crash and hostile takeovers.
- *Informational*. Loss of crucial information, false information.
- *Physical*. Breakdown of plants, product failures.
- *Human resource*. Rise in absenteeism and accidents, violence, corruption.
- *Reputational*. False rumors, gossip.
- *Psychopathic acts*. Terrorism, kidnapping, hostage taking, violence.
- *Natural disasters*. Tsunamis, hurricanes, flood.

Crisis management evaluates all the relevant factors, and affirms their level of risk and the amount of attention they need. A noticeable point is that the management is able to control some of the

factors above. However, the majority of the factors is outside the control or influence of the organization, and needs to be discussed from a broader perspective. If the starting point is not clearly defined, the approach to the factors requires a process of rationalization. This method might be risky, since it creates an illusion of control, when it, in real life, does not exist. Up to a certain point, the literature encourages denial or blindness of the crisis, when the opposite is preferred. This denial has been identified as one of the largest barriers to effective crisis planning (Pollard & Hotho, 2006).

There are many types of crises. To get an easier understanding of how each of the crises function, types of crisis will be examined in the figure 1 Crisis types The first distinction is between community crisis and non-community crisis. A community crisis splits up into several subcategories, such as natural crisis, industrial crisis and non-industrial crisis. A natural crisis is the result of a disaster in nature e.g. earthquakes, flooding, tsunamis and volcano’s eruptions. An industrial crisis is the result of socio-technical disasters, such as rail crash, product recall, stadium fires and computer problems. The non-industrial crisis includes political conflicts and non-conflict crisis. The non-industrial crisis splits up into two different sub-categories, conflict type situation and non-conflict types of crisis. As shown in the figure below, Shaluf, Ahmadun & Aini developed a complex framework for crises typology (Shaluf, Ahmadun & Aini, 2003). The first category is divided into two genres, internal and external. The external genre includes crisis such as war, threats, relation breakdown, embargoes and blockades. The internal genre includes crisis such as political crisis, internal conflicts, terrorists attacks, strikes, sabotage, riots and executive kidnapping. The non-conflict types of crisis narrows down to economic crisis and social crisis. Events such as the East-Asia financial crisis are considered to be financial crisis. Events like the UK’s food-and-mouth crisis are classified as non financial crisis. Social crisis includes the following events: false rumors, on-site sabotage, blackmail, bribery, price fixing and racism (Shaluf, Ahmadun & Aini, 2003).

Figure 1: Crisis types



Source: Shaluf, I.M., Ahmadun F. Said, Aini, M. S., (2003)

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The economic crisis began as a financial crisis in the fall of 2008. At that time the American financial system broke. This shock has accelerated the transition of recession in the USA – which had lasted the whole of 2008 after starting with the mortgage crisis there in August 2007 – into a world recession. We can not point exactly the moment the financial crisis began, but the bankruptcy of Lehman Brothers on September 15, 2008 is a good starting point.

The bank has made loans to people with little support, making these kinds of loans very risky. When the interest rates rose, the borrowers could no more repay Lehman. This led to huge losses for Lehman Brothers (\$60 billion loss in bad real estate loans-Blue R., White J., 2009). More than that, the poor relations with top banks of United States, which refused to help the bank, has made Lehman declare bankruptcy as its only alternative. This type of crisis has never happened before. The recession

has a component of financial crisis preceded by a reduction of real industrial production. The complex combination of a fusion of the major elements of the credit system of the USA, distribution, stockbroker, a bank and credit crisis worldwide with the obvious cyclic content makes it a systemic crisis. This concept does not so much mean the scale and depth of shocks, but how far it specifies subsequent systemic changes in the economy, its cyclic model, financial sector and financial regulation, and, possibly, general rules of business functioning in the sphere of corporate control. Other characteristics of the crisis are (Congleton R. D., 2009): high speed of curtailment of production and world trade; growth of unemployment; the overall squeeze are continuing and are accompanied by a loss of trust in the economic agents of financial regulators.

The crisis which has begun in 2008 seems to start in the American financial sector. The crisis has then quickly expanded on a worldwide scale, especially through some industries such as retail trade, auto industry and industrial equipment. In turn, demand and prices for raw materials, especially metals and fuel. Practically identical branches are affected worldwide: construction, metallurgy, building materials, real estate and retail trade (Krugman P. R., 2009). The synchronism of the crisis throughout countries, the speed of distribution of information and the decrease in orders and deliveries are not letting up, as was earlier the case in any area which “*buys instead of sells*” by inertia or ignorance, and most importantly due to isolation. Reduction in demand and the spreading of the crisis is advancing in similar ways across the main regions of the world. It is possible to say that a systemic failure has occurred in all bodies of supervision, analysis and control of the financial markets. The essence of the problem consists of the inability of institutions and markets to estimate adequately a set of risks. It has turned out that they can only track partial risks, but do not see systemic threats. It is already clear that together with the crisis in financial regulation it is possible to settle also a crisis in trust in financial regulators in the wide sense of the word.

What has begun as a financial crisis has transformed in a global economic crisis, increasingly influencing the real sector all over the world, starting a dangerous mechanism. The crisis has self-developed through the transfer of a reduction in demand in industries via foreign trade. In a few months after the collapse of stock exchanges, the bubble of prices for metals and building materials throughout the world burst (Congleton R. D., 2009, p. 38). A worldwide reduction of orders and spending on capital investments began.

3. Models and theories associated with crisis management

Successfully defusing a crisis requires an understanding of how to handle a crisis before they occur. Gonzalez-Herrero and Pratt found the different phases of Crisis Management. There are three phases in any Crisis Management as below:

- *The diagnosis of the impending trouble or the danger signals.*
- *Choosing appropriate Turnaround Strategy.*
- *Implementation of the change process and its monitoring.*

Crisis management planning

No corporation looks forward to facing a situation that causes a significant disruption to their business, especially one that stimulates extensive media coverage. Crisis management planning deals with providing the best response to a crisis.

Contingency planning

Preparing contingency plans in advance, as part of a crisis management plan, is the first step to ensuring an organization is appropriately prepared for a crisis. Crisis management teams can rehearse a crisis plan by developing a simulated scenario to use as a drill. The plan should clearly stipulate that the only people to speak publicly about the crisis are the designated persons, such as the company spokesperson or crisis team members. The first hours after a crisis breaks are the most crucial. Working with efficiency is important, and the plan should indicate how quickly each function should be performed. When preparing to offer a statement externally as well as internally, information should be accurate.

Providing incorrect or manipulated information has a tendency to backfire and will greatly exacerbate the situation. The contingency plan should contain information and guidance that will help decision makers to consider not only the short-term consequences, but the long-term effects of every decision.

Business continuity planning

When a crisis will undoubtedly cause a significant disruption to an organization, a business continuity plan can help minimize it. First, one must identify the critical functions and processes that are necessary to keep the organization running. Then each critical function and or/process must have its own contingency plan in the event that one of the functions/processes ceases or fails. Testing these contingency plans by rehearsing the required actions in a simulation will allow for all involved to become more sensitive and aware of the possibility of a crisis. As a result, in the event of an actual crisis, the team members will act more quickly and effectively.

Structural-functional systems theory

Providing information to an organization in a time of crisis is critical to effective crisis management. Structural-functional systems theory addresses the intricacies of information networks and levels of command making up organizational communication. The structural-functional theory identifies information flow in organizations as "networks" made up of members and "links". Information in organizations flow in patterns called networks.

Diffusion of innovation theory

Another theory that can be applied to the sharing of information is Diffusion of Innovation Theory. Developed by Everett Rogers, the theory describes how innovation is disseminated and communicated through certain channels over a period of time. Diffusion of innovation in communication occurs when an individual communicates a new idea to one or several others. At its most elementary form, the process involves: (1) an innovation, (2) an individual or other unit of adoption that has knowledge of or experience with using the innovation, (3) another individual or other unit that does not yet have knowledge of the innovation, and (4) a communication channel connecting the two units. A communication channel is the means by which messages get from one individual to another.

Role of apologies in crisis management

There has been debate about the role of apologies in crisis management, and some argue that apology opens an organization up for possible legal consequences. However some evidence indicates that compensation and sympathy, two less expensive strategies, are as effective as an apology in shaping people's perceptions of the organization taking responsibility for the crisis because these strategies focus on the victims' needs. The sympathy response expresses concern for victims while compensation offers victims something to offset the suffering.

Crisis leadership

James identifies six leadership competencies which facilitate organizational restructuring during and after a crisis.

- *Building an environment of trust*
- *Reforming the organization's mindset*
- *Identifying obvious and obscure vulnerabilities of the organization*
- *Making wise and rapid decisions as well as taking courageous action*
- *Learning from crisis to effect change.*

Crisis leadership research concludes that leadership action in crisis reflects the competency of an organization, because the test of crisis demonstrates how well the institution's leadership structure serves the organization's goals and withstands crisis. Developing effective human resources is vital when building organizational capabilities through crisis management executive leadership.

Unequal human capital theory

James postulates that organizational crisis can result from discrimination lawsuits. James's theory of unequal human capital and social position derives from economic theories of human & social capital.

These theories consider that minority employees receive fewer organizational rewards than those with access to executive management. In a recent study of managers in a *Fortune* 500 company, race was found to be a predictor of promotion opportunity or lack thereof. Thus, discrimination lawsuits can invite negative stakeholder reaction, damage the company's reputation, and threaten corporate survival.

4. Crisis management. Best practice approach

4.1. Best Practice guide - macroeconomic approach

A new development paradigm is emerging that links the economy and culture, embracing economic, cultural, technological and social aspects of development at both the macro and micro

levels. Central to the new paradigm is the fact that creativity, knowledge and access to information are increasingly recognized as powerful engines driving economic growth and promoting development in a globalizing world. In a world of scarcity and uncertainty where economic, political and fiscal policies showed that failure can appear in no matter of the size and power of the specific state or continent, new and innovative solutions are taken into account.

A transformation to a knowledge-or *idea-driven creative economy* is desirable, the current financial and economic maelstrom has accentuated its importance.

The combination of this transformation and the current economic uncertainty is leading to struggles and difficulties for many states, but it also opens great opportunities for each and every one of them. In crises like these, nations, regions, provinces, and states can rapidly change ground; they can improve or lose position, depending on the actions they take. Now is the time for us, the Romanians to take bold actions to ensure our future prosperity.

As in all times of economic crisis, there is considerable pressure on governments to protect the past and to undertake bailouts – to preserve what we have during this time of uncertainty. But this protective approach can only forestall the inevitable. *Martin Prosperity Institute*, in the research *Ontario's Opportunities in the Creative Age* suggested that there is a better way: investing in people, businesses, institutions, and infrastructure. Productive and future-oriented investment will generate prosperity for the long term.

There is no greater resource than the creativity, innovativeness, and productive talents of people. The goal must be to harness and use full creative talents, to grow the businesses and industries of the future, to use openness, tolerance, and diversity to gain economic advantage, and to invest in the infrastructure of the future in ways that enable more innovation and economic growth. Romania can and must take a high-road strategy for economic prosperity in which all Romanians can participate. We owe it to ourselves and future generations to build a vibrant economy for the creative age.

The current economic transformation is as big and as challenging as the transformation from agriculture to industry. Our economy is shifting away from jobs based largely on physical skills or repetitive tasks to ones that require analytical skills and judgment. This shift is also evident in the long-term trend away from employment in goods-producing to service industries, from occupations that depended on physical work to ones that rely on creativity. Competitive advantage and prosperity will go to those regions that can best prepare themselves and adapt to this long-run trend. We must embrace it and act in ways that create a distinctive advantage for the region and ensure our long-term prosperity (Roger Martin, Richard Florida, 2009). In doing so, we must recognize that our current economic transformation – like others before it – not only generates considerable future opportunity, but also considerable inequality. Certain industries have expanded and certain occupations have seen their wages grow considerably, while others have languished, stagnated, or declined. Greater returns have gone to innovative industries, to more highly educated people, to those in creative occupations, and to urban areas. Our world is becoming increasingly spiky, with peaks that help to drive economic growth and valleys that are languishing. Our aim is not to lop off the peaks, but to raise the valleys. Our forebears did that in the industrial age by ensuring that manufacturing work was productive, well-paid, safe, and secure and by developing an infrastructure that helped grow industries and brought everything from better transportation to better housing. We can do it again in this economic transformation, by developing a distinctive advantage in highly innovative creative industries, by bolstering the productivity of our competitive manufacturing industries, by transforming and improving productivity and wages in our growing service industries, by establishing a new social safety net system.

There is also necessary to develop a twenty-first century infrastructure that strengthens our urban centers and mega-regions while connecting older industrial centers and rural areas – giving us the scale and speed to compete globally (Roger Martin, Richard Florida, 2009).

Businesses need to develop and invest in strategies that build on a jurisdiction's advantages and to invest in strengthening those advantages through training, capital investments, and other strategic initiatives. Businesses should make these choices for their own benefit, not in response to government directives. For individuals, it means investing in their own capabilities and skills. It also means investing their time and money in local businesses and in local arts, cultural, and charitable organizations.

A macroeconomic approach on crisis management strategies

A single model for a macroeconomic crisis management cannot be outlined because of the differences in political, economic, and legal systems, as well as the nature and scope of different crises and the availability of different tools. More than that, crises are complex phenomena by their nature, a mix of different approaches being usually taken to manage them. The literature review on the crisis management strategies shows us a number of general guidance lines, as well as some key areas where the strengthening of crisis resolution frameworks would be desirable. The crisis management strategies were revised during the current turmoil, in which the scale and intensity of state support has been virtually unprecedented. The appropriate boundaries for state intervention were revised, addressing the moral hazard implications of the widespread use of official guarantees and bailouts. Although every crisis is different in nature, intensity and many other factors, some important key factors for dealing with the crisis at a macroeconomic level can be outlined:

- *The need for a correct early diagnosis of the nature of the crisis and the adoption of a consistent overall crisis strategy that has the support of the highest level of government;*
- *The importance of the crisis resolution strategy being cast within a sustainable macroeconomic framework;*
- *The need for the state to have adequate tools and instruments to intervene in the system where and when necessary;*
- *The importance of recognizing losses, writing down impaired assets and facilitating the injection of new capital as needed;*
- *The importance of a high degree of transparency and independence in the key decisions regarding the allocation of losses, intervention of firms, and injection of official capital;*
- *The need for the independence of the crisis management strategy from vested political and financial interests;*
- *The need for a high level of cooperation, coordination, and information sharing among key state agencies, ministries, and the central bank;*
- *The need for a clear exit strategy for the orderly unwinding of extraordinary measures.*

According to the steps presented above, a common mistake in the early stages of any crisis is to ignore the signals in the first tremors and respond to them in a relatively empirical manner. This is one of the biggest mistakes that can be done because, for example, the failure to correctly diagnose the systemic nature of the crisis at an early stage can delay the adoption of the appropriate measures to deal with the financial sector weakness, and can damage confidence as the problems worsen and spill over to other sectors. In addition, the misdiagnosis of the problem and the provision of extensive liquidity support and guarantees may risk overwhelming central banks and finance ministries. As a result, both monetary policy and fiscal policy can become overly expansive with adverse implications for the exchange rate and inflation. In addition, extensive liquidity support can lead to a sharp deterioration in the quality of the central bank balance sheet and the need to eventually recapitalize the central bank. Based on these considerations, it is clear why it is important to correctly and quickly diagnose the systemic nature of problems and adopt a coherent overall strategy. A key component of such a strategy is to address in a holistic way the impaired asset and institutional problems in the financial system, and not rely excessively on temporary painkillers such as liquidity support, regulatory forbearance, and government guarantees.

Another important aspect for a best practice crisis management strategy is its transparency. This raises a dilemma though. On the one hand, population are said to be increasingly distrustful of authority, thereby facilitating a response that provides for 'transparent' measures of control which are likely not only to provide an incomplete picture of reality, but will be exposed to gaming and manipulation, as well as 'creative' behavioural adjustment among those controlled. On the other hand, population are said to be increasingly less likely to follow 'authority'.

Thus, a dilemma appears – many societies today distrust authority, thereby rely on controls with potentially tragic consequences, at a time when social heterogenization makes a concerted response problematic. In other words, the illusion of control breeds further 'non-control'.

Nevertheless, a transparent decision-making can avoid many opinions stating that the measures are inequitable and abusive. The reason why cooperation and coordination among state agencies is critical is based on the desirability of the crisis management strategy addressing in a holistic way the interrelated components of the crisis. For example, a ministry has to perform risk assessment in order to identify the emergencies which may occur in its area of government, prepare a

crisis management plan and ensure the implementation thereof in an emergency, form a structural unit in the ministry or designate one of the departments to be responsible for the general organisation of crisis management in the area of government of the ministry, form a crisis management team, determine the crisis management duties of agencies and inspectorates in the area of government of the ministry, plan the use of resources necessary for responding to an emergency, direct the responding to an emergency in its area of government, organise crisis management training in its area of government, perform an assessment in its area of government in order to identify the resources which are necessary for participation in international crisis management.

On the other hand, for example the crisis management committee of a county has to review the risk assessment of the county and on the basis thereof make a proposal for specification of the county plan, review the crisis management plan of the county, make proposals to the county governor concerning the staff of the crisis management team, make proposals to the county governor for the preparation and acquisition of resources necessary for responding to emergencies and mitigation of consequences, make proposals to the county governor for organizing crisis management exercises, co-ordinate the responding to emergencies in the county, make proposals to the county governor for the request of additional resources and co-ordinate the informing of the population concerning emergencies and the responding thereto.

On an even lower level, the rural municipalities and city governments have to perform the risk assessments of the rural municipalities and cities, designate, on the basis of risk assessments, the enterprises and agencies where emergency plans shall be prepared, take the results of risk assessment into account upon preparation of comprehensive and detailed plans of the rural municipalities and cities, inform the population of possible dangers, organize the preparation of crisis management plans of the rural municipalities and cities, enter into contracts for the use of resources necessary for responding to emergencies, plan and organize crisis management training, form crisis management teams, inform the population of emergencies and the responding thereto, organize the availability of foodstuffs, drinking water and staple goods and services for the population in emergencies, systematize the activities related to health care and social welfare in emergencies and request additional resources from county governors in order to respond to emergencies.

Another important aspect of a best practice crisis management at the macroeconomic level is the exit strategy. These are important especially in circumstances where a range of extraordinary measures have been taken to deal with the crisis. We will take as an example the global financial crisis that has started in 2008. The exit strategy for this crisis requires policy makers to think about the place to which they want to exit, which is surely not to similar incentive structures to those used prior to the crisis. A sound framework requires six very basic building blocks that all jurisdictions should work to have in common. These are:

- *The need for a lot more capital – so that reducing the leverage ratio has to be a fundamental objective of policy. Europe, for example, has a very long way to go in this respect if there is to be some equalization across the globe.*
- *The elimination of arbitrage opportunities in policy parameters to remove subsidies to the cost of capital. This means looking at the way income, capital gains and corporate tax rates interact with financial innovation and derivatives to create concentrated risks and to eliminate ways to profit from such distortions.*
- *The necessity to reduce contagion risk within conglomerates, with appropriate corporate structures and firewalls. This issue is not unrelated to the too big to fail moral hazard problem. It must be credible that affiliates and subsidiaries of large firms cannot risk the balance sheet of the entire group – they can be closed down by a regulator leaving other members of the group intact.*
- *The avoidance of excessive competition in banking/securities businesses and a return to more emphasis on the credit culture banking model.*
- *Corporate governance reform is required.*

The way those companies deal with crisis it is analyzed in the following section.

4.2. Best practice guide - microeconomic approach

Every company - large or small, publicly traded or privately held - runs the risk of a crisis. Forward-thinking companies across the country and around the world are proactively practicing crisis management. The main actions to be taken in dealing with a crisis on the microeconomic level are:

- *Identifying the crisis*

Proper recognition of the crisis is an important initial step. The crisis could be of a financial or strategic nature. A communication crisis, due to negative publicity of a company, may also affect the company's success.

- *Isolating the crisis*

Part of the process of identifying a crisis is to isolate the cause of the trouble. Often this is done by identifying crisis symptoms and root causes of the crisis. Many times this root cause may not be easily apparent to business teams that are closely tied to an organization, or that have a personal stake in the company. A crisis coach can help an organization to identify root causes of crises by isolating the crisis so that the management of a company can focus its efforts on solving the problem.

- *Crisis communications*

Ahead of employing a crisis communications plan, the company should specify who it's critical to reach in the time of a crisis. Each group or individual may need contacting in a distinct way and might require providing with different information and facts.

- *The employees:* It is vital that every employee is enlightened on what is taking place and how this will change their function in the company. They will therefore, have to be fully informed on exactly what they need to be doing. It's in addition advantageous to identify a dedicated contact to which people will turn to in the occurrence of an unexpected emergency.
- *Stakeholders:* it is advisable to send out frequent notices, and employ a freely obtainable web page to publish updates so the customers know what is occurring. The managers have to correspond as frequently as they can, and make sure to be as transparent and clear as can be.
- *Government:* Occasionally, the business may need to liaise with local officials. This might be subsequent to a major accident or the release of a hazardous substance. The managers of the company have to make sure they know who to make contact with well before an emergency occurs and to review the company's strategy regularly. As the company grows, develops and changes, aspects of the plan may need to be adapted in line with this.

- *Assembling a crisis management team*

In doing this, the managers of the company have to consider who the primary decision makers are within the organization. Because the crisis is likely not defined when the team is identified, people with varying responsibilities within the organization must be included in the team.

- *Creating a crisis management plan.* A best practice approach on crisis requires creating a *crisis management plan* within a step by step process. Even though every crisis is different, there are a few items that every plan has to include: overview of the plan, description of the plan, plan, recovery strategies, and communications strategy.

- *The first section of a crisis management plan* is going to need to include an overview of the crisis management plan. In the overview, the managers of the company should include information on the plan's mandate. They should include a brief description of the objectives.

- *The second section of the crisis management plan* needs to include a description of the structure, which is what is going to be used to support the business through the crisis period. It should have details on the roles and responsibilities of the employees during the crisis period. Any basic operating principles that apply to the crisis management organization also need to be included in this section of the plan so that it is clear to others how the business will be run during the crisis. The plan itself will include any information relating to the budget for implementing the crisis management plan, while the recovery strategies include critical business functions, external entities, software, and equipment. The communications strategy details any information related to how specific members of the organizations will talk with each other during the event of a crisis. For example, back up communication devices in case the phone lines go down. This section needs to include information on project members, executives, employees, and external parties.

Sometimes the crisis can be avoided if they are forecasted. Crisis forecasting involves examining the processes and procedures of the company, as well as outside factors to determine if that company is heading for a crisis. The best way to deal with a crisis is to avoid it all together, and forecasting impending disaster can go a long way in ensuring the life of a company. Often crisis forecasting can benefit from an outside person or organization who has an objective view, and can see an impending crisis easier than the company can.

5. Conclusions

To sum up, we can state that there are three aspects of crisis management that could usefully be strengthened:

- *The tools and instruments available to involve the private sector in crisis resolution,*
- *The ability to credibly impose losses on systemically important financial institutions while keeping them afloat*
- *The approaches used to identify and manage systemic risk.*

When dealing with a crisis, we can state that the private sector is crucial to the governance of the monetary and financial system at national, regional and global levels. Given that private sector activities have increasingly dominated global financial transactions, private financial firms should be integrated into the process of crisis resolution. While the proposition that the private sector is important is widely accepted, what should be the proper balance between private interests and public good is still a question that needs a definitive answer. A thing is certain: private companies themselves have to face different crisis.

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INTERNAL AUDIT. FINDING SOMEONE GUILTY OR FINDING SOLUTIONS

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Abstract: *The paper concerns about the relationship between internal audit and management, focusing on the role of internal audit within the economic entity, and thus in corporate governance, knowing that the value of a company maximizes in the extent to which managers succeed to identify and harmonize the conflicts of interest between the social partners of the firm, especially between shareholders and managers. What is most important to an internal audit is that it can find, besides the system non-conformities, some possibilities to improve the management system. The paper wants to emphasize that the purpose of an audit is to find solutions, not to find fault or someone to blame.*

Key words: internal audit, management, risk management, internal control

JEL classification: M10, M14, M42

1. Introduction

The audit is a universal function. Although, its best known face regards the financial function, the auditing activity spreads its arms among all functions retrievable in an entity, through internal audit, which covers all functions which contribute to a result determination. A limitation of audit activity to a single compartment, as accountancy, is not recommendable in the context of a globalized society, being preferable a complete verification and certification of the entity's activities (Alexandru and Constantin, 2011).

Internal audit is an independent activity, objective, assurance and consulting, designed to create value and improve an organization's operations. It assists the organization in achieving its objectives by implementing a systematic and disciplined approach in evaluating and improving the effectiveness of risk management, control and governance processes (Bunget, 2009).

Therefore, internal auditing represents a function integrated in the company, when the external auditing represents an independent function whose mission is to certify the accuracy of the accounts, results and financial situations, and more precisely to certify the sincerity and a truthful image of the financial situation and (if we retain the definition of the authorized accountants) to certify the regularization, ingenuity and fair picture of accounts and financial situation.

Internal audit has an important role in assisting the reorganization of the internal control system and in advising general management. The installing of a system in order to prevent fraud remains in the responsibility of the management within the organization and internal audit provides assistance in assessing risks and strategies for corporate control, suggesting the proposals, recommendations and solutions to diminish the threat of fraud, and improve the control strategy.

In today knowledge-based society it can be identified a number of five tendencies, as: globalization, changes in risk management, technological progress, organizational talent and capacities, changes regarding internal audit role. All of these are expected to have an important impact over internal audit during the following years. That's way it is essential the proper understanding of these tendencies, and also of their implications, in such way so that internal audit could supply the help needed in identifying and managing risks; so in the end internal audit has an effective contribution in adding plus value to economic entities (Pop and Bota-Avram, (2009). The internal audit must guarantee the reasonable safety that the operations performed, the decisions made are under control and that in this way it contributes to the improvement of management decisions regarding the achievement of tasks set by companies (Terci, (2009).

Machiavelli's maxim "the one who takes it for just what he thinks is real, but it is not, it surely to reach failure" applied to internal auditor, highlights the danger of preconceived ideas and absolute

necessity of practicing validation. Main points that delimit the internal audit definition are: management assistance, without judging employees, total independency. The internal auditor will assist managers, in that it allows through their opinions and successive approaches, improvement of decisions that are about to be made. The notion of assisting managers finds itself in a permanent evolution. The actual economic crisis excluded any reference regarding affiliation of internal audit and control which was leading to confusions and has been replaced with a proper word: consultant. In that, internal auditor assists, recommends, conciliates, but not decide.

2. Internal audit as an attribute of management

In 1941, JB Thurston (the first president of IIA), made a statement anticipating the amazing evolution of internal audit in management assistance. In 1991, Joseph J. Mossis (the president of IIA in UK) resume the notion of internal audit in more precise terms "It is clear to those working in the internal audit function that it plays a vital role to play, helping lead to grab the reins of control".

Specialists consistently held that the audit is a specific approach and should not be confused with other techniques used to investigate the circumstances of organizations and economic structures, such as: control, examination, inspection, studies, etc. mediation. Indeed, the audit is a particular way of knowledge of the pragmatic reality of the audited entity internal point, based on ex-post study common processes and some specific procedures, from direct observation documents and facts, statistical calculations, diagrams, test compliance, written or oral questioning.

Depending on the scope of application and objectives, we can discuss about the financial audit - accounting, social tax, legal, operational, information, etc.

In terms of relations with the organization's management, we can identify two types of audit: Internal audit and external audit.

Internal audit is "what a manager should do to ensure that it has a good control over situations, if they have time and if they knew how to do " (Renard, 2002). Note that internal audit function management is a profession that does not improvise and as such, must be made by specialists. Internal audit is an attribute of one or more employees working for the benefit of its managers, highlighting the level of mastery over activities and if it finds dysfunction, they can make recommendations for improvement.

The internal auditor is a consultant with autonomy to formulate recommendations, and not a controller, this autonomy is provided by reference standards, methods and tools appropriate to have, but work must be conducted within the rules established.

The auditor should not interfere in the implementation of any corrective measures improvement established, either in achieving them. It should be mention that the internal audit can't assume and be responsible for effectiveness of risk management. That is the responsibility of the top management and operational management.

3. Purpose of Internal audit: Finding solutions or finding someone to blame?

Internal audit can be defined as the last step of the internal control system of an organization. By way of expression, internal audit adds value by estimating the system of internal control, risk research and recommendations provided adjacent to the internal audit report made and sent to the achievement of targets set for the entity.

Internal audit does not provide certainty that there are all no errors in all company's activities. Also,

Cost audit is seen as a cost of imperfect information, information required by shareholders that can be made by audit. In fact, any definition of the audit reveals the need to ensure a party to the transaction flows over internal control. Cost audit and control is the most appropriate given by the cost of acquisition of hidden information by the shareholders.

In any organization, the internal audit function adds value to the extent that is able to bring an extra value of confidence to executive management in achieving the entity's objectives. Equally, its usefulness is appreciated by the insurance offered to non-executive bodies (such as the Audit Committee and Supervisory Committee) in relation to the adequacy and effectiveness of existing internal control, risk management process and concerning the compliance with best practices on corporate governance.

As a result of an effective internal audit mission, the company's management can see how the processes in the firm are working. It can be seen where you are, how well the system works, how

reliable it is, and draw some conclusions about what to do in the future and about the direction you are heading towards. Without doubt, internal audit, together with assessment of suppliers, customer satisfaction management and analysis, is the key in having at least a live management system, if not efficient.

It is highly important that after implementing a management system within an organization to let some time to "ripen" and to employees to enter into their role plays and staff to incorporate new requirements in their daily routine until it puts smoothly. This surely is a relatively difficult, arduous process, which takes time and that usually is not that easy, especially because it is changing some minds. During this period it is preferable not to do internal audits, because things are still a potential 100% and you can draw the wrong conclusions. Unfortunately, in many organizations this does not apply to several reasons that it is pointless to explain.

First, an internal audit should be done when the processes are fully integrated (there can be cases in which a process may not be integrated, from several causes, and then the process should be changed/reviewed), and that should be taken very seriously. Just so, the results of the audit report will be used as relevant information to create future strategies.

The internal audit department audits not a service or a job (quite common error), but the process. This process can encompass several departments, etc., as applicable in all parts of the organization. In order to on-going with an internal audit mission must begin to make a plan, an audit plan, encompassing all processes to be audited, date and place of audit, audited persons and other organization specific observations (if necessary). This plan would be communicated it to all levels and the auditor should ensure that it is approved by top management (if possible, top management would be involved in this plan). The next step represents the audit itself. It usually takes place at the location where the process is mainly to be audited.

Once the audit began, the auditor/auditors have to go through all the process and see if it takes place according to procedures, instructions and policies implemented, and discover this process's non-conformities.

After auditing the persons responsible for the process (not always overlap department managers, in which cases both of the responsible persons must be audited), is very effective to visit the "field" to see how the process is going effectively and talking with other employees who are part of the process seems to be a good idea. The auditor should not approach a hard tone, is not constructive.

The auditor should not be referred as a police-officer, ready to issue sanctions and punish the guilty ones. Internal auditor must find the ideal way to communicate with all departments of the economic entity, in order to understand processes that occur in the firm. A feature of internal auditors is that they have a thousand eyes, but not a heart. Why is that? For being part of the company, with a great responsibility on their shoulders, the internal auditors still have a relative independence given by their statute as employee of the company.

The auditor has to remember/take in consideration that all employees make efforts (large or small) to integrate the new process and the purpose of an audit is to find solutions, not to find guilt/someone to blame for the non-conformities. In that aspect, the auditor would talk to as many people about how they see the process, what benefits they believe are, if they see improvement process, how they feel with the new duties, if they feel any difference than it was before (in cases of changes of processes).

In other words the auditor has a responsibility to collect as much information to help the continuous improvement process.

Internal audit is complete when all preventive and corrective actions were completed, and nonconformities resolved or removed from the system.

4. Internal audit and risk management

Internal audit and risk management have the same goal: the control of risk. There are various roles for the internal audit in respect of risk management. The main limitations of internal audit in respect of risk management regards assuming risk management tasks.

Objectives of internal audit functions differ between organizations, but the main objective should be to assess and improve the efficiency and effectiveness of the management to maintain and improve the internal control system. Objectives might be:

- providing assurance on the adequacy of control system;
- providing assurance on the adequacy of activities;

- advising management.
Risks to internal audit achieving these objectives could be:
- not testing enough to provide the assurance needed;
- incorrect advice.

Risk management could be defined as the activities directed towards the management of opportunities and adverse effects.

The board of the organization is directing the risk strategy, the risk appetite and the risk treatment choices. Risk appetite means how much risk the company wants to take in the achievement of its objectives. Risk treatment means choosing the right options to mitigate the risk.

Within the organization the board, the executive management, the risk committee, the experts and the employees are responsible for the risk management. Nevertheless risk is considered to be the responsibility of operational management.

Important benefits of risk management are:

- increased likelihood of achieving corporate objectives;
- reduced cost of risk;
- calculated risk taking.

Therefore risk management should be embedded in the operations of the organizations with appropriate monitoring. Business processes should be supported by risk management. The board should have an overall assessment of the contribution of risk management to the function of the business (Constantin and Alexandru, 2011).

One of the main issues regarding risk management is to make sure that the key risks are taken into consideration and that the management and the board of the organization take action as needed. In order to accomplish these important corporations set up a risk management committee, whose main roles are to:

1. report on the key risks to the board;
2. review how the major risks are managed;
3. promote the best practice in risk management within the organization.

The main risk management strategies are to:

- avoid/transfer it – get rid of the activities giving rise to the risk. Avoiding an activity is the answer to a risk that cannot be controlled. Some organizations, for example, taxi companies have identified no-go areas where their cars will not go. Public sector organizations instead do not have sometimes the choice of avoiding a risky activity.
- reduce/exploit it – insure against the risk; Insuring against a risk will reduce the financial impact but is not going to solve the problems created by business discontinuity. Nowadays, insurers require organizations to treat risks using internal controls as well as insuring against it. The insurance might cover above a certain level of excess.
- retain it – implement controls to manage the risk.

The greatest number of risks will be retained. Internal controls will be implemented to mitigate reduce either the probability or the impact. Organizations retain risks where controls have brought them to accepted residual levels.

There are many roles that internal audit can fulfil in respect of the risk management process implemented within the organization.

Today, internal audit assumes at least two important roles in respect of the risk management. First, internal audit can act as an advisor helping the organization in respect of risk awareness. This can be done by improving the management understanding of the major risks facing the organization. It should be mention that the risk management process can be used by internal auditors in identifying areas for review. In these ways the internal auditors can focus their activity on the key systems and controls within the organization.

Second, internal auditors can act as trainers in risk management workshops. In this way internal auditors aid line managers understand better organizational risks and controls. This is how internal audit can help the managers to identify various risks.

Nevertheless, we redraw attention in the internal auditor's statute: that the internal audit can't assume and be responsible for effectiveness of risk management, that being the responsibility of the top management and operational management. However, assurance on the risk management process can be provided by the internal audit. During the assessment activities, internal audit can also give advice on this field.

In those organizations that have an internal audit function and risk management process it is vital to be sure that there is no duplication of work. Therefore, it is crucial that the roles of each function is made clear to stay away from unjustified overlap and, more importantly, to avoid conflict of interests.

5. Conclusions

Ignoring the internal audit function can lead to real disasters in financial terms and not a few have been cases where the collapse of giant companies resulted in a number of negative chain and entailed thousands and sometimes even millions of creditors, suppliers, employees and investors injured, with effects that have lasted for years.

Though the role of a skilful risk management it was clearly shown and extolled, many commissions and institutions analysed the main causes of the outbreak and spread of the crisis reaching to a common point: a faulty risk management had a determinant contribution in generating the actual crisis. So, one of the negative elements identified in companies strong affected by the economic crisis, was the managers failure in managing risks, in identifying them, mainly because of a high complexity of the services provided and the risky nature of the business. Therefore, revising procedures regarding risk management process, in order to improve its effectiveness, becomes an imperative demand.

However, as noted, none of these features, relatively modern, of an economic entity cannot timely identify a potential crisis on its own, much more could not manage it. Every department, every function that is found in a company must be interwoven with other functions, there are interdependent. We, humans are the perfect example of interdependency. A person is not built to stand alone, needs connections with others in order to create something, needs communication, no man could ever build The Great Wall by itself. We need each other. So the departments of an economic entity; cannot exist separately, cannot develop separately, they must communicate in order to deal with a dynamic economic environment. Can we nominate which one of the body components is more important? Can we tell which company department, or function is the most important? No. They must function as a whole. If one of the departments misfires, is reflected in all business activities. Solution is found in employee training, in improving their future as professional with the hope that significant risks will not only be discovered in time, but managed in an effective and fair way.

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IMPROVING THE EFFICIENCY OF LOGICAL FRAMEWORK APPROACH AS A PROJECT MONITORING AND EVALUATION INSTRUMENT

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Abstract: *The paper focuses on important features of Logical Framework Approach (LFA) due to which the mentioned classical project management tool is lasting for more than 40 years in project management practice, proving to be a more requested instrument than ever by different international financing bodies. The article emphasizes the main elements of building a Logical Framework Matrix (LFM), highlighting its connexions with the process of project monitoring and evaluation. Also, the paper presents the main causes of recurrent failures of the method, and some improvement measures, so that LFA could become more powerful as a project management tool.*

Key words: Logical Framework Approach (LFA), Logical Framework Matrix (LFM), project management, project monitoring and evaluation, project planning.

JEL Classification: H43, M19, O22.

1. Introduction

The Logical Framework Approach (also regarded as Logframe Approach or simply LFA) is a project planning, monitoring and evaluation tool, which was initially used within development projects, and afterwards, becoming a wide accepted tool within project management processes.

The method was firstly adopted as a project planning and appraisal tool for the development projects promoted by USAID (United States Agency for International Development), in late 1960's. The beginnings of the method are closely related with the emergent theories in management amongst which the most representative was the *management by objectives* (MBO) theory. Since then, the LFA (and its main outcome – the LFM) has been intensively promoted, coming to play a central role in the planning, monitoring and evaluation interventions (projects) during the last 40 years.

Under the recent circumstances of a more and more dynamic business environment, the method has undergone several recurrent failures, which made it vulnerable for the main stakeholders of the project. In this context, it is necessary to identify a set of strategic activities aimed to ensure the compatibility of the method with the main elements of companies' corporate culture (stakeholders' commitment, corporate social responsibility, organizational culture, business ethics, environmental commitment, social awareness).

Thereby, many authors have tried to improve the Logical Framework Matrix, either by building more complex structures (Couillard, et al, 2009), either by combining the method with other instruments and techniques for project monitoring and evaluation.

2. Background Research

Even if the LFA has become universally known, it is far from universally liked. It has been the subject of much criticism over the years, concerning both the theoretical basis of the approach, and the way it is applied in practice (Bakewell & Garbutt, 2005).

During its evolution, the LFA has come to encompass some of the best-known project management instruments and management techniques, such as stakeholders' participation, participatory monitoring and evaluation features, problem tree development, solution tree development, SWOT analysis, cost-benefit analysis, culminating with the development of the Logical Framework Matrix (LFM) which was initially used for communicating the *theory of change* within the project stakeholders. Nowadays, LFM is used for breaking down the logic of the project strategy into a chain of *conditional causalities* (Crawford & Bryce, 2003).

From a managerial perspective, LFA involves several characters which provide a full and complete overview on a project (Walsch, 2000) during its entire lifecycle, as follows:

- a system for analysing a project's potential problems and constraints;
- a system for assessing a project management's team needs and expectations;

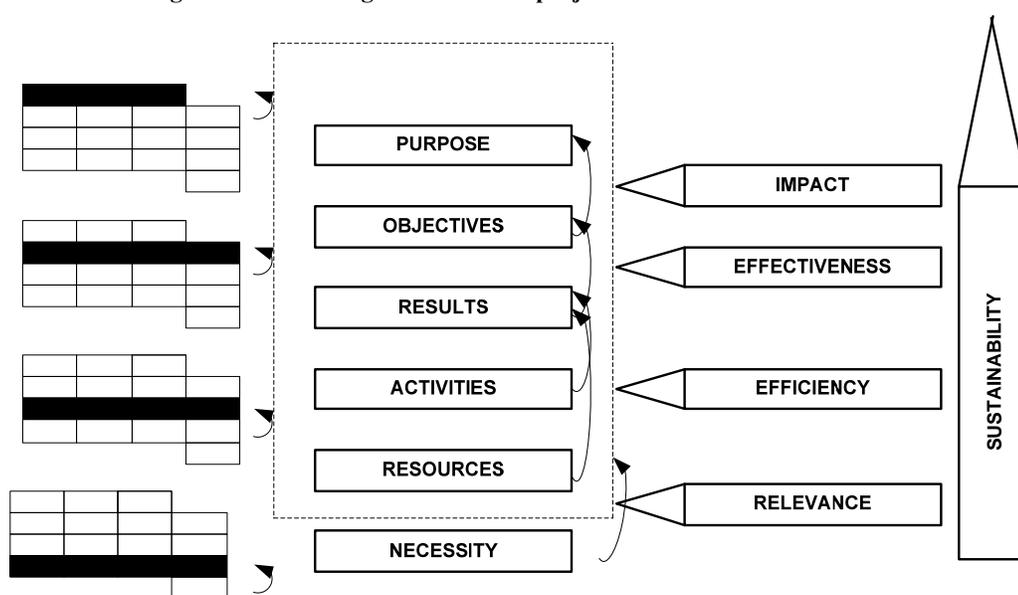
- a system for providing an objective – resources causality;
- a system for selecting the most suitable implementing alternative;
- a system for effective project evaluation, appraisal and monitoring.

As shown, LFM involves a systemic approach upon the main components of a project (regarding objectives, goals, results, activities, outputs and resources) (Gasper, 2000), on which are being made certain assumptions and are being analysed certain risks.

Under these circumstances, it is useful to distinguish between the LFM - the matrix which summarises the main elements of the project and connects them to each other – and the LFA – the overall process by which the elements which go into the matrix are formulated (Dale, 2003).

Nowadays the Logical Framework Approach was adopted as a planning and monitoring method both by the European Union and the main worldwide financing bodies. Regarding the projects financed within European Union’s operational sectoral programs, the management authorities has already connected the projects’ assessment criteria (impact, effectiveness, efficiency, relevance and sustainability) with the main elements of the matrix, as shown in *Figure 1*.

Figure 1: Connecting LFM with EU project assessment criteria



Source: (Adapted from European Commission, 2004)

3. Building the LFM: The Vertical and Horizontal Logic

The LFM is a table which summarizes 16 different categories of information, usually arranged as shown in *Figure 2*.

Figure 2: Logical Framework Matrix format

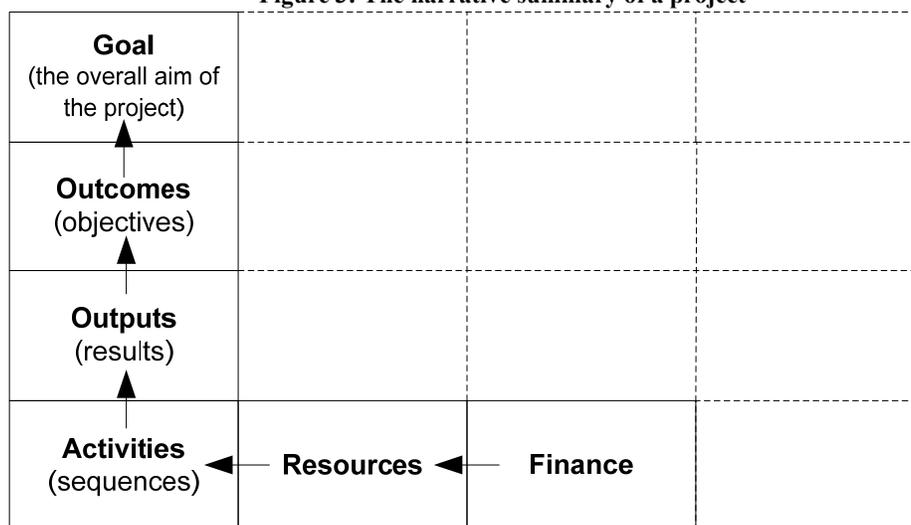
	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal (the overall aim of the project)	1.	15.	16.	
Outcomes (objectives)	2.	13.	14.	8.
Outputs (results)	3.	11.	12.	7.
Activities (sequences)	4.	9.	10.	6.
				5. Pre-conditions

Source: (Adapted from Bakewell & Garbutt, 2005)

Besides the logical succession of placing the information into the matrix (given by the numbers mentioned in each cell of the LFM), there are three main issues which are important for a project's stakeholder (and also for the financing bodies, which request more and more frequently a LFM before providing financial support for a project): *the narrative summary, the vertical logic* and *the horizontal logic*.

The Narrative Summary, as shown in Figure 3, represents the strategic background of the project, explaining the logical succession of a project's stages: financing ensures the attraction of resources within the project; the existence of resources ensures the progress of the activities; the completion of the activities generates the expected outputs; the outputs lead to the attendance of the expected outcomes; finally, the achievement of the expected outcomes leads to the achievement of the overall objective of the project.

Figure 3: The narrative summary of a project



Source: Author

The Vertical Logic, as shown in Figure 4, describes the causal link between different levels of the project, stating foremost a hierarchy of objectives (Bell, 2000), according to which inputs ensure the completion of the activities, activities deliver outputs, which contribute to outcomes, which help bring about the overall goal of the project. The whole succession is viable, only if the assumptions specified on the last column of the LFM are being matched. Moreover, the vertical logic illustrates the strategic project management process, which involves the advancement from a lower strategic level to a higher strategic level within project structure. Also, the vertical logic provide useful information about the steps a project should follow from the stage of an idea to the final completion.

Figure 4: The vertical logic within a Logical Framework Matrix

	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal (the overall aim of the project)	1.	15.	16.	
Outcomes (objectives)	2.	13.	14.	8.
Outputs (results)	3.	11.	12.	7.
Activities (sequences)	4.	9.	10.	6.
				5. Pre-conditions

Source: Author

The Horizontal Logic, as shown in *Figure 5*, describes both how progress against each objective can be assessed (indicators and means of verification) as well as the external factors (assumptions and risks) which might affect whether the reaching of the objectives will contribute to the next level. The horizontal logic does not focus on project progress but on cooperation relations established at each strategic level of the project.

Figure 5: The horizontal logic within a Logical Framework Matrix

	Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Assumptions
Goal (the overall aim of the project)	1.	15.	16.	
Outcomes (objectives)	2.	13.	14.	
Outputs (results)	3.	11.	12.	
Activities (sequences)	4.	9.	10.	

Source: Author

4. The Logical Framework Approach and the Monitoring and Evaluation Processes

The **monitoring** process is being regarded by one of the most important project financing bodies, World Bank, as *the continuous assessment of project implementation in relation to agreed schedules and use of inputs, infrastructure and services by project beneficiaries* unlike the **evaluation** process, which is regarded as *the periodic assessment of relevance, performance, efficiency and impact assessment (expected and unexpected) of the project in relation to stated objectives*.

There are three main types of **monitoring** processes which are susceptible to be associated with the life cycle of a project or program (Sadler & Davies, 1998), and especially with the monitoring of the social and environmental non-quantifiable objectives.

The first category of monitoring refers to **baseline monitoring**, which is regarded as the measurement of economic, social and environmental variables during a representative pre-project period to determine existing conditions, ranges of variation and process of change (Reeve, 2002).

The second category of monitoring is regarded as **impact monitoring**, encompassing the quantification of the variables during project development and operation, to determine changes that may have been caused by the project (Sadler & Davies, 1998).

The last category of monitoring is regarded as **compliance monitoring** and takes the form of periodic sampling and/or continuous measurement of different economic or social parameters (Wiersma, 2004).

Even if we consider previous models of project life cycle, such as Stackenbruck's system life span (Stackenbruck, 1981), or Cavendish and Martin's contract project life cycle (Cavendish & Martin, 1982), or more recent approaches, such as PMI Standard Committee's sample generic project life span or Cooper, Edgbert & Kleinschmidt's Stage-Gate process (Cooper et al, 2001), monitoring should be taken into account in each of every major stage of project development, including also pre-project and post-project stages.

Comprehensive monitoring might be used as a holistic component of responsible life cycle environmental management of large investment projects. The main components of a monitoring process include, but are not limited to: establishing baseline conditions, documenting, managing experienced impacts, evaluating the effectiveness of measures and validating impact prediction techniques (Archibald, 2003)

Similarly, **evaluation** processes involve the application of rigorous methods to assess the extent to which a project has achieved its defined objectives (Pollack, 2007), while being regarded as a set of activities aimed to determine as systematically and objectively as possible the relevance, effectiveness, efficiency and impact (both intentional and unintentional) of a project in the context of its stated objectives. Just as the monitoring process, the evaluation can be divided into three types of evaluation: **ex-ante evaluation**; **mid-term evaluation** and **ex-post evaluation**, proving the continuity of the mentioned process.

If analysing the Logical Framework Matrix, it can be easily noticed that beside the first column of the matrix (the narrative summary, which has already been discussed) and the last column (the assumptions column, which encompasses the degree of risk and uncertainty of the project), the second and the third columns of the matrix provide the project monitoring and evaluation background through LFM.

Therefore, the second column includes all the *objectively verifiable indicators* (benchmarks and key performance indicators) which are susceptible to be used in project monitoring, while the third column, which includes the *means of verification*, is supposed to provide the most suitable mechanisms for performing an objective and independent evaluation of the project.

Despite its apparently popularity and easiness to use, the LFA is neither the best nor the most used instrument for performing the monitoring and evaluation of a project. According to Gasper (2000), a major pitfall is hoping to define an approach as essentially good or essentially bad. In a previous paper, Gasper (1997) stated as a result of many empirical studies, that LFA declines as a project moves from project design through the ex-post evaluation.

Under these circumstances, the author will emphasize the main elements which generate the lack of efficiency of using the LFA as a tool of monitoring and evaluation of the project, along with a set of solutions for strengthening the power of this instrument within project management.

5. Improving Logical Framework Approach within Project Monitoring and Evaluation Processes

According to the recent theoretical approaches of LFA, there are four main situations generating the lack of efficiency in the process of using LFA as a powerful project monitoring and evaluation tool.

The first situation is called *logic-less framework approach syndrome*, and states that some LFAs or LFM are not relevant, as they are not paid the necessary attention. Thus, LFM for example is used only because the investors demand it, while, in reality, project managers believe this is a useless and time consuming management tool.

As a consequence, they work anachronistically, by developing the LFM only after the entire project has been designed. Therefore, instead of using LFM as a project planning, monitoring and evaluation tool, project managers tend to use it as an abstract of a project which has already been articulated. Under these circumstances, the LFM not only is illogical, but irrelevant as well.

In order to eliminate the logic-less framework approach syndrome, the author highlights three possible ways of action, as follows:

- developing the LFM by specialists who entirely believe in Project Cycle Management (PCM) or Goal Oriented Project Planning (ZOPP) - which is an advanced version of LFM;
- motivating staff to apply correctly the principles of project management during each stage of a project lifecycle;
- promoting participatory project management and involving all the stakeholders in building up the LFM.
- promoting the use of information technology in developing LFM, by importing certain information from Microsoft Project or other dedicated project management software;
- providing training for project managers, in order to make them understand the benefits of applying correctly LFA principles and the improvements in project monitoring and evaluation, which are brought about by the correct use of LFA.

The second situation is called *jamming framework approach syndrome*, and states that some project managers tend to overestimate the role of the LFM and to encompass in a single 16-cell diagram a lot of information, which slows down the logical path of the project.

This case is specific for complex projects, where the LFM developers' possess strong

theoretical skills for developing a LFM, but the lack of practice does not make them capable to understand which are the most important information and which are susceptible to be included in each cell of the matrix. In order to eliminate this syndrome, the author emphasizes some possible ways of action, as follows:

- developing the LFM by specialists who posse both theoretical and practical background in project management, especially in PCM, ZOPP or LFA;
- asking an external project management expert if he is capable to understand the vertical and the horizontal logic of the project, only by analyzing the LFM;

The third situation is called *logic-lack framework approach syndrome*, and states that some LFA developers tend to omit some critical features which will very probably affect the project. In this case, most omissions refer either to resources or the assumptions of the project.

The situation is critical, as many projects may fail recurrently if critical elements are not taken into account when implementing the project. In order to eliminate this syndrome the author adds to the previous statements regarding the jamming framework approach syndrome some other possible ways of action, as follows:

- developing participatory management approach during the entire project lifecycle;
- using the participatory management and evaluation of the project;
- defining key performance indicators and benchmarks for each activity of the project;
- connecting each activity with one or more specific outputs, and analyzing if the succession of these outputs builds up the full logical path of the project;
- combining LFA with other project planning and monitoring tools, such as Program Evaluation and Review Technique or Critical Path Method.

The fourth situation is called *logic-lock framework approach syndrome*, and states that LFA developers are not flexible enough to see the LFM as a helpful instrument for their activity. Not all projects can be summarised in a 16-cell matrix and not all LFM should have the same configuration as shown in theory. Each project manager should adapt the LFM according to his specific needs, so that he attains a logical flow of the project.

By approaching LFM as a rigid structure, many LFM developers get locked in a dangerous pattern, which don't allow them to use the LFM as a helpful project management tool. In order to eliminate this syndrome we add to the previous statements, considered to be universally valid, some new features, which should be taken into account when building-up a LFM:

- stimulating innovation and creativity within project management team;
- organizing brain-writing meetings;
- developing flexible LFM formats, which allow project managers to use their creativity in order to achieve better results; one of this flexible LFM formats is represented by LFM-M, developed by Couillard et al (2009), who suggested a seven-step approach leading to the development of the Logframe-Millennium (LF-M), a five-column and four-line matrix describing major project commitments and providing an overall understanding of the project.

6. Conclusions

Since 1969, when the Logical Framework Approach (LFA) was firstly developed by Practical Concepts Incorporated and used by USAID, this instrument became a core component of a larger set of project management tools, used both for project planning, as well as for project monitoring and evaluation.

Despite several recurrent failures, LFA still plays the central role in project management lifecycle, providing a convenient overview of a project objectives, results and activities.

The literature has identified certain weaknesses of applying the method, which has generated, over the years, contradictory points of view regarding the method's effectiveness.

If we assume that there are four main sources of failure in using LFA in the project planning, monitoring and evaluation processes, we could identify some alternatives for preventing further LFA failures, in order to improve its performance and relevance as an essential tool for effective project management.

In our opinion, a further analysis is requested, in order to identify which are the critical cells of the matrix, which usually generate failures, and afterwards in order to recommend some actions

for reducing their incidence.

We also recommend developing a software which allows the development of LFM's as well as the import of relevant data from other project management software applications used within the project management process.

7. Acknowledgements

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CONNECTING POLLUTION ABATEMENT COSTS TO THE DYNAMICS OF ECONOMIC INSTRUMENTS FOR POLLUTION CONTROL

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Abstract: *The paper focuses on identifying relevant connexions between the most popular economic instruments for pollution control (environmental taxes, compliance fees, subsidies, deposit-refund schemes and tradable permits) and the main components of the aggregate pollution abatement curve (the cost of direct damage curve, the cost of avoiding damage curve, the cost of compliance curve and the cost of pollution control curve). Also, the paper emphasizes which are the main constraints in using effective economic instruments aimed to ensure both the decrease of the aggregate pollution abatement costs, as well as the reduction of the maximum allowable pollution level.*

Key words: economic instruments, environmental costs, pollution abatement costs, pollution control, tradable certificates.

JEL Classification: Q52, Q56, Q59.

1. Introduction

Economic instruments, which emerged in early 1990's, gradually replaced the classical pollution control and prevention instruments, as they repealed the weaknesses of the classical tools and provided companies with a higher degree of autonomy in deciding how to comply with environmental constraints under economic efficiency circumstances.

Moreover, according to Austin (1999), economic instruments not only reduce the information burden on regulators, but also provide potential revenue sources for states or governments, as well as they provide greater flexibility in dealing with emission sources.

Taking into account that *economic instruments for pollution control* are basically designed to restore the link between resource scarcity and price (Staudte & Karcher, 2001) and that they are an expression of a market failure (Convery & Redmond, 2007), the paper emphasizes that decisions regarding their use as *a strategic option* related with the companies' efforts to reduce negative impacts on the environment which are summarized by the *pollution abatement curves*.

The paper also reveals that a single economic instrument for ensuring pollution control may prove insufficient versus using a mix of economic instruments, but more efficient than using none.

2. Background Research

In economic terms, pollution is being regarded as a negative *externality*. When external effects are significant, markets will be inefficient, and economists have considered several broad classes of economic instruments to correct the inadequacies (Austin, 1999).

According to this assumption, economic instruments were developed in order to avoid the market failure (Wiebe & Dick, 1998), by placing a cost on the factors which determine the negative impact on the environment.

As long as economic agents are bind to pay for their externalities, determining the process of internalizing the externalities (Montero, 2005), they are susceptible to become more concerned about heading the decision-making process towards reducing both the negative impact on the environment, as well as the pollution abatement costs (Gray & Shadbegian, 2004).

The most popular economic instruments used for pollution control that have already proven their strengths and weaknesses are: *environmental charges, fees or taxes, compliance fees, subsidies, deposit-refund schemes and tradable permits*.

The mentioned economic instruments, which are usually regarded as macroeconomic features (Swensson, 2001), are operating on one or more of the pollution abatement curves, which are describing the aggregate pollution abatement curve. Our research assumes the similarity between the economic instruments defined as macroeconomic policy tools and the same economic instruments approached from the economic agents' point of view.

Similarly, the pollution abatement curve, designed as a macroeconomic function describing the environmental costs of a country (Brechet & Jouvet, 2001), can be considered an aggregate function which possess, as components, the pollution abatement curves which are specific to each economic agent. In this context, our further analysis will be focused on the microeconomic approach of both economic instruments and pollution abatement curves.

Therefore, the pollution abatement costs can be divided into four categories (Brechet and Jouvet, 2001; Kelly, 2003), as follows:

- *cost of direct damage* - which includes the cost of all the irreversible damages produced upon the environment, as a result of the economic activity (accidental spills, uncontrolled explosions, gas emissions) and is represented through a mixture between a linear function and an U-inverted function, growing since the beginning of the economic development of the company until it adopts a non-polluting industries development strategy (Oikonomu, et al., 2008);

- *cost of avoiding damage* - which includes all the pro-active financial measures taken by economic agents in order to prevent a direct damage (contingency plans, pollution provisions, protection equipment), and is represented through an exponential function, growing since the beginning of the company economic development process;

- *cost of compliance* - which includes all the expenses made by an economic agent or by a country in order to come into line with the environmental regulation (pollution fees, investments in new technology, investments in purchasing green certificates or other tradable permits) or to keep the pollution level below the maximum allowable limits (OECD, 1997)

- *cost of pollution control* - which includes the cost of monitoring the emissions, so that the maximum allowable limits won't be exceeded (EMS implementation, EMAS implementation, Environmental Strategic Plans) and is represented through a constant function until the pollution level exceeds the maximum allowable limits and afterwards follows the direct damage curve trend.

The scientific literature usually approaches economic instruments and pollution abatement curves separately, without interconnecting them. However, there is some evidence proving that the relationship between the two concepts was analyzed (for example, there had been stated a relationship between the tradable permits and the pollution abatement costs).

According to the Government of Canada, permit trading is an economic instrument used to create the pollution market, in which companies facing high marginal abatement costs buy permits (emission rights) from companies operating at low marginal abatement costs, thereby minimizing the total costs of pollution abatement curve.

In this context, the paper emphasizes the intimate relationship between the aggregate abatement curves and the mix of economic instruments which are being used in order to minimize the negative impact of the economic activities upon the environment, both by showing how the economic instruments can influence the aggregate pollution abatement curve, and also by exercising a specific influence on one or more of the pollution abatement costs.

3. Linking Economic Instruments for Pollution Control with Pollution Abatement Costs

Among the five economic instruments which were mentioned, two of them (environmental charges and tradable permits) are in a tight relationship with all the functions composing the aggregate pollution abatement curve, and the last three of them (compliance fees, subsidies and refund schemes) are in a tight relationship only with some of the functions composing the aggregate pollution abatement curve.

a. Linking environmental charges with pollution abatement costs

Further, it has been assumed that each of the economic instruments for pollution control is susceptible to generate changes in pollution abatement costs, and also to determine a lower optimal abatement cost. *Figure 1* emphasizes a possible shift in pollution abatement costs, generated by a higher level of environmental charges.

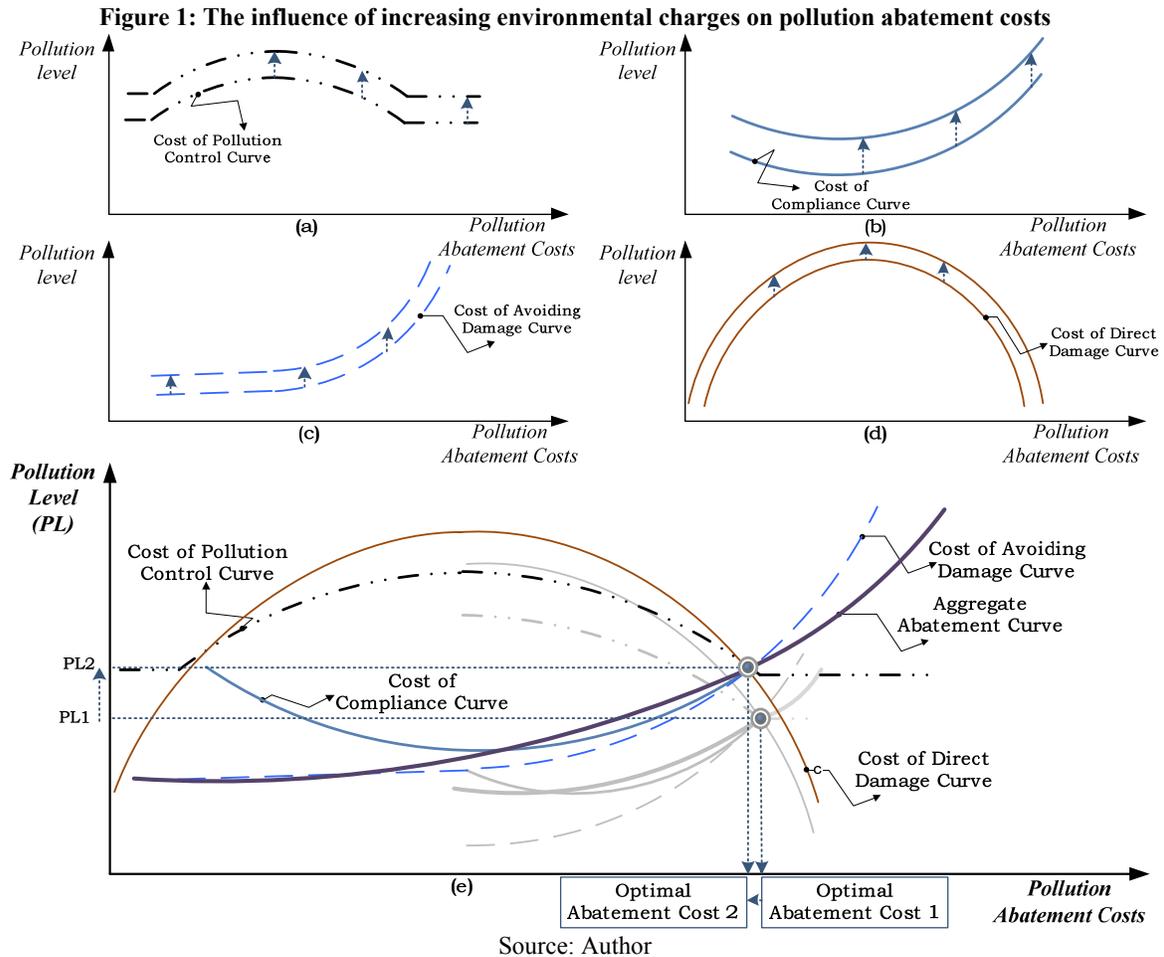
Assuming each company pursues the reduction of optimal abatement cost, an increase of environmental charges and fees will lead to a higher pollution level.

Increasing environmental charges leads to:

- the increase of the pollution control costs (as they are strongly related with the direct damage costs – as shown in *Figure 1a*);
- the increase of compliance costs (considering the fact that companies should invest or

- pay more in order to comply with environmental regulations – *Figure 1b*);
- the increase of avoiding damage cost (regarding the greater concern in the manufacturing and consuming processes or in disposing harmful substances – *Figure 1c*);
- the increase of the cost of direct damage (taking into account the unwillingness to improve the used technologies – *Figure 1d*).

The consequence of these costs increase is being reflected in higher pollution abatement costs, if keeping unmodified the pollution level. If the objective of the companies is to reduce the abatement cost, the equilibrium will be attained at a higher pollution level (PL), as shown in *Figure 1e*.



Therefore, increasing environmental taxes, under *caeteris paribus* circumstances, will lead either to the increase of the optimal abatement costs (with no equilibrium situation possible) or to the increase of the allowable pollution level (with an equilibrium situation possible), alternative which is not desirable.

We should note that an increase in pollution abatement costs does not necessarily involve an increase in the pollution level.

As shown, environmental charges does not seem to be the most suitable instrument for controlling pollution, as they place a supplementary burden on all economic agents, whether their impact upon the environment has grown or not

b. Linking tradable permits with pollution abatement costs

Figure 2 emphasizes a possible shift in pollution abatement costs, generated by a tradable permits scheme. Tradable permits are included in the category of market-based instruments for pollution control, which are regarded as public policies, which make use of market mechanisms with

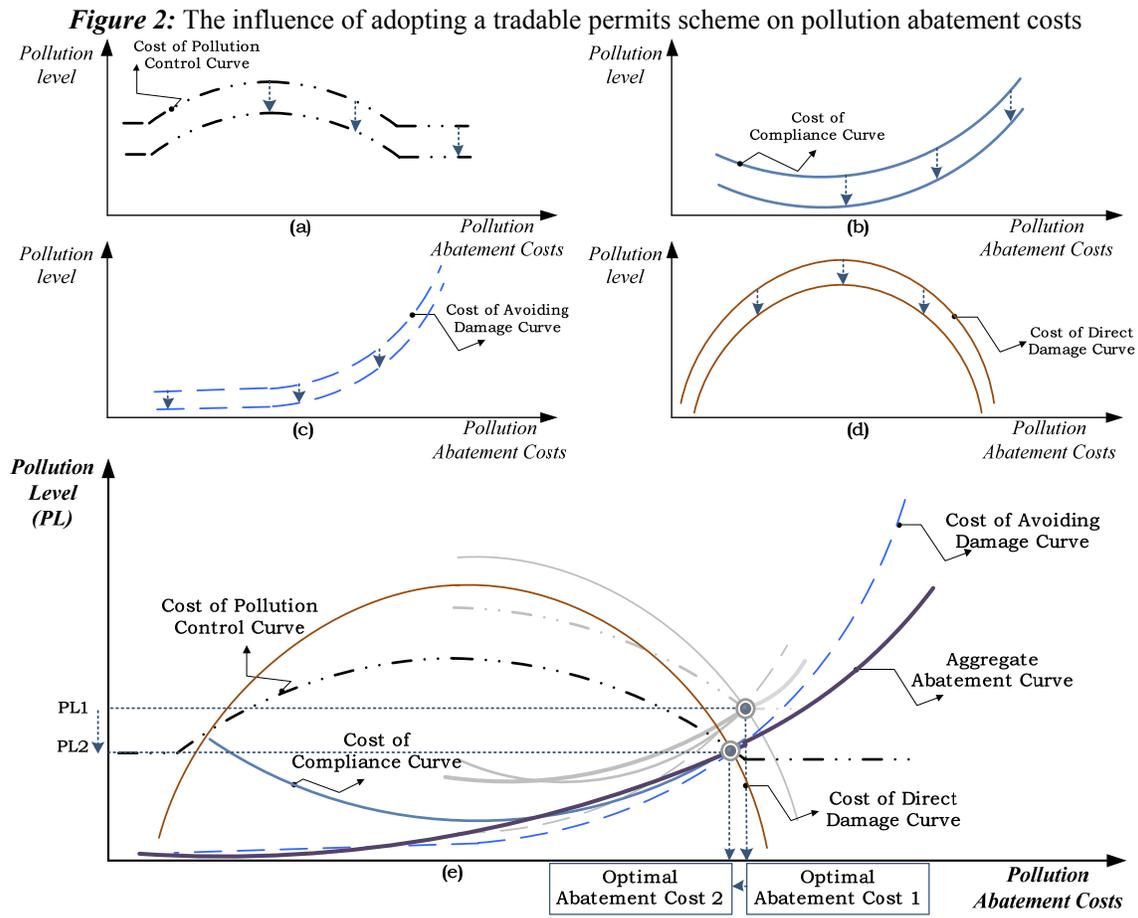
transferable property rights to distribute the policy burden (Wiebe & Dick, 1998). However, there is a thick border between economic instruments (which are regarded as environmental targets or emission quotas proving the environmental compliance) and market-based instruments (which are tradable instruments, such as green certificates, white certificates and carbon allowances). Therefore, market based instruments are a much narrower concept representing just a tradable commodity (Langniss & Praetorius, 2004) whereas policy instruments are compulsory rules which ensure environmental compliance.

Unlike the previous case, by adopting a tradable permits scheme, the decrease in the optimal abatement cost is accompanied by the lowering of the pollution level.

In this case, under *caeteris paribus* conditions, adopting a tradable green certificates scheme will lead to:

- the decrease of the pollution control costs (as they are strongly related with the direct damage costs – as shown in Figure 2a);
- the decrease of compliance costs (regarding the compliance of the technologies with the environmental regulations – Figure 2b);
- the decrease of avoiding damage cost (regarding the previous experience in the manufacturing and consuming processes or in disposing harmful substances – Figure 2c);
- the decrease of the direct damage costs (taking into account that energy companies will produce most of the energy by exploiting renewable sources – Figure 2d).

Apparently, adopting a tradable permit scheme is a superior alternative for controlling pollution, as it can achieve the decrease of both the pollution level and the pollution abatement costs, as shown in Figure 2e.



Source: Author

However, using a tradable permit scheme as a single instrument for pollution control is useless

and inefficient, because of multiple disadvantages amongst which we could mention:

- the certain categories of economic agents to which is designed (for example, in the case on green certificates, the obliged parties are the energy producing companies);
- the involvement of massive investments (which are not affordable for small companies);
- the need of strong market-based mechanisms and regulations in order to be functional and compulsory;
- the influence of several factors, which produce changes in the trend of the pollution abatement costs, altering the *caeteris paribus* assumptions.

Integrated tradable permit schemes may prove to be an appropriate alternative for reducing the impact of these vulnerabilities, but in order to integrate two or more tradable schemes, the national authorities should provide a very complex and fully featured framework for controlling the market mechanisms.

Taking into account the research of Moors, Mulder & Vergragt (2007), which is the most recent approach concerning the main constraints in controlling pollution, we assume that a strategic option for lowering the exogenous barriers is the development of an effective system of economic instruments for pollution control (for example, in energy industry, which is one of the most suitable industry for applying pollution abatement strategies, this system could encompass either an integrated TGC - Tradable Green Certificates, defined as a market based cost-efficient mean to stimulate electricity production from renewable energy sources; TWC - Tradable White Certificates Scheme, defined as a mean to encourage greater energy efficiency market, or a complex TGC – TWC – TBC (Tradable Black Certificates, also known as Carbon Allowances, CO₂ Certificates or Emissions Certificates) market). It can be assumed that these types of integration could be achievable if certain assumptions are being respected, as follows:

- the single market based instruments should be taken off the market, in order to be completely replaced with a common market, focused on reducing the aggregate pollution abatement cost;
- the integrated market should be regulated by a central authority and the regulations should be similar in all complementary industries.

c. Linking other economic instruments with pollution abatement costs

Other economic instruments (compliance fees, deposit-refund schemes or subsidies) have a restricted effect on the aggregate pollution abatement cost, as they only influence directly part of the environmental costs, producing contradictory shifts within the pollution abatement curves which may result in unpredictable dynamics for the aggregate pollution abatement costs.

Compliance fees have a similar behavior as environmental charges but they influence foremost the cost of compliance. An increased level of compliance fees will raise automatically the compliance cost and will place an undeserved burden for all the economic agents.

However, compliance fees could either raise or reduce the cost of direct damage, as the companies choose to continue their activity, just as before the compliance fee (in which case the cost of direct damage is higher) or to invest in new technologies or even to drop out the polluting activities and to perform another activities (in which case, the cost of direct damage is lower). In the second situation, on short run, economic agents will face financial problems, as a consequence of high investment costs involved by the adopting of new technologies.

The cost of avoiding damage will increase only if the marginal cost of compliance is higher than the present cost of avoiding damage (in which case the companies will choose to pay more for avoiding damage, but for paying a compliance fee). Otherwise, the cost of avoiding damage decreases (or remains constant), as the economic agents will rather pay the cost of compliance, which is lower.

Similarly, the cost of pollution control depends on the strategic decisions made regarding the payment of the compliance fees. If the company chooses to pay the compliance fees, they will be less interested in controlling pollution and the pollution control cost will decrease. Otherwise, the company would be more concerned about avoiding damage and controlling pollution and these two categories of cost will increase accordingly.

By combining these different evolution scenarios, will result an aggregate pollution abatement curve which is neither monotone nor predictable, so that decision makers will find it difficult to anticipate de further dynamics of pollution abatement costs, especially in the context of a more and

more dynamic business environment.

Deposit-refund schemes minimize the cost of avoiding damage, but have no effect on the cost of direct damage. Deposit-refund schemes are applicable only after the final products are being used by the final consumers and are being returned to the producer.

In this case, it cannot be noticed any influence of this economic instrument, neither on the cost of direct damage, nor on the cost of compliance.

Deposit-refund schemes could only decrease the cost of avoiding damage and the cost of pollution control, but they are useless as long as the biggest components of the aggregate abatement cost (cost of direct damage and cost of compliance) are not taken into account. Deposit-refund schemes could be completed with a subsidy scheme (which is complementary to deposit-refund schemes), in order to cover the entire lifecycle of a product.

Subsidies could be granted for reducing the cost of direct damage and the cost of compliance, while deposit-refund schemes help to drop-out the cost of avoiding damage and the cost of pollution control.

Subsidies are payments from the government to those economic agents which maintain the pollution control under a maximum allowable limit. Subsidies act partly like an environmental charge policy (as they increase both the pollution control costs as well as the cost of avoiding damage) and partly like a tradable permit scheme (as they decrease both the cost of direct damage and the cost of compliance).

Under these circumstances, it is improbable to decide whether reducing the optimal abatement cost is possible by decreasing the maximum allowable pollution level or only by increasing it. Depending on the eligible companies for receiving subsidies, as well as on the dimension of the subsidies, it can be assumed which of the alternatives is feasible.

4. Conclusions

Hereby, the paper focused on describing the relationship between the main economic instruments for pollution control and the dynamics of pollution abatement costs, in order to estimate, under *caeteris paribus* circumstances, which is the most suitable alternative for reducing pollution abatement costs, as well as the pollution level.

It has been found that apparently adopting a tradable permit scheme is more efficient than adopting an environmental charges policy, but the multiple disadvantages of trading schemes made them inappropriate for single use.

Also, when analyzing the feasibility of environmental charges and compliance fees, we should take into account that these two economic instruments, even if they are stalled, are the only ones which have an overall applicability, as they are macroeconomic tools compulsory for all economic agents within a country.

On the other side, tradable permits, deposit-refund schemes and subsidies, despite being more efficient and effective, are addressed only to a few obliged parties, which make them relevant only at industry level.

Combining two or more of these instruments may prove to be even more effective, but the occurrence of not covering all the economic agents might be very high (for example, the combination between a tradable permit scheme and a deposit-refund scheme will apply only to energy producing companies and to some manufacturing industries, where the deposit-refund scheme is possible).

Combining an overall economic instrument (environmental charge or compliance fee) with a tradable permit scheme, a deposit-refund scheme or a subsidy policy is less efficient, but covers the overall economic agents within an economy.

However, in this situation, some of the economic agents will have to endure a more awkward burden than others, as they will have to comply with both the overall economic instruments and the specific ones.

Under these circumstances, further research could analyze the alternative of using a mix of economic instruments for controlling pollution and reducing abatement costs, so that it could cover all the economic agents within a country, without creating a supplementary burden on the economic agents operating in certain industries.

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RELATION BETWEEN SUSTAINABILITY AND LEAN MANAGEMENT

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Abstract: *In this paper, we have approached aspects related to sustainability and the relation between sustainability and new methods of modern organisation like Lean Management.*

he objectives of the paper have been materialized in: explaining and interpreting the concept of sustainable enterprise, the exemplification of Lean management method and Lean production, which favour the sustainable development. This paper presents a case study, too, that expresses the transcendence of Lean production in a sustainable production, arguing that the application of some modern management methods promote the sustainable development of organizations in the current and future economic environment

Key words: sustainability, Lean Management, sustainable enterprise, sustainable development,

JEL classification: M11, Q01, Q56

1. Introduction

We are living in a period which is under the sign of change, of profound and radical transformations in all fields. Now, when time is not patient anymore, when resources are more and more limited, the environment is more hostile, more dynamic and complex, the requirements of society and people have become more demanding, imposing a rethinking of all the activities, of all processes, of systems in the community, economy and society.

Social transformations are fast, intense and have a lasting effect, even permanently, being also associated to “moving ocean currents in deep, well below the water surface which is already agitated by hurricanes. They have radically changed the society and economy, the community and the state in which we live.” (Drucker, 2010)

Therefore, the management of organizations is no exception and, it is among the areas that have strongly centred the concepts and actions around the concept of change. Major changes which are in progress or anticipated for the future and that cause the change within organizations, due to the development of knowledge, technical and economic progress, the emergence of new values, the globalization of economies and capital flows require the management to exercise flexibility by adapting and changing the constructive and functional parameters of the organization management, giving dynamism to its activities and results.

All the changes, both at the macroeconomic level and in each and every organization, should be based on the principles of a sustainable development, promoting that kind of development capable of satisfying the needs of the present generation, without compromising the ability to meet the needs of future generations and highlight the requirement to simultaneously approach the imperatives of economic development and environmental protection.

2. Concern for sustainability

It is a long time since sustainable development is not a new and unknown topic in the business world anymore, now being a tendency to reorient and implement its organization-wide requirements in many areas. However, there are still doubts and uncertainties about the way of approaching and the transposition into practice of the principles included in the concept and, as well as, of quantification efforts, not only financial, submitted by the organizations in order to add on the list of features the attribute of “sustainable”.

Sustainable development, in its already classic sense, defined in Brundtland report as “development that meets the needs of present without compromising the ability of future generations to meet their own needs” (SDG. 2008) refers to a macroeconomic concept that can be applied at the society level or more limited, at human communities.

If we analyse this concept from the perspective of an organization, the definition provides no clue about what is needed to be done or in what it has to turn in order to transpose a sustainable

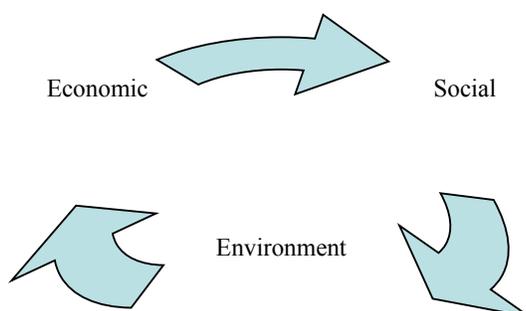
development into reality. The concept of sustainability, on the other hand, covers exactly this lack from the perspective of the organizations. Thus, the transformation of today's organizations in sustainable organizations is, in fact, part of the solution to the problem of the sustainable development of human society (Vaida, Căndea, 2010).

In practice, when a firm disappears from the market or encounters serious problems to maintain profitability, it can easily be said that firm is not sustainable. When, however, the firm has a good market position, it generates profit and can not be characterized as having high pollution generating processes or great consumers of resources, though, it remains to be demonstrated what it makes for sustainability (Vaida, Căndea, 2008).

The way the world develops its economic activities and promotes an economic development which is directly linked to people's wellbeing it is likely to ensure the sustainable development of the human society, being assessed as unsustainable. We can say that sustainability comes off the concept of sustainable development by the fact that there, where sustainable development refers to the entire planet and its evolution over time, sustainability is addressed to some of its components related to population and its activities, such as for example organizations in their various forms and manifestations. Thus, by adding a number of activities in an unsustainable way, the sustainable development of the whole is jeopardized.

Sustainability, viewed from the perspective of an organization can be described as the development of all the activities within it in a way that would ensure continuity in time, indefinitely. Just like the sustainable development, sustainability is based on three pillars, according to the following figure:

Figure nr.1: The pillars of the sustainable development



Source: (Vaida,A., Căndea,D., 2010)

In terms of human society and environment, any activity of the organization which has a negative effect on them, may be considered unsustainable by that it lowers the potential for a sustainable development of the whole. Environmental damage may result, extremely, in the loss of society and therefore the disappearance of organizations as entities. The negative effects on human society contradict the idea of meeting the needs in that the negative effect is most often translated in jeopardizing the ability to meet the needs of individuals and, by the extreme to threaten their health and even lives.

If the objectives of growth and development inherent in the vast majority of the human organizations and economic organizations in private overlap over this image, two major aspects contrary to the idea of sustainable development result. The first is that the development and growth of an organization that has a negative impact on the environment and society is likely to amplify the negative effects that it has and thus, reduces the potential for the sustainable development of the system environment – society – organization. The second is that the society by the governing bodies, competition, stakeholders, etc., will put pressure on the organization using various forms of legal regulations and penalties for it to eliminate or minimize the negative effects it has on society and the environment, affecting the very existence of the organization.

An approach of the organization sustainable, simply assumes that the organization grows and grows without negative impact on the environment while having a positive impact on society. This description is idealized (Vaida, Căndea, 2010). If growth and development are translated into economic terms by profit and increasing workload, the positive impact on society is partly generated by the very existence of the organization. Porter and Kramer (Porter, Kramer, 2006) highlight this by

saying that the greatest service that a firm can make to society is to provide jobs, products and services and contribute to the generation of social welfare.

Professor Serge Latouche has a different interpretation which is in favour for a model of the dynamics of modern economies, both at the level of each country and also globally. "In a world with limited resources, the dominant paradigm up to now has been that of the infinite growth. It is necessary to change this paradigm before being crushed by the limits that nature has" (Latouche, 2006). The author launches the idea of economic decline which is a challenge, a challenge addressed to all social – economic and political actors in the world. In other words, the economic decline, proposed to general attention by him, is not a fundamental concept of a new economic theory regarding the current and future economic dynamic, but a slogan.

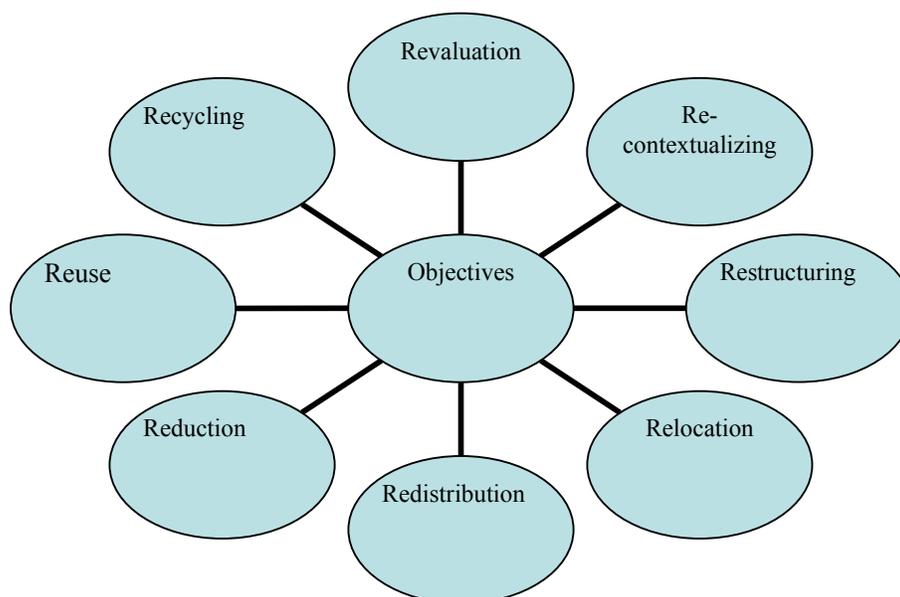
Synthesizing the concept of Professor Latouche regarding the decrease, it results that he suggests a rethinking of the current state of things in society, by adopting a different social logic, which can try to build a sustainable society by:

- The change of current concepts and values;
- The change of structures;
- The relocation of economy and life;
- The profound change of the current way of consuming products.

Thus, Professor Latouche launches a challenge by his vision on the decline, but he does not omit in his reasoning the idea of welfare. Still, he claims that it is necessary to reach a new paradigm of welfare, more intelligent and more rational from the social point of view, as well as in what concerns the environment. The productive apparatus would be restructured for other forms of production that would not affect the survival of the planet. Production should result from the implementation of ecological footprint, given the bio space, meaning that one that allows us to live with what we produce and which is limited.

The implementation process of the society decrease entails eight interdependent objectives, which were named the eight R's as it can be seen in the following figure:

Figure nr.2: The eight interdependent objectives



Source:(Latouche, 2006)

The eight objectives can be synthesized thus:

1. The author proposes, by reassessment, the reviewing of the values in which the current society believes and which are bases for the current organization of people's life. Cooperation will

have to rely on competition, altruism over selfishness, local interest on the global one and the social life problems unlimited consumption.

2. Re-contextualizing - To shape the context again supposes the change of the conceptual and emotional context of a situation, which is lived thus so that the meaning is completely changed. Such a change is required, for instance, on the concept of richness and poverty or on the concept of lack and abundance. Moreover, the current economy transforms the natural abundance in crisis, creating artificially, the deficiencies and needs through the acquisition of nature and its commercialization.

3. Restructuring is adapting, depending on the change of values, of the economic – productive structures, of the consumption patterns, of social relationships, of lifestyles, to redirect them towards the society of continuous decline. The more radical this restructuring will be the faster the systematic character of the current dominant values will be uprooted.

4. Relocation requires, in the author's view, the satisfaction of consumption from the local products made in enterprises which are sustained by the local economy. As a consequence of this situation, it is expected that any economic decision to be taken locally. Goods and capitals movements should be reduced to minimum, to avoid the transport costs, and also pollution, the greenhouse effect and climate changes.

5. Redistribution aims to guarantee for all the citizens the access to the natural resources and an equitable distribution of wealth, ensuring the satisfactory employment of labour and respectable conditions of life for all.

6. Reducing the impact on the biosphere by resizing production and consumption, as well as the hours of work, the resources consumption should be reduced and correlated with the limited resources of the globe.

7. Reusing involves overcoming the obsession of consumption on the goods obsolescence and the continuous tendency to endow with new products and adopt the custom to repair the appliances and other goods instead of throwing them away in working order.

8. Recycling intends that any product from the category of waste and scrap, which is derived from human activities and cannot be decomposed, to be recovered and reintroduced in the economic circuit.

After going through these eight objectives that, in the opinion of their author, should provide an economic decline without disturbances, the question arises to what extent they are feasible. Even if Professor Latouche recognizes that the economic decline is not an economic concept, as the economic growth is with theories and models suitable for it, but a slogan, this is still a challenge in the best sense of the word.

If this slogan would be implemented, a human society upheaval and a restructuring of the existing ordinances, installed progressively in history, would take place. Reducing the physical quantities that are produced and the resources used, concerns obviously the industrial developed countries over time, which helped, in large measure, to meet the standards reached by the current civilization.

According to the opinion of some specialists (Dobrotă, Vierită, 2010), from the analysis of changes that would take place in the evolution of human society, it results that is not only about the quantitative aspects of the process of decline, but also about the transformation of complex socio – economic and political structures, but especially about the individual and collective mind. There is not a one-way action against the idea of economic growth, but a change of paradigm.

3. Sustainability and Lean management

To shape the perspectives of organizational sustainability a proactive management is necessary (Oncic-Sanislav, Căndea 2009) – by anticipating the changes that will arise in stakeholders needs, finding resources and action towards the established targets achievement.

Organizational changes determine a new type of management that promotes the use of those methods and management techniques that lead to the development of the organizations with respect for the environment.

Lean Management is one of the methods of management, which, as stated by Dickmann enables the sustainable economic development and prevents the staff turnover, citing the “management contracts that propels the sustainable development throughout the organization” is one of the “purposes after which the management must necessarily be oriented” (Dickmann, 2007).

Being a sum of principles and methods derived from Toyota production system, Lean Management requires employees to participate in improving the system for the reduction of seven types of waste, in all the company activities: human relationships, relationships with suppliers, technology, materials management and stocks. Lean management is based on the principle of flexibility and the speed of response to the demand for products or services, aiming at increasing the efficiency of the process chain that creates added value to products and services.

The fundamental principle that Lean Management method is based on, is that of an efficient and effective configuration of the process chain, value creation and it is divided into a number of procedural and background principles (Pfeiffer, Weiss 1994).

Procedural principles relate to:

- Complete approach (systematization, integration, interdisciplinary);
- Orientation towards process;
- Continuity and perseverance in thought and action;
- Orientation towards application;
- Perfection even in details;
- Avoid loss;
- Orientation towards client;

Background principles de fond are reflected in the following:

- The change of perspective – from the accumulation of goods towards human capital;
- Designing the whole value chain as a super-integrated network;
- Designing the super-network provider - manufacturer - beneficiary as a self-taught system;
- The integration of the analysis on the product and the production process.

The Lean model focuses on the evolution process of changes and adaptation to these changes and it is not just a technology idealized level. A central organizational concept is the sustainable enterprise, in which the corporation is building processes and mutual relations in partnership with stakeholders.

Centred on the principles of Just-in-time method (JIT) at the end of last century, the concept of fluent production mainly concerns the production relations of an enterprise.

If the JIT method aimed as objective only the production of those products that will be sold, that of fluent production wants the company to be able to adapt to the rapid market fluctuations.

A Lean Management system will be a slender and agile management system, able to adapt quickly to any changes in the environment. Lean management concept can be considered as an evolution of some concepts of production, perfectly correlated with the conditions in which the enterprises of the twenty-first century are developing. (Badea, 2009)

The greatest benefits from Lean model include the use of resources, a rapid development cycle of products, a better quality at a lower cost, a more flexibility and an organic system of production.

A particular interpretation of the concept of Lean in the view of some specialists is that it is a production phenomenon that seeks to maximize the labour results of resources number one of the company: people. That is why Lean is a way of thinking, of adapting to changes, of eliminating losses and of continuous improvement. There are many tools and techniques that used together, maximize the efficiency of human resources and with which a company may appear as “Lean” (Năftănăilă, 2010).

Lean Management method integrates a number of other techniques and methods for involving the management and employees in eliminating the loss and creates the prerequisites of a sustainable development. Particularly suggestive is the integration of Lean Management method with Six Sigma, which is a synergistic approach which consists in integrating the best practices for improving progress and increase customer satisfaction, followed by corroborating in seven steps the concepts of performance of Six Sigma in five phases DMAIC with the reduced cost concepts of Lean Management. This is compounded by other methods such as:

- Kaizen (improvement of standardized activities and processes to eliminate loss);
- Poka Yoke (elimination of product flaws by preventing, correcting or drawing attention to human errors when they occur);
- Kanban (production control on the flow through cards or signals);
- 5S (the organization of jobs by improving security and delegating responsibility to improve the work place);

- Visual Management (understanding the state of production in five minutes by simply observing it through panels and visual signals);
- The Map of the value flow (taking into consideration the activities necessary for designing, producing and supplying the product and service, to identify loss in flows of materials and, information and value and to find solutions to reduce or eliminate them);
- Hoshin Kanri (using PDCA – plan-do-check-act, to establish objectives, choosing how to check fulfilment and establish a connection between daily activities and the organization strategy).

An important aspect of the sustainable organizations that promote a Lean production is to create a system of environmental management, which, as some experts say (Bergmiller, Mark Wright, 2009) “is a process by which the management of an organization identifies the environmental aspects regulated and unregulated, the impact of operations and develops objectives and plans to make significant improvements on the environmental protection”.

In the environmental management system is ISO 14001 that can be implemented in any organization and business, regardless of size, location or income. The objective of the standard is to reduce the environmental footprint of a business and to reduce pollution and loss of ongoing business processes. The standard ISO 14001 refers to five key steps for implementing an environmental management system, namely:

- ✓ Establishing an environmental politics;
- ✓ Planning the environment activities;
- ✓ Implementing the planned actions;
- ✓ Verifying the system and correcting irregularities;
- ✓ Validating the operation of the system;

As seen from the analysis of the three stages it can be find the application of the PDCA cycle, which represents a fundamental principle on which all the requirements of the standards ISO 14000 are based.

4. Case study on the relation between Lean production and sustainable production

Any organization can integrate Lean tools and concepts with the concepts of sustainability to have a positive impact on the environment, society and its economic performances. Lean principles help the organization to eliminate waste and at the same time help companies to meet the ever-increasing requirements of customers, while preserving valuable resources for the future generations.

The link between Lean production and the sustainable production has been documented recently in the literature (Angel Klassen, 2009, Sawhney et al., 2007). Sustainable production is defined by Allwood (2009) as “a method of developing technologies which transform materials without gases emission of greenhouse and without generating losses”. Lean Production seems to transcend into the sustainable production.

It is also highlighted the close link between Lean production and the sustainable production, adding that “it is natural that the concept of Lean, the continuous flow of value and focus on eliminating losses is in full resonance with the global environmental strategy, called the Lean Environment” (Sawhney et al., 2007).

Particularly relevant is the conclusion of a group of professionals in the field of environment and Lean (Miller et al., 2010) that compared the environmental impact in case of a manufacturing cell where the principles of Lean production are applied with the production organized on manufacturing lots. Experts have shown that there are more positive matrix of a sustainable development for Lean production unless the production on manufacturing lots:

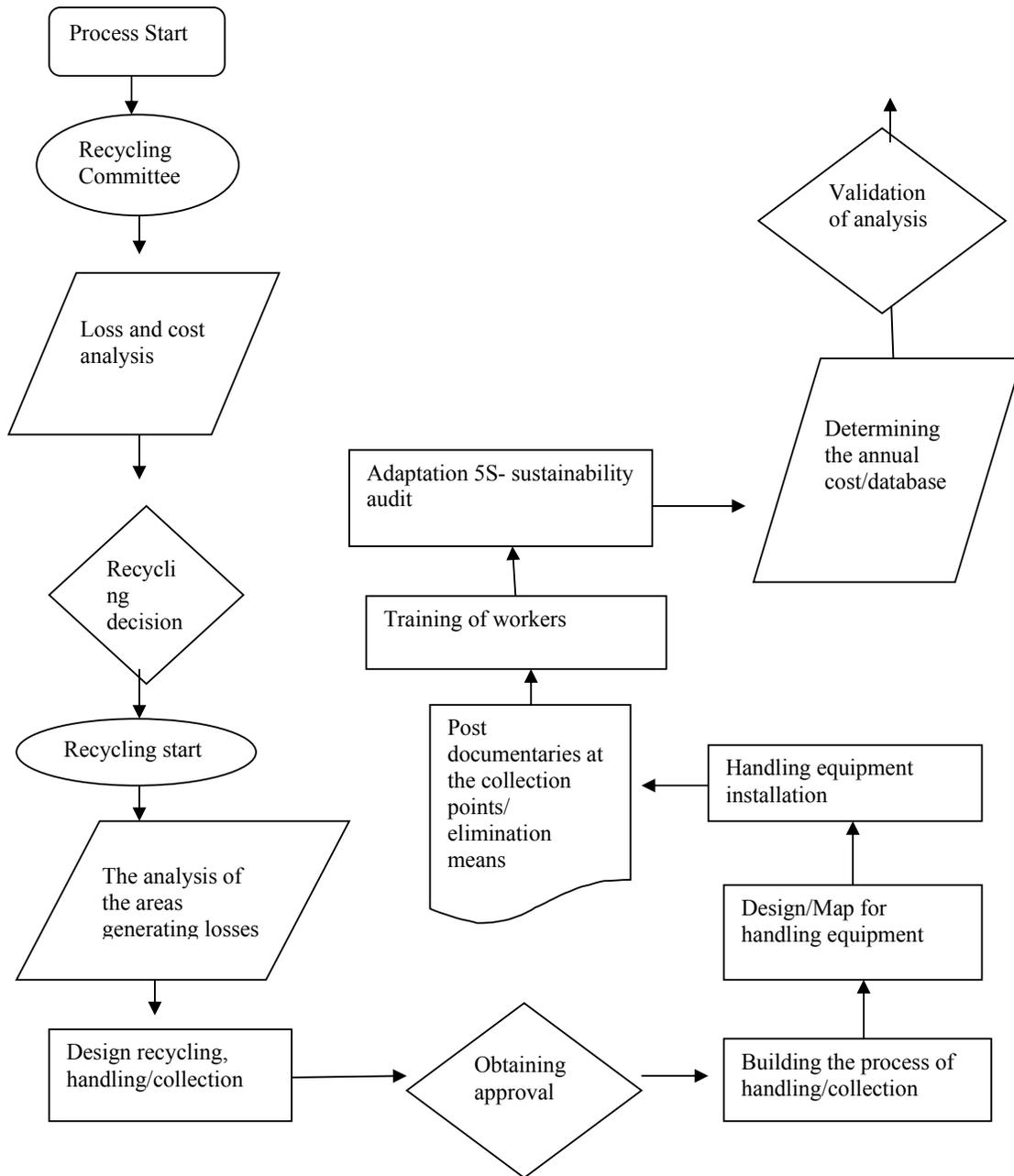
- ✓ Air pollution was reduced because the power consumption was less;
- ✓ Safety and health of employees was higher due to optimizing the equipment location;
- ✓ The exposure to hazardous materials was reduced by eliminating the unnecessary transfers;

Teresko (2004) also showed the link between lean production and the sustainable production in his research into the Bill McDonough’s book entitled “Cradle to Cradle”. Teresko states that the Lean objective is to create “a strong structure around value and optimized processes, including the entire external commercial environment in the optimized process, integrating all the production flows from global to national levels and even sub-microscopic” (Teresko, 2004).

An example which shows that the results of Lean projects are inherently sustainable, creating a future support for multiple comparisons between Lean production and the sustainable production is

the recycling program within a company that can be made based on the principles of Lean by the map drawing of the process for the development of recycling program according to the following figure:

Figure nr.4: Map of the process for developing a recycling program



Source: (Miller, 2010)

Lean focuses on stable and standardized processes and facilitates the development of a formalized documentation not only for value added, but also to eliminate non-value-added.

Applying Lean principles and making an evaluation and a continuous improvement of processes, companies can achieve a high level of eliminating waste.

5. Conclusions

In the last decade, the concept of sustainability has grown to become a significant element in the strategy of many organizations around the world. Sustainability as a mega trend is an evidence and responsibility of current and future period.

The sustainable development at the level of society, and sustainability in business are targets located somewhere in time, to which it should be continuously marched, without being able to achieve them as achieving the objectives of a plan. The sustainable development is a journey, a way of life and, similarly, the sustainability of an enterprise is an emerging.

Based on the three pillars of sustainable development: economic development, social development and environmental protection, by analogy, it came to believe that enterprises should ensure a balance between their performances in relation to the economic, social and environmental protection objectives to be sustainable. Based on this cause-effect relationship, sustainability assessment, both in dynamic and compared between firms, is made currently taking into consolidation the actions that the firm enhances in social and environmental area, overlapped with its usual activities – which aims at success on the market. The more the firm has greatest achievements towards environmental and social objectives, the more it is considered that it is more sustainable.

The management of sustainable organizations is a proactive, dynamic, open one, based on new, integrated methods and techniques, which facilitate the achievement of social, economic and environmental protection objectives.

We have exemplified, throughout the paper, the importance of Lean Management method, as method, which by analyzing the value stream and eliminating waste creates the prerequisites for a sustainable development of the company. Applying Lean Management method and creating a Lean enterprise closely linked to the sustainable enterprise is only one facet of the organizational change.

Within the knowledge-based society, the sustainable enterprise is an enterprise that always learns, that always adapts to environmental changes, which adopts a modern leadership and that is becoming a priority for present and future.

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THE ROLE OF EDUCATION IN DEVELOPING A CULTURE OF SUSTAINABILITY

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Abstract: *This paper takes an institutional approach to analyzing the role of education in adopting sustainable development practices. It assesses the influence of the existing individual values on the capacity of countries to follow sustainable paths and suggests possible ways to make education a pillar for building a culture of sustainability.*

Study objectives relate primarily to establish the role of universities to become a potential agent of change towards sustainability. Thus universities can develop sustainable practices, can form skills to integrate, synthesize and analyze systems, can do research based on real world problems and promote and strengthen the interactions between individuals and institutions.

The developed study is materialized in a model regarding the formation and development of a sustainability culture being based on six successful key domains : environment, local impact, curriculum, standards for sustainability, skills and scientific research.

Key words: sustainability, change, education, sustainable university, culture.

JEL classification: M11, Q01, Q56

1. Introduction

In the last half century, humanity became aware of the need to stop economic development made at the expense of the environment and, ultimately, to the existing mechanisms to support life on our planet.

It's also recognized the need not to restrict the possibility of meeting the human needs of every kind, both present and future. Since most of these needs are met through economic activities as a whole, the imperative to maintain and perpetuate the economic development of human society was recognized. More obviously, economic development is directly linked to the wellbeing of individuals in a particular location in the world and is seen as the very engine of development of society in general.

Without ignoring the truth contained in these statements, we can say that now, the way the world develops their economic activity is unlikely to ensure sustainable development of human society, can be assessed as unsustainable. We can say that sustainability comes off the concept of sustainable development in that, where sustainable development refers to the entire planet and its evolution over time, sustainability is addressed to some parts of it related to population and its activities, such as for example organizations in their various forms and manifestations. Thus by adding a number of activities in an unsustainable manner, jeopardizing the sustainability of the whole.

Efforts to sustainability can be seen from this angle as a road map for achieving the sustainable development. Take into account the kinds of such economic and social development that protects or promotes the natural environment, social equity and welfare of the individual.

Sustainable development, in its already classic acceptance, defined in the Brundtland report as "development that meets present needs without compromising the ability of future generations to meet their own needs" (Vaida, A.; Căndea, D. 2010) refers to a macroeconomic concept that can be applied at society level, or limited to the human community

If we look at this concept from the perspective of an organization, the definition does not give any indication of what to do or what to turn to translate sustainable development into reality. The concept of sustainability, on the other hand covers exactly this lack of perspective in organizations.

Thus, transforming today's organizations in sustainable organizations is in fact part of the solution to the problem of sustainable development of human society. (Vaida, A.; Căndea, D. 2010)

2. Universities in the transition to sustainable development

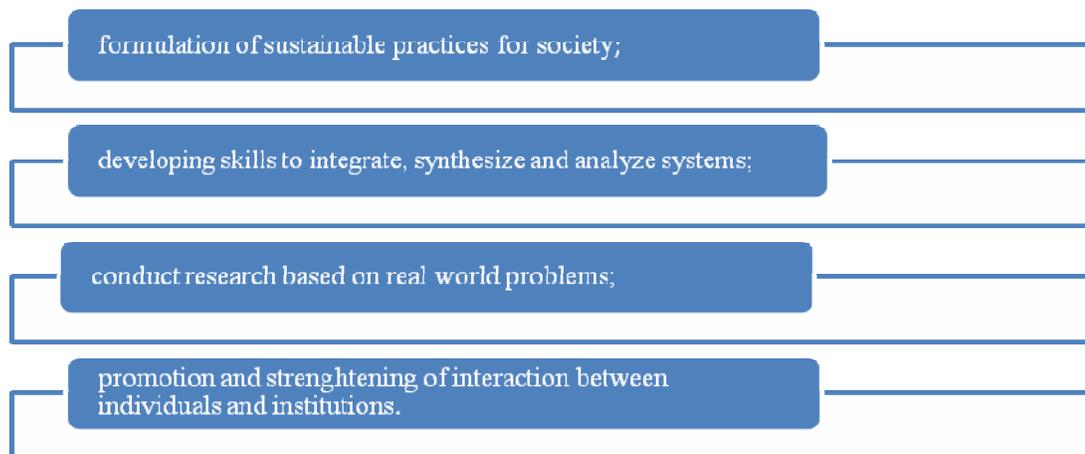
Higher education institutions have a unique position in society. Universities are places of special importance due to production, dissemination and spread of knowledge. Among the conventional association of universities and knowledge, higher education institutions have the unique potential to promote synthesis and integration of different types of knowledge and its application to enhance social change.

In terms of social transition towards sustainability, the main role of higher education institutions may be considered in two ways: universities can be seen as institutions that need to be changed or may be seen as a potential agent of change.

There are specialists like Ferrer-Balas (Ferrer Balas, D.; Adachi, J.; Baras, S., 2008) who emphasize the first of the two perspectives, showing how higher education can change from within, or specialists such as Stefans, Jennie (Stephens, C.; Hernandez E.; Scholz, R., W., 2008), who explore the potential of higher education institutions as an agent of change in society, highlighting how universities can facilitate change from within.

Different perspectives and expectations on the role, value and potential of the university in society have given rise to numerous university perceptions about opportunities to become agents of change in the transition to sustainability. Although these perceptions vary from culture to culture, there are four general categories of perception of how higher education could help society's transition to sustainability (Radu, S.; Deneş, C., 2011), as shown next:

Figure 1- Perceptions of how universities can contribute to the society's transition to sustainability



Source (Radu, S.; Deneş, C., 2011)

Thus higher education could lead to sustainable practices for society, and this opinion is based on the idea that sustainable practices in the campus, the teaching methods that the university can maximize sustainable behavior.

Second, higher education teaches students skills to integrate, synthesize and analyze systems and skills to deal with complex issues necessary to address issues of sustainability.

Third, higher education can make a useful research based on real world problems, which aims to address the urgent sustainability issues facing society.

Finally, higher education can promote and strengthen interaction between individuals and institutions, both within and outside higher education, to reaffirm the position of universities as transdisciplinary agents, with close links with other institutions of society.

The first of these categories incorporates the view that the university is a microcosm of society that can try innovative approaches to environmental management even of campus operations (Ferrer Balas, D.; Adachi, J.; Baras, S., 2008).

In this respect, higher education institutions have the potential to influence by modeling sustainable practices inside, so that everyone who interacts with universities to recognize, appreciate and learn from them and even try to emulate.

Thus, sustainability practices and principles behind these practices are transferred to partners through the institution itself and its behavior (Colucci-Gray, L.; Camino, E.; Barbiero, G., Gay, D., 2006).

The second category is based on the idea that higher education is primarily a space focused on learning, and that in this context, university through curriculum could popularize and promote sustainability (Colucci-Gray, L.; Camino, E.; Barbiero, G., Gay, D., 2006).

A curriculum designed to promote sustainability requires not only traditional knowledge base, but for a change requires a new set of skills, mainly relating to synthesis, integration and assessment of complex systems. Higher education therefore has the potential to facilitate social transition by adjusting the curriculum to incorporate, reward and support the skills of synthesis, integration and analysis of complex systems.

Strategic planning and understanding of social infrastructure behind technological development in this new era is an essential part of education. A broader social context for understanding and interpreting social impact or significance of technology, inventions or curriculum is now essential. The need for contextualization incorporates a new need, analysis and management of complex systems and interconnections, and changes need to focus on technological perfection or disciplinary limitations.

The third category is based on the belief that higher education plays a unique role in society, meaning that universities are places where research based on free and independent thinking and the exchange of ideas is promoted and supported.

Universities are generally considered spaces where they create, store and transmit knowledge.

But given the urgent need of society for a transition to sustainability requires a new concept, both creation and knowledge sharing. In terms of knowledge creation, or research, new research is needed, motivated by the desire to make social change to develop a more sustainable direction and not motivated to go beyond conventional knowledge and understanding as a creative and sometimes self-centered activity.

In terms of knowledge sharing in this new era of sustainability challenges, there is a new requirement for students to teach themselves, combining theory with practice.

Interconnectivity and complexity of the biggest challenges facing society requires individuals to work together to understand systems, thus the simple notion of „teacher” or expert professor that gives knowledge to his students is no more nowadays.

In this context, interdisciplinarity, activities include a fusion of concepts and methods from different disciplines, play an increasingly important role.

Finally, the fourth category refers to the potential of higher education institutions to integrate and influence society by enhancing openness, involvement and interaction between faculty staff and students who are formally affiliated to the institution.

In this context, possible mechanisms for closer ties are varied but include, for example, involvement in policy making, non-formal education, community planning and development and technological support.

This foreign involvement is key to the concept of transdisciplinarity, a concept that goes beyond traditional disciplines and interdisciplinary activities.

Transdisciplinarity explicitly incorporates processes, knowledge and goals of those involved and organizes processes of mutual learning between science and society (Scholz, R., W.; Lang, D., Y.; Wierk, A.; Stauffacher, M., 2006).

As a result, the interdisciplinary higher education has the potential to promote transdisciplinarity by increasing linkages with other actors, beside students, faculty or staff.

3. Culture for sustainability in higher education space

Higher education institutions have the unique freedom to develop new ideas, to analyze the company and involve in daring experiments, and to help create new knowledge. (Cotesse, A., 2003)

Universities in particular are designed to develop their students' so-called dynamic qualities (Posch, A.; Scholz, R., W., 2006) that allows them to analyze, build and operate with a high

degree of autonomy and self-determination, if not in their personal lives, at least in their professional life.

At the same time universities should help students develop skills which will allow them to cope with uncertain situations, and vaguely defined norms, values, interests and conflicting constructions of reality that are in conflict, or at least divergent.

An instrumental interpretation of education and culture for sustainability becomes problematic. In such an interpretation, education must contribute to creating a culture for a sustainable world - either way this world looks.

Education, including higher education, is a means or a tool that governments can use to create a more sustainable world, as it appears in their and the stakeholders vision.

The problem is that we don't know for sure which is the correct sustainable lifestyle. Even if we knew it would vary profoundly from one situation to another and would probably be subject to shifts over time since the circumstances are changing constantly.

We can analyze a more emancipation of the relationship between education and sustainability. Such a theory argues that education should help create a fairer world in terms of democratic and ecological terms - either way it would look.

Education is seen as a way to fulfill membership of society, seeking meanings, develop their potential and find solutions together.

According to this view, a sustainable world can not be established without the full involvement of all members and democratic society, a sustainable world without participation and democracy is unthinkable.

If you join more instrumental theories of education for sustainability we can imagine, on the one hand, rules of "eco-totalitarian" who by law and order, reward and punishment, and behavioral conditioning can create enough sustainable society in terms of environmentally friendly criteria. (Radu, S.; Deneş, C., 2011)

As a creation of emancipation theory, we can imagine a very transparent society with active citizens who participate directly and analytically to the processes of problem solving and decision making, and appreciate and respect the ways of thinking, of assessing and alternative action.

Perhaps this company is not as sustainable as an eco-totalitarian society, from a strictly environmental perspective, but its members may be happy, finally, able to better respond to ecological problems that arise.

These notions about democracy and participation can also be applied to decision-making processes in terms of content and the learning that takes place in colleges and universities. We should answer the following questions (Barlett, P., F., Chase, G., H., 2004):

- To what extent are learners and those who assist the learning process involved in such decisions?
- To what extent higher education meets the challenges identified by the community?
- To what extent is the educational process and content of education sensitive to ideas, values, interests and conceptions that students themselves stand for?

These are questions to be answered when trying to find connecting environmental concerns with concern for democracy in a learning environment.

If integration of sustainability in higher education is closely linked to development of emancipation qualities it will need to give students a way to understand and transform the complex world they live in.

This era has not questioned the productive processes in terms of social and economic practices of production, making them stronger.

Development of standards and positivist and deterministic results for education, environmental education and education for sustainability fits into this tradition.

Despite the questions we have on the sustainability of higher education organizational structure is, however, great educational potential can and should be valued higher education institutions.

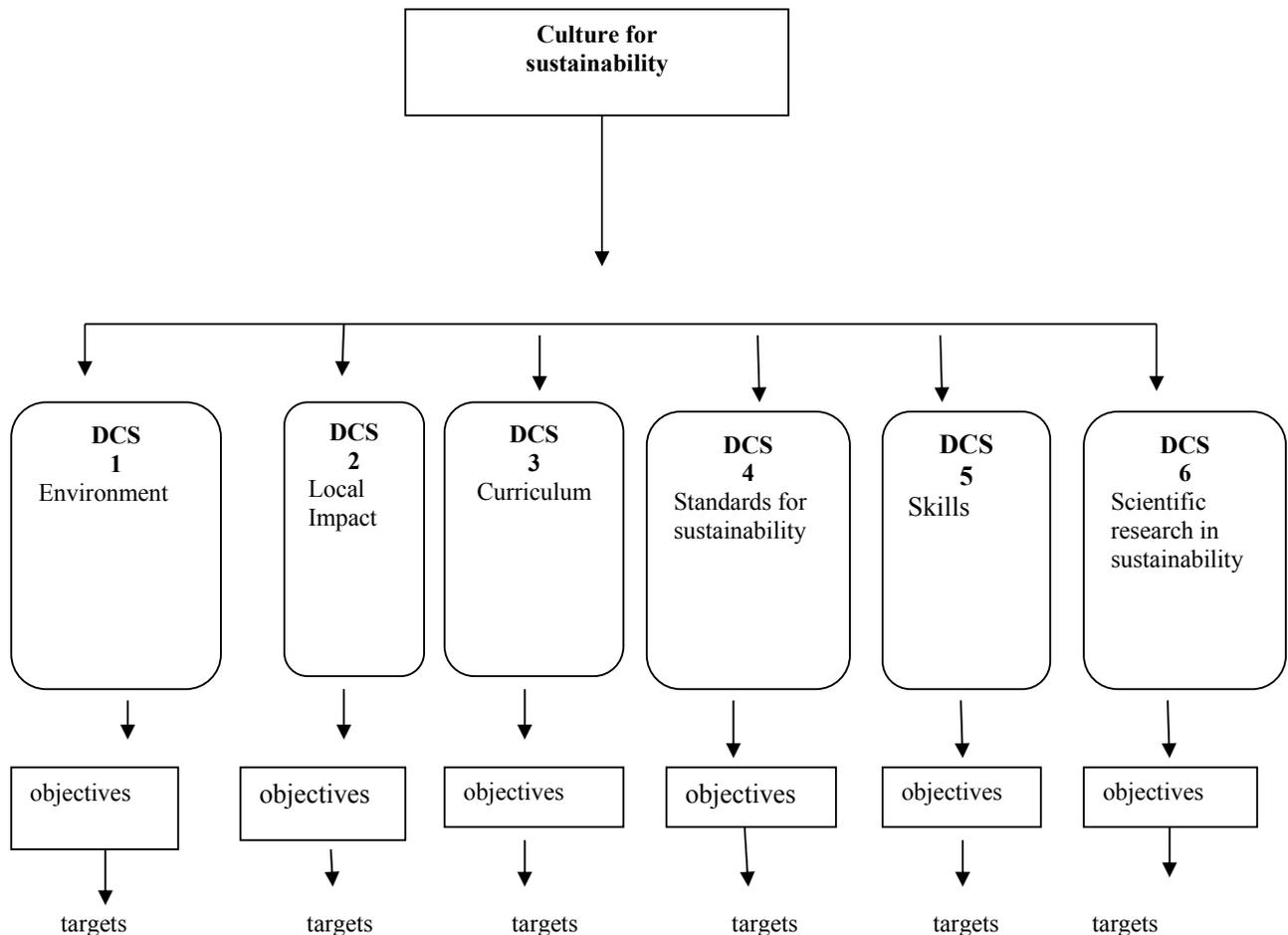
Sustainability has many aspects and features that greatly enhance its educational potential of a more emancipated perspective. These issues include:

- Sustainability as reality (socially constructed);
- Aim to achieve sustainability;

- Sustainability as a concept and dynamic / evolving;
- Sustainability as normative ethics and moral;
- Sustainability as innovation and catalyst for change,
- Sustainability as a heuristic tool that helps thinking;
- Sustainability as a corner stone in the evolution of environmental education and environmental thinking:

Developing a model for training and developing a culture of sustainability in higher education, focused on six successful key areas(DCS), may be presented as follows:

fig.2- Culture for sustainability



Source: (Paraschivescu,A.,O.,2009)

Impregnation of sustainability in the functions of a university offers the potential for the institution to contribute substantially to improving the environment.

4. Conclusions

The fact that sustainability is a poorly defined term offers universities the opportunity to shape and develop new ways of thinking about this notion. Sustainability provides colleges and universities the opportunity to balance their essential values, practices, their traditional pedagogies, the way they program the learning process for the student, the way it determines the resources and relationships with the entire community.

Higher education is above all a mission to create opportunities and not to define or prescribe the future of our students.

These opportunities arise when universities promote observation, evaluation and creative new ideas and contribute to their development. Addressed as such, sustainability should be considered only one of many milestones. So universities have huge responsibility to raise awareness, knowledge, develop technologies and tools necessary for a sustainable environmental future

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THE SOCIAL RESPONSIBILITY OF BUSINESS ORGANIZATIONS: THE CASE OF PFIZER

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Abstract: *The complex relationships between business and society have constituted the subject of many researchers from different disciplines in the last century. The aims of our paper are to render in brief the theoretical framework related to the concept of social responsibility of business organizations, and to highlight the implementation of the concept in the case of the largest biopharmaceutical corporation in the world. The methodological approach was based on the literature review. Our paper contributes to a better understanding of the social responsibility of business organizations and provides a platform on which to build further studies on the same subject.*

Key words: social responsibility, corporate social responsibility, business organizations, society, Pfizer

JEL classification: M14

1. Introduction

The roots of social responsibility appeared earlier in the history of humanity. During the time, the complex relationships between business and society have constituted the subject of many researchers from different disciplines such as economics, law, journalism, management, sociology, political science, philosophy, and business policy. The First Industrial Revolution brought many changes and opened “new perspectives on the relationship between economic growth and social welfare” (Heald, 2005, p. 1). However, significant concerns about the role of businesses in society, especially big businesses, first arose in the United States of America (USA) at the end of the 19th century. The emergence of large business organizations in society led most American people to blame them as being too powerful economic and financial entities.

The corporations continued to expand their power in the 20th century. In the 1930s, some researchers warned about the fact that huge American business organizations had come to dominate major industries in the country: “The economic power in the hands of the few persons who control a giant corporation is a tremendous force which can harm or benefit a multitude of individuals, affect whole districts, shift the currents of trade, bring ruin to one community and prosperity to another. The organizations which they control have passed far beyond the realm of private enterprise- they have become more nearly social institutions.” (Berle and Means, 1932, p. 46)

The modern era of social responsibility started after the Second World War when H. R. Bowen considered corporate social responsibility (CSR) as a way of integrating the societal values beyond the interests of corporate shareholders (Toma, et al., 2011). The 1960s and the 1970s brought an effervescence of ideas related to the field of social responsibility expressed by the works of several prolific authors such as K. Davis, W. C. Frederick and G. Goyder.

In the beginning of the 21st century several corporate scandals both in the USA and Europe (e.g., Enron, Tyco, Parmalat, Ahold) were associated with a culture of executive greed and poor management oversight. Those scandals have shaken public confidence in businesses, have caused a growing deficit of trust and have spurred “a general climate of increased scrutiny, tighter rules and legislation” (Grayson, Hodges, 2004, p. 21).

The current financial and economic crisis has eroded once again the public’s trust in big business organizations. That is why now is probably the most important moment for the business organizations to reaffirm their commitment to responsible and sustainable business practices. In this respect, the business organizations should be rethinking their responsibilities to the various publics concerned with their activities (Snider, et. al., 2003).

The aims of our paper are to render in brief the theoretical framework related to the concept of social responsibility of business organizations, and to highlight the implementation of the concept in

the case of the largest biopharmaceutical corporation in the world. The methodological approach was based on the literature review.

The paper is organized as follows. The second chapter of the paper deals with the conceptual framework of the social responsibility of business organizations notion, emphasizing some of the main contributions derived from the literature. A short history of Pfizer is expounded in the third chapter. The fourth chapter presents in details the social responsibility at Pfizer. This is followed by conclusions.

2. Conceptual framework

Over the last century, a steady stream of research has developed concerning the concept of social responsibility of business organizations who has continued to grow in importance. CSR has become “somewhat of a millstone for the business community” (Hawkins, 2006, p. 1) and created new pressures in an increasingly complex environment. In other words, CSR has never been more prominent on the businesses agenda than it is in the 21st century (Craig Smith, 2003).

As CSR is rather an elusive concept, there is not a universally acceptable definition of CSR (Fifka, 2009). A review of the literature reveals various definitions and different interpretations of the CSR concept. This could be explained by its relatively long history and by its multidisciplinary approaches.

Within the complex relationships between business and society four main themes were identified as follows (Whetten, et al., 2002):

- ‘organizing principles’ (‘why’) that examines the basis for claims that corporations should act on social and ethical issues;
- ‘organizational processes’ (‘how’) that focuses on companies’ responses to claims that they ought to act in certain ways;
- ‘social issues’ (‘what’) that underlines the specific concerns expressed by various stakeholders;
- ‘business-government relations’ (‘a unique who’) that focuses on activities directed at business by government (e.g., trade policies) and on activities directed at government by business (e.g., lobbying).

Therefore, these themes led to different viewpoints about the social responsibility of business organizations. Due to the wide range of CSR definitions in existence, theoreticians have categorized them into the following two approaches (Schwartz, 2011): those who state that business has only to obtain profits within the boundaries of minimal legal and ethical compliance, and those who consider that there are broader responsibilities.

H. R. Bowen provides the first definition of the social responsibility in business as follows: “it refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society” (Bowen, 1953, p. 6). On his turn, K. Davis argues that social responsibility is a nebulous idea that refers to “businessmen’s decisions and actions taken for reasons at least partially beyond the firm’s direct economic or technical interest” (Davis, 1960, p. 70). Starting from the fact that social responsibility invokes both socio-economic and socio-human values, he presents two different views on social responsibility:

- on the one hand, businessmen understand they have a broad obligation to the community within they act with regard the economic developments affecting public welfare (e.g., inflation, full employment);
- on the other hand, businessmen have the obligation to nurture and develop human values (e.g., morale, cooperation).

Later, M. Friedman states that the only social responsibility of business organizations is to increase their profits by legal means. From the opposite side, H. Mintzberg shows that “without responsible and ethical people in important places, the society we know and wish to improve will never survive” (Mintzberg, 1983, p. 14). Moreover, A. B. Carroll (1999) identifies four components of CSR: ethical, economic, legal, and discretionary (philanthropic). The social responsibility of business encompasses “the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point of time” (Carroll and Buchholtz, 2012, p. 34).

In essence, CSR represents a multidimensional construct that describes the complex relationships between business and society. Business exists to serve not only its shareholders, but also the larger society within it operates. In this respect, Pfizer is a valuable example.

3. Pfizer: a short history

Located in the USA, Pfizer is the largest research-based biopharmaceutical company in the world. In 1849, C. Pfizer and C. Erhart, two German young entrepreneurs, co-founded Charles Pfizer & Company, a fine-chemicals business, in a red brick building in Brooklyn, New York. Pfizer was a chemist and Erhart, a confectioner. Combining their skills, they succeeded in launching a palatable form of Santonin, an antiparasitic used to treat intestinal worms. The “new” Santonin proved to be an immediate success for the new company.

As the Civil War demanded large quantities of painkillers and disinfectants, Pfizer expanded its production of tartaric acid (used as a laxative and skin coolant) and cream of tartar (used as a diuretic and cleansing agent). In the 1880s, Pfizer was America’s leading producer of acid citric.

In 1899, after 50 years of existence, Pfizer became the leader in the American chemical business, owning in its portfolio a wide array of industrial and pharmacological products (e.g., citric acid, borax, camphor). A statement made by C. Pfizer showed that the goal of the company was to provide high-quality products to the customers. Pfizer remained a privately held company until 1942 when 240,000 shares were sold to the public.

The company was successful in its efforts to mass-produce Penicillin, the first real defense against bacterial infection, and became the world’s largest producer of the so-called the “miracle drug”. By its contribution to the war effort, Pfizer earned the coveted Army-Navy “E” Award in 1943. After the end of the Second World War, Pfizer researchers started an intensive race to find new organisms to fight disease. In the 1950s, Terramycin (Oxytetracycline), a broad-spectrum antibiotic, was the result of the company’s first discovery program.

Step by step, Pfizer continued to invest in research and development and became one of the most diversified corporations in the global health care industry. Today, Pfizer has a wide range of biopharmaceutical products. Its best products in terms of revenues are Lipitor, Lyrica, Plevnar 13/Prevenar 13, Enbrel, Celebrex, Viagra, Norvasc, Zyvox, Xalatan/Xalacom, Sutent, Geodon/Zeldox and Premarin family (Table 1). In 2011, Lipitor, Lyrica, Plevnar 13/Prevenar 13, Enbrel and Celebrex each delivered at least 2 USD billion in revenues, while Viagra, Norvasc, Zyvox, Xalatan/Xalacom, Sutent, Geodon/Zeldox, and the Premarin family each surpassed 1 USD billion in revenues. In 2010, Lipitor, Enbrel, Lyrica, Plevnar 13/Prevenar 13 and Celebrex each delivered at least 2 USD billion in revenues, while Viagra, Xalatan/Xalacom, Effexor, Norvasc, Plevnar/Prevenar (7-valent), Zyvox, Sutent, the Premarin family, Geodon/Zeldox and Detrol/Detrol LA each surpassed 1 USD billion in revenues.

Table 1: The revenues of the major biopharmaceutical products of Pfizer in the period 2009-2011 (millions USD)

Product	Primary indications	2011	2010	2009
Lipitor	Reduction of LDL cholesterol	9,577	10,733	11,434
Lyrica	Epilepsy, post-herpetic neuralgia and diabetic peripheral neuropathy, fibromyalgia	3,693	3,063	2,840
Plevnar 13/Prevenar 13	Vaccine for prevention of pneumococcal disease	3,657	2,416	-
Enbrel	Rheumatoid, juvenile rheumatoid and psoriatic arthritis, plaque psoriasis and ankylosing spondylitis	3,666	3,274	378
Celebrex	Arthritis pain and inflammation, acute pain	2,523	2,374	2,383
Viagra	Erectile dysfunction	1,981	1,928	1,892
Norvasc	Hypertension	1,445	1,506	1,973
Zyvox	Bacterial infections	1,283	1,176	1,141
Xalatan/Xalacom	Glaucoma and ocular hypertension	1,250	1,749	1,737
Sutant	Advanced and/or metastatic renal cell carcinoma (mRCC) and refractory gastrointestinal stromal tumors (GIST) and advanced pancreatic neuroendocrine tumor	1,187	1,066	964
Geodon/Zeldox	Schizophrenia; acute manic or mixed episodes	1,022	1,027	1,002

	associated with bipolar disorder; maintenance treatment of bipolar mania			
Premarin family	Menopause	1,013	1,040	213

Source: (Pfizer, 2011, p. 21)

These successful brands allow Pfizer to obtain superior financial performance in comparison with other pharmaceutical corporations. In this respect, the total revenues of Pfizer have significantly increased in the last years (Table 2).

Table 2: The Financial Performance of Pfizer in the period 2008-2011 (millions USD)

	2011	2010	2009	2008
Revenues	67,425	67,809	50,009	48,296
Research and Development expenses	9,112	9,392	7,824	7,945
Net income attributable to Pfizer Inc.	10,009	8,257	8,635	8,104
Total assets	188,002	195,014	212,949	111,148
Total debt	38,949	44,013	48,662	17,283

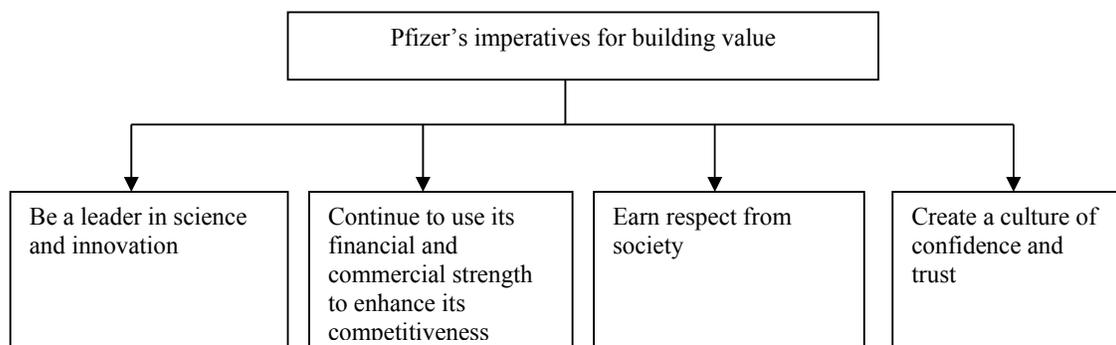
Source: (Pfizer, 2011; Pfizer, 2010a, p. 10)

According to Fortune Global 500 world’s largest corporations, Pfizer was ranked no. 103 in the world in 2010. However, Pfizer is not only a very profitable corporation, but also a highly responsible one.

4. Social responsibility at Pfizer

During its long corporate history, social responsibility has become a fundamental concept for Pfizer. CSR plays a key role in achieving its mission of “Working together for a healthier world”. There are at least two main reasons that explain this assertion. Firstly, CSR is inextricably linked with the Pfizer’s imperatives for building value such as “Earn respect from society” (Figure 1).

Figure 1: Pfizer’s imperatives for building value



Source: (Pfizer, 2010a)

Secondly, CSR is based on the Pfizer Values such as respect for people, community and integrity. Among its values (Figure 2), integrity constitutes one of the core values of the corporation. Ian C. Read, Pfizer chairman and chief executive officer, considers that integrity means complying with the law, reflects who Pfizer is as a company and as individuals, and helps Pfizer to earn the trust and respect of the people it serves. In essence, integrity is at the core of Pfizer’s identity and reputation.

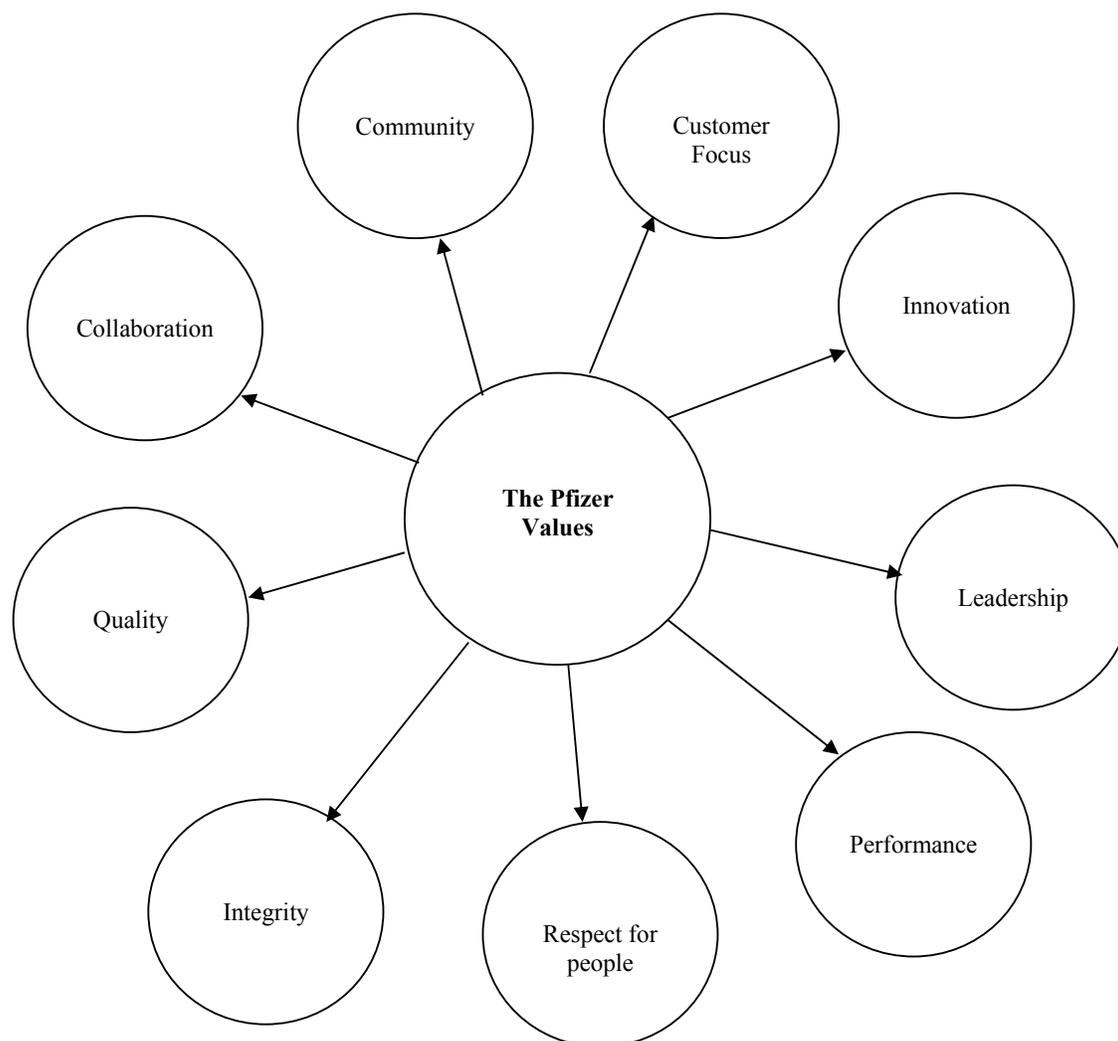
According to Pfizer Policies on Business Conduct, performance with integrity represents both what Pfizer does and who Pfizer is. In order to perform with integrity, the employees of Pfizer:

- take responsibility and hold each other accountable;
- raise concerns and ask questions;
- make the right decisions even when those are difficult;
- maintain corporate high standards in everything they do and everywhere they operate.

Performing with integrity means setting the right priorities and delivering on Pfizer's commitment while adhering to Pfizer's Values and standards. The essence of Pfizer's commitment is expressed in the so-called "The Blue Book" as follows:

- Know the standards, and live by them.
- Know the law and ask questions.
- Raise concerns.
- Always act with integrity.

Figure 2: The Pfizer Values



Source: (Pfizer, 2012)

By building a healthier world, Pfizer has always striven to act in a responsible manner towards the society and/or community within its functions. In 2007, Pfizer asserted in its CSR report that a responsible and accountable (socially, ethically and environmentally) company is a trusted company. Its corporate responsibility objectives were:

- To follow internationally recognized standard for corporate responsibility reporting.
- To develop corporate responsibility performance measures.

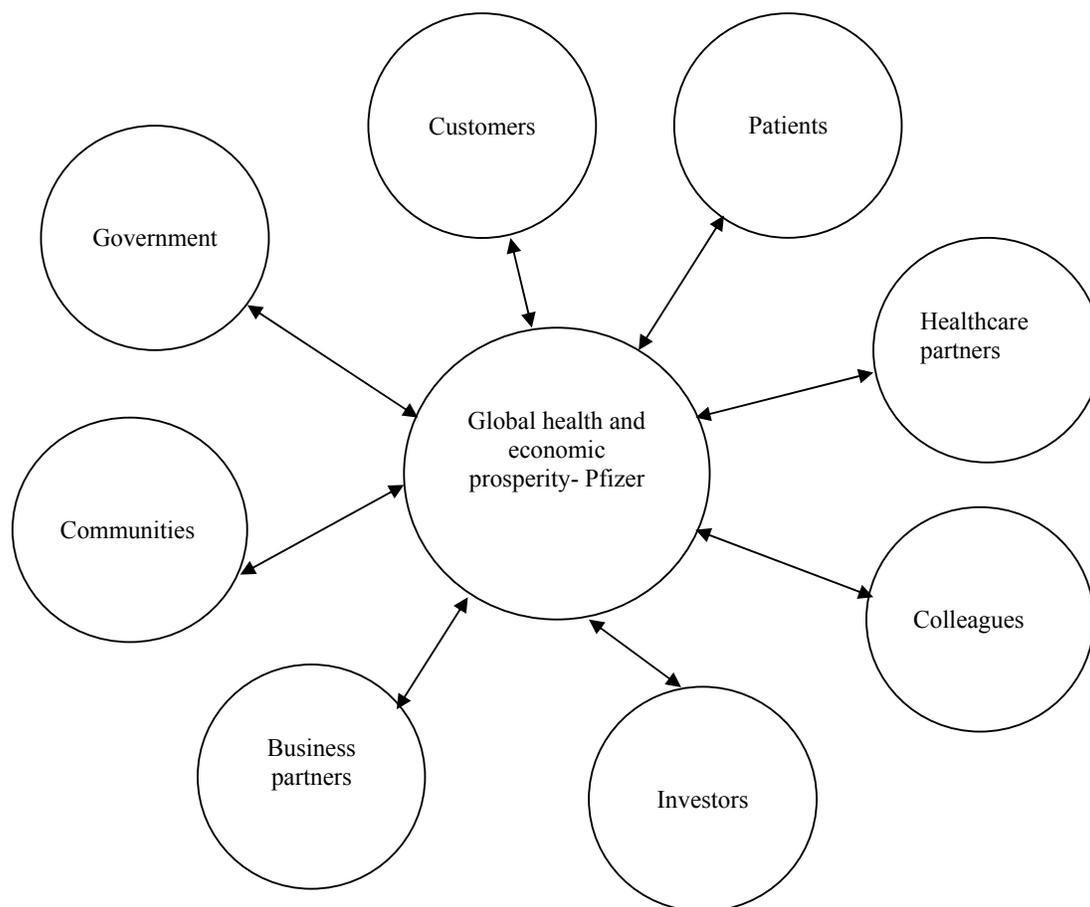
That is why the American biopharmaceutical colossus has taken a dramatic step to reshape itself into a more flexible, entrepreneurial and accountable corporation starting with 2008. On its website (<http://www.pfizer.com/responsibility/>), Pfizer declares that its responsibility in a changing world is the following: "As a member of today's rapidly changing global community, we are striving to adapt to the evolving needs of society and contribute to the overall health and wellness of our world. We are

continually reviewing and improving our efforts to lessen our impact on the environment, nurture a workplace of diversity and inclusion, conduct responsible business practices, and uphold the highest ethical standards in everything from research and development to sales and marketing. And, we are building partnerships in communities throughout the world to strengthen health systems, increase access to our medicines and find sustainable solutions to the health challenges of today, and tomorrow.”

A key element in improving Pfizer’s corporate responsibility efforts is the relationship with its stakeholders (Figure 3). In the past years Pfizer has worked with various important stakeholders such as American Cancer Society, Business for Social Responsibility, Harvard University, World Health Organization and World Bank. Pfizer uses a stakeholder model that recognizes the inherent interconnectedness of its goals and its stakeholders. In this respect, the Pfizer’s objectives related to CSR are:

- To integrate corporate responsibility into Pfizer’s core business processes.
- To facilitate responsible transitions during the economic recession.
- To improve public health around the world.
- To develop and implement a program to protect the integrity of Pfizer medicines.
- To reduce its impact on the physical environment.
- To support US health care system reform.

Figure 3: Major stakeholders of Pfizer



Source: (Pfizer, 2009)

In order to achieve the above mentioned objectives, Pfizer has striven to develop and implement many CSR programs in the last decade (Table 3). All of them express its commitment to participating actively in and improving the societies and/or communities in which Pfizer do business.

Table 3: Pfizer CSR programs

Year	Program	Impact on society
2007	Mobilize Against Malaria	In Ghana, conducting training sessions for Licensed Chemical Sellers enabling more than 660 chemical sellers in 13 districts to provide better malaria education to over 20,000 people, dispense medicines according to national protocol, refer complicated malaria cases and pregnant women to nearby health centers.
2007	Global Health Partnerships	The program supported 29 grantees in 46 countries across five continents addressing emerging challenges in cancer and tobacco control.
2007	Connect HIV	Over 6,000 individuals at high risk for contacting HIV/AIDS have been reached with prevention messaging and educational programs; 573 HIV-possible individuals have learned how to prevent transmission to their partners, etc.
2004	Pfizer Helpful Answers	The program has helped over 5.1 million patients receive over 51 million Pfizer prescriptions, the equivalent of USD 4.8 billion worth of free medicines and savings.
2004	Infectious Diseases Institute	Nearly 4,000 health care workers from 27 countries have received training in various aspects of the prevention and care of HIV/AIDS and related infectious disease, etc.
2003	Global Health Fellows	Over 200 Fellows have been selected to serve as physicians, epidemiologists, nurse educators, supply chain experts, IT specialists and business consultants in 39 countries.
2000	Diflucan Partnership Program	The program has provided over USD 840 million in medicine to more than 2,000 sites in 63 countries, with training and education of 20,000 health care professionals.

Source: (Pfizer, 2009)

In sum, Pfizer corporate responsibility is fundamental to its business, being directly integrated into all of its activities. CSR encompasses both “what Pfizer does” and “how Pfizer does it”. Through its CSR programs, Pfizer has proved that it responds to the evolving needs of human society and contributes to the wellness of the world population.

5. Conclusions

The idea that business has societal obligations has been evident at least since the 19th century. Today’s business organizations have responsibilities that go beyond the production and marketization of goods and services and involve helping society to solve important social and environmental problems. In the 21st century, a responsible business organization is an enterprise that marries social and environmental responsibilities and economic efficiency.

The social responsibility of business organizations is a multifaceted concept that has different meanings for different people. The dynamism of the CSR concept in the last century has echoed its multidimensional nature. However, it has encouraged businesses around the world to take into account not only their economic responsibilities, but also their social and environmental responsibilities. Thus, business organizations have numerous impacts upon society within they function that go beyond simple market transactions.

Our paper contributes to a better understanding of the way CSR concept is implemented in business organizations. Also, it provides a platform on which further studies can be carried on the same subject.

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THE MANAGEMENT OF THE ENVIRONMENTAL RISK FROM THE PERSPECTIVE OF THE FINANCIAL ACTIVITIES

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Abstract: *In this document we presented what the management of the environmental risk means from the perspective of the financial activities. I also we described the loan evaluation process from the perspective of the environmental risk management. In the context of the fast development of the banking activities within the field of the sustainable development, we consider that at least a first step of education and informing within this field is mandatory.*

Evaluating the environmental risk is very important for the financial institutions as well; there even were banks that went bankrupt because of the legal environment standards. The banks have the opportunity, through the smooth involvement of the banking sector into environmental issues, to collaborate with their customers in the environmental risk management.

Key words: sustainable development, environmental risk, banking policy, evaluation

JEL classification: Q56, Q59

1. Introduction

The value of Romania's natural capital demanded taking measures for nature conservation over the time. The conservation of the natural capital is mandatory not only for ensuring life at present, but also for the coming generations, because it preserves the regional and global ecological balance, it guarantees the regeneration of the biological resources and it maintains the quality of the environment necessary for the society

The most important concern for the natural capital is continuously increasing in the entire world as the environmental damages at local and global level becomes more and more obvious.

Since 2000, the issue of sustainable development has become a banking sector concern by incorporating social and environmental issues in credit policy.

Due to globalization, consolidation and financial industry diversification, banking sector has become more and more important for global business. A certain number of banks have initiated a series of products for sustainable development, they also changed internal and credit, policies, as well as training programs and consulting services, obliging the employees and partner companies to invest in socio-ecological principles of responsibility.

In comparison to other sectors, banking sector had slower response to the new problems presented by development.

Nowadays, the environmental performance evaluation is extremely important for financial institutions too; there are even banks that have reached the bankruptcy case based on legal environmental forms.

This was the cause for which the American Banks reconsidered their banking policy regarding the environment, the main reason being credit risk.

European Banks, unexposed to environmental provisions, initiated the creation of environmental policies later, in the middle of '90s.

In Europe, the main concern was more focused on internal environment than on risk management and later on creating new products, for example the investment funds according to Environmental Protection.

In 1992, "UNEP Declaration of Financial Institutions regarding the Environment and Sustainable Development" was treated during Rio Conference; this was the first step towards the active involvement of banks in sustainable development.

An empirical research, realized in 1995, regarding the activities of the Environmental Protection, has shown that 80% from respondents had implemented certain evaluation instruments of environmental risk. Another assessment of the signatory institutions, made in 1997, came to the idea that many of them created specialized environmental departments.

In 2003, another important step was made at the global level, namely the Equator Principles for regulating financial activity of structured projects.

2. What is Sustainability Banking?

The integration of sustainable development in banking sector is divided two directions:

1) The integration of social and environmental responsibility in Banking Operations through environmental initiatives (for example recycling or increasing energy efficiency programs) or social responsibility initiatives (sustaining cultural events, improving human resources activity and humanitarian donations).

2) The integration of sustainable development in Bank's main activity, by integrating environmental considerations into products, policies and their strategies design (integrating environmental criteria in granting credit and investment strategies, in developing new products that facilitate access to capital business based on sustainable development).

Banks have the possibility of working together with their customers in Environmental risk management through a harmony involvement of the banking sector.

The Environmental risk management facilitates a structured and systematic approach to decision-making process in environmental domain. The force and the value of the risk management approach is that it combines various techniques of evaluation and consultation, uniting them into a consistent whole that gives decision-making approach.

Risk management offers the opportunity to any organization to understand better the conduct of every operation and the ability to respond effectively at the changes of internal and external circumstances.

Environmental Risk Management is significantly different from other types of risks management due to the fact that its particular characteristics reflect the complexity of the environment.

The large number of ecosystems and organisms, the way they interact to each other or with neighbouring systems, generates a high degree of complexity as well as a significant level of uncertainty.

Most times, the decisions refers to long periods of time and are based on multiple assumptions regarding the potential impact, such as, for example, the effect on new generation. Because of the difficulty to make accurate assumptions, decisions are often taken in conditions of scientific uncertainty on the possible consequences.

Factors affecting the environmental risk of management:

- Absence of data or the existence of a small amount of data;
- The need for formulation of hypotheses;
- Natural variability; use of concepts, techniques and new methods from sciences underdeveloped and that is the subject of numerous disputes and controversy regarding the actions to be undertaken;
- Long periods of time(for example, although it should be taken into account by future generations, ecological changes may occur slowly, action because the time lag between causes and effects materialize);
- Potential effects on the environment and economic welfare at local, regional, national, international, global scale and the possibility of irreversible consequences;
- The absence of a direct and clear relation between certain causes and environmental effects.

3. Banking policy in environmental risk assessment

In terms of financial activity, the environmental risk of management involves:

- Systematic integration of environmental considerations in financial institution operations, including a clear definition of the supervisory role of the top management team, staff responsibilities and providing staff training;

- Collecting, evaluating and reporting of information regarding the environment, concerning a proposed transaction;
- A fully informed decision about whether the transaction associated environmental risk is acceptable;
- The control of environmental risks associated with the transaction;
- Realization of any potential benefit to the environment, associated transaction.

Probable examples of environmental activities proposed by a company:

- Continuing pollution generated by current operations
- Historical pollution generated from past operations
- Accident resulting in serious and sudden pollution
- Handling, transport and disposal of hazardous materials
- Excessive use of natural resources
- Use of or trade with – sensitive products in terms of environmental
- Environmental problems like those create risks for the company (Table 1), including.

Table 1: Banking financial risk classification

Type of environment	Financial risks	Legal risks	Reputation risks
Air, water, soil	Increasing investment operation costs to comply with environmental standards	Difficulties/delays in obtaining urbanism and environmental license due to settlement requirements or public opposition	Reduced sales where the products are perceived as harmful to the environment
Air, water, soil	Remediation costs, payment of fines or compensations	Forced closure or limitation of enterprise activity	Public objections or of the authorities regulations regarding activity expansion
Air, water, soil	Increased expenses with the removal, handling and transporting of the waste	Claims of third parties	
Air, water, soil	Decrease of the assets value such as land or shares		

Source: Data processed by authors

Many of these risks can not be grasped by the standard processes of financial analysis and therefore, some financial institutions have suffered important losses due to unanticipated problems, health and safety environmental that affected their clients or investments.

For this reason, most of the international banks and many other financial institution have established specific measures regarding the management of environmental risks in order control this risk aspect the operations it carries on.

Environmental risk management is needed because companies, especially industrial enterprises, carry out activities that may pose a danger to human health or because environmental damage.

In addition, a company's tangible assets, especially property or land may be contaminated due to current or past activities. As a result, financial institutions doing business with those companies, whether bankers, either as investors or other involvement with, faces a variety of potential environmental risks. This is true even when a company is or appear to conform environmental legislation in force. Section risk (derived from questions) specific environmental review the loan approach procedures for environmental risk management to be used by bank staff to evaluate business loans. In the frame work of the environmental risk management, there are four key phrases which take place at appropriate times of the credit assessment process (Figure 1).

The use of these procedures allows bank personnel to determine what level of environmental risk management is necessary for each transaction and make the necessary investigations.

Although these are intended for use in analyzing new potential transactions when the client application, they can be used equally well for an existing portfolio, to identify existing loans that may present a medium risk for the bank.

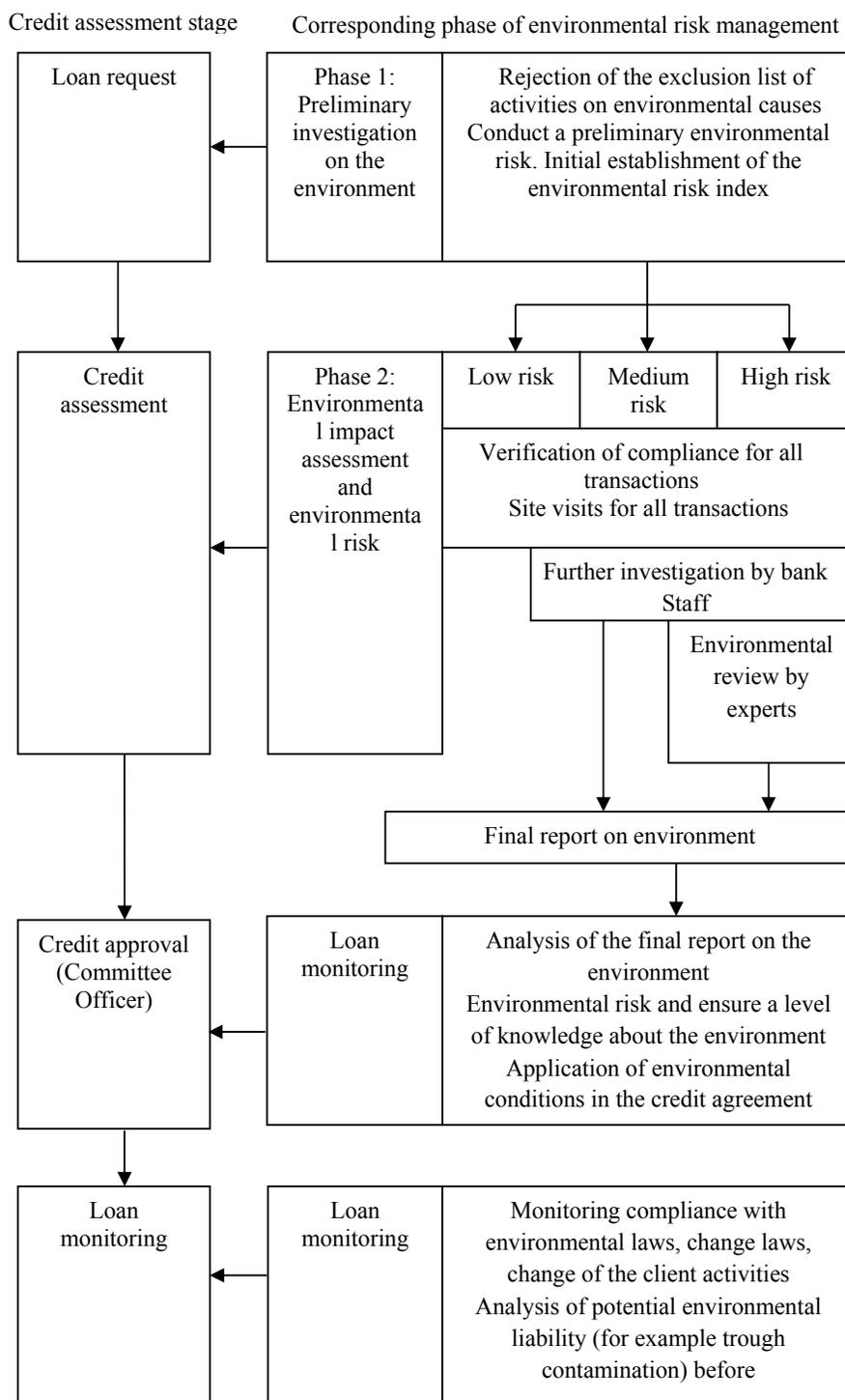
Environmental risks are the possibility of impending events or adverse effects on the environment.

Through an integrated approach to the problems of the environment, social and safety labour associated financial processes in which the bank is participant follows:

- control of environmental risks in order to prevent and minimize them as well as of their adverse effects;
- Ensuring compliance with the provisions of national environmental legislation and regulations in force, the activities carried out with clients, in which.

The bank inspects, the beneficiary customers, the obligation to realize, the projects funded in accordance with these regulations.

Figure 1: Banking financial risk classification



Source: Data processed by authors

Bank to promote in the internally financial assessment process, projects with positive impact on the environment and / or social, providing, by the specific policies more attractive conditions than those currently applied in the case of financing operations (differential interest rate, facility to finance).

Identify, assess, monitor and maintain environmental risks to an acceptable level for the bank will be considering by risk categories (high, medium, low).

Identification process and environmental risk assessment involves collecting information on how to analyze customer consider environmental protection, within his business, and financial implications, legal and reputation risks of these on the client and / or bank.

Depending on risk category identified (high, medium) may be used as additional assessment tools: environmental audit (if necessary) and recommendations needed to prevent, minimize, mitigate or compensate for adverse impacts of the action plan / recommendations of the compliance schedule (part of environmental permit). For low-risk transactions, it is not necessary to use the assessment tools mentioned.

Main criteria that influence environmental risk, is the activities developed in the potential client company and environmental impacts, associated with its. In the same time must be considered the information on loan amount, loan duration and the nature of guarantees.

So,

- Loan amount. The environmental risk is also influenced by the loan amount, the bigger the loan, the bigger the potential losses. Often, substantial credits are accorded to industrial units which apply complex processing technologies and at a larger scale, which use larger quantities of raw materials and generate larger volumes of waste.

- Loan term. The duration of a loan is another important aspect of global risk assessment. The longer the loan term, the bigger and harder it will be to anticipate the exposure to external risk factors and certain problems will be more likely to occur, such as legislative changes or pollution.

- Type of guarantee. Guarantees may take the form of liquid assets such as cash; current illiquid assets such as stocks; fixed assets such as buildings, equipment and vehicles; or land. The guarantee may pose a risk to the lender in a series of cases including the following situations:

- When the one which granted the loan executes the guarantee and becomes the owner of the warranty which may be associated with environmental risk (for example, in case that the terrain is contaminated and exist the possibility to be imposed requirements according to decontamination which require significant expenditure).

- When at guarantee evaluation were not taken into account the environmental damage or lack of adequate performance in environmental (for example, in the case when equipments could help at classification into the newest authorized standards therefore is why have low value or no value).

Through the issues examined in the context of an accelerated development of banking activities in the field of sustainable development, considering that at least a first step of education, information and involvement in the field is necessary.

4. Conclusions

At the end of this work, the most important conclusion is that the banking sector has an essential role in the environmental risk management.

Implementing the sustainable development implies fundamental changes in the way the bank is lead, in the way it defines its financing policies, in the way it chooses its customers, employees, suppliers etc.

If developed in an efficient way, the banking activity for the sustainable development will imply innovation, creativity, and implicitly new benefits as a result of creating new products by developing new markets.

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REALISING A SUPPORT FOR REDUCE WATER POLLUTION BY NITRATES FROM AGRICULTURAL SOURCES

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Abstract: *One decisive step towards the achievement of a sustainable modern society is represented by the efficient management of water resources. There has been an essential change in most of the governments' economic policy and related strategies, in those water resources of protection activities are now regarded as an intrinsic component of a sustainable development of the human society. Policies related to the field of water resources, devised by competent authorities, must take into consideration general principles and criteria which are specific to the current context of transition from a regulations-based approach, to the gradual introduction and implementation of new economic tools, in perfect harmony with the EU Directives and legislation. This paper takes into account important aspects of legal and economic nature, which to base decisions in the field mentioned. It also presents a model of sustainable water management, with the possibility of introduction in the economic mechanism*

Key words: water, pollution, nitrates, agriculture, management

JEL classification: Q15, Q25, Q53

1. Introduction

Environment protection issues are of particular complexity, address all economic sectors and call for the involvement of both specific stakeholders and of the polluting uses. By taking into consideration all the numerous scientific studies and warnings formulated by water resources research scientists, in 1988, the European Commission decided it was high time a correct and comprehensive policy in this field was formulated and subsequently proposed elaboration of a Water Frame Directive.

Following a decisional process that took almost 10 years, in 1997 the first draft of this legislative act has been made public. This version was submitted to debate within the European Parliament twice: in February of 1999 and in February of 2000. The Water Frame Directive finally became effective once it was published in the December 2000 edition of the Official Journal- OJL 327, under the name “Directive of the European Parliament and of the European Council, 60/2000/EC, on the setting up of a community action framework in the field of water policy.

Due to ever stronger and more numerous pressures put on the available water resources, it has become vital the creation of legislative instruments capable of clearly addressing newly emerging issues and of contributing to the securing of water resources needed for the next generations.

The EU Water Frame Directive extrapolates the water protection field to all the water uses, whilst clearly setting up milestones in this process, so that by 2015, all watercourses of Europe should eventually meet the “good water” status, their uses being sustainable throughout countries in Europe.

2. Results and Discussion

The Water Frame Directive (2000/60/EC) represents an ambitious and innovative approach at EU level in the field of water management, its key legislative components referring to :protection of all waters, irrespective of their nature – rivers, lakes, maritime coastal waters, underground waters, identification and implementation of objectives that can effectively contribute to the granting of the “good water” status for all European waters until 2015; active participation of all responsible forces, including the NGOs and local communities, in the activities related to the management of water resources; devising policies which can financially capitalize on waters and which can ensure effective application of the “polluter pays” principle.

In this context, presently, the water management activities rely on the following basic principles:

- Water is a limited and vulnerable resource;
- Water management activities should be based at sub-river basin level;
- Water management activities should integrate both quantitative and qualitative aspects;
- There should be a sub-river basin level solidarity among water users;
- Any polluter will have to pay for the damage incurred to the environment;
- Water can render an economic value;
- Water is not a commercial product.

The EEC 2000/60 Water Frame Directive became effective as of December 22, 2000; according to the provisions of this European Directive, for the first time underground waters were deemed as part of a river basin integrated water management system for monitoring purposes. Programmes will be devised in order to implement measures aimed to secure sufficient underground water resources of adequate chemical quality by the year 2015.

In order to be able to achieve a reduction of emissions coming from agricultural sources, the 91/676/CEE Directive on the protection of waters against the pollution caused by nitrates from agricultural sources, has been issued, which is subordinated to the Water Frame Directive. Endorsement. Directive no.91/676/EEC on the protection of waters against pollution caused by nitrates from agricultural sources has been fully adopted within the national legislation, by means of the following normative acts:

- Decision of the Romanian Government no.964/2000 on approval of the Action Plan for the Protection of Waters against Pollution with Nitrates from Agricultural Sources and on setting up of the Commission and Support Group for the implementation of the Action Plan for the Protection of Waters against Pollution with Nitrates from Agricultural Sources; this Commission consists of specialists of the Ministry of Agriculture and Rural Development and of the Ministry of Health; affiliated to this Commission is a Support Group, consisting of representatives of “Romanian Waters” National Administration, of river basin committees and of certain specialized institutes, either subordinated or under coordination of the mentioned ministries;

- Joint Order no.425/2001 and 105.951/2001 issued by the Minister of Waters and Environment Protection and by the Minister of Agriculture, Food and Forests, on approval of the by-laws, role and structure of the Commission and Support Group established to implement the Action Plan for the Protection of Waters against Pollution with Nitrates from Agricultural Sources;

- Order no. 740/2001 of the Minister of Waters and Environment Protection, on approval of the nominal structure of the Commission established to implement the Action Plan for the Protection of Waters against Pollution with Nitrates from Agricultural Sources;

- Order no.918/2002 of the Minister of Waters and Environment Protection, on approval of the Code of Good Agricultural Practices for the use of farmers.

Objectives. The main objectives set by the 91/676/CEE Directive and included in the Action Plan for the Protection of Waters against Pollution with Nitrates from Agricultural Sources, are as follows:

- reduction of pollution produced or induced by nitrates coming from agricultural sources;
- prevention of pollution of waters with nitrates;
- Optimization and rational utilization of chemical and organic fertilisers.

3. Differentiating between models of water resources management

One can refer to a typology of the water resources management models, depending on the following characteristics:

- The type of access to the relevant water resource;
- The type of water resource consumption;
- The type of control exerted on the water resources' access and consumption;
- Bearing the costs of water resources' utilization;
- The main framework under which institutions involved in the management of water resources operate;
- The ethics of water resources management activities.

The types of ‘free’ and ‘controlled’ access are defined by taking into consideration the reference organizational system and the pressures exerted by human activities upon the aquatic ecosystems.

One deems as essential to the endorsement and making operational of the two types of access, the degree of knowledge on the aquatic ecosystems' mechanisms, reflected on the way in which the generated water resources' role and importance are perceived and ultimately in the manner in which each water user behaves within the real environment.

In the absence of such behaviour, the 'control' costs will be substituted by costs corresponding to damages incurred to the aquatic ecosystems, this leading to a non-sustainable utilization of the available water resources.

Most of replenish able natural resources allow division/sharing and therefore their consumption is almost exclusively of the concurrent type. This is also the case with water resources which may be consumed by users in various amounts, without immediate direct consequences on their parameters.

However, with ever growing number of water users which consume ever increasing volumes of water, the type of concurrent consumption should evolve from a 'freely expressed' one towards a 'controlled/regulated' consumption type.

Assuming responsibility over the accessing and consumption of water resources will only be feasible to the extent in which the promoted management model does include an essential informational sub-system that can constitute the basis for knowing the dynamics of aquatic ecosystems, for justifying the size of the abstraction rate and the range of compensation measures required, etc.

Without claiming to reflect the whole range of representative cases, one illustrates in the table below, the relation between the type of accessing and the type of consumption in terms of water resources, which leads to the following typology of environment assets in general and of water generated by the aquatic ecosystems, in particular:

Table 1: Relation between the type of accessing and the type of consumption

Consumption type Access type	Shared	Concurrent
'controlled'	Assets assuming a form of payment– a natural reserve for whose visitation one levies an entrance charge	Private assets
'free'	Public assets	Common assets

Source: Data processed by authors

4. The type of control related to the accessing and consumption of water resources

Irrespective of the customary or legislative nature of the normative acts that are specific to this field, the type of control exerted for the accessing and consumption of water resources may either be based on the confrontation model or alternatively, on the cooperation model.

The confrontation model assumes a monitoring activity (exhaustive or by random checking), so that any deviation from the provisions of the water management permit can be quickly identified and subsequently penalized.

For the case of water resources, the costs of monitoring the access and consumption processes, combined with the costs of levying the adequate sanctions are considerable, in proportion with the number of water users.

Under such circumstances, one has to take into account and/or the cooperation model which consists of an assessment of the partnership between the user and the institution (institutions) involved in the management of water resources.

In order to be consistent with the cooperation type of control, whenever one spots infringements of applicable norms and regulations, certain flexible conformation measures must be enforced, by means of:

- Instating certain adequate permissive mechanisms;
- Enforcing temporary conformation exempting mechanisms;
- Allowing an increased flexibility to the penalty enforcing system

Principles and methods used to manage water resources aim to ensure the financial viability and continuity for the water supplying systems, not as an independent purpose in it self, but as a means to achieve the long term scheduled public sanitation and environmental objectives.

The optimization of costs (for investments, overheads, operation and maintenance, etc.), the level of subsidizing, the degree of expenditure recovery, etc. all represent action destinations which have to be employed so that the system becomes viable on long term and thus one avoids discontinuities in the process of water supplying, water supply infrastructure under-equipping and so forth, which all tend to firstly impact on the least favoured social groups.

5. Recovery of costs/expenditures

The recovery of costs based on the collection of water usage fees from the users may be achieved *totally* or *partially*; for the latter case, a diversification of the recovery sources is required, among which the subsidizing mechanism is one alternative.

Criteria which constitute the basis for recovering the costs of water supply are related to the securing of the public sanitation status and to the financial stability of the River Basin Directorates.

Within any given society, each member has the right of benefiting from adequate quality water in sufficient amounts, therefore the public sanitation criterion leads to a differentiation of tariffs (T1), depending on the income and on the degree of comfort

$T1 = f(\text{income}) = \text{social tariff applied to the groups with low level incomes};$

$T1 = f(\text{comfort}) = f(\text{volume}) = \text{tariff applied to higher income households};$

In accordance with the financial criterion, T2 medium tariff has to cover the whole cost of the water supply service:

$T2 = (C + M + P) : X$ (at market price), where:

C = capital expenditures;

M = cost of assets and services;

P = cost of salaries;

X = the sold volume of water.

The economic criterion calls for a kind of tariff system (T3) applied to water supply that can render the best possible utilization of water (and of all other components of the water supply system). The water resources management models, either undergoing design stages or already implemented, have a significant impact with spatially and over time distributed effects.

In a quintessential formulation, from an ethics standpoint, the water resources management models may respond to a utilitarian concept, based on a descriptive (neutral) or analytical approach, but also to a deontological concept (non-neutral) which is based upon a specification-type approach.

It is obvious that these criteria are often incompatible, which suggests the need to adopt a compromise solution, i.e. a reduced tariff level corresponding to any water consumption that satisfies essential needs (this tariff has to reflect the users' payment affordability) and an ever increasing level of the tariff corresponding to any supplemental consumed amounts, so that the financial requirements of the River Basin Directorates are met.

6. Conclusions

- The diversity of physical, geographical, economic and social conditions in which the aquatic ecosystems (components of the natural assets which generate water resources) dwell, coupled with the system of interests and reaction times needed for an efficient management of the water demand and supply ratio, call for setting up an appropriate proportion between the centralism and autonomy of the decision support system, inside which the institutional sub-system has a particularly important place;

- The water resources management models, either undergoing design stages or already implemented, have a significant impact with spatially and over time distributed effects;

- If one endorses the concept "the right to water" is almost equivalent to "the right to life", and then one can have a correct understanding of the extent of the ethics issue of managing the water resources.

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CURRENT STATUS OF RESEARCH IN THE DOMAIN OF THE PRE - UNIVERSITY MANAGEMENT

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Abstract: *In the study, we started addressing the following working hypothesis:*

- Analysis of the last 15 years revealed a series of data, which reported to the requirements have generated confusion and this often because there was not and there is no relationship between the social, economical, political and educational structures.

Research can be conducted in an argument to convince the school managers that they must know this area of management science deeply, they being placed in a position to solve a wide range of issues, each requiring a specific technique.

Key words: school management, management strategies, financial management

JEL classification: L32

1. Introduction

1.1. The need and justification of the research

Current research in university management are imperative for specialists into a school that goes from knowing they had to set a target to define where they want to reach.

Problems, although at first seemed to be clear and precise were complicated due to variables not taken into account at the time. Efforts were focused on two paths:

- One of finding ways and techniques for effective teaching and learning, to ensure school success
- And the other of the management of the school institutions that had to satisfy the requirements of contemporary society.

Regarding the managerial domain of Education , problems are still under construction. The literature works that have appeared related to educational management are few and their main observation is made about the fact that they were made by science education specialists, who wanted to highlight in particular the position of the manager of the educational process , the teacher, and not treat the conduct of the school principal, in terms of institution manager.

Current research in university management are only feeble attempts to set up assembly. Like any part of an overall educational and should be seen in close relationship with what is happening in society.

The problem of management training is not specific only to Romania. It has the same reverberations in Eastern European countries too. Basically one could say that Eastern European managers are faced with an avalanche of information and requirements, which sometimes creates confusion, especially in those countries where social and economic structures are far from being harmonized and understand one another.

The lack of a diagnosis based on real research can be translated into Romanian education system as policy deadlock. There was very strong lack of educational policy implemented in targeted goals to be achieved by education reform, to give a sense and respond to current and future social commands.

Orientation to field analysis strategies, methods, techniques specific to the management of the school is motivated by the fact that school managers still use them with shyness, which is reflected directly in

the operation of these institutions.

Through the work and research in management school education has been achieved a theoretical and practical education in the transition area with a background analysis of the school management system, general performance of the functions of management, financial analysis and quality in this area design strategies and methods and techniques used in interactive and interdisciplinary perspective, demonstrating that management is a fundamental characteristic of education conceived as a system, which management claims that this should be done as a management of a system. They need a vision based on theoretical vision of methodological, economic, technical, social, legal and moral aspects to synthesize managerial activity.

2. The current state of management in preuniversity education

Currently two trends are talking about the need to align the requirements demanded of a democratic society, namely decentralization and devolution of functions.

Last refers to the transfer of action from the superior levels to the medium and basic ones, without this being accompanied by the transfer of decision within important problems of the mentioned issue. Decision can occur at levels which conduct the action only on parts, in matters of detail involved. In this sense we can speak about the current way of conducting continuous training, which can decide on county levels for content and progress of the action itself, but is connected to the unified methodology decided by the ministerial level.

School life has shown the need of rethinking, in accordance with changes in social system, the place and role of school managers in the hierarchy of the education system functioning. In order to achieve decentralization and deconcentration of functions with beneficial effects, it is necessary to prepare managers for each hierarchical level, such that they are able to exercise the authority conferred by statute, ensuring efficient operation of the field of competence.

The limits of the educational system established during the transition period refer to:

- Absence of a coherent continuous coordination and the overall system;
- Inability to plan and staff involvement required;
- Inability in preuniversity Romanian education to meet the demands of specific sectors of law, general management, local government, computer services etc.
- Excessive concern for achieving short-term needs, which made it impossible for a unified strategy (work is more visible, if we refer only to tenure teachers exam in preuniversity Romanian education secondary education held in the previous years)
- Fragmentation of training, referring to the dual authority (ministry, economy, power central-local power) if we talk about institutional level, and if we refer to the structure, content areas designed to narrow misfit conditions change;
- "brain drain" to developed countries because the country could not find social affirmation and the needed motivation.

One of the biggest problems faced at present pre-university education in Romania is the lack of specialized managers. Chosen from among teachers, starting from an initial criterion methodical and scientific performance (director candidate must have minimum degree extensive professional training), managers find themselves, often that they do not have the necessary knowledge to ensure business performance. The fact that they have a very good qualification as teachers of a particular specialty does not provide, automatically management qualifications.

3. Aspects of the present state of research in preuniversity management

Currently, between theory and practice there are many noticeable differences when conducting a thorough research on management.

Research efforts undertaken in the last hundred years has revealed a series of optics sometimes convergent, sometimes divergent from how to design management.

Educational field corresponds to precise objectives and targets, based on its ideal realization of educational standing in line with current social development.

When talking about management education it is better that the discussion be based on what happens in other countries in this field. It's not about copying and implementation of foreign models, but the opportunity to study and to learn how problems are solved there.

A theoretical radiography of the current state of Romanian school management must be accompanied by a survey of existing situation in schools in order to analyze the feature then if there are notes and to outline the main solutions that fall in this respect.

3.1. Research on managerial work in preuniversity education

3.1.1. Changes in school management in the context of professionalisation of management function

This paper presents a theoretical basis for the need professionalisation of school directors in the increasing complexity of business management at this level of change in the management of school education reform in Romania determined by the context and development of European education. Based on the documentation of European education, other models have been identified too, at school level management, which, if proved to be efficient, could be adapted to specific conditions of Romanian education.

3.1.2. Management strategies of the school director in rural areas

The result of a profound theoretical and practical investigation, the work has the capacity to deal with issues of educational management in schools within Romanian rural areas through an anticonservatory, open mind, in line with contemporary movement ideas.

3.1.3. School as an organization. Democratic - participatory management and its involvement in the school for inclusive education center Beclean

Paper on the results of a research-action taken towards the practice implications pointing the democratic participatory management at the schools has the organizational plan, targeting the acceptance of change and innovation in education, quality organizational climate, professional satisfaction, the level of occupational stress and perception of the school community inclusive type CSEI Beclean but also in teacher-class relationship plan, aiming at the students' school performance and the educational institutions of their degree of sociability.

3.1.4. Socio-economic management in the pre-school organizations

The work scrolls through one of the most important current issues in the pre-school organizations, namely that related to the presence of school performance in the context of the existence and performance of the decentralization process and therefore the Romanian educational funding.

Aim of our work was to identify and analyze than a series of socio-economic aspects that characterize the school organization regarded as representative entity in secondary education.

3.1.5. Conceptual and practical approaches to financial management accounting education institutions in Romania

The work addresses a number of elements on the financing of educational institutions in Romania, the general approach by management functions and its features, approaches from the literature of financial management accounting and propose a new definition to refer only to public institutions in Romania.

3.2. Management research in the educational process

3.2.1. Management of preuniversity-school education in Oltenia

The work is justified because it helps the managers of the school institution not as a "handbook" but putting them available to the theories, tips, projects, methods, techniques, etc.. likely to bring him in a position to propose objectives and to be able to reach efficiency in his work, to be able to build a culture of quality in school, etc.

3.2.2. The management of preuniversity accession process of Romania's educational requirements of the European Union

Regarding the timeliness and significance of themes for school education, the purpose of investigation is the reasoning advanced methods of preuniversity school education and in determining the educational management methodology in education in preuniversity Romanian education in terms of integration and globalization.

3.2.3. Improving business management in higher education (on the example of Hunedoara County)

Given the structure of school education, it is presented pre-school, primary and secondary school in the county of Hunedoara, a county that is part of the Western Region of Romania. In

Hunedoara county the educational activity is presented in relation to activities undertaken in this county, and to draw some conclusions, given the opportunities and threats in this county, was carried out a SWOT analysis.

3.2.4.Design and management curriculum at the school organization.

The name of the study highlights issues and the methodological- epistemologico option for one approach in the field. It refers, on the one hand, to the consideration of curriculum design as a specific activity curriculum, and on the other hand, in assessing the design and management work in curricular activities there are two interrelated systems, but within two curriculum processes.

3.2.5.Human Resources in the process of performance and the the quality of management education in Romania after accession, with applications in higher education.

The work carried out theoretical analysis and practical contribution to human resources to ensure quality performance and education in preuniversity Romanian education in education system from future systemic, interactive and interdisciplinary, which is configured within a matter of reflection, but also the application for researchers and managers in the educational field, concerned to align to European and world standards.

3.2.6.Research on quality management system in preuniversity Romanian education technical and vocational secondary education

The thesis outlines some concepts terminology used in quality assurance, technical and vocational secondary education.

3.2.7.The management and the culture of quality at the level of school unit

Research relates to quality assurance in education even identified a number of dilemmas and tensions that define some loaded axiological value poles, between which there is a continuum of possible options for each educational system remains to choose a specific resolution finding its point balance taking into account both cultural and educational policy elements.

4.Conclusions and personal contributions

Analysis of current situation and recent trends, with precise objectives and competencies take into account the following:

- Content of educational activities, information, skills, abilities;
- human material: teachers, students, skills, interests, motivation;
- Material conditions: time, space, equipment, funding
- Prognosis in relation to the country's social economic dynamics in general.

The world has realized that the economic success of states are determined directly on the quality of education and that the most effective human capital factor of production is expressed in knowledge, skills, creative abilities and moral qualities of members of society that largely formed education system, management strategies applied.

Following the results of analysis conducted surveys and studies documenting the current state of research on university learning management system were analyzed the following objectives:

- The importance and necessity of implementing a performance management system in pre-schools;
- Quality management in technical and vocational secondary education;
- The training of school education
- Management of motivation;
- Communication Management;
- Human resources management;
- Financial management of school organizations
- Risk management in pre-university
- The quality of university education
- Education Technology

Analysis of educational needs in terms of integration into the European Romanian university education

- methodical aspects of teaching
- Interdisciplinarity and transdisciplinarity quality growth education;
- educational and vocational guidance.
- Evaluation of teaching

- Systematic orientation of the evaluation document to the skills and capacity assessment ability and attitudes in the context of situations and tasks as close to real life, the future of learners and their specific image to be the next education cycle or the labor market.
- The issue of decentralization of school education for the future.

Status of research in the field shows that management is not resolved only interdisciplinary that seeks efficiency and effectiveness criteria for educational success through superior use of human resources, content, processes, relationships, specific strategies.

Maturation stage evolution of the concept shows the new disciplines of science and art of the teacher to direct their own activity and education, to achieve the proposed objectives, content and resources to train, mobilize and coordinate the work of institutional decision-making and use strategies (methods, means, forms of organization, style), to achieve expected performance, to find and solve the most varied conditions necessary to the educational success.

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LEADERSHIP'S INFLUENCE ON OTHERS

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Abstract: *The article tries to explore different perspectives and points of view to understand the importance, the necessity and utility of practicing leadership in organizations, in order to improve performance and to consolidate the unity of members. Understanding the importance of leadership is the key to every business success, because leadership has so much influence in people's lives. The importance of leadership is a key ingredient to successful businesses and championship teams, and organizations that have this synergy tend to be the ones on top.*

Key words: leadership, performance, follower.

JEL classification: M21.

Known as a social phenomenon, leadership has been studied from various perspectives. Leadership is argued to be a social and at the same time a relational influence process that occurs within a social system (Kempster, Parry, 2011). In Yulk's point of view, cited by Jun Yan and James G. Hunt (2005), leadership involves a process whereby intentional influence is extended by one person over other people to guide, structure and facilitate activities and relationships in a group or organization. Although, it is well known that leadership behavior and effectiveness are influenced by how leadership is perceived by others. Because leadership in organizations is an inherently multilevel phenomenon, as individual, team, unit, and organizational level, scientists and practitioners interested in leadership phenomena have long recognized that leaders can have significant effects on collectives including teams, units, and organizations (DeChurch et al., 2010). According to Hiller (2011), leadership is a driving force in the organization of individuals, teams, and entire organizations and enables individuals to be successful, small teams to synergize, and entire organizations to accomplish goals through the differentiated yet synchronized efforts of these individuals and teams.

Leadership has been viewed as both a necessity for survival and as a strong competitive advantage for organizations (Barrett, 2011).

Twenty years ago, the understanding of leadership in organizations was dominated by the classic two-factor approach focusing on task and relationship behaviors, known as transactional leadership and transformational leadership (Hernez-Broome G., Hughes R.). Contemporary leadership theories began to emerge in the late 1970s, when Burns developed a comprehensive theory to explain the differences between the behaviors of political leaders by using the terms "transactional" and "transformational" leadership (Jogulu, Wood, 2008).

Transformational leadership theory has been profoundly researched for over twenty years by many specialists. The theory extends behavioral approaches to consider the actions of leaders who stimulate effort from their followers. Transformational leaders encourage followers to transcend their self-interest and increase their awareness of valued outcomes by engaging in four types of behaviors: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration (DeChurch et al., 2010). According to Jogulu (2008), transformational leaders were defined as people with inspirational values, who exhibited nurturing, caring and displayed consideration towards their followers and, along years, transformational leaders were believed to have the ability to identify prospects in their followers and then to encourage and motivate them to develop to their fullest potential and hence achieve personal and organizational goals. Also, transformational leaders were considered to have the capacity for developing and fostering self-worth and self-confidence amongst their staff.

In addition, according to Jogulu (2008), transformational leadership style emerged as the most appropriate style of leading in contemporary organizations in the West where external changes in the environment are. Such dramatic changes in the environment accompanied by diversity in the workforce have instigated the emergence of transformational leadership to become the prominent

leadership profile in contemporary organizational settings. It is also seen as visionary with long term direction and planning capacity. Transformational leaders are described as inspirational people who constantly communicate organizational vision, direction and strategies to their followers. These leaders aspire to transform the internal organizational practices to better fit the changes that are happening in the external environment. In addition, they are characterized by thinking beyond internal workplace constraints through initially understanding and adapting to the existing work culture and subsequently attempt to expand the organizational culture to better fit the global surroundings. (Jogulu, Wood, 2008).

Transformational leadership is essentially leadership that sets high expectations, focuses on higher order follower needs, and generates a greater willingness to adopt challenging goals, thereby increasing follower motivation and elevating performance to higher levels of accomplishment (Cole et al., 2011). Transformational leadership is important because it leads followers' deeper values and gives a sense of higher purpose and commitment. Transformational leaders provide compelling visions of a better future and inspire trust through seemingly unshakeable self-confidence and conviction (Hernez-Broome G., Hughes R.). Furthermore, transformational leadership has achieved prominence because it is a style built around behavioral attributes which inspire, empower, nurture and develop staff in organization (Jogulu, Wood, 2008).

In contrasting of all these, Burns defined transactional leaders as people who emphasized work standards, and had task oriented aims, people who performed their leadership within the organizational constraints and adhered to the present organizational rules and regulations. These leaders' aimed at making sure that all the regular organizational tasks were completed on time. This was usually achieved through rewards or disciplining of followers in the style of a transaction. The implicit understanding was of a task needing to be carried out and if satisfactorily completed, the reward would be forthcoming. Such reward based action was intended to influence and improve employee performance (Jogulu, Wood, 2008).

The problem of leaders shaping collective emergent phenomenon sits at the intersection of two theoretical sub-fields; one concerned with the dynamics of leaders, followers and their interactions, and the other focused on understanding the emergent characteristics necessary for individual effort to combine in ways that produce synergistic outcomes (DeChurch et al., 2010). Transactional leadership is characterized by mutually beneficial exchanges between parties to optimize mutual benefit including the accomplishment of necessary organizational tasks and tends to produce predictable and somewhat short-lived outcomes (Hernez-Broome G., Hughes R.).

Today, specialists believe that effective leadership is commonly viewed as central to organizational success, and more importance is placed on leadership development than ever before. Therefore, according to Gina Hernez-Broome and Richard L. Hughes, from Center for Creative Leadership, development today means "providing people opportunities to learn from their work rather than taking them away from their work to learn". The last two decades they have witnessed something of an explosion of interest in leadership development in organizations. According to their point of view, some of the most noteworthy issues and trends in the field of leadership development in the past 20 years fall under two general headings like the proliferation of leadership development methods and the importance of a leader's emotional resonance with and impact on others.

According to Gilley et al. (2011) leadership can be associated within a competence and knowledge framework rather than with a traditional role or status model. The following roles were proved to be common among all leaders (Gilley et al., 2011): career development, employee growth and development plans, problem solving, self-esteem, goal setting and decision making, delegation, performance improvement, developmental evaluations.

With leaders as the focal point of leadership and because time plays an important role in followers' perceptions about leadership it is very important to focus on the real impact between leader and follower. In 1973, Henry Mintzberg studied many leaders and managers on their daily activities and from that time a huge number of studies showed that leaders spend at least 70–90% of the their time communicating with their followers (Bluedorn, Jaussi, 2008). In this process of sending information from leaders to followers time is essential. In the field of leadership studies, leadership is not an a temporal phenomenon and many aspects of leadership are time dependent (Shamir, 2011). Bluedorn (2008) suggest that the amount of time any given follower spends in a context will determine perceptions of the amount and nature of individualized consideration from the leader and that's why the followers perceptions about leader form over time.

In many different conceptualizations of the phenomenon, leadership is significantly about motivating people and gaining their commitment, and effective leaders change the way people feel (Hiller et al., 2011). Also in their research, Cole et al. (2011) observed that the empowerment of followers is one of the main differentiators between transformational leadership and transactional leadership, because the latter does not seek to empower, but merely influence team members' behavior through exchange-based relationships.

Cole et al. (2011) consider team empowerment as a mediating process because, over the last two decades, both researchers and practitioners have increasingly recognized its association with team performance. Indeed, enhancing team empowerment increases team performance by increasing team level motivation. The elements of this model are referring to input factor as leadership behavior, the mediator factor as team empowerment and the output measured in team performance. In practicing the model essential are the leader of the team, the individuals of the team and the team agreement about the leader's behavior, which will influence in a positive or a negative way the results. The same theory is mentioned by Shamir (2011) and it never specifies how long it takes the leadership input to affect the mediator (e.g. trust, efficacy perceptions), and how long it takes the mediator to affect the final outcome (e.g. extra effort, organizational citizenship behavior, performance).

Related research on empowering leadership has deliberately focused on teams (Vecchio, Justin, Pearce, 2010). According to Cole (2011), empowerment is defined as the extent to which team members have the freedom to choose how they perform their tasks, are competent to perform their tasks well, sense that their work is meaningful, and believe that their work will impact the effectiveness in their organization. As stated by Vecchio, Justin and Pearce (2010), empowering leadership is a style of leadership that targets employees to develop self-control and to act on their own, and this empowering leadership can be viewed, therefore, as essentially an approach that offers prescriptions to leaders for arranging the distribution and exercise of power.

It well known that empowerment is able to unleash a team's potential, enhance its motivation, and allow it to be more adaptive to its working environment. To achieve these ends, transformational leaders use empowering behaviors such as delegating responsibilities to team members, encouraging team members to question traditional ways of doing things while challenging them to try creative approaches to performing work, and enhancing team members' capacity to think (Cole et al., 2011). Studies of workgroups have reported the superiority of empowerment, either as a direct or indirect effect. (Vecchio, Justin, Pearce, 2010)

Leaders who show transformational leadership behavior and create consensus among team members will be perceived as being the most transformational and that is why team empowerment is going to be especially advantageous because a team's leader is usually considered as the motivating influence and its members are excited, energized, and dedicated to him (Cole et al., 2011). Researchers stressed that transformational leaders help to realign the values and norms of the organization to promote and implement change and also are able to effectively lead the organization and its members. Realigning organizational values by changing management practices and focusing on subordinate involvement and empowerment are some of the valuable strategies frequently exhibited by transformational leaders when organizations encounter severe crises (Jogulu, Wood, 2008). Transformational leadership and behavioral leadership theories suggest that leadership affects the way individuals view themselves and relate to the organization, the leader, and others within the organization on dimensions such as satisfaction, commitment, cynicism, self-esteem, and identification (Hiller et al., 2011).

Vecchio, Justin and Pearce (2010) define empowering leadership as behaviors that share power with subordinates. They explain that the sharing of power such that self-directedness is enhanced should reasonably be expected to generate a higher level of subordinate performance and also, greater self-directedness resulting from empowerment should be associated with superior subordinate attitudinal response such as higher job satisfaction. Ultimately, a leader is responsible for improving performance (Gilley et al., 2011). Recent decades have witnessed the rise of employee empowerment, movement which showed that employees who are given greater opportunities for self-direction, sooner or later will manifest superior outcomes, such as higher levels of job performance and job satisfaction (Vecchio, Justin, Pearce, 2010). According to Hiller et al. (2011), specific outcomes that were categorized under the motivation process include efficacy and general motivation.

The dominant theoretical paradigm in leadership studies focuses on the relationships between leader characteristics or behaviors and the hypothesized outcomes of these characteristics or

behaviors. The leader characteristics may include the leader's background, skills, personality, or self-concept, and the leader behaviors may include a specific behavior or a broader behavioral style like transformational leadership. The organizational outcomes include subordinate performance, group and organizational performance, subordinate job attitudes, and turnover but also influential in the domain of leader behavior are taxonomic efforts specifying more narrowly-defined behaviors (DeChurch et al., 2010). Typically, leadership outcomes include follower attitudes (satisfaction, commitment, trust), behaviors (extra effort, cooperation, organizational citizenship behavior), and performance such as group cohesion, collective efficacy, organizational culture, and unit performance (Shamir, 2011). According to Shamir research (2011) transformational leadership would affect outcomes as follows: efficacy perceptions after three months, followers' commitment to the organization after six months, follower's individual performance after one year, and followers' level of moral development or their unit's performance only after three years (Shamir, 2011).

In an effort to understand the antecedents of job performance, leadership research has traditionally emphasized the relationship between leaders and followers as individuals (Cole et al, 2011). Bluedorn (2008) observed that follower expectations and perceptions of a leader may or may not change depending on time, explaining that less mature followers will have less time with their supervisor, and thus will expect less consideration-based leader behavior. Team members' consensual perceptions about the quality of their managers' leadership behavior is the important illustrative variable for understanding the influence of leadership within teams (Cole et al, 2011).

Along time, managers tried to incorporate power sharing in a manner that seeks to motivate employees to strive for higher levels of accomplishment within a hierarchical system. Many specialists suggested that leaders should not totally abdicate their responsibility for providing vision and strategic direction, but instead should develop a two-way social influence dynamic with their subordinates while also promoting greater subordinate-to-subordinate sharing of job knowledge, power, resources, and information (Vecchino et al, 2010). Leadership researchers have long acknowledged the importance of a manager's leadership behavior in shaping team members' psychological and work group climate perceptions and performance. As leaders, managers transmit their belief systems to team members through role modeling, providing guidance in the form of direct and indirect feedback, and by reinforcing behavior that supports a leader's favored achievement orientation (Cole et al, 2011). A manager's leadership behavior in supervising subordinates as a group influences the performance in and of teams (Cole et al, 2011).

In general, leadership evaluation in organisations has been reported to be skewed, discriminatory and prejudiced due to the absence of clear guidelines in the evaluation processes. (Jogulu, Wood, 2008).

The dynamic, rapidly changing business environment demands that organizations pro-actively embrace change, creativity, and innovation to remain competitive. As a solution, researchers propose a new dimension of leadership, named developmental leadership, which is considered to be the process of equipping people with the knowledge, skills, and opportunities they need to grow, develop, change, and become more effective (Gilley et al., 2011).

According to Gilley et al. (2011), developmental leadership positive attributes might be as follows:

- involves creating a synergistic relationship with employees, the primary benefit of which is the establishment of a collegial partnership based on two-way communication, trust, and honesty, while non-judgmental, free of fear, personal, and professional;
- allows leaders the opportunity to better serve their employees through a variety of activities such as integrated communications, developmental evaluations, performance growth and development activities, and reward and recognition systems used to improve employees' accomplishments and development; the result is motivated, productive employees, ready to accept challenges, take initiative, innovate, and creatively solve problems. In other words, developmental leaders do not develop people but equip people to develop themselves.

Also, several trends will have a major role in our future understanding and practice of leadership and leadership development. According to Hernez-Broome G., Hughes R., these trends represent the critical role changing contexts will play in leadership development:

- Leadership competencies will still matter;
- Globalization/internationalization of leadership concepts, constructs, and development methods;

- Increasing interest in the integrity and character of leaders;
- Pressure to demonstrate return on investment;
- New ways of thinking about the nature of leadership and leadership development.

In conclusion, nowadays, to be successful implies to be concentrate on how to really motivate, determinate and conduct all human resources in every organization, because good leadership is the key to performance improvement. And speaking about human resources, good leaders are precious resources in every organization. This is why organizations should not neglect to invest in developing their leaders, because leadership influences employee performance.

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THE PROCESS OF CHANGE IN ROMANIAN BANKING SYSTEM: THE DIAGNOSIS PHASE

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Abstract: *Organizational structure and organizational culture are two of the base elements to make the change and performance. Methods offered by Mintzberg and Crozier, Hofstede and Schein, Ernst and Janor give a good opportunity for the analysis of influence that structural variants have on collective intelligence and performance organizations. Our study proposes to test the functionality of the structure, of organizational culture and life positions where employees found themselves within the bank system and refer to system failure which must focus on organizational change actions. Diagnoses were made using questionnaires for data collection, statistical method and grid environments in data interpretation. Both questionnaires and grids of interpretation have been validated by multiple checks and use the literature and managerial practice.*

Key words: performance, change, diagnosis, structure, culture

Jel classification: M10, M21, M54

1. Introduction

The increase of organizational performance has reached the stage at which it can no longer be disregarding the concepts of organizational change, sustainable development and social responsibility. Analysis of existing situation from the point of view of the structure created to achieve the performance, cultural support, the social climate achieved through leadership style and motivational mix, represents the debut of change process. The study focused on bank branches of BCR, ING Bank, Piraeus Bank and Raiffeisen Bank in Dolj County. The research methodology used survey with questionnaires and scales interpretation of results (Person), the scheme of life positions in the organization (Ernst), graphical representation of structural equilibrium and cultural norms (de Person) and statistical averages. The sample represented 45% of staff of all branches involved and meets the requirements of a scientific survey. For data collection and interpretation were used three types of questionnaires, with their assessment grids:

- diagnosis of structural forces in the organization;
- diagnosis of dominant norms in the organization;
- identify life positions in the organization.

Data processing was done in the first phase (which is the subject of our study) in each branch, then moved to strengthen its analysis at a global level, by aggregating all responses. From the results obtained have been found a low level of variation on all variables studied, which led us not to look in detail and through more sophisticated methods, subsequently confirmed and by checking assumptions related to the profile at the banker at the level of system.

2. Structural diagnosis

To facilitate comparison between research results and current structural trends as Mintzberg's conception, the object of our study is the retail banks sector. Like many other sectors, banks are today a place of increasingly important changes and more frequent and are asking about their defensive or offensive strategies. These mutations are not the result of simple hierarchical intervention, but a better appreciation of the environmental factors and coordination mechanisms review, very deeply rooted in old and conformist industry.

To understand the need for these changes in banking sector, we consider an analysis in line with Mintzberg's work. In his work "Structure and dynamics of organizations" (1982), when the issue of retail bank organization, the author uses the term "bureaucracy cloned" to emphasize that it is a hybrid of the divisional structure and mechanistic type bureaucracy. Indeed, the banking organization is distinguished from other types of services enterprise by the coexistence of an administrative pole, often called office, and a commercial-oriented, agents' network. Bessire (1999) evokes also the similarities that exist between distribution companies and activity of bank in detail. Organization of trade enterprises articulate, outside management, around two pivots, one operational, consisting of operations, purchasing and logistics, and administrative one, containing activities of administration, finance, IT, marketing and human resources. In banking domain, this duality between relocated and central activities is found in the distinction between front office and back-office (de la Villarmois, 1999).

From this perspective, the banking example illustrates perfectly the fact that bureaucratic organization seems lacking in the means by its functional coordination and clippings. Insulating activities and hierarchy as the fundamental principle of regulation is a factor which does not facilitate responsiveness to the complex and uncertain environments. Coexistence of mobile and unsafe environment, with a rigid organizational structure, should encourage banks to modify not only the content of their strategies, but also to use and review design of their own mechanisms of conception.

For banks, especially those of retail, operational actors play an intermediary between reflection and strategic action. Their participation in strategic approach is restricted to the operationalizing phase, without any intervention in formulating ideas. But these operational roles of information and control require to be completed when the developments and uncertainties of the environment is accelerating. A stronger commitment of operational staff would constitute a strategic approach to improve the information process and allow management to accede to the points of view closer to the current work, which knows not directly.

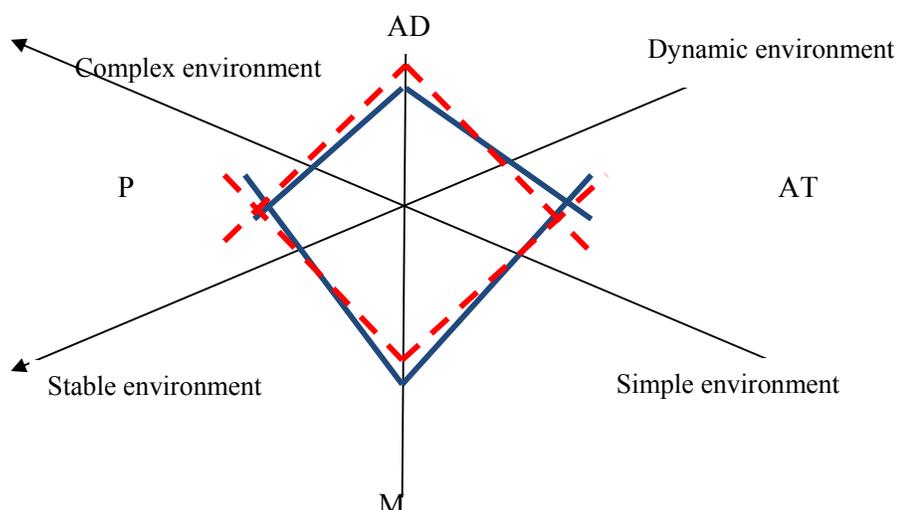
Excess reactivity obtained by participating operational employees, their best approximation of the strategic guidelines and changing the role of managers based on institutional developments and environmental advocates' for the decentralization of strategic and structural changes required. To make such processes, Burgelman (1991) recalls the "autonomous strategic processes", and Von Krogh and Roos (1995) "strategic conversations" that allow enrichment and dissemination even individual reflexes.

This new conception of the articulation between structure and strategy notes that the strategic process corresponds to a strategic interactive concept of collaboration between management, which proposes a framework and supportive of proposals by employees. The observed context foresee the exciting prospects in order to solve the link between strategy and control issues. From this perspective, a better adaptation of the bank requires more organizational readjustments, to strengthen the adhocratic force and enhance employees' work autonomy. The results obtained from the processing data are shown in Table 1 and in figure 1.

Table 1: Overall results of processing structural diagnosis

No	Branch	No. of employees	No. of respondents	Type of structure							
				AT		M		P		AD	
				E	D	E	D	E	D	E	D
1	BCR Erste	41	11	2,66	2,68	3,21	2,82	2,33	2,58	2,31	2,68
2	ING Bank	12	8	2,48	2,54	3,44	2,95	2,69	2,81	2,65	2,91
3	Piraeus Bank	14	8	2,75	2,61	3,60	3,10	2,61	2,75	2,51	2,88
4	Raiffeisen Bank	13	9	2,81	2,62	3,35	2,79	2,43	2,68	2,50	2,94
5	TOTAL	80	36	2,67	2,62	3,38	2,90	2,50	2,69	2,48	2,84
6	DIFFERENCES	*	*	-0,05		-0,48		+0,19		+0,36	

Figure 1: Existing and desired structural configuration in the sample



Analysis and interpretation of data related to the current situation reveals that overall entrepreneurial and mechanistic forces are in advantage over professional-adhocratic tandem, excepting ING Bank, where the professional component has a higher value level component of the business. The reality of these organizations requires a structure with mecanist-entrepreneurial trends.

Relational research of personnel requirements tends to reveal a large configuration mechanistic-adhocratic accents. Although such a situation does not involve, theoretically, a collective intelligence of high level and requires a mechanistic type structure, diagnosis reveals a behavior and a bureaucratic-mechanistic structure. The explanation may come from specific type of environment, which has experienced big changes as a result of the financial and economic crisis since 2007, and it is linked, in our opinion, and changes the optics on the necessary skills and employees and/or will be drawn within the system. The crisis requires, first, the existence and enforcement of clear procedures, but also the ability of employees to be more involved in the business of lending and other important activities of banks, to work in teams and solve problems with a higher degree of difficulty.

2.1. The cultural diagnosis

The study undertaken at the level of the sample chosen was based on quantitative methodology. In the absence of mathematical tools of organizational culture, the second questionnaire (Person, 2001) used the most common organizational values and norms and analyzed the way in which these are applied at the level of branches of the four banks. This time the comparison was carried out against a self-referential cultural representative for this system and allowed the identification of positions in which the banks are located at each of the criteria taken into consideration (table 2 and figure 2).

In the questionnaire, each standard has been noted to 5 questions (50 questions) and the grid consisted of 4 levels of scoring: A – totally agree; B-rather agree; C-rather disagree; D- totally disagree.

Each of these levels has been quantified, +2, +1,-1,-2 or -2,-1, +1, +2, depending on the meaning of the question. For each standard the amount was recorded at the 5 questions, and the result was multiplied by 10 and was expressed as a percentage. Final results obtained represent the average of the notes provided by the persons included in the sample from each bank. In general, cultural situation in the system may be seen as negative criteria such as "innovation" (-15%), "concern for excellence" (-10%) and the "trust in the atmosphere in the organization" (-10%) and very satisfactory to each other, such as, "care for a good management" (5%), 'customer care (8%), "confidence in the hierarchy" (12%) and "care of colleagues' (13%).

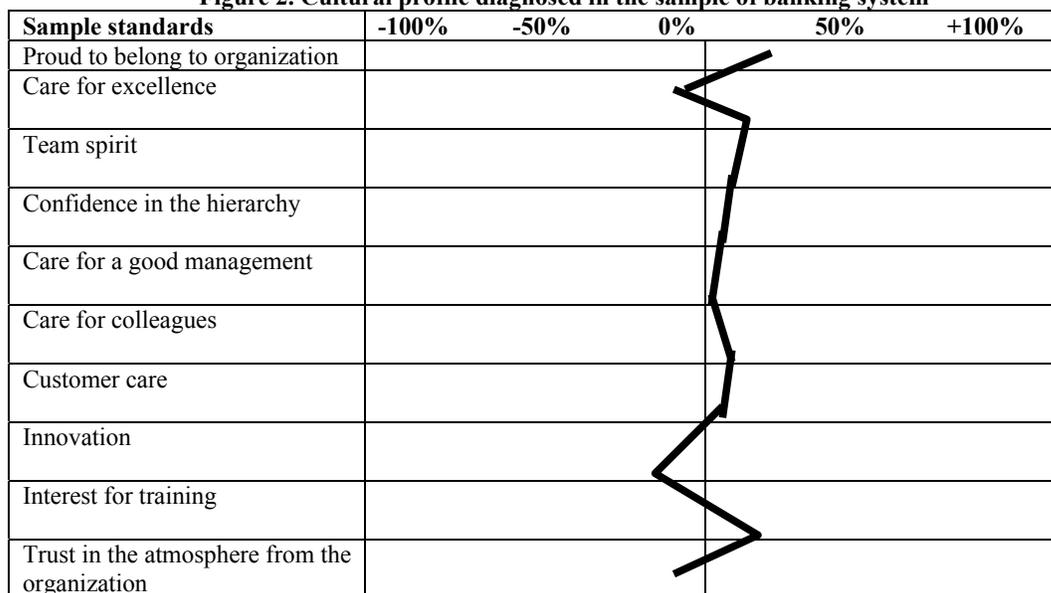
Table2: Cultural characteristics of the sample bank (%)

No	Organization standards	TOTAL	BCR	Alpha Bank	ING Bank	ProCredit Bank
1	Proud to belong to organization	+24	+33	+19	+19	+25
2	Care for excellence	-10	+ 6	- 20	- 16	- 10
3	Team spirit	+15	+18	+16	+10	+16
4	Confidence in the hierarchy	+12	+14	+ 8	+10	+16
5	Care for a good management	+ 5	+13	+ 2	+ 3	+ 2
6	Care for colleagues	+13	+15	+12	+10	+15
7	Customer care	+ 8	+ 7	+ 5	+ 8	+12
8	Innovation	- 15	- 6	- 21	- 18	- 15
9	Interest for training	+22	+25	+21	+19	+23
10	Trust in the atmosphere from the organization	- 10	+ 2	-18	- 16	-8

At the individual level is noted interesting variations, which are influenced, from our point of view, by different degrees of vulnerability of these banks, by current economic and financial circumstances and on the way in which countries of origin of the capital majority shareholder in passing through this crisis.

Thus, BCR-Erste recorded, in general, positive values to all of the criteria, with the exception of that in relation to innovation, but without the notice about confidence in internal atmosphere, care for promoting excellence or care of customers. It can be said as the only value in the criterion "proud to belong to organization", which remains high with all erosion that was submitted to confidence in banking organizations in the last few years.

Figure 2. Cultural profile diagnosed in the sample of banking system



Situations recorded at ING Bank and Piraeus Bank are fairly similar between them and all that mattered in decisive final results. In the criterion "concern for excellence", registered values -20, respectively -16, in the criterion "innovation", levels - 21, and -18, "trust in the atmosphere from the organization ", the values -18 ,respectively -16. Negative values come to confirm that these two banks have not emphasized the cultural component to maintain a positive energy and to face the competition.

Practically, they are not emphasized the values that support improvement of the knowledge, increase motivation and which are decisive factors in overcome competition.

Raiffeisen Bank is located in an intermediate position between BCR-Erste and the other two banks included in the sample. Unlike the BCR-Erste, it has lower values to the criteria "innovation" (-15%), "concern for excellence" (-10%) and the "trust in the atmosphere in the organization" (-8%), which shows that its situation is better, but it is still not far away from a satisfying use to the concept of organizational culture in improvement of management and in carrying out its mission and increasing quantitative and qualitative strategies on the Romanian market.

The diagnosis made allows the culture without taking into account the apparent aspects. According to several researchers, common values are located in the core organizational culture, contributing to transformation of praxis activities in significant and appreciable activities. They provide the link to the organization with significant values of the company in which it is implanted and can ensure a competitive advantage. Most of the organizations have in common prosperous features of cultural order.

Distinguishing common values can strengthen institutional identity, improve collective commitment, create a social system internally stable and reduce the need for both formal and bureaucratic controls. Held on the second level of analysis of organizational culture (Schein, 1985, Martin and Frost, 1996), the above diagnosis highlights weak points (the poor values to the criteria above) which are not visible on the appearances and the elements formalized in these institutions.

They must represent following poles of interest in improving organizational culture by way of a disclaimer that the requirements which they correspond.

2.2. Diagnosis of life positions within the team

To achieve at organizational level, the manager must also introduce the human factor. This factor is affecting the conditions for success, but it is also very difficult to motivate. Between the structural configuration and the environment, the connection might seem relatively rational, cold, determined. Taking into account the human factor causes the manager to enter into a world more vibrant, more intense, which is based on emotional energy.

The manager is located in the position in which they must use the best that human potential has the organization. Only with this energy, the organization is to succeed. To study people's mobilization within the framework of the organization it is necessary to use a work properly.

The graph "positions of life" proposed by Ernst, from the School of Palo Alto, views the rules for operation of the human components in the team work, and gives a real image, depending on which this resource is better inserted within the organization (de Person, 2001).

It is achieved by applying a questionnaire containing 7 themes of working life, each with 4 possible answers, respectively a, b, c, d. The points recorded to the variant a corresponds to the quadrant +, -; those from b correspond to the quadrant -, -; those from c correspond to -, + and those from d to the quadrant +, +. The situation shown is the average for the whole sample and the 4 banks. Mean values were represented by surfaces in the 4 quadrants as rectangles, whose base is constant.

The positions of life shall appear on a system of axis, in which on the ordinate is located the one person he does it on its own, from the "OK" (at the top), to "non-ok" (on bottom), compared with the environment in which they are located.

Perception "OK" is symbolized with the mark +, and perception "non-ok", with the mark -. On the abscissa is post judgment that a person has on the remaining members of the team: others are "OK", i.e., worthy of esteem, respectable, well-trained (+), or, on the contrary (-).

This appreciation is only overall trend, meaning that it may not be identical for all evaluation team partners, may not provide information on developments in its own system of personal representation in time and also relational environment can change him.

The intersection of the two axes cuts relational space in four areas:

- in zone 1 (+ -), the person feels superior (+) and places the others on a lower position (-). Such a person is feeling very confident (+) and does not have a high esteem for its entourage (-), that it considers mediocre and main cause of ill team;

- in zone 2 (- -), the person does not have a esteem to himself and no others, and both sides is not worth much, what could induce a distrust and lack of hope;

- in zone 3 (- +), the individual does not have a high self-esteem and it cannot be felt at the height of which he is a member of the team, having a tendency to be accepted by a sag excessive, through multiple justification; in this position the individual feels on trial all times;

•in zone 4 (++) , the situation is more dynamic, because the individual feels confident in himself and on the team is part of. They are so secured conditions of a mutual respect, even if differences of competences appear. A person located in this position thinks that can establish positive relationships with others, to which receives a similar response.

Relational sphere within the teams and to the business has been studied through this scheme of life positions. Overall individuals surveyed also tend to hold themselves and their teams, in the quadrant III (- +), which means an atmosphere of obedience, the obedience and the lack of initiative, which is a characteristic organizations of mechanistic bureaucracy type. In fact, the highest score is recorded in quadrant III, typical characteristic to mechanistic-bureaucracy type, followed by the quadrant II (- -).

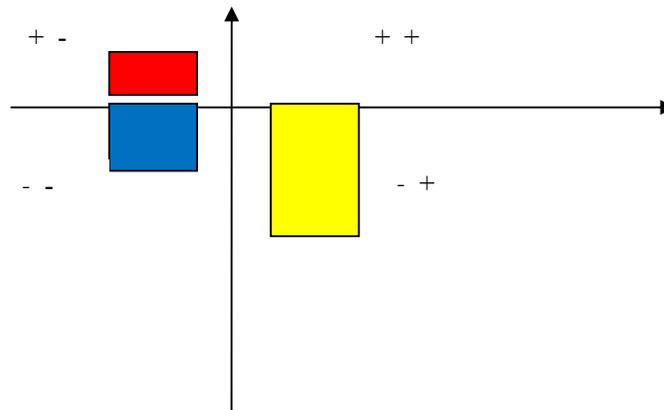
Significant result for the case (- -), quadrant II, reveals that the atmosphere in the teams is not normal, both for the individual as well as for his entourage. In the best case, such a team or organization will hide behind procedures, regulations, in which actually does not believe. It is, in fact, a team or organization where bureaucracy stifles performance. The score recorded in quadrant IV (+ +), comes to support the results that adocratic force has recorded after structural diagnosis previously described.

As regards the individual situation of the four banks analyzed, it should be observed near results from Alpha Bank and ING Bank, a better position to BCR-Erste and an intermediate position for Raiffeisen Bank (table 3 and figure3).

Table 3: Positioning of the sample banks in the chart positions of life

No.	BCR-Erste	ING Bank	Piraeus Bank	Raiffeisen Bank
1	D	b	d	c
2	B	b	b	b
3	C	c	c	c
4	C	b	b	c
5	B	b	b	c
6	C	b	b	b
7	C	a	b	a

Figure.3. Distribution of positions of life - Raiffeisen Bank (Romania) SA



The three approaches undertaken in a sample of banks chosen for the study shows the staffs wish to evolve in a structure with an adhocratic and more accessible component. Although I agree with the promotion procedures and work rules where activity recorded a high degree of repeatability, the employees feel and interpret the negative trends of excessive formalization of organizational structures of the romanian banking system.

Excessive trends mechanisms are perceived as having a negative influence in relation to creating a more relaxed work environment where creativity and innovation can be demonstrated with courage.

The strategies of banking system in Romania have as objective the improvement of activities by

managing risk, high quality relationships with clients, creating an environment in which individual expression, which involves retention, training and staff development, increase its autonomy. These strategies should be based on a work environment based on mutual confidence, autonomy fare being raised that is to say on a style of leadership to encourage the adhocracy.

The analysis of cultural phenomenon reveals, however, that the banking system does not show adequate concern and not properly managing the organizational culture. He has not been the subject of analysis of the present situation, and the proposal in this area does not have been sufficiently documented.

Low values recorded from the standards such as "innovation" and "confidence in the atmosphere in the organization", reveals that employees denounce a culture and a climate that does not support the whole performance.

3. Conclusions

The study proposed may be considered as a model to highlight alternative the differences which arise between what propose and carry out management of the analyzed banking system and what receives a sample representative of employees with respect to structural context (particularly its relational dimension), social context and social climate.

Such an approach is important to identify pathways on which management in the banking system need to place special emphasis on the process of change for creating climate necessary to achieve strategic objectives.

This process should be aimed at improving spot structure on functionality, increased cultural values increase favorable performance and the creation of a work environment more permissive in relation to the autonomy of employees.

We believe, however, that its success is dependent upon the manner in which the bank failed to decline strategic objectives, to allocate appropriate resources and to motivate staff, to monitor active and in good time the situation.

Such a goal involves the use of a set of management tools able to facilitate the strategic approach and to meet all its objectives. Unlike most existing management tools that address the strategic and implementation process was fragmented, leading to compatibility problems, Balanced Scorecard presents a comprehensive methodology and consistent in this regard. Therefore, we considered it necessary to address the strategic process, organizational performance and the changes it requires the use of this instrument at Raiffeisen Bank Romania SA and banking subsystem that it is part of.

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COMPARISON BETWEEN THE LOBBY ACTIVITIES IN EU AND USA – A THEORETICAL APPROACH

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Abstract: *An interest group refers to a voluntary association that looks to promote different advantages for its cause. Our work has its origins in a different analysis of the EU and USA lobbying landscape which is very different and always in a process of changing. In the first part of this paper, we present the organization of lobbying in the European Union, and we provide a detailed account of European Union institutions. The focus of the second part of our paper is a presentation of lobbying in the USA, its evolution and actual context. In conclusion, we present a comparison between European and American lobby activities nowadays.*

Key words: interest groups, lobby, control, influence

JEL classification: D71 - Social Choice; Clubs; Committees; Associations

1. Introduction

Interest groups are perceived in a different light in every political system and therefore are treated differently in each political system based on experience with representing interests and objectives. Essentially, the representation of interest groups is a legitimate and integral part of democracy, which efficiently qualify the lobbyists to be credible political actors.

An interest group that seeks its objectives in the political arena, or attempts to influence economic rulemaking, is apparently in line with the spirit of democracy.

Nowadays can be a rich dialogue, democratic, open, between interest groups representatives and political or economic institutions. The interest groups are well-known for providing information and technical expertise to ensure clarity on regulations formulation.

In theory, the influence of interest groups is in accordance with the principles of democracy. In practice, the influence of interest groups can lead sometimes to political corruption, inequality of representation or an overcrowding of political institutions. As a result, some political or economic systems have found it prudent to regulate the representation of interest groups.

These regulations should be considered not only as written and unwritten standards and practices but also as legal regulations adopted by the government which must be respected by interest groups when they attempt to influence government. In this manner, interest groups are penalized for failure. By these regulations, the aim is to ensure the responsibility and transparency of policy and the legitimation of its practice by structuring and regulating the relationship between political actors and interest groups.

We consider it necessary to examine EU regulations regarding the activities of lobbying in a comparative framework with American and Canadian regulations on lobbying.

A comparison allows us to observe if the European Union's efforts to regulate lobbying activities, are, in fact, relatively weak, and to argue if it is prudent for EU institutions to create more severe regulations in light of information provided by this comparison.

2. The lobby in the European Union

The European lobbying process is very different from one region to another. There are more than 1,000 trade associations in the EU, about 750 NGOs (representing consumers, environmentalists, religions, families), European representative bodies of about 500 large companies, about 150 regional offices, 130 specialized law firms in the field of European Affairs and an unspecified number of consultants, with most of them specializing in regulating and monitoring EU funding programs (Lehmann, 2003).

For the European Union, interest groups can create the ways for regions, at the international level, to get important economic or strategic information for development.

2.1 The EU and its Institutions

Complex multi-level policy making in the European Union produces an equally complex system of interest representation. An actor who tries to influence EU policy in this complex system has to deal with sub-national institutions of member states, as well as with multiple supranational institutions (Greenwood, 1997, p. 27).

What further complicates the system is the rapidly growing number of interest groups in the EU over the last ten to fifteen years. This trend of increasing representation of interest groups also seems like it will continue, albeit at a slower pace, in the future (Lehmann, 2003, p.53). This creates difficulties to analyse, prioritize, and structure the plurality of interests in the EU. Despite the complexity and growth of lobbying in the EU, which creates potential complications, the EU has responded with a *laissez faire* approach to the regulation of lobby activities.

When there are assessments on lobbying regulation, it is better to consider the nature of representation of interests in relation to the objectives of the system in interaction with interest groups.

The EU approach to regulating interest groups may seem soft compared with countries with a rich history of lobbying, but the rules and practices are in line with current EU objectives. (Chari et al, 2007).

We can, however, hope that these objectives will change in the future, requiring a review of regulatory policy.

EU institutional actors responsible for formulating and implementing this policy include the Council of Ministers, the European Commission, and the European Parliament. Each institution is responsible for a diverse function in policy formulation and implementation, and therefore, is pursued by lobbyists in different ways and at different stages of policy formulation. Each European institution has a unique relationship with lobbyists.

The Council is meant to represent the interest of member states and has the ability to reject or amend proposals that are presented by the Commission, and it establishes long-term goals for the EU (Chari; Kritzinger, 2006, p. 21). The Council is often considered to be the last accessible institution of the EU due to its loyalty to the member states.

The Commission is the executive body of EU. It is responsible for EU interests; it has the exclusive right to initiate EU proposals in different areas of regulations and is responsible to ensure that members respect them. As a result, lobbyists consider the Commission the principal institution for collaboration in the EU.

The Commission is open to lobbyists and considers that the lobby is essential for policy formulation and puts a strong importance on open dialogue with outside interests, which offer specialized and technical expertise (Greenwood, 1997, p.2). Nowadays, it is recognized that the Commission often focuses on a core, a dominant interest, which leads directly to targeting by interest groups on this interest. From this point we can observe that there is unequal access to the Commission for different interest groups.

The representative body of the European Parliament has the power to approve, amend, or reject legislation in different policy areas and can influence the appointment of Commissioners. In terms of lobbying, Parliament became a target for influence lobbying activities at the European Union level. Some authors describe the Parliament as the most open of all European Institutions, and it is considered a "natural target for non-business interests" (Greenwood, 1997, p. 42).

In the **Table 1** we describe the role of EU Institutions in lobbying process.

Table 1: European Union Institutions and the lobbying process

EU Institutions	Council of Ministers	European Commission	European Parliament
The responsibility in EU	Reject or amend proposals of Commission	Proposals in different areas	Amend or reject the legislation
The relation with interest groups	A formal relation	An informal relation	A strong relation
Lobbying process	It is neutral	It is influenced by different interest groups	It attracts different interest groups, mostly from business

Source: Own representations

2.2 European Union and the practice of influencing interest groups

The European Parliament is the only institution from the European Union with formal lobbying regulations. Due to its concerns about the abuse of lobbying in 1980 and 1990, the European Parliament began to investigate the lobbying activities in European Union institutions. These investigations have resulted in reports issued by Galle, Ford and Nordmann, which have resulted in required minimal standards for regulations which are ensured through a code of conduct for foreigners and for European Parliament members. Its regulations have ordered the registration of lobbyists, but interest group representatives have to provide less information than in the USA or Canada.

The information that lobbyists must provide include limited details on lobbying. In addition, the interest group representatives must respect a Code of Conduct.

The European Commission seeks specific information from important interest groups and is open to collaborate with them (Malone, 2004).

In response to pressure from the Ford Report issued by the Parliament in 1990, it has begun a self-regulation policy of interest groups to promote an open dialogue and ethical administration of the regulations.

We can observe that the regulation of interest groups in the European Union is significantly reduced because the Parliament has an unclear policy governing the representation of interests.

Making a comparison between this practice and those in the United States and Canada provides an interesting perspective on strategies and possible alternative approaches for regulating lobbying that EU can take in consideration.

3. The lobbying process in the United States of America

The USA government has the longest history and is the most experienced in the regulation of lobbying from all governing bodies of developed states. As result, the United States exists as an ideal example for a basis from which a comparative assessment can be made.

This model shows the levers that can overcome against corruption associated with lobbying, the overpopulation of government institutions, and unequal representation and consideration of interests.

Modern scholars in US policy and lobbying recognize not only pluralism in the representation of interests in US policy and lobbying but a hyper-pluralism. The USA has been continually challenged to find a balance between the First Amendment and a lobbying industry which supplies billions of dollars and its institutions structured with responsibility and transparency (Chari et al, 2007).

To regulate further in the USA, the Federal Act was enacted to regulate the activities of lobbying in 1946, which covers any person who by himself or through an agent, or employee request, collect or receive money or anything of value to be used primarily to help passage or defeat of any legislation by Congress. In addition, the Federal Act requires lobbyists to submit financial records (Malone, 2004).

In 1995, the Federal Act was replaced by the Lobbying Disclosure Act which was subsequently amended in 2007. In the measures, the regulations have been strengthened by expanding the definition of a lobbyist, which requires recording of all representatives of interest groups in both the House and the Senate, and provides the establishment of semi-annual reports that present issues of interest, institutions contacted, lobbyists involved, and associations with any foreign actors.

Although over time in the United States of America, many attempts to regulate the rules of interest have been criticized, each in turn continues to allow for re-interpretation. At present, the formalization and legalization of the regulation of interest group activities is in a sharp contrast with unclear and informal approach of European Union.

In addition, the regulation of lobbying activities in the USA is evident at all different levels of American political society. The increase of regulations has restricted the ability of lobbyists to provide gifts to government officials and has brought more transparency through frequent activity reports.

The reforms that have followed were recently made during the Obama Administration in 2009 in the Recovery Act by restricting the gifts given by lobbyists (Stolberg, 2009).

In the USA, the regulation of lobbying has had an important positive impact in the public policy process and has created the new forms of openness, professionalism and collaboration in public administration.

Despite that, the interest regulations in USA still have some gaps, and the regulation of interest groups activities rules prove a strong administration which is in contrast with that found among the EU institutions.

In the figure 1 we describe the lobbying process in the USA.

Figure 1: Lobbying process in USA

Lobbying Disclosure Act – 2007 - Information about lobbyists and lobbying activities, - Issues of interest for lobbyists and public administration in the USA

Source: Own representations

4. Conclusions

We may conclude that the EU objective in terms of lobbying is to allow the free flow of specialized information, as long as there is no prejudice to the integrity of the Union. The EU efforts to regulate lobbying activities are relatively weak, but they are in line with EU objectives. Due to the nature of the EU as a political institution, we may conclude that it is naturally protected from the harmful effects of lobbying that exist in other places like the USA. In the European Union, the Commission is not elected by popular vote, therefore, policy makers are not as reliant on campaign contributions as senators and congressmen and women from the USA are. The principal function of the Commission in the European Union is to implement regulations that increase market efficiency and this process is facilitated by the flow of specialized information.

The lobbying experience in the USA suggests that regulations have promoted openness and professionalism in the practice of interest representation. In addition, the USA still reaches a democratic dialogue by limiting the ways by which policy is influenced and this reflects the unique political circumstances in each state.

Therefore, we also conclude that the European Union could benefit from a more professional and transparent policy and therefore should create stronger legislation to prevent the abuse of lobby. This will serve to promote ethical behaviour and a more complex lobbying practice.

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MANAGING ROMANIAN ORGANIZATION TO DEAL WITH CRISES

Motto: "The crisis is the most blessed event that can occur for countries and individuals, as lead to progress." (Albert Einstein)

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Abstract: Forced to face the market fluctuations and financial constraints, one of the challenges of modern management is to lead organization to continuously improve the iradaptability. More, organizations have the responsibility to integrate changes for creating a realistic strategy for adaptability, that is capable to give them the ability to predict, understand and adapt to environmental changes without unnecessary human losses. Thus, human resource management has a key role in passing the current turbulent times, because only humans have the ability to provide and generate creative solutions for economic recovery. To identify features of adaptive behavior of Romanian companies, inconditions of economic recession, I conducted a case study regarding performance variation and identify specific managerial measures implemented in companies during2008-2010. Main results and conclusions confirm that companies have felt significant variations in performance and profitability indicators, as a result of negative effects of the global crisis. To respond to business disruptions, in addition to organizational changes, labor resizing etc., managers of Romanian companies have implemented human resources management measures for labor flexibility as a management alternative that supports business performance.

Key words: crises, adaptability, human resourcesflexibility

JEL: H12, M12

1. Introduction: crises-a review and a new beginning

The current organizational environment is characterized by continuous economic, social, informational changes that require organizations to adapt in order to remain competitive, finding new organizational formulas and strategic alternatives designed to enhance their capacities and opportunities.

Crisis, as a process, should be seen as a necessary step in the process of moving toward new stages of development. Initially the crisis begins as a disturbance of the regular course of economic, social and organizational life, but it is a necessary step that turns old structures and relations to some newsuperior ones (Dilts, 2009). The global crisis has forced organizations from everywhere to review their internal situation and available resources. Thus, managers are placed in a position to manage the existing resources and exploit the potential of resources underused so far: people, values and strategic alternatives.

Under these conditions, competitive advantage is not static, but is determined by the organization capacity of adjust its own offer according to fluctuant market demand and to better exploit and prediction the emerging opportunities. The succes depends on the sensitivity to market, adaptability and appropriate response build through effective, flexible and efficient exploitation of existing resources and processes.

Moreover, under the current crisis, it is necessary to think again priorities and review to straight the strategical changes that can be decisive for further economic recovery. More than ever, we need those new strategical measures designed to enhance valences and opportunities of the changing environment, based upon new priciples and managerial practices, and appropriate use of resources, base on capitalizing human capabilities rather than limitations.

Thus, particularly the **human resourcemanagement** and the processes of knowledge, innovation, research, strategic reorganization can provide new solutions and new informations necessary to adaptation to the periods of crisis and global changes. More than ever, under the current crisis, we need Human ResourcesStrategies designed to enhance valences and opportunities of the changing environment concerns stimulating flexionary forms of work and human resources development designed to increase productivity and to keep workers active on the labour market.

To better reflect the specific needs of organisation, in a fluctuant environment, the flexibility is seen as an essential element in trying to make the organization and their workers as adaptable as possible, in fluctuant conditions of economic life characterized. The **work flexibility** is given by the elasticity of labor resource (work volume, working time, location, work organization, etc.) according to the company's production needs.

To accommodate fluctuations in the market and their own financial constraints, organizations need a flexible human resource, which balance the adverse effects. In terms of workers, flexibility could contribute to a favorable reconciliation between work and private life, allowing them to build their own professional development schemes, ensuring long life learning and personal satisfaction. In other words, workers would prefer work contract that ensure them a good security and an adequate quality of work.

In a globalized, highly competitive environment, Romanian companies are being faced with new challenges that managers need to find quick and effective response. This requires better knowledge of that environment influence on organization activity, respect of the principles on which it is based organization, but also a new approach to internal organizational resources and relations between them. Especially in the current changing context, organizational management is forced to adapt and find new alternatives as sources of competitive advantage and capitalizing the most precious resource, human resource, as the main driver for progress.

„At microeconomic level, adaptability and flexibility are key factors characterizing the new management system of modern organizations in a changing environment. Under actual conditions, managerial concerns was around the concept of change, also strategies and actions leading increasingly as response to developments and opportunities of the environment. Flexibil management is to change structural and functional parameters of the management organization, offering dynamism to activities and its results.” (Nicolescu O., Verboncu I., Profiroiu M, 2011).

2. Aim and methodology

This work is devoted to investigate the response of Romanian companies, regarding the performance variation and identifying specific managerial measures implemented in companies during 2008-2010.

For this, I conducted a case study based on interviews (face to face interview) applied to managers and management responsible, in 125 medium and large, active, companies regarding aspects of their development in 2008-2010. The study was part of the research project "*Managing human capital under condition of labor market flexibility*", conducted inside National Institute for Scientific Research on Labor and Social Protection, in 2009-2011. Following results and conclusions are an adaptation of the project work.

Investigated companies activate in urban (88.8%) and rural (11.2%) in one of the following sectors: industry (27.2%), construction (20.8%), and service (52.0%). Most of the units (74.4%) hire between 10 and 49 employees. A percentage of 17.6% of the total have between 50 and 249 employees, and 8.0% are units with over 250 employees. Just 7.2% of the total sample analyzed companies are associated in a group or association at national level, 10.4% are part of a multinational group, and 77.8% are not associated at national nor multinational level. Half of investigated units (50.4%) are using a certified management system.

3. Main results and conclusion

Main results and conclusions confirm that investigated companies have felt variations in performance and profitability indicators due to negative effects of global crisis. Many companies has initiated organizational changes and resources resizing to respond to business disturbances. More, we are interested in management practices implemented for labor flexibility as a management alternative that supports business performance.

Performance and profitability

In last three years, evolution of the company's performance indicators suffered major variations, following the negative effects of economic recession (table 1). These developments have affected Romanian companies, regardless of urban/rural environment, class size, sector of activity.

Table 1: Evolution of the performance indicators (number of units), 2008-2010

	2008/ 2007				2009 / 2008				2010/ 2009			
	increased	the same	decreased	dont respond	increased	the same	decreased	dont respond	increased	the same	decreased	dont respond
turnover	79	11	23	12	40	13	64	8	40	14	63	8
profit	67	12	27	19	25	19	62	19	33	12	62	18
investment	56	28	14	27	35	31	31	28	30	26	40	29

Most of investigated companies (63.2%) showed an increase in turnover, in 2008 than 2007, and only 18.4% had a decrease of the indicator. Since 2009 and then in 2010, the number of companies with turnover growth is reduced (32%) and the number of companies with decreasing turnover is much higher (51.2% in 2009 and 50.4 % in 2010).

Obtaining profit is the main goal pursued by any company and is a measure of the effectiveness of its business. In 2008, 53.6% of the companies investigated have obtained an increase in profit, and profit fell in 21.6%, compared with profit of 2007. With the emergence of recession, the situation changes, so the share of enterprises that profit fell (49.6% of cases) both in 2009 and 2010 is higher than the share of enterprises that profit increased (20.0% in 2009 and 26.4% in 2010) comparing to the previous year.

Investments indicators are inherently correlated with turnover and profit of the company. In 2008, investments increased in 44.8% of units and decreased in 11.2%, comparing with 2007. Incoming years, investment has been a priority for 28% of enterprises in 2009 and 24.0% of enterprises in 2010, compared to previous years. In recession, this decrease has occurred in 24.8% in 2009 and 32% of cases in 2010.

As a first conclusion, since 2009 the results and performance have worsened in most analyzed companies, also with recession and adjacent negative effects.

Human resources management

During the crisis, number of employees in investigated companies showed variations, like a first response of management for adapting to business disruption. Otherwise, evolution of the number of employees is perceived as an easy tool to try balancing the performance fluctuation.

Therefore we expect that the evolution of the number of employees with employment contract follow the path to performance indicators: turnover, profit, investment. According to international trends we expect that the number of temporary employees and the number of employees with part-time to increase.

a) Evolution of the total number of employees with employment contract, in 2008-2010.

The responses of participants in the investigation shows that the total number of employees with employment contracts increased in 41.6% of total units and decreased in only 16.8% (table 2), in 2008 than 2007. Starting with 2009 and then in 2010, the number of units that increased the total number of employees is reduced, however, are more and more units that decreased number of employees with employment contract (40.0% in 2009 and 40, 8% in 2010).

Table 2: Evolution of the number of employees with employment contract (%), 2008-2010

	2008 / 2007			2009 / 2008			2010 / 2009		
	increased	the same	decreased	increased	the same	decreased	increased	the same	decreased

number of employees with employment contract	41,6	37,6	16,8	28,0	28,8	40,0	20,0	36,8	40,8
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For significant relevance, regarding the sector of activity, we found that, in 2008, employment increase in several units from service sector (in 61.5% of total) and decreased in 47.6% of industrial units. The situation is similar in 2009. In 2010, the situation recovers, especially in industrial units, where the number of employees increase in 40.0% of units.

b) Evolution of employees number according to working contract, in 2008-2010.

In most investigated companies, the evolution of the number of employees with permanent contract is well known and reported. Instead, about the number of employees with fixed-term contract or those hired by temporary work agencies, respondents do not know and could not give any details. The percentage of those who did not respond is over 70% (regarding fixed-term employees) and about 91% (regarding temporary work agency) (table 3) which prevent us drawing any conclusions.

Table 3: Evolution of the number of employees, depending on working contract and working time(%), 2008-2010

	2008 / 2007				2009 / 2008				2010 / 2009			
	increased	the same	decreased	don't respond	increased	the same	decreased	don't respond	increased	the same	decreased	don't respond
number of employees with permanent contract	38,4	44	15,2	2,4	27,2	39,2	32,0	1,6	18,4	49,6	31,2	0,8
number of employees with fixed-term contract	8,8	12,8	2,4	76,0	4,8	15,2	3,2	76,8	8,0	11,2	8,0	72,8
number of employees hired by temporary work agencies	1,6	8,0	0	90,4	0,8	7,2	0,8	91,2	0,8	7,2	1,6	90,4
number of employees with full-time	28,8	48,8	17,6	4,8	21,6	47,2	27,2	4,0	14,4	49,6	32,8	3,2
number of employees with part-time	5,6	28,8	2,4	63,2	4,0	28,8	4,8	62,4	6,4	24,8	7,2	61,6

c) Evolution of the number of employees depending on work schedule, in 2008-2010.

Analysing data about the evolution of the number of employees with normal working hours or part-time is difficult, as in previous case, because the people surveyed do not know the exact status of these categories, in over 60% of cases (table 3).

Who is associated evolution of the number of employees with permanent contracts?

We suppose that the evolution of the number of employees with permanent contracts is associated both with the evolution of the employees with full time and the number of employees with part-time.

To analyze this hypothesis we apply *Chi Square test of association*. The results show that there is a statistically significant interdependence with strong effect, between evolution of the number of employees with permanent contracts and the evolution of the employees with full time ($\chi^2 = 153.1$, $p = 0.000$, and the Cramer's coefficient = 0.639, $p = 0.000$) but there is no statistically significant interdependence between the evolution of the number of employees with permanent contracts and the evolution of the employees with part-time ($\chi^2 = 3.547$, $p = 0.939$).

d) The evolution of wages

63,2% of investigated companies reported higher wage costs than the previous year, and in 16.8% of cases it were lower. In the next two years, the percentage of units with salary increases is

40.0% in 2009 and 42.4 in 2010 than the previous year. But at the same time, there were several units that have wages decline (Table 4).

Table 4: Evolution of wages(%), 2008-2010

	2008 / 2007			2009 / 2008			2010 / 2009		
	increased	the same	decreased	increased	the same	decreased	increased	the same	decreased
wage costs	63,2	20,8	9,6	40,0	32,0	22,4	42,4	25,6	27,2

The company implemented managerial measures (organizational, workforce resizing etc) to respond to changing environment

Most romanian companies have responded by putting into practice a series of organizational, operational and human resources measures, designed to facilitate the transition of economic recession when the effects of the crisis spread in business environment.

Regarding such management practices being implemented in the analyzed companies, we find that most units have applied wage constraints (69.6%), followed by measures of workorganization (52.0%) and organizational changes (45.6%). Just a few companies have initiated to change working time of employees by changing the start and end of working schedule (26.4%) or changing the type of employment contract by introduction of flexible forms of employment (table 5).

Table 5: Managerial measures applied in romanian companies (%) in 2008-2010

	yes	no	don't respond
	wage variation	69,6	28	2,4
work organization	52,0	47,2	0,8
organizational changes	45,6	54,4	0
changes in production process	26,4	69,6	4
changes in working schedule	17,6	82,4	0
changes the type of employment contract	15,2	83,2	1,6

Was company performance influenced by this measures?

We suppose that, there where a positive evolution of turnover in units where were implemented some organizational measures or human resources changes. Analysis table is read by an independent association between independent variable "turnover" and the variables that design the managerial measures implemented.

So we take a critical look on units that turnover increased in 2010 then 2009. The result shows that 75% of this applied salary variation; in 60.0% were implemented changes in work organization; in 52,5% organizational changes occurred (Table6). For companies that have changed working schedule of employees or change type of employment contract, the incidence of increased turnover is low (17.5% and 7.5% of total).

Table 6: Table of association between the incidence of managerial measures applied in companies and the development of turnover in 2010 compared to 2009 (%)

	Evolution of turnover in 2010 compared to 2009			
	increased	the same	decreased	dont respond
wageconstraints	75,0	85,7	65,1	50,0
work organization	60,0	57,1	46,0	50,0

organizational changes	52,5	57,1	36,5	62,5
changes in production process	30,0	28,6	20,0	50,0
changes in working schedule	17,5	28,6	15,9	12,5
changes the type of employment contract	7,5	42,9	12,7	25,0

4. Critical

External organisational environmental changes and fluctuation require a rapid, adequate response from the companies management, but companies need a flexible and adaptable human resource. Also, the measures of human resource management must focus on multi-disciplinary learning and professional skills for innovation and reveal the human creative potential. Only in this case the companies will be prepared for further economic recovery.

In our opinion, an essential element is to ensure a balance between flexibility and security. Also, the principles of flexicurity approach aims to provide a secure framework, ensuring workers from the risks that come along with flexible labor market practices and precarious employment.

We note that this thematic approach is only a first step on the work to study the adaptability process applied at organizational level, which requires a multidisciplinary conceptual and methodological approach. Also, further effort are necessary for extending and deepening knowledge issues and testing new ways to optimize operational processes and performance management in the changing environment.

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INTELLIGENT BUSINESS NETWORKS IN THE CONTEXT OF GLOBAL ECONOMIC CRISIS

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Abstract: *In the latest economic developments, such as increased mobility of goods and services, the strategy of building networks is gaining importance. The ability to achieve cooperation and participation in networks is becoming more and more one of the basic business skills. Networks provide opportunities, but also create new challenges and uncertainties. The purpose of this paper is to highlight the advantages of using business networks to increase the performance of companies and regional economies; to do that, a research upon the present state of knowledge on the concept, through specialty literature, has been performed.*

Key words: intelligent business networks, innovation, competitive advantage, flexibility.

JEL classification: L14 - Transactional Relationships; Contracts and Reputation; Networks.

1. Introduction

Worldwide there are many models and approaches of the concept of business networks. Salancik argued that research on networks has a strong descriptive character, but not a theoretic one (Salancik, Gerald R., 1995). This view has been the subject of many discussions in the past, but is not at all true in the present.

Today, there are many types of organizational arrangements that try to bring sustainable performance. A network implies a new form of relationships between organizations. Networks are formed so that problems are tackled with collectively, each member bringing a set of specific abilities, knowledge and experience to the table, and that through collaboration – innovation and competitive advantage appear.

As the pace of business change accelerates and businesses become more connected, company networks offer a new source of competitive advantage for companies. We are now witnessing a dynamic and orchestrated global transformation of the business networks in which each entity is focused on differentiation, while collaborating with others in the network is done to provide greater customer value, innovation speed and reduced costs (Word, Jeffrey, 2009).

2. The concept and definitions of business networks

The theorization of network appeared in almost every research on organization, including leadership, power, job performance, relationships with stakeholders, innovation, inter-firm collaboration, etc.

Network theory has become dominant in the 1990s, as the basis for new organizational forms (Popa, Ion, 2006).

Business networks are self-organized and evolving aggregates of business relationships (variously connected), and unlimited, without a center, and quite opaque (Woodside, Arch G., 2010).

Turmoil and rapid changes in business have, for some time, been associated with the development of new forms of network organization, which put different types of strategic alliances and other inter-organizational collaborations into practice. Thus a new framework for classifying network forms is proposed. With dimensions of volatility of the environmental change on one hand, and inter-organizational type of relationships involved on the other (collaborative or transactional), the following network types arise: tubular networks, flexible networks, value-added networks, virtual networks. In each case, it is possible to identify environmental and organizational contingency, the most likely to be associated with the development and adoption of a particular type of network arrangement. This argument leads to the identification and better understanding and contingency of the emergence of network forms and their relative effectiveness and indicate some of the major implications of network formation. Also, David W. Cravens, Nigel F. Piercy, and Shannon H. Shipp identify, in their work: *New Organizational Forms for Competing in Highly Dynamic Environments:*

the Network Paradigm, a number of managerial implications for policy priorities and development of adequate management in the new context of organization (Cravens et al., 1996).

What differs from country to country are the supporting and developmental territorial policies.

Networks facilitate the flow of information, in regards to technological developments, solvency of being an entrepreneur, the reliability of individual workers, and so on. Innovation depends on "continuous informal interaction between the cafes and bars in the street." Social norms that prevent opportunities are so deeply internalized that the problem of opportunism on the obligation of spending of the community is said to occur more often here, in areas characterized by vertical and customer networks. What is crucial about these small industrial districts of small firms, conclusion reached by most observers, is the mutual trust, social cooperation and a well developed civic sense - in short, the hallmarks of civic community (Putnam, Robert D., Leonardi, Robert, 1993).

Networks involve compliance in thinking and acting of the member organizations.

Networks are a vital phenomenon that is still often misunderstood in the economy. The existence of knowledge about the principles of their management is extremely important, and how managers develop knowledge in the network is one of the most important challenges for a manager (Christiane Prange, 1999).

Cooperation in networks is not an easy task. In this context, tools that can assist in helping companies develop networks also foster regional economic development. After an introduction in the theory of business networks, in the EU regional policy a hypothesis is proposed, that: "business networks are a product of chance. Appropriate tools improve application deployments and are crucial for the long term existence of the network." (Schlgl, Gerhard, 2010).

Japanese economist Nakatani (1990) considers that the outstanding innovations and high economic performance of Japanese industry from 1970 and 1980 can be attributed largely to the unique industrial structure in Japan. An important feature of this structure is the existence of vertical and horizontal groups between companies, which, among other long-term positive effects also facilitates mutual cooperation advantages for the product development between assemblers and subcontractors (Laage-Hellman, Jens, 1997).

The industrial network differs from the other network concepts, in which actors are involved in business processes, transforming resources into finished products and services for consumption by the end users, whether they are individuals or firms (Axelsson and Easton, 1992).

In order to defend against disruptive innovation leading companies now gain competitive advantage through business networks models and by bringing talent from outside their company. Rather than implementing rigid processes "designed to survive", organizations now build more fluid networks "made to adapt", networks in which each members focus on differentiation and rely much more on partners, suppliers and customers to provide the rest (Word, Jeffrey, 2009).

Business networks have become a popular concept in the fields of business, government and academia. Researchers working in the SME field offer the idea of networks to companies as a strategy to obtain resources and to connect to sources of information. Also, large multinational companies collaborate with many organizations in a way that links them together as formal networks. Conglomerates of traditional type fragment into more easily managed units and coordinate in the form of flexible business networks, producing competitive advantage. A multitude of new products and services are developed through these networks.

In general, a business network is seen as an organizational survival strategy in an environment of intensely competitive business. Some networks allow greater strategic manipulation than others. And although it is known that networks bring many benefits, the relationship between component organizations can also bring members certain obligations and influences.

The network concept is not new to university researchers who have studied the phenomenon from different theoretical perspectives that cross social sciences. Neoclassical economists from Marshall (1890) to Weber (1929), to Schumpeter (1934) have noticed the competitive advantages of inter-firm links for companies and for the regional economies in which they are incorporated. They argued that interdependent and specialized networks companies can lead to external economies of scale and significance (often in the form of economies of agglomeration), thus compensating for the limitations of small production units. Economists see the links between firms, also as a mechanism by which innovations are created and disseminated (Staber, Udo H., Schaefer, Norbert V., Sharma, Basu, 1996).

Globalization of trade, driven by increasingly more information, new production technologies and communication, quickly dissolve the organizational walls that marked the traditional boundaries of integrated companies. These integrated companies with perfectly defined organizational structures have dominated trade in the early 19th century to late 20th century, but it began to disappear in 1980. Competition was the first to appear among the central coordinated interrelated companies - among them, keiretsu (Japan) and chaebols (Korea).

According to Goldman, Nagel, and Preiss (1995) the concept of business networks refers to being a national information and knowledge exploitation strategy, in order to gain competitive advantage, in the rapidly changing market conditions and new opportunities market. The new models of networks of companies have been adopted as extensions of the integrated enterprise, and in some cases, as an alternative to the integrated company. These models offer the promise of greater flexibility, speed, low transaction costs and a much improved range of knowledge and information to be applied to innovation.

Regarding effective management, a way to judge whether an alliance is effective is if it helps build a competitive advantage. It is known that resources and capabilities are the basis of competitive advantage only when they satisfy certain criteria: they must be valuable, rare, difficult to imitate, and supported by organizational arrangements. If an alliance (or network of alliances) is a vehicle that helps the firm's strategy satisfy these criteria, it has probably developed a collaborative advantage that helps one or more of the member firms achieve a competitive advantage over rivals outside the alliance (Popescu, D., Ceptureanu, S., Ceptureanu, E., 2011).

3. Benefits of using the business network as the new organizational form

Characteristics of network firms are the dissemination of innovation by adopting / adapting to new practices, technologies, organization, or any product/process innovations (Todeva, Emanuela, 2006).

This makes small businesses to be integrated into complex networks, composed of local partners, national and international government agencies, financial institutions, consumer associations. Together, these networks of small firms generate higher profits for all members, allowing them to have access to larger markets, benefiting from economies of scale and compete with bigger companies, without merging or being purchased. According to Aldrich and Zimmer (1986), small firms use networks primarily, to complement their own resources.

Networks of firms exchange knowledge and experience among their members, cooperate to achieve synergy, and are used to reduce costs by the sharing resources, etc.

In the latest economic developments, such as increased mobility of goods and services, the strategy of building business networks is gaining importance. Ability to achieve cooperation and participation in networks is becoming more and more one of the basic skills of business. Networks provide opportunities but also create new challenges and uncertainties.

Networks of firms rather than individual companies are now determining competitive advantage. Organizations and companies working as agile and dynamic networks are able to generate exceptional or "intelligent" results. Smart business networks offer organizations new ways to derive value from the combination of many individual organizations that, grouped together as a network, are able to compete better and more efficiently and to respond with greater agility to the changing world (Vervest, Peter HM, Van Lier, Diederik W., Zheng, Li, 2009).

The most important aspect is that this form of organization is flexible and it involves a division of labor expanded horizontally and vertically among the technologically and flexibly dynamic firms in terms of organization, which tend, therefore, to focus on their competencies (Prahalad and Hamel, 1990). This organizational arrangement is, above all, characterized by complex reciprocal relations of cooperation, rather than competitive relationships, and relatively stable relationships between legally independent and economically interdependent firms that cooperate in spatial proximity (Sydow, 1992).

Faced with market products becoming increasingly differentiated, this inter-organizational arrangement of the network allows companies to obtain or sustain a competitive advantage against their competitors outside the network.

Networks derive their flexibility and efficiency, and thus their competitive advantage from the fact that they contain elements of both markets and hierarchies. The ideal-typical network is more

reliable than the market (hierarchy element), and less coercive than hierarchy (market element) (Staber, Udo H., Schaefer, Norbert V., Sharma, Basu, 1996).

4. How to maintain a successful business network

For building, developing and maintaining a successful business network, able to obtain competitive advantage in the market, we must first see what a performant (successful) corporate network means and how we can reach such a result. So we have to identify what makes a network of businesses achieve profitable and more durable results than other strategies (cooperative, competitive, etc.).

Defining a network in terms of trust is totally irrelevant as long as the concept of self-confidence is not well defined. Trust may be unilateral or mutual. When defined in this way, trust is a special type of reputation, based on how certain entities or individuals act. Each member of the network has a reputation in relation to the other members, which they must uphold (by behaving in a fair and honest way). A network is a natural generalization of the confidence of the members. Thus, if trust is not secure in a network, organizations belonging to this network can not work well together and the network can not be fully efficient or sustainable for long term.

The two terms linked to the creation of trust are: respect and status. Respect is an important factor supporting trust based on social and moral sanctions. To trust another person is to believe that they will respect your rights. If they have no respect for you, then they consider it unnecessary to respect your rights. Status is a reflection of what others think about a person. Successful operation of the network thus depends on status. All those in the network must feel that they enjoy the status of member of the group. If they do not feel that they enjoy a status, then they can not trust the other members of the network.

An important feature of a successful network is that it allows people to maintain self-esteem. Therefore, the effectiveness of a network depends on a mixture of social and moral elements, which are agreed upon in advance.

For a network to succeed, it is essential that the enterprises ensure that their strategic goals are not contradictory, this however does not require the member firms to have the same objective, this is, in fact, very unlikely.

Network performance is based on organizational and individual culture of reciprocity and equivalent exchange, which provides a more effective relationship between firms.

Networks tend to be built by certain leaders. These leaders recognize the opportunity to develop a set of links, in order to coordinate (or may decide to build a network based on an existing informal connection). Leaders play an intermediary role, by helping to establish higher confidence links between people.

P. Vervest and his co-authors of "Smart Business Networks", from 2005, established to explore the scientific and practical implications of management and design of an intelligent business network. According to Peter Vervest, the four features that constitute a smart business network are: the result / execution / government / planning (design) of a smart business network (Vervest, Peter, 2005).

The intelligent network concept implies companies new and different (innovative) actions, better than usual results, but for a shorter period of time (in the context of ongoing developments, what is smart today, tomorrow will be just regular). In the minds of Peter Vervest and his co-authors a smart business network is represented by:

- a number of participating companies (organizational entities), which form the nodes;
- linked through the network, forming links between nodes;
- compatible goals and objectives;
- interact in new ways;
- perceived by each member as a catalyst of self growth;
- a sustainable in time network (Vervest, Peter, 2005).

Smart business networks are activated when organizations combine their skills to enhance cooperation in order to provide better value for the customers.

Business networks that are intelligent are able to use fast their capabilities, knowledge and resources of the member companies, to choose the best and to use them together in the network and to do so in unison, also having control over the executive processes of the members.

Smart business networks should have the following capabilities, which can also constitute conditions so that a network of businesses is efficient:

- Establish common grounds: of meanings, words, ethics and informal commitments, and principles followed in contractual obligations;
- Selection of members: the ability to decide which entities (companies) can act as network nodes;
- Connection: positioning and connecting to other parts of the network nodes.
- Setting goals: coordination mechanisms that determine the network business objectives and tasks and responsibilities of each member node.
- Interaction: interactive, learning, and self-organizing capabilities, which make the network generate new results (results that an individual member could not achieve on their own).
- Risk and reward: the perceived value of each of the entities participating in the business network must be considered;
- Continuous improvement: the capacity and network processes must provide the network the possibility renewal and sustainability.

Smart business networks (performance) should take care to meet, among others the following needs, in order to be successful in the current context of economic crisis:

- Be able to translate informal coordination mechanisms in structural institutional mechanisms to avoid unnecessary transaction costs, while making sure that does not hamper innovation.
- Have power and resources to implement decisions taken collectively, or by arbitration.
- To form sustainable alliances, even in the event of potential differences of strategy of the different members.
- Make information exchange processes between network members and coordinate the interdependent activities in the network.
- Commitment to achieve an agreement, so that contractual obligations and liability shall be expressed as concisely as possible and issues / conflicts are resolved as quickly and as cost-effective as possible.
- Integrate data, information, resources and knowledge, taking into account the functional, organizational and geographical aspects of the network.
- Optimize decision-making process within the network.
- Ensure that each member does its proper work.
- Promote lifelong learning within the network.

Also, in order to meet the challenges of the changing environment, networks of companies must constantly evolve and develop, and have a predictive and reactive approach. To successfully cope with uncertainty, networks must have an adaptive behavior and exploit the experience of each member of the network.

There are various classifications of business networks; this being is caused by the many environmental characteristics and the context in which the various structural configurations have been outlined. Although globalization and the global clutter of information and communications networks play a role, there are also specific factors of the business system and the national environment. This typology is constantly changing, whereas experience shows that new forms of business cooperation between organizations still appear, each with its specific character. The interaction between these organizations generates new structural configurations, with different contracts and agreements.

Future research should pay more attention to different types of networks, which may occur in regional economies and their different implications on economic performance (Casson, Mark, 2000).

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SOCIAL CARE ORGANIZATIONS AND INSTITUTIONS

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Abstract: *Social care management, pretty recently for Romanian society, but with tradition in the Occident, must be a priority for Romanian socio-economic policies. The Romanian society had learned many things from the non-governmental organizations that provide services for the elderly, basically being a model to follow for social care institutions. Management in social care is more difficult to accomplish because on one hand it requires taking moral decisions regarding the fate of those who perceive social care as safety net. On the other hand it has to respect the limits of budgetary resources or any other kind of resources.*

Key words: social care management, organizations, social welfare institutions, services for the elderly.

JEL classification: J14, J17, J18

1. Introduction

Institutions are relatively stable structures of statuses, roles and social relations, having the duty to meet certain needs of people in society and to fulfil certain social functions (M. Vlăsceanu, 1996). In sociology, the concept of institution has two meanings. A broad sense, which involves a system of rules governing social area - family, kinship system, the system of political leadership and school, the complex formed by all schools, courts, etc. and a narrow sense including public systems such as: government ministry, municipality, county council. The diversity of needs and social functions associated with the diversity of institutions is a process named by T. Parsons as a process of institutional differentiation. As long as the institutions are becoming more numerous, more diverse, the social activity will be performed by a set of institutions. In terms of legislation, institutions consist of a whole more or less coherent rules or norms that define the basic structure of social order. Rules are formal and informal. The formal ones are included in laws or legal statutes and regulations.

The informal rules take the form of conduct, rituals, etc. can be written or unwritten, implicit or explicit. The organization has several meanings: the organization has a mission which is associated with certain objectives, and missions and objectives are associated with technical expertise; the organization is a group of people who interact in order to fulfil on common objectives. The organization is also a structure based on formal and informal rules that generate collective actions. The organizations reproduce institutions, but they also change them. It is known the fact that the organizations are not dependent by opportunities and institutional constraints, but by other organizations and constraints that are related to the scientific and technological development, the distribution of wealth or income, the orientation of political interests, etc. (M. Vlăsceanu, 2003, Organizations and Organizational Behaviour).

2. Social welfare institutions

Social institutions are a very important element in the system because, on one hand it assures protection for the persons in need, and on the other side helps the system to function and to be organized. In social care we meet both the term of institution and the term of organization. Institutions give the rules or the legal frame of interactions and the organizations promote actions and interactions in an institutional context. Between institutions and organizations there are at least three types of connections:

- a. The institutions are the legal base for the organizations that is through the legal system it gives different opportunities in order to sustain the collective agents. It also offers formal and informal constraints for the performances of the organizations.
- b. The organizations become the agents of the institutional change.
- c. The main characteristic of the institutions is the reproducibility. The routine makes the institutions promote constancy.

In the social systems of EU we meet two categories/types of institutions: those with responsibility for social care and those that are specialized in this area. The common feature of the modern social work is to develop local level, in local communities. Currently, in Romania the central level is more developed than the local one, where there are a lot of beneficiaries of social care. The second category of specialized institutions is the one that is functioning as public or private institutions, the ones that provide housing, care, protection, rehabilitation for the elderly, disabled, children and other people in need. These institutions are established by the county or local budgets. These institutions are being subordinated to the general welfare departments or the local council (Dan Buzducea, *Modern Social Systems, Global Trends and Local Practice*, 2009).

3. The aging of the population and proper services for the elderly

Ageing is not a new phenomenon. In recent decades this demographic evolution has occurred in many countries in Europe, North America and others. What is new is the scale, the speed with which this phenomenon occurs. During the second half of the century, most developed countries and particularly those in Europe have experienced an unprecedented population aging demographic history. In 1950, only 8% of world population was aged 60 or more. This figure would last till 2000 to reach 22% in 2050. In 2030, half of the European population will be aged 50 or older with a life expectancy at this age of 40 additional years. This will be a region with more than half of the population aged 50 or more. For example, Italy has the highest percentage of elderly- 18.2% and Ireland 11,2% - the lowest. Other developed countries such as Australia, Canada and the United States are at the lower end, 12% and 13%. (*La securite sociale et la def du changement demografique*). The term "elderly" refers best to the people who have passed middle age. The elderly are those people who are in the third or fourth period of existence, during which losses and decline in physiological, psychological, economic and social are the worst; these losses are not always due to biological evolution, but involved simultaneously social, economic and cultural factors".(Bogdan C., *Geriatric, Ed. Medicală, Buc. 1997, pag. 21*). World Health Organization identified: middle age, middle or transition, between 45 and 59 years; older period: 60 to 74 years; old age, after 75 years; longevity, for those above 85 years.

4. Services for the elderly

4.1. Home care (home maintenance)

The main feature of the elderly is the acute need of long term care knowing that on one hand the chronic diseases are the primary cause of death of the elderly, and on the other hand, chronic disability are the main changes of old age. Following the researches of the American gerontologists, led Stanley J. Brody to the following conclusions:

- a. The situations of the old age that require support are chronic and require medical and social services, continuous and sustained;
- b. The main support for the dependent elderly is the family members; if the family requests assistance it means that resources are limited and the elderly without resources require an alternative form of assistance.

These statements are based on the following facts:

- Links between generations are strong and viable, this being demonstrated by high proportion (84%) of elderly who live close to at least one adult child.
- Family members provide most of care (that lay), related to medicine and personal care (according to statistics of the Department of Health, Education and Welfare of the U.S.) and 90% of home help services.
- Older people are better cared for daughters than sons.
- The establishment for dependent elderly person is the last solution for the family when all the other efforts failed.

These findings lead us to recognize the essential contribution of the family and the effects on the psyche of elderly. Initiative, improvement and quality control services are the responsibility of the community support. Each town, taken separately, has its own resources and moreover, has its own rating system. There are two categories of care: directed against disability and functional impairment, and adapting the way of life to disability. Home care must be multidisciplinary, this means coordination of caregivers.

4.2. Institutionalization of elderly

The law 17/2000 on social assistance for the elderly presents the criteria for the access of the elderly to a care institution. Thus, an elderly person would require institutionalization in the following conditions: they require constant care, which cannot be achieved at home and no one can administer, has no legally binding and they cannot fulfill their duties because of health, the economic or family situations, the elder has no home and no income;

According to Law no. 17/2000 on social assistance for the elderly, home for the elderly is the social institution with legal conditions providing adequate housing and food, medical care, recovery and rehabilitation, occupational therapy activities and leisure, social and psychological care. Homes for seniors, homes for the elderly and homes for chronic patients that already existed when the Law no. 17/2000 appeared will function as homes for the elderly with sections for elderly who need all types of care services, for those who need less care services and for the elderly who have chronic diseases. According to data from Ministry of Labor, Family and Social Protection in the first half of 2010 there were 131 homes for the elderly, with a total capacity of 7122 seats. From the total capacity, 25 with a capacity of 1570 respond to DGASPC, 52 with a capacity of 3734 respond to the local council and 54 with a capacity of 1818 seats are subordinated to NGOs. The estimated number of dependent elderly people is about 450,000, of which at least 140,000 would be in a state of dependence degree, this means that formal care provided by qualified staff is extremely underdeveloped in Romania. According to single electronic register of social services administered by MLFSP, there are a number of 228 public and private providers of social services that offer accredited home care services in 443 home care units. All social services for older people are organized in decentralized system and are funded only by local budgets. In 2010, MLFSP approved the granting of subsidies for Romanian associations and foundations with legal personality, that establishes social assistance units, subsidies for social services for older people, that worth 8,505,408 ron from the total grant of 19,999,905.28 from the state budget. So, 61 are home care social services for a number of 5679 beneficiaries, with a contracted value of 4,614,644 ron, 26 are residential centers for a total of 1,087 beneficiaries, 15 are centers for a total of 923 beneficiaries and 5 are social canteen for a number of 227 beneficiaries. In conclusion, from 322 subsidized social services in 2010, 107 were for the elderly, representing 42.53% of the funds allocated for grants.

5. Conclusions

The economic crisis is affecting the whole population, but in a different way. It deepens social polarization and social exclusion of vulnerable groups vulnerable in the absence of active coherent social policy and social protection. General features of social protection in Romania have direct relevance for social protection of older people: the social protection in Romania is below the European level, a critical financial situation of the population requires significant further intervention from the state, especially in terms of improving living conditions in social welfare institutions. Community services, community and nongovernmental structures for helping those in need are in early stages have a shy manifest towards the existing needs and there is still a highly specific interfamilial solidarity of the traditional Romanian family, model supported by the legislation. The funding schemes and existing social service networks were developed independently, based on a spirit of imitation more or less inspired, according to social conjuncture immediate emergencies.

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TABLE OF CONTENTS

TRENDS AND CHALLENGES IN HUMAN RESOURCE MANAGEMENT AND ORGANIZATION PERFORMANCE	3
BERCU ANA-MARIA	3
BEST PRACTICES FOR CREATING AN EFFICIENT EXECUTIVE BOARD IN TIMES OF ECONOMIC CRISIS.....	12
BODISLAV DUMITRU-ALEXANDRU	12
DINU MIRCEA ALEXANDRU	12
ASPECTS REGARDING MATHEMATICAL MODELS FOR DETERMINING THE LINK BETWEEN PRODUCTION, STOCK MANAGEMENT AND LEAD TIME	21
CAMPEAN EMILIA MARIA	21
MORAR LIVIU	21
POP DUMITRU	21
FUTURE DIRECTIONS IN THE PROLIFERATION OF CHANGE MANAGEMENT IN ROMANIA SME'S.....	28
CEPTUREANU EDUARD GABRIEL	29
CEPTUREANU SEBASTIAN ION	29
DRAGHICI MIRCEA STELIAN	29
A HYBRID MODEL FOR THE ASSESSMENT OF THE ORGANIZATIONAL CULTURE AT COMPANY LEVEL, ADAPTED TO THE ROMANIAN BUSINESS ENVIRONMENT	40
CERCEL MIHAI OVIDIU	40
DIGITAL DEVELOPMENT AND QUALITY OF LIFE IN ROMANIA: A NUMERICAL CHARACTERIZATION.....	48
CIOCOIU CARMEN NADIA	48
BORISOV DANIELA.....	48
COLESCA SOFIA ELENA	48
THE HUMAN DEVELOPMENT INDEX AND THE EVOLUTION OF THE QUALITY OF LIFE.....	63
CODREANU CARMEN MARIANA	63
THE IMPACT OF LATEST IT TECHNOLOGIES OVER THE EFFICIENCY OF A KNOWLEDGE-BASED ORGANIZATION MANAGEMENT IN ROMANIA.....	68
COJOCARU CAMELIA.....	68
CSR INTEGRATION IN CRISIS MANAGEMENT – NEW OPPORTUNITIES FOR ORGANISATIONS.....	77
CRISTACHE NICOLETA	77
MICU ADRIAN.....	77
SUSANU IRINA OLIMPIA	77
THE EFFECTIVENESS OF PRODUCTION FACTORS USAGE DURING THE ECONOMIC CRISIS. AN APPROACH IN THE SUGAR INDUSTRY.....	83
CUREA ȘTEFANIA-CRISTINA.....	83
CREȚU RALUCA FLORENTINA	83
CIORA COSTIN	83
CALCULATING METHODS REGARDING THE INFORMATIONAL MODERNISATION OF THE EMERGENCY MANAGEMENT	93
DAN GHEORGHE	93
MORAR LIVIU	93
ANALYSIS OF THE MAIN INTERNATIONAL STANDARDS AND GUIDELINES ABOUT PROJECT RISK MANAGEMENT	100
DROB CĂTĂLIN	100
THE EVALUATION OF A BLOCKING TRADEMARK OWNED BY A COMPANY IN INSOLVENCY PROCEDURE. CASE STUDY.....	104
FÂNTĂNĂ RAUL SORIN.....	105
GLOBALIZATION ERA AND HUMAN RESOURCES MANAGEMENT	112
FRATICIU LUCIA	112
POPA LILIANA MIHAELA	112
INDRES MIHAI	112

A SNAPSHOT OF ROMANIAN ECONOMY IN THE FIRST YEAR AFTER EUROPEAN UNION ADHESION	117
GAFTEA VIOREL	117
POPA ANCUȚA	117
COMPARATIVE ANALYSIS OF CORPORATE GOVERNANCE IN CENTRAL AND EASTERN EUROPE	127
GAVREA CORINA	127
STEGEREAN ROXANA	127
SOME CONSIDERATIONS ON THE MEETING OF PATIENTS. CASE STUDY: CHRONIC DISEASE HOSPITAL SMEENI - BUZAU	134
GIRBAN MARILENA GELA	134
PARGARU ION	134
SUSTAINABILITY MANAGEMENT IN ROMANIA: CHALLENGES AND OPPORTUNITIES.....	141
GRECU VALENTIN.....	141
DENEȘ CĂLIN.....	141
KNOWLEDGE MANAGEMENT IN EU FOUNDED PROJECTS	152
ILIEȘ LIVIU	152
MUREȘAN IOANA NATALIA	152
MUNTEAN BIANCA	152
CREATIVITY, INNOVATION AND CHANGE IN KNOWLEDGE-BASED ORGANIZATION....	160
IONESCU VLADIMIR-CODRIN.....	160
CORNESCU VIOREL	160
DRUICĂ ELENA.....	160
THE HUMAN RESOURCES MANAGER - A MODERATOR FACTOR OF THE ORGANIZATIONAL CHANGE.....	167
IORDACHE LOREDANA	167
CRIVEANU ION	167
THE WORKING CONDITIONS OF HIGHLY QUALIFIED EMPLOYEES IN ROMANIA AND HUNGARY, ACCORDING TO SOME EXPERTS FROM THE TWO COUNTRIES, IN THE CURRENT ECONOMIC CRISIS.....	176
LEOVARIDIS CRISTINA	176
RESEARCHES REGARDING THE APPLICATION OF THE CLASSIC TOOLS.....	187
OF QUALITY MANAGEMENT IN HIGHER EDUCATION UNITS	187
LUCA LILIAN	187
MIHUT NICOLETA	187
COLLECTIVE LEADERSHIP – ORGANIZATIONAL DIMENSION OF HUMAN RESOURCES STRATEGIC DEVELOPMENT.....	193
MANOLE CRISTINA	193
ALPOPI CRISTINA.....	193
WORK CAPACITY AND FATIGUE RELATION IN EMPLOYEES ACTIVITY	201
MANOLESCU AUREL.....	201
MOROSAN-DANILA LUCIA.....	201
BORDEIANU OTILIA-MARIA	201
EVOLUTION OF MAIN STATISTICAL INDICATORS THAT CHARACTERIZE ANIMAL PRODUCTION AT COUNTY LEVEL TELEORMAN FOR THE PERIOD 2000-2009.....	212
MARA FLORICA.....	212
NECULA RALUCA	212
MANAGEMENT STRATEGIES OF THE ORANGE MOBILE TELECOMMUNICATIONS COMPANY FACING THE ECONOMIC-FINANCIAL CRISIS.....	218
MARCU NICU.....	218
MEGHISAN GEORGETA-MADALINA	218
HOW SOCIAL RESPONSIBILITY IMPROVE THE INNOVATION POTENTIAL OF COMPANIES. EVIDENCE FROM ROMANIA	224
MILITARU GHEORGHE	224
RISK MANAGEMENT AND THE IMPLICATIONS TO BUSINESS SUCCESS.....	233
MILITARU MĂDĂLINA	233
CHENIC (CREȚU) ALINA ȘTEFANI.....	233
TEAMS AND THEIR ROLE IN MODERN ORGANIZATIONS	239

MUSCALU EMANOIL	239
MUNTEAN SILVANA NICOLETA	239
INFLUENCING FACTORS OF PRICE AND ASSOCIATED STRATEGIES.....	247
NEAMȚU LIVIU.....	247
NEAMȚU ADINA CLAUDIA	247
SOLUTIONS FOR MARKET DOMINANCE THROUGH COST LEADER STRATEGY.....	255
NEAMȚU LIVIU.....	255
NEAMȚU ADINA CLAUDIA	255
THE MAIN INDICATORS OF DEVELOPMENT OF MECHANIZED FARMING IN BUZAU COUNTY.....	262
NECULA RALUCA	262
NECULA DIANA.....	262
2011 NATIONAL MANAGEMENT PERFORMANCE AND STATUS.....	268
NICOLESCU OVIDIU	268
NICOLESCU CIPRIAN.....	268
THE ACCOUNTING DUALISM – STRATEGIC BASIS OF THE FIRMS DURING THE ECONOMIC CRISES.....	277
POP (GRIGORESCU) IOANA IULIANA	277
INNOVATIONAL STRATEGIES	284
POPA ION	284
CICEA CLAUDIU	284
DOBRIN COSMIN.....	284
POSSIBLE REMEDIES FOR THE CRISIS, REGARDING EMPLOYMENT AND WORK CONDITIONS IN ROMANIA.....	290
POPESCU I. DOINA	290
GENDER DIFFERENCES IN LEADERSHIP	296
POPESCU SILVIA	296
RELATIONAL STRATEGIES – A MANAGERIAL SOLUTION DURING THE CRISIS.....	304
PRICOP OLIVER CONSTANTIN.....	304
ACTIONS, METHODS AND TOOLS FOR THE QUALITY EVALUATION OF EDUCATIONAL SERVICES - A COMPARATIVE APPROACH.....	310
ROMAN TEODORA	310
MAXIM EMIL.....	310
MANOLICĂ ADRIANA	310
DIAGNOSIS OF STRESS FACTORS IN MILITARY ENVIRONMENT	317
RUS MIHAELA.....	317
TECHNICAL EFFICIENCY ANALYSIS AT S.C. AVICOLA CREVEDIA.....	327
SANDA (COSTAICHE) GEORGIANA MELANIA.....	327
OANCEA MARGARETA	327
THE MANAGEMENT OF SUPPLIERS SELECTION OF DANGEROUS SUBSTANCES FROM MINING INDUSTRY USING FUZZY LOGIC.....	335
SÎRB LUCIAN.....	335
BUSINESS LEADERSHIP BIASES: ANDROCENTRISM, ETHNOCENTRISM AND CHRONOCENTRISM	346
SOFICĂ AURELIAN.....	346
NEGRUȘA ADINA	346
GENDER ISSUES IN WORKPLACE VIOLENCE.....	356
STĂICULESCU ANA RODICA	356
HUMAN RESOURCES MANAGEMENT EFFICIENCY IN THE MILITARY ORGANIZATION.....	364
STĂNIȚ ALEXANDRA	364
RIZESCU MARIUS.....	364
MANAGING CORPORATE SOCIAL RESPONSIBILITY IN FINANCIAL CRISIS.....	369
STOIAN CIPRIAN-DUMITRU.....	369
CRISIS AND CRISIS MANAGEMENT. CREATIVE ECONOMY AS A FEASIBLE OPTION. CHALLENGES AND OPPORTUNITIES.....	374
SUCIU MARTA-CHRISTINA.....	374
ALDEA-PARTANEN ANDRA	374
PICIORUȘ LUCIANA.....	374

INTERNAL AUDIT. FINDING SOMEONE GUILTY OR FINDING SOLUTIONS	385
SUSMANSCHI GEORGIANA	385
CONSTANTIN NICOLAE VASILE.....	385
IMPROVING THE EFFICIENCY OF LOGICAL FRAMEWORK APPROACH AS A PROJECT MONITORING AND EVALUATION INSTRUMENT	390
TACHE FLORIN.....	390
CONNECTING POLLUTION ABATEMENT COSTS TO THE DYNAMICS OF ECONOMIC INSTRUMENTS FOR POLLUTION CONTROL	397
ȚĂPURICĂ OANA-CĂTĂLINA.....	397
RELATION BETWEEN SUSTAINABILITY AND LEAN MANAGEMENT	404
TODORUȚ AMALIA VENERA.....	404
THE ROLE OF EDUCATION IN DEVELOPING A CULTURE OF SUSTAINABILITY	413
TODORUȚ AMALIA VENERA.....	413
CÎRNU DORU	413
THE SOCIAL RESPONSIBILITY OF BUSINESS ORGANIZATIONS: THE CASE OF PFIZER	419
TOMA SORIN-GEORGE	419
MARINESCU PAUL.....	419
THE MANAGEMENT OF THE ENVIRONMENTAL RISK FROM THE PERSPECTIVE OF THE FINANCIAL ACTIVITIES	427
TRICĂ CARMEN LENUȚA	427
PICIU GABRIELA CORNELIA	427
REALISING A SUPPORT FOR REDUCE WATER POLLUTION BY NITRATES FROM AGRICULTURAL SOURCES	433
TRICĂ CARMEN LENUȚA	433
PICIU GABRIELA CORNELIA	433
CURRENT STATUS OF RESEARCH IN THE DOMAIN OF THE PRE - UNIVERSITY MANAGEMENT.....	438
TUȘA ANA	438
VOINIA CLAUDIU SORIN.....	438
DUMITRAȘCU DĂNUT DUMITRU	438
LEADERSHIP'S INFLUENCE ON OTHERS	443
TUTULEA ANCA.....	443
THE PROCESS OF CHANGE IN ROMANIAN BANKING SYSTEM: THE DIAGNOSIS PHASE.....	449
VĂRZARU MIHAI	449
ALBU CARMEN CRISTINA.....	449
VĂRZARU ANCA ANTOANETA.....	449
COMPARISON BETWEEN THE LOBBY ACTIVITIES IN EU AND USA – A THEORETICAL APPROACH.....	456
VASILCOVSCHI NICOLETA.....	456
OANTA STEFAN ILIE	456
MANAGING ROMANIAN ORGANIZATION TO DEAL WITH CRISES	461
VELCIU MAGDALENA.....	461
INTELLIGENT BUSINESS NETWORKS IN THE CONTEXT OF GLOBAL ECONOMIC CRISIS.....	467
VLĂȘCEANU CRISTINA	467
SOCIAL CARE ORGANIZATIONS AND INSTITUTIONS.....	473
ZODIERIU ELENA	473