

# The Dimensions of Organizational Intelligence in Romanian Companies – A Human Capital Perspective

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***Abstract.** The paper discusses the perceptions of organizational intelligence dimensions in Romanian companies, taking into account the degree of awareness employees have, in relation to this concept, and the overall investments in R&D at the industry level. Starting from the concept of organizational intelligence, the way it is defined in recent literature, we establish seven dimensions which are relevant for its analysis, and test them on a relevant sample, random stratified, of Romanian companies, reflecting the structure of Romanian economy, and all the layers of company size. We examine, thus, the correlation between the quality of the organizational human capital (the individual intelligence) and the learning processes, at the organizational level. The results of the study can be further expanded to analyses of the regions of development, by correlating the dimensions of the organizational intelligence with the macro-economic, developmental indicators.*

**Key words:** organizational intelligence; human capital; Romanian companies.

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**JEL Codes:** D23, M12.  
**REL Codes:** 14C, 17C.

## 1. The concept of organizational intelligence

For understanding organizational intelligence and its importance for the business environment, we have to consider two perspectives: the Western one, set by Peter Senge (Senge, 1990) and Chris Argyris (Argyris, 1999) in the United States, and the Eastern one, tailored to the Japanese way of thought by Ikujiro Nonaka and Hirotaka Takeuchi (Nonaka, Takeuchi, 1995). Senge's vision on the learning organization, that of a group of people who continually enhance their capacity to create the results they truly desire, proved to vary influential, in the last decade, as Harvard Business Review nominated his book, *The fifth discipline: The art and practice of the learning organization* (1990) as one of the most thought-provoking management works of the last century. According to Peter Senge, in order for an organization to learn, its members have to create new thinking and expression models and have to share the vision of a common purpose.

Although, theoretically speaking, as all have the capacity to learn, the organizational structures in which we activate are not always flexible and open to learning. It is for this reason why intelligent people are necessary, but not enough for an organization to become intelligent. In bureaucratic organizations (Mintzberg, 1997), which are highly reluctant when it comes to stimulating the creativity of their employees, the intelligence of the members of the organization is systematically blocked. More than that, they do not dispose of the adequate structures which should guide their learning,

of the systemic integration both individual and organizational elements which enable learning. These are, according to Peter Senge, systemic thinking, personal mastery, mental models, shared vision and team learning. People can influence the structures they are a part of, on the condition that they don't think narrow, but seize complexity, seeing fractals, not fragments. Thus, from passive executors of organizational routines, they grow into those who create their action framework, building, practically, the structural capital of the organization.

Organizational intelligence is, thus, the integral result obtained in a given organizational environment, due to contextual management (Menkes, 2005). Organizational intelligence, a non-linear system (Brătianu, Murakawa, 2004), fractal, like individual intelligence (Cruse, 2006), has not been, up to this moment, approached unitarily (Glynn, 1996, Akgun, Bryne, Keskin, 2007). The main approaches to individual intelligence, the behaviorist approach (Zuriff, 1985, Melser, 2004), the cognitivist approach (Sternberg, 1984, Walsh, Betz, 1990, Harth, 1993, Jensen, 1998) and the adaptive approach (Laughton, 1990, Plotkin, 1994) are imported in the studies dedicated to organizational intelligence. The behaviorist approach (Zara, 2004) refers to setting some behaviors which are suited to the organizational interests, which the organization should reach based on a given set of inputs. The organization learns which are the behavioral algorithms which yield the desired results and, like a hybrid system, human and cybernetic (Abraham, Koppen, Franke, 2003), it selects the corresponding algorithm each time it comes across a situation which is similar to one in the past.

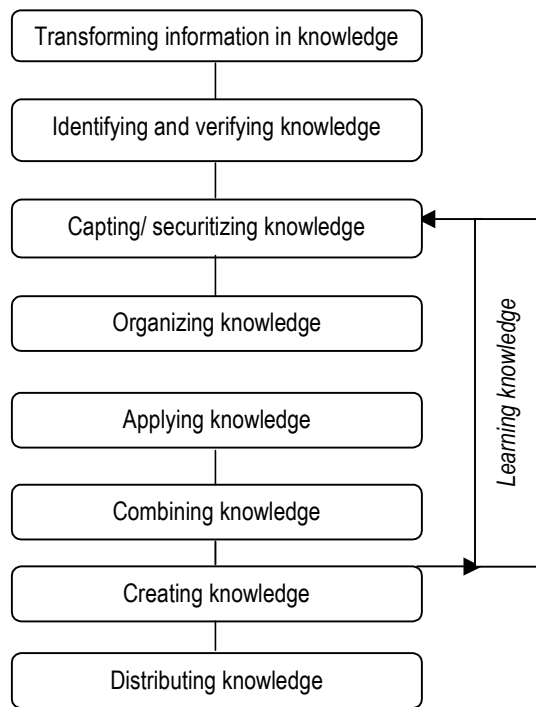
This is what Argyris (1999) names *single loop learning*. The cognitivist approach (Schlinger, 1992, Schwaniger, 2003) employs the cybernetic modeling of organizations, by equaling intelligence with the information-processing organizational structures. The critique of the cognitivist approach (Rizzello, Turvani, 2000, Perkins, 2003) is structured around its ignoring of the intra- and extra-organizational environment in which information is processed. While the behaviorist approach takes intelligence for a reflex act, whose manifestation depends linearly on the environmental stimuli, the cognitivist approach is an autistic one, which ignores contextual positioning. The adaptive approach to organizational intelligence (Desouza, 2006) describes its evolution also under the impulse of the environmental stimuli, but by adopting a non-linear model. The AGIL model (Parson, in Nilsson, 2007) – *adaptation, goal attainment, integration, latency (pattern maintenance)* – illustrates, in a simplified perspective, the way organizations use their intelligence in a manner which targets their adaptation to the environmental conditions and success achievement, in two stages: survival and performance.

The definitions of the organizational intelligence focus on various aspects of this conglomerate of characteristics, out of which we extract:

- The problem of gathering, processing, interpreting, and communicating the technical and political information needed in the decision-making process (Wilensky, 1967).
- Understanding organizations as learning systems and creative systems (Nevis, 1996, Mumford, Gustafson, 1988).
- The organization's ability to deal with complexity, that is, its ability to capture, share, and extract meaning from marketplace signals (Haeckel, Nolan, 1993). Based on the three directions, connection, for attracting knowledge, interaction, for sharing knowledge, and structuring, for extracting meaning, the intelligence quotient of the organization can be computed (Choo, 1995).
- The intelligent behavior of the organizations, as a function of their design (Nonaka, 1995).
- Information processing functions that permit adaptation to environmental demands and are related to innovation initiation and implementation (Glynn, 1996).
- That capacity for computation which can be applied to information that is externally gained or internally generated to meet survival challenges (McMaster, 1996).
- Organizational intelligence is a function of five cognitive subsystems: organizational structure, culture, stakeholder relationships, knowledge management, and strategic processes (Halal, Kull, 1997).

It can be noticed that, in all these approaches, the focus is on processing information for obtaining knowledge. Knowledge possession and knowledge creation are, according to Gregory (1981, 1984) two different processes contained in organizational knowledge. The intelligent organization uses knowledge management as adaptive tool for coping with an environment which is continuously

changing, by identifying in advance opportunities, and early risk avoidance, behavior which identifies itself with the strategic orientation of the company, understood as its capacity to position itself, in the long run, in such a way as to generate and maintain its competitive advantage. Simpler said, an intelligent organization is that organization which, being the best, has success, and reciprocally. Liebowitz's modeling (2000, p. 6) presents a sequence of the knowledge processing functions that organizational intelligence involves, represented in Figure 1:



**Figure 1.** *Assembling the processes of knowledge transformation into organizational intelligence*

All these approaches point at the connection existing between organizational intelligence and the learning process, an intelligent organization being, essentially, an organization able to learn.

The organization's capacity to learn is influenced by the way in which its employees

perceive organizational intelligence, the benefits an intelligent organization offers to its members, and the awareness, or lack of awareness, regarding the level at which the organization is placed on the intelligence scale, and regarding the effort which its employees are disposed of making for improving this level. On the quality and quantity of this effort the success of the learning process depends.

## 2. The dimensions of organizational intelligence

In order to assess the suitability of the organization for the learning process, and its intelligence coefficient, seven factors have to be monitored: strategic vision, shared fate, change orientation, heart and soul, alignment, knowledge deployment, and performance pressure (Albrecht, 2005, in Prejmerean and Vasilache, 2007).

For *strategic vision*, the matters in focus are:

- The “strategic conversation” in the organization – plus or minus.
- The environmental scanning – plus or minus.
- Annual strategic review – present or absent.
- Value proposition – plus or minus.
- Statement of direction – present or absent.
- Correlation between statement of direction and key decisions – present or absent.
- Leaders' identification and promotion – plus or minus.

Similarly, for *shared fate*, other seven questions have to be addressed to:

- Plans and priorities sharing between management and employees – present or absent.

- Understanding of the organizational idea throughout the organization – plus or minus.
- Information sharing across departments – plus or minus.
- Sense or belonging – plus or minus.
- Employees – management partnership – present or absent.
- Employees’ belief in the organization success – plus or minus.
- Projected long lasting relationship with the organization – plus or minus.

*Change orientation* is accounted for by:

- Issuance of new university services to keep up with the demand – plus or minus.
- Natural mechanisms to encourage innovation – present or absent.
- Employees’ stimulation to find creative ways to better do their jobs – plus or minus.
- Permission to question the habitual way of getting things done – plus or minus.
- Bureaucracy – plus or minus.
- Willingness of the management to admit their mistakes and to cancel non-working strategies – plus or minus.
- Openness – plus or minus.

“*Heart and Soul*” measures commitment in terms of:

- Overall quality of work life, as perceived by the employees – plus or minus.
- Management’s interests as perceived by the employees – plus or minus.
- Pride taken in belonging to the organization – plus or minus.
- Willingness, from the part of the employees, to spend extra effort to build organizational success – present or absent.
- Optimism regarding the future of employees’ career in the organization – plus or minus.

- Management commitment – present or absent.
- Perception of managers as role models – plus or minus.

*Alignment* shows:

- Organizational structure appropriateness to the mission – plus or minus.
- Sense-making of rules and policies, as compared to priorities – plus or minus.
- Facilitation of employee performance – present or absent.
- Information systems as facilitators – plus or minus.
- Value creation – plus or minus.
- Authority delegation – plus or minus.
- Alignment of departments missions, as to facilitate cooperation – present or absent.

*Knowledge deployment* is expressed by:

- Cultural processes of knowledge sharing – present or absent.
- Managers’ respect for employees’ knowledge skills – plus or minus.
- Porous organizational boundaries – plus or minus.
- Information systems knowledge flows support – plus or minus.
- Continuous study of the new tendencies at the managerial level – present or absent.
- Continuous learning programs support – present or absent.
- Accurate appreciation of employees’ tacit knowledge – plus or minus.

*Performance pressure* takes into account:

- Clear understanding of roles and responsibilities, at all levels – present or absent.
- On-going communication of performance goals and expectations – present or absent.

- Replacement of poorly performing employees – present or absent.
- Removal of failing managers – present or absent.
- Feedback to employees and recognition of their contributions – plus or minus.
- Employees’ perception that their work contributes to the organization’s success – plus or minus.
- Employees’ perception that their career success is determined by their job performance – plus or minus.

Performance pressure, in a society “of excellence” (Lyotard, 2004), where performance is the main legitimating factor, reflects an organization’s capacity to shift demand in its favour. Demand, in its turn, is influenced by the marketing and the R&D expenses of the company. Thus, intelligence creation operates both externally, by means of relationship management, and internally, by generating the technological advantage (Yang, 2004). The matrix of the sources of R&D intelligence is presented in Figure 2 below:

	Direct	Indirect
Individual	Networks Individual research Visits Memberships Tradeshows, conferences, etc. Lifelong learning	Consultants Experts Editors Analysts Retired executives
Organizational	Patents and patent citations Marketing material Annual reports	Industry surveys Business associations Government records

Figure 2. Sources of R&D intelligence

Kohli and Jaworski (1990) list as the first element in market orientation the market

intelligence generation. The main sources of market intelligence are:

- *databases*, for relevant indicators regarding companies operating in the field
- *opinion leaders*, who are trend-setters for that particular domain, and who may be consulted as far as the feasibility of an innovation is concerned
- *informal contacts* – keeping the channels open for information flows
- *industry associations, universities*
- *horizontal* (with complementary companies on the market) and *vertical* (licensing agreement with large, marketing skilled companies) *alliances*.

The seven elements listed above are principles of the intelligent organization, a composed competitive advantage allowing it to perform better than firms lacking this architecture do. Synthetically, the organizational synergy behind intelligence is reflected in Figure 3.

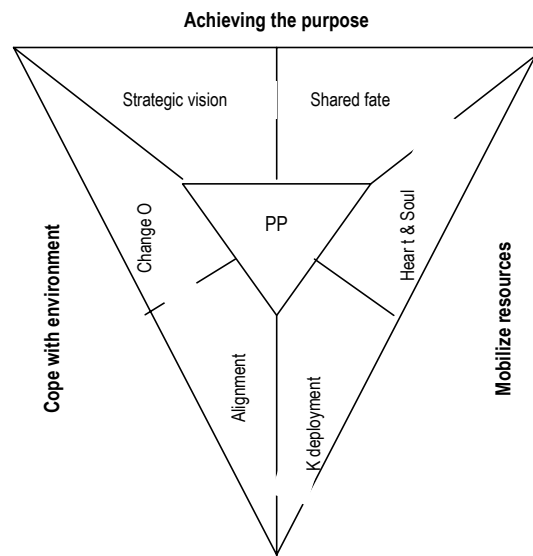


Figure 3. The architecture of the intelligent organization

The triad achieve purpose – cope with environment – mobilize resources is a function



of team-learning. By team-learning the organization becomes a rhizome-like system (as defined by Deleuze and Guattari, 1987), whose relationships with the context are diffuse, and which forms connections spontaneously, relying not only on existing, but also on potential knowledge. Margaret Schneider (2002) advances also the concept of *radix organization*, anchored in the value chain, and taking its intelligence from there. By combining the two views, we add some other radices to organizational intelligence, these being organizational culture and leadership.

Organizational culture can be seen as an organization's "personality", whose relationship with intelligence was thoroughly theorized in individuals. For José Antonio Marina (2004), personality can contribute to the success or failure of intelligence, because it brings about emotional traits, irrationality, safety anchors which prevent individuals from taking risks, even if their intelligent calculus proves that risk-taken to be profitable, inertial mechanisms, etc. Marina defines social intelligence as the sum of the individual intelligences, corroborated with the systems of interaction and with power distribution. Organizational culture accounts for the systems of interaction, while leadership governs power distribution.

The dynamics of every organization is, at the same time, centripetal and centrifugal. Committed to the same organizational culture, people tend to be on the one hand collectivist, on the other individualist. Excellence, in itself, can be interpreted as the performance of the egotists, or as the successful common effort towards accomplishing a common goal. In order to harmonize these contradicting energies, intelligent organizations need to

include, in their cultures, five elements (Wagner-Marsh and Conley, 1999):

- Strong sense of purpose – *why is the organization in place?*
- Preoccupation for individual development – *what do the employees want to become and how the organization supports them to get there?*
- Openness and trust – *mistakes are inherent, and have to be admitted, the focus is not on hiding them, but on preventing, curing and, if possible, never repeating them.*
- Empowerment – *employee learning and employee decision-making are promoted, in order to stimulate employee responsibility and commitment. If the employees recognize themselves, and their individual objectives, in the vision shaped for the company, and in the organizational objectives, they are likely to contribute with increased efforts to the organization's success.*
- Allowance for employees' emotions – *intelligent organizations let their people be themselves, act spontaneously, behave creatively, express their moods.*

These prescriptions for an intelligent culture constitute favourable conditions for organizational intelligence to emerge. Successful organizational culture is some sort of hologram, where every individual becomes a micro-scale representation of the macro-scale "mind" of the organization. The challenge of creating and maintaining an intelligent culture is the one of being able to shape a common ground but, knowing that homogeneity is intellectual death, and that consensus, according to Lyotard (2004), has grown into a suspect value, to encourage, at the same time, creative difference.

### 3. Research objectives

The main objective of this research was to outline the position of the employees in Romanian companies towards the seven dimensions of organizational intelligence identified in the aforementioned questionnaire, in a pilot research, in order to be, then, able to extend the conclusions to a representative sample of organizations.

We envisaged the analysis of the differences existing between large organizations, with over 150 employees, and microenterprises, starting from the premise that the human resources, as well as the differences in organizational culture and leadership between the two categories can have significant effects on the manner in which the dimensions of organizational intelligence are perceived, and on the way they are put into practice. Also, as an indicator of the profitability of organizational intelligence, we recorded the investments in R&D in each organization, as reported to the average of the sample.

### 4. Methodology

We used a random stratified sample ( $L = 3$ ), including ten for profit organizations, with Romanian capital. We used part-time students employed in these organizations as interview operators. The average rate of response was of 83.7%, while the weight of the interviewees holding management positions was of 21.4%. The interviews were partly structured, focused on obtaining details on the issues we previously described, and which are included in the seven dimensions of organizational intelligence.

Starting from the identified aspects we intend, in a future research, to interview key persons in each organization, and to organize focus groups, in order to identify and discuss

the problems in perceiving the dimensions of organizational intelligence, and to diagnose differences from the patterns acknowledged in literature.

The structure of the sample, by the number of employees, is presented in Figure 4:

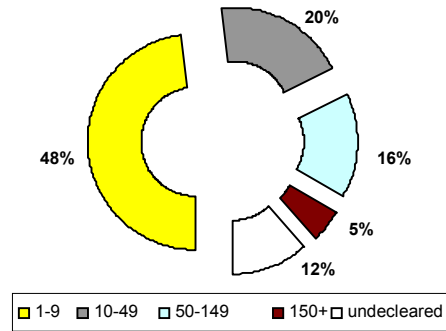


Figure 4. The structure of the sample by number of employees

It can be noticed that microenterprises are prevailing, as their percentage in the national economy is also high (85% of the SMEs). The percentage of the organizations employing more than 150 people is low, but it can be seen that a relatively large number of organizations did not declare their number of employees, which affects the precision of the correlations between the human resource and the degree of organizational compatibility with the dimensions of organizational intelligence.

The distribution of the organizations by their object of activity is illustrated in Figure 5, which gives a fair image of the distribution in the national economy:

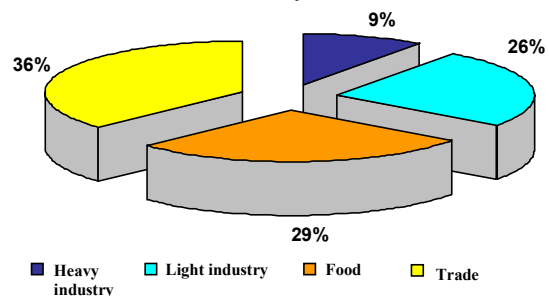
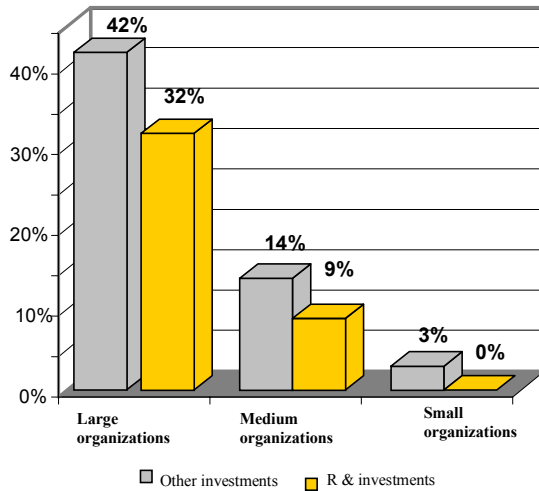


Figure 5. Sample structure by field of activity



From the point of view of investment in R&D, at the level of the small enterprises, the medium and the large, we notice the situation presented in Figure 6.

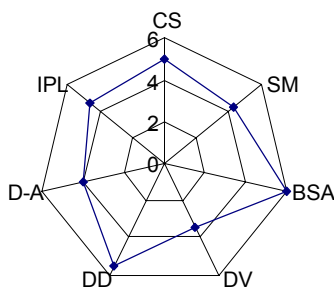


**Figure 6.** The comparative situation of R&D investments, related to other priorities

The results, regarding the investigation of the seven dimensions, are presented in the following section.

## 5. Results

The analysis of the first dimension, the strategic vision, lead to the results presented in Figure 7:

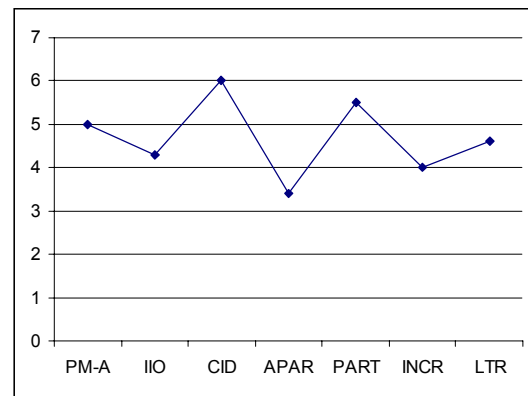


**Figure 7.** The average values of the sample for the seven sub-components of strategic vision

where CS = strategic conversation, SM = environmental scanning, BSA = annual strategic review, DV = value proposition, DD = statement of direction, D-A = correlation between statement of direction and actions, IPL = leaders' identification and promotion.<sup>(1)</sup>

We can notice that, excepting the statement of direction and the annual strategic review, all the other components score around the value of 4, on our scale from 0 to 6, which indicates an average level of complying with these desiderates, in the examined Romanian companies. The lowest scores are obtained in the cases of correlation between the statement of direction and the concrete actions taken, which is not at all surprising, considering the general context of the Romanian companies.

As far as shared fate is concerned, the average scores are presented in Figure 8:



**Figure 8.** The shared fate perception of the organizations' members

where: PM-A = common plans manager-employee, IIO = understanding of the organizational idea at all levels, CID = interdepartmental communication, APAR = feeling of belonging, PART = partnership management-employees, INCR = employees' trust in the future of the organization, LTR = long term relationships in the organization.

On the same scale, from 0 to 6, we notice that the relative maximum levels are obtained by interdepartmental communication and the sense of partnership with the management, which is obvious (although there is the risk of a superficial perception) in the companies with a young management and a low power distance. On the contrary, the Romanian employees included in the

study declare low levels of trust in the future of their organization, and low levels of belonging. The understanding of the idea on which the organization is based and the establishment of long-term relationship reach only an average level.

As far as change orientation is concerned, the practical findings are summarized in Figure 9:

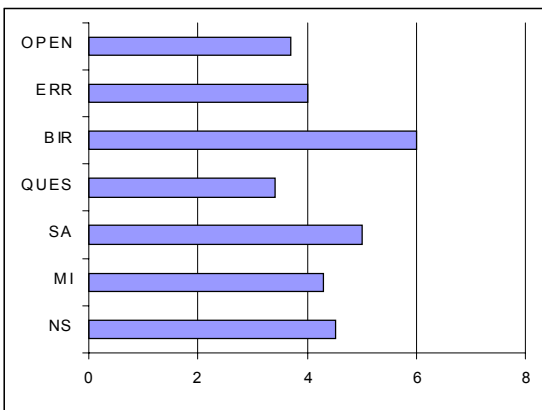


Figure 9. The change orientation parameters

where: OPEN = degree of openness, ERR = management tolerance towards errors, BIR = bureaucracy, QUES = the permission to ask questions about management decisions, SA = employees stimulation to change, MI = mechanisms to encourage innovation, NS = new products/ services proposed by the organization.

Not at all surprising, bureaucracy, as a factor which blocks change scores very high, followed only at a large distance by the other parameters, favourable to change. The tolerance towards errors is, generally, high, in the analyzed organizations, which may, on the one hand, indicate an organizational climate which encourages experiments but, on the other hand, may signal a *laissez-faire* atmosphere, in which the results of the actions taken are not sanctioned in any way. Also, the stimulation of the employees to change is perceived as intense, the employees being, thus, motivated to find out methods to become more efficient.

The „heart and soul” is, in its turns, measured by means of seven parameters, included in the graph presented in Figure 10:

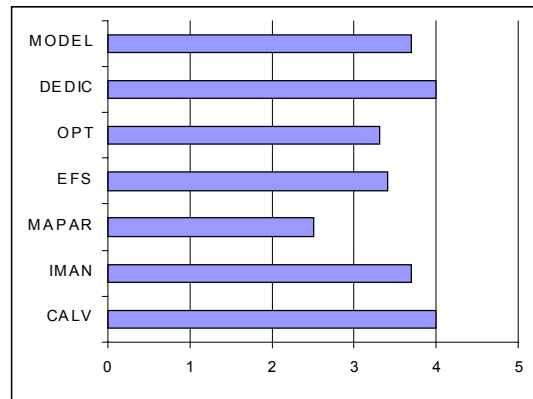


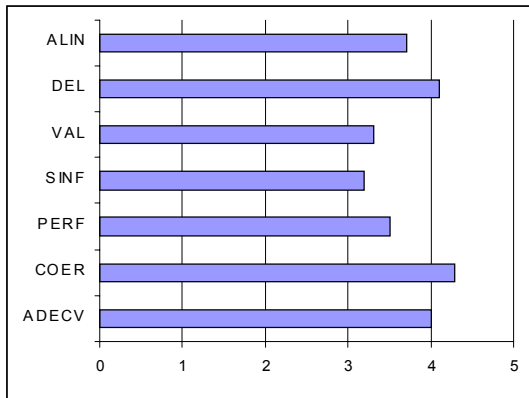
Figure 10. „Heart and soul”

where: MODEL = perceiving managers as role models, DEDIC = dedication to the management, OPT = optimism, EFS = willingness to make additional effort to insure organizational success, MAPAR = pride in belonging to the organization, IMAN = management interests as perceived by the employees, CALV = the quality of life in the organization.

We notice that, in this case, the scores are significantly lower than for the previous dimensions. Only the quality of life in the organization is perceived as fairly good, and the degree of dedication is high.

On the contrary, the optimism and the willingness to make additional efforts for the organizational success score poorly. Also, a relatively small number of managers are seen as role models, and the pride to be a member of a certain organization has the lowest score from all the variables recorded. We may, then, ask why people dedicate, if not because they are proud. One hypothesis may arise from a particular understanding of dedication (*doing one’s job well*), or from the dedication *in abstracto*, towards a generic organization, combined with a general sense of duty.

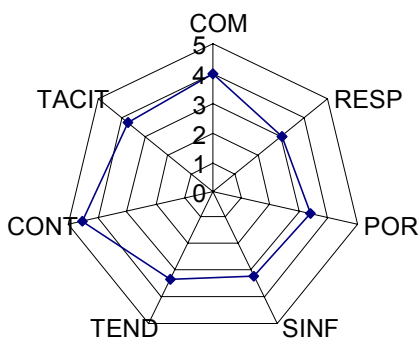
When analysing alignment, we came across the situation represented in Figure 11:



**Figure 11.** *The degree of alignment in organizations*

where: ALIN = the alignment of departments' missions, DEL = delegation, VAL = value creation, SIN = using IT for facilitating activities, PERF = facilitating employees' performance, COER = coherence of policies and strategies, ADECV = alignment of organizational structure to organizational mission.

From the graph we may infer that the best represented attributes of alignment are delegation and coherence, while the others obtain only medium scores, which are far below the maximum considered, of 6.

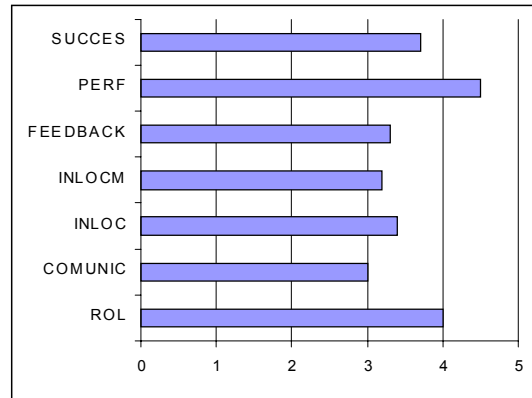


**Figure 12.** *Knowledge deployment*

In Figure 12 we outline the main mechanisms by which knowledge deployment is produced, at the organizational level. The most important is encouraging continuous learning (CONT), and putting individual knowledge together (COM), as

well as extracting tacit knowledge accumulated by the employees (TACIT).

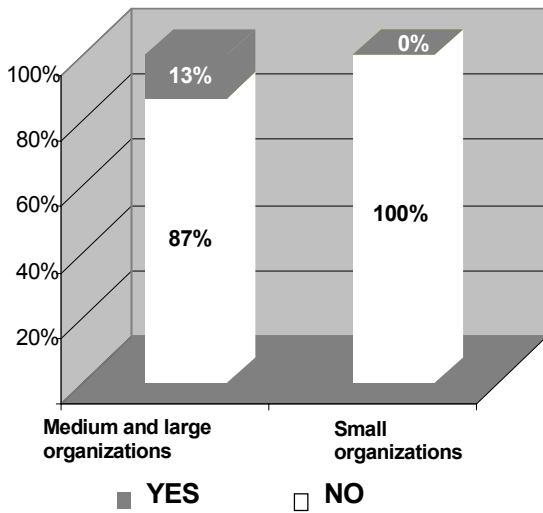
Finally, performance pressure is illustrated by the indicators presented in Figure 13:



**Figure 13.** *Performance pressure indicators*

The main indicators are the perception of the employees that their individual performance contributes to the success of the organization (PERF), and the opinion that their success in their career is influenced by their performance (SUCCES). Also, we should take into account a clear understanding of roles and responsibilities in the organization (ROL). A minor importance is given to communicating managerial expectations related to performance (COMUNIC), and to replacing the managers (INLOCM) and the employees (INLOC) who perform poorly. Interestingly enough, replacing managers who don't perform well is seen as less important than replacing employees who don't perform well.

In the end of the interview, the respondents were asked a question referring to how familiar they are with the concept of organizational intelligence. Their answers, on types of organizations, are presented in Figure 14:



**Figure 14.** *The degree of familiarity with the concept of organizational intelligence*

We noticed that, at the level of the large and medium organizations, the concept is known in a small proportion, while at the level of small companies the degree of familiarity corresponds to statistical zero. We need, then, strategies of promotion and of proving its efficiency, targeted to the managers and employees, before we can go on to its applying and development in Romanian companies.

### Conclusions

The data obtained in this pilot research show that, although organizational intelligence is not new to the world, as many recent studies debate on it, it is certainly new to the market, for Romanian companies. Starting from the answers obtained to the last question included in the interview, we can conclude that the proportion of the employees, even in large and medium companies, which have heard of organizational intelligence (13%) is far from being satisfactory. The employees of the

small organizations totally ignore this concept and, of course, we can't expect that they are ever going to operate with a concept which is unfamiliar to them.

However, the answers to the questions based on dimensions and subdimensions of organizational intelligence, as they were identified by us, indicated average and above average scores, which shows that, although these development efforts are not reunited under the umbrella of organizational intelligence, the analyzed organizations apply elements of human resources management and strategic management in order to reach their objectives, by motivating their employees to remain loyal to them, transmitting the organizational idea at all levels, etc. What it seems, nevertheless, to be missing is systemic thinking, which lies at the base of organizational learning and organizational development. Although these practices are in a germinal stage, in Romanian organizations, they do not belong to a coherent assembly, which should make possible their re-utilization, whenever necessary, their archiving in the manner of an organizational behaviour code, which is more effective than their unsystematic, momentary usage.

The situation which resulted from this research imposes as a priority the harmonization of theory and practice in the field of organizational intelligence. The first step which needs to be taken is the popularization of the concept, at the level of the decision factors in the organizations, as well as at the level of the employees, in order to create a double-direction pressure, which is favourable to applying the principles sustaining the concept of organizational

intelligence. Only after a significant degree of familiarity with the concept is reached, being, thus, created the critical mass of knowledge about organizational intelligence, we can continue with the reevaluation of its components and to stimulating its application, being aware of its meaning and organizational effects. Thus, the scores obtained will be comparable and correlated, not only a series of ups and downs, which may very well be accidents of organizational

life, and not the expression of a systematically pursued method. Intelligence, although it may emerge accidentally, from the organizational subconsciousness, needs, in order to develop and become operational at the organizational level, a strategy, a sustained, systematic practice. The direction which should be followed in order to reach the strategy of organizational intelligence development is what this pilot research pointed at.

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### Note

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- <sup>(1)</sup> As the questionnaire was written in Romanian, the acronyms express the Romanian concepts

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