

UDC 005

ISSN 1820-0222

management

2009 - 51



management

Number 51, Year XIV
April 2009.

Publisher

Faculty of Organizational Sciences - Belgrade

Dean

Nevenka Žarkić Joksimović, Ph.D.

Editor in Chief

Aleksandar Marković, Ph.D.

Editor of Internal Department

Ondrej Jaško, Ph.D.

Editor of International Department

Jovan Filipović, Ph.D.

Editorial Board:

Čedomir Nestorović, Ph.D., Faculty of Coimbra, Portugal
Dejan Petović, Ph.D., Faculty of Organizational Sciences, Belgrade
Jasmina Četković, Ph.D., Faculty of Economics, Podgorica, Montenegro
Jasmina Omerbegović Bijelović, Ph.D., Faculty of Organizational Sciences, Belgrade
dr Sonja Petrović - Lazarević, Ph.D., Department of Management,
Monash University, Australia
Milan Martić, Ph.D., Faculty of Organizational Sciences, Belgrade
Goran Putnik, Ph.D., University of Minho, Portugal
Mirjana Drakulić, Ph.D., Faculty of Organizational Sciences, Belgrade
Miroslav Svatoš, Faculty of Economics, Chesh
Milija Suknović, Ph.D., Faculty of Organizational Sciences, Belgrade
Robert Leskovar, Ph.D., Faculty of Organizational Sciences, Kranj, Slovenia
Siniša Nešković, Ph.D., Faculty of Organizational Sciences, Belgrade
Roberto Biloslavo, Ph.D., Faculty for Management, Koper, Slovenia
Vesna Milićević, Ph.D., Faculty of Organizational Sciences, Belgrade
Stanka Setnikar Cankar, Ph.D., Faculty of Administration, Ljubljana, Slovenia
Vinka Filipović, Ph.D., Faculty of Organizational Sciences, Belgrade
Peter A. Delisle, Ph.D., Austin College
Peter Bielik, Ph.D., Faculty of Economics and Management, Slovak Republic
Milica Bulajić, Ph.D., Faculty of Organizational Sciences, Belgrade
Sladjana Barjaktarović, Ph.D., Faculty of Organizational Sciences, Belgrade

Management is being regularly reviewed in DEST
DEST - Department of Education, Science and Training of Australia
Ulrich Periodicals

Technical Editor

Milivoje Radenković
Andrej Novović

Address

Belgrade, Jove Ilića 154
Tel./fax. 381 11 3950 868
E-mail: manage@fon.rs
http://management.fon.rs/

Journal is published quarterly

Printed by
Sigra Star, Belgrade

CIP Katalogizacija u publikaciji
Narodna biblioteka Srbije, Beograd
005
ISSN 1820-0222 = Management (Engl.
ed.)
COBISS.SR-ID 112265484

Copyright © 2004 by Faculty of Organizational Sciences

CONTENTS

- 5 The learning organization:
Model of organizational structure
or the characteristic of the
organization**
Mirjana Petković
- 13 Electronic negotiation
Systems (ENS)**
*Vojkan Vasković,
Dario Kršić*
- 21 Managing action programs for
organization development**
*Ljubomir Drakulevski,
Leonid Nakev*
- 29 Upgrading direct marketing by
using the CRM concept**
*Ivana Domazet,
Jovan Zubović,
Božo Drašković*
- 39 Business intelligence model
for sales analysis**
*Suzana Djukić,
Ljiljana Kaščelan*
- 47 Pluralism in creative organizational
development management**
Slavica Petrović
- 59 The corporate social responsibility
and stakeholder management**
*Biljana Predić,
Maja Ivanović-Djukić*
- 67 Analysis Motivation of
Management schemes A. S.
HUMENNE**
*Miloš Hitka,
Maria Sirotiakova*

The Learning Organization: Model of Organizational Structure or the Characteristic of the Organization

UDC 005.71

Mirjana Petković

Faculty of Economics, Belgrade

The paper draws on the dilemma of whether a learning organization is a new model of organizational design, or is just a composite of certain characteristics which need to be developed in the existing and, within literature and practice, known models of organizational structure. The author approaches this dilemma by trying to explain the concept of organizational learning, on which the phenomenon of learning organization is based, the learning types and processes, and consequently suggesting in that way a logical conclusion. The starting point of the paper is that the construct »learning organization« refers to the description of the characteristics of the model, and not on the model per se.

Introduction

The subject “the learning organization” is ever more present in the national literature in the field of organization and management. As knowledge has become a superior resource that will, according to some researchers, soon take its place in the companies’ balance sheets^[1], the concept of organizational learning and the design of the learning organization based upon it have become a real challenge for doctorands, postgraduates doing their masters degree and those with the masters degree achieved, but for consultants and managers as well. Such an interest in this topic is undoubtedly a good sign, since it proves that there is awareness of the importance of learning, however, evident is a certain confusion in the interpretation and understanding of this issue. The dilemma that is ever more present at expert seminars and in open students’ works defences at various study levels is: well then, what is the learning organization – a new model of organizational structure or a property a model should have or develop. In this sense, some other important questions emerge: can a learning organization be presented by an organizational chart, which has so far been the only known way of presenting an organizational model, or does a knowledge and learning era offer new mechanisms, such as social networks that are presented by the number and the density of communications among organizational parts, management positions or members of a team^[2]. In case the learning organization is not a specific model of organizational structure, do the structures differ according to the extent to which they are appropriate/inappropriate for learning, that is, are some structures a barrier to organizational learning?

Some authors maintain that the centralized structure blocks learning since it stresses the importance of the sequence of events from the past, whereas a somewhat more decentralised structure leaves more space for creativity and experimenting, which naturally leads to the conclusion that hierarchy is not a suitable learning

environment. Some research, however, show that effective and long-term learning is as possible in hierarchical bureaucratic societies as in decentralized structures, which challenges the above conclusion that hierarchy is not a suitable milieu for learning and gives support to those authors that claim that the learning organization is not a specific model of organizational structure, but a model characteristic^[3]. The differences among the authors are logical and result from a rigidity of a bureaucratic structure that gives major resistance to change; however, this does not mean that changes are not possible in bureaucratic structures, that is, that bureaucratic organizations do not learn. On the contrary, it only needs to provide the conditions for learning and adapt the learning process. The key issue is how to teach bureaucracy and at the same time retain a necessary level of hierarchy which is synonymous to order, discipline and efficiency. Bureaucratic structures are formalized and structured according to the rules, therefore strict rules form a kind of internal equilibrium. Nonaka maintains that bureaucracy learns best if this equilibrium is upset. In order that bureaucratic organizations should learn, it is important that self-awareness of the necessity to learn be developed to a greater extent than it is today.^[4]

The starting premise in this work is that the “learning organization” is not a specific model of organizational structure, but a characteristic of a model that can be manifested in different forms (functional, divisional, network, matrix model, etc.). If we adopt the view that the learning organizations are flat (non-hierarchical), without rules or procedures, with despecialised executives, as some authors maintain, we will inevitably come to the conclusion that 90% among hierarchical and regulated organizations do not learn, that is, that they are non-learning organizations, which would be absolutely incorrect. The structure of an organization is important in its learning, however, there are other conditions besides the structure that are to be met, and they also affect the employees’

behaviour: motivation, career management, the learning climate and culture, leadership, etc.

This author plans to, first, explain organizational learning and the learning process, then to define the concept of the learning organization, and, finally, to try to solve the above dilemma.

1. Organizational learning

Organizational learning is a new concept in management; it emerged in the late 1970s and in the early 1980s, aiming to provide explanations to the phenomena that resulted from new trends in organizations. The traditional practice of leading companies, to invest into the competences of an individual and favour the function of research and development was destined to fail with the emergence of Japanese companies that based their achievement on an integral process of learning and development of all their employees. Long periods of stability have shown to last due to the lack of competition rather than to creative efforts of managers and experts on research and development. It was for these reasons that in the 1980s and 1990s, in the course of transformation and restructuring of these companies, the development managers and the experts in IT sector were increasingly made redundant.^[5] The concept of Organizational Learning and the concept of the Learning Organization based on it links learning to the organizational (enterprise) performance. According to this concept learning is a process of critical importance for the organizational survival and success. Basic to this concept is the pledge for radical changes in the behaviour of managers and employees in organizations, the changes that will result in the change of the organizations themselves, in that they should be transformed from low level performance organizations into the high level performance ones. Essentially, the organizational learning concept supports and generates ample changes in the company. Therefore organizational learning is often classed in management literature among the concepts of organizational changes (of restructuring and revitalisation of the company).

In the literature on organizational behaviour the organizational learning is related to new trends in the organization as well as to the need to explain new complex phenomena, such as leadership, organizational culture, teams and teamwork, making the employees independent etc., that are to support organizational learning. Here organizational learning is perceived as a generator of the changes of *cognitive and behavioral nature*, as a motive force creating enthusiasm and innovation and change-bound organizational competence. The organizational behaviour theory knows a relation between *the individualized and the organized le-*

arning concepts. Analogous to the individualized learning concept, which explains that learning is a process in which an individual's behaviour continually changes, the changes resulting from the experience and new knowledge acquisition, we can claim that organizational learning is a continual process of change that means promotion, innovation and improvements in production, services, customer service and other sectors, these changes being a result of experiences and new knowledge acquired by an organization.^[6] The knowledge remains within the organization regardless of the changes and the fluctuation of the employees.

All the processes in organizations are assumed to be the learning systems.^[7] Hence, *organizational learning can be defined as a continual process of creating and improving the organization's (enterprise's) capability of changing*. The organizational learning concept promoted continual learning that includes both learning from one's own experience and from the experience of the others. The idea is that the people in organizations be inspired to continuously learn, explore, experiment, research and change opinions, attitudes and approaches to the phenomena and problems in the organization. Thus they develop their abilities to anticipate the customers' needs and the competition's intentions, as well as to listen to the consumers and meet their expectations. The organizational learning concept enriched the language of management with terms such as: systems thinking, creative dialogue, team learning, and gave birth to a new perspective for understanding the managerial role. Managers are advised to abandon the "problem solving" approach (manager is the one who solves the problem) and to perceive themselves as people who constantly remodel the organization. The organizational learning concept suggests a type of learning (generative learning) different from the one that is taken to be the manager routine (adaptive learning).^[8]

The learning era in management is considered to have started in 1990, with the appearance of Peter Senge's book (Sloan School of Management, MIT) symbolically titled "The Fifth Discipline", in which the author describes the five new "competence technologies", by which the "organizations of control" can grow into the learning organizations. Systems thinking, personal skills, mental models, participation in vision shaping and team learning are the basic dimensions in shaping the organizations believing in the power of learning.^[9] Senge's work was a good starting point in understanding the concept and in affirming the organization as a learning system. The Sloan School of Management was the site where the Organizational Learning Center – OLC – was established – the world's best known centre that attracts researchers from numerous universities and business schools. Their empiric research into organizations

worldwide enabled them to describe the learning organization, to identify its key characteristics, to differentiate between organizations that learn in a proper way from those that learn in a wrong way, to suggest organizational design and the culture that will facilitate learning and, on this basis, to create a model of the organization as a learning system. Our further discussion on this topic will be based on the OLC research.

2. Types of organizational learning

All organizations are considered to be learning systems, however, they differ from one another in accordance to the way they learn, that is, the method they use to adapt to the changes in the environment. Some organizations learn in that they correct the existing behavioral practices, others completely abandon old practices and embrace new ones. Some learn exploitatively, others learn exploratively.^[10] Both start from their own past experience, from the experience and practice of similar organizations, and evaluate their competences for changing their behaviour. In their well-known book, “Organizational Learning: A Theory of Action Perspective” (1978), the early researchers in this field, Chris Argyris, professor at Harvard Graduate School of Business, and Donald A. Schön, professor of Massachusetts Institute of Technology, explain that there are two levels of learning, a single-loop learning, based on the ability to detect and correct the errors in activities, within a set of hypotheses, which is classed as adaptive learning, and a double-loop learning, based on the ability to check the validity of fundamental hypotheses, which is classed as generative learning.^[11] The *adaptive learning*, or the one-loop learning is the one in which the organization adapts its behaviour to the changes in the environment, in that it undertakes slight interventions within its existing strategy, design and culture, in order to adapt. The result of adaptive learning is a reactive organizational behaviour, which means that the organization adapts after the changes in the environment have already taken place. Such organizations learn by using the others’ good experiences to correct some dimensions in the existing structural and behavioural model, e.g., they reduce the level of formalization and delegate the authority to junior managers as well as to non-managers, so that the problems might be solved where they emerge. The *generative learning*, or the double-loop learning, is actually a two-fold learning: rejecting the old and learning the new. Senge defined this process as “learning to learn”. This is a delicate process that consists of rejecting the already learned and adopting the new, which means the change in the peoples’ minds, the change in their attitudes, premises and value systems. The generative learning is a cognitive effort related to the processes of invention, imagi-

nation and creation. In organizations, the generative learning results into deep, ample and radical changes. It generates the change in the basic characteristics of the organizational model itself.

The contribution to the development of the organizational learning concepts also came from the Japanese author Ikujiro Nonaka who, jointly with Takeuchi, developed (1995) a model of organizational learning which explains the process of conversion of one form of knowledge into another: implicit and explicit knowledge. The subjective or implicit knowledge can be transformed into the explicit knowledge through the externalization process. In this way the subjective, personal, or implicit knowledge is converted into a certain form of procedures, rules, instructions, i.e., into the explicit knowledge of an organization, and then the explicit knowledge can in turn be converted into the implicit knowledge, via an internalization process. The internalization forms that appear most frequently are *learning through practice, employee education and trainings*. Nonaka and Takeuchi explained two other processes of knowledge conversion: the socialization process which deals with the transfer of implicit knowledge from one member of the organization to another; and the combination process, which includes combining and systematizing of explicit knowledge, to be disseminated throughout the organization. According to this model, the knowledge creation and organizational learning are conducted via an endless spiral of socialization, externalization, combination and internalization.^[12]

The generative learning outputs are innovation and change, which means that generative learning equals creativity. The creative skill is reflected in discovering and valuating the factors that generate organizational life, and the processes that the organization values most. The contents of generative learning, according to Senge, is made up of generative talks that move the boundaries of valuating the existing (what an organization is) to anticipating what an organization may become. Creativity requires both emotional and cognitive energies to create a positive image of the desired future. Hence organizational learning is generative learning, and includes five new learning technologies:^[13]

- *Systems thinking* brings systems perspective into the perception of phenomena and processes in an organization. It is essential that the organization is observed as a whole, not in terms of isolated parts. When people in an organization are taught to *understand the organization as a whole entity* or as a system built up of interdependent and interrelated parts, they will be able to learn from the cause-consequence relations which make up their organization’s method of functioning.
- *Personal skills* are developed by training em-

ployees. The learning organization develops a practice of permanent learning, both on the basis of the results achieved and on the basis of errors made. The perceptive competence of the people in an organization leads to a permanent challenging of their own attitudes, to learning and to changes in behaviour.

- *Mental models* are personal images or pictures people have about the world, the processes and the phenomena. These are gathered knowledge and experiences acting from behind, subconsciously, and affect the individual's behaviour in the organization. People change their images of the phenomena and processes in the organization when they learn something different from what they knew, or have different experience. Working together people learn from one another and modify their mental models.
- *Participating in vision creation (mutual vision)*, means education and training employees to understand the idea and develop awareness of its benefits. To become supporters and promoters of the vision, the employees should be included into its creation.
- *Team learning* is a synergy effect of team work that improves the way of thinking, the change of mental models, abandoning of prejudices and stereotypes. Teamwork encouraged dialogue, arguing and generating unique solutions.

The organizational learning concept contributed to the rise of *intrapreneurship* which is reflected in the willingness of people in organizations to collaborate within work groups and teams, to share knowledge and experience in their interaction, to learn and develop their com-

petences in order that they should be included into the unstructured and non-programmed activities in organizations. The intrapreneurs are the people in factories and in workshops; they redefine technological processes, remodel work processes, redesign workposts, improve the quality, increase work productivity etc. Hence organizational learning and intrapreneurship are generating factors in high performance organizations.^[14]

3. The organizational learning process

The understanding of the organizational learning process can be facilitated by a system approach, according to which the organization is a complex system consisting of interrelated parts and open to the environment. Starting from the organization as a learning system we can draw a conclusion that learning is an integrative process permeating the entire organization. The learning process, as well as other organizational processes, follows its own course, which means that organizational learning goes gradually, or in phases.

The majority of studies on organizational learning largely deal with the same activities in the learning process, the only difference being that different authors group them differently, therefore literature lists the models of learning process structures in three phases (creation, dissemination, application) or in four phases (acquisition, information distribution, information interpretation, memorizing).^[15] Basically, there is no significant difference between these two models, therefore an *integral organizational learning model* can be created and structured into four phases: it starts with the creation of knowledge (1), continues with the knowledge dissemination throughout the organization (2), then knowledge is memorised (3) and finally applied (4), as presented in Figure 1.

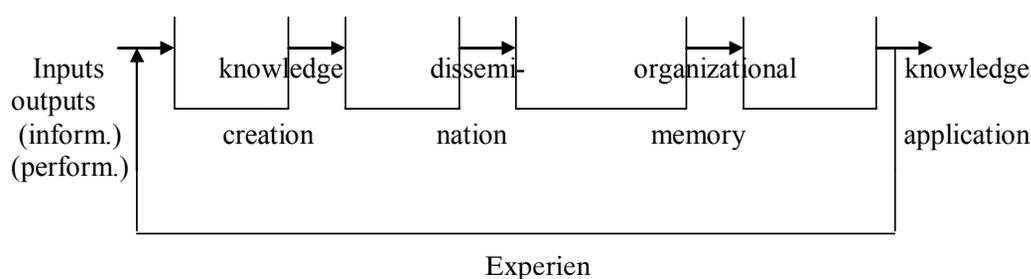


Figure 1: The learning model

Phase one: *knowledge creation* – organizations collect information from internal and external sources, then process and interpret it. Real knowledge is more than the information itself. It incorporates the meanings contained in the information, but also the messages that are not always manifest. Therefore, in creating knowledge it is very important who is the one that interprets the collected information.

Phase two: *knowledge dissemination* – organizational learning is collective learning. Hence the organizational learning process means that knowledge is disseminated throughout organization, it is available to everyone. There are two basic forms of knowledge dissemination in organizations: *formal*, when knowledge is disseminated in a prescribed way, using established methods, manners and means, and *informal*,

when knowledge is shared in informal relations among the employees.

Phase three: *knowledge memorizing* – organizational memory is a critical factor in the organizational learning process. The basic difference between individual and organizational learning is in that *the individual knowledge is the property of an individual, whereas the organizational knowledge is an organizational resource*. Hence the organizational knowledge has to be stored as organizational property. Organizational memory consists of written documents, such as the statute and codes, strategies and plans, decisions, monographies, etc; as well as unwritten rules of behaviour, such as norms, standards, jargon, style and other elements of organizational culture.

Phase four: *knowledge application* – the knowledge application phase includes the activities of implementation of what is learned. The outcome of this phase should be a change in the behaviour of an individual and the change in the behaviour of the organization, that is, *a general increase of individual and organizational performance*. It is this phase that new experience is formed, to become a useful source of information in the repeated process of learning in the organization itself as well as for other organizations, those that use benchmarking in the learning process. The role of *benchmarking* in the organizational learning concept is to collect useful information on those who are better and who implement superior work processes. Comparison to others who do their job better and more efficiently is a very popular method of self-evaluation of strengths and competences, and of collecting information and knowledge created by the best and the most successful. Benchmarking is in fact a *comparative analysis* in which an organization compares with the best in the industry and gets information and knowledge about the way the best achieve highest performance and tries to find ways to become a high performance organization.

4. The learning organization

Given the definitions of organizational learning and the learning types and processes, it is logical to define the learning organization as an organization that has potentials for organizational learning development and that implements the characteristics of its basic dimensions, such as the level of behavioral formalisation, the authority centralisation level, the process standardization extent, coordination mechanisms, etc. to create conditions and encourage its employees to permanently learn and improve. The learning organization actively creates, transfers, stores and uses knowledge in order that it should improve its competencies, adapt to environmental changes and achieve superior perfor-

mance. The learning organization promotes exchange of information among the employees and ensures the conditions for their permanent development and promotion. Thus it reduces rigidity while increasing organizational flexibility, that is, reduces the extent of organizational bureaucracy, which is a key barrier to learning. According to Senge, “The learning organization is one that permanently increases its competence for creating its own future. It does not stop at just mere survival. The aim of the learning organization is not only to achieve the planned business performance, but to achieve a higher level of competencies, primarily of its employees, and then of the organization itself.”^[16]

Consultants are frequently faced with numerous questions, dilemmas and doubts that people from practice put before them, such as: “Even if I come across the learning organization, how will I be able to recognize it?” Indeed, this question can be asked by any of us. How will we know that the organization we analyse is the learning organization? Literature brings a variety of descriptions of organizations that can be deemed the learning organizations, or are on their way to achieve this status. Most frequently used are the above quoted Senge’s disciplines, such as the test on whether an organization is a learning one or it is on its way to become such. A more pragmatic formula for testing organizational characteristics is provided by the consultants of Sloan School of Management who found that all successful companies use a more or less the same model to develop into a learning organization. Similar to Senge, who in fact belongs to this same school, the consultants, too, focus upon five elements: (1) leader with clear vision; (2) a detailed and measurable action plan; (3) prompt exchange of information; (4) inventiveness; (5) capability of turning activities into results. A formula to create a learning organization (LO) goes as follows:

$LO = \text{Leader with vision} \times \text{Plan/Metrics} \times \text{Information} \times \text{Inventiveness} \times \text{Implementation}$.

The organizations that are characterised with the five quoted elements are on their way to become learning organizations. In order that they should really become such, each of the elements should be filled with the right contents.^[17] Anyway, the focus is upon the organizational characteristics that are reflected in the leader style characteristics, the state of development and maturity to accept authority for disseminating the vision and team work, to change their attitudes, values and mental models, to act in an entrepreneurial manner, by creating new ideas, or new products and services.

After we have learnt how to recognize the learning organization, let’s try to answer the question on whether it is a new organizational model or is just a new characteristic to be developed within the model. Here we

will adopt the “frame and picture“ metaphor, frequently used in the philosophy of Christianity, especially in the Orthodox tradition, when explaining the religious rites. The frame is the folklore, the picture is the essence or the contents of the rite. The frame without the picture is nothing, however the picture, even if left without a frame, retains its meaning. Similarly, the organizational architecture as a frame is a mere organi-

zational scheme, meaningless until we have seen the organizational picture, made up of processes and systems. Herefore, some attitudes presented in literature must be questioned, since it is an extremely simplified and artificial to *a priori* pronounce some structural models, bureaucracy, for example, as inappropriate to learn. On the other hand, shallow structures are *a priori* considered appropriate to learn (Figure 2).^[18]

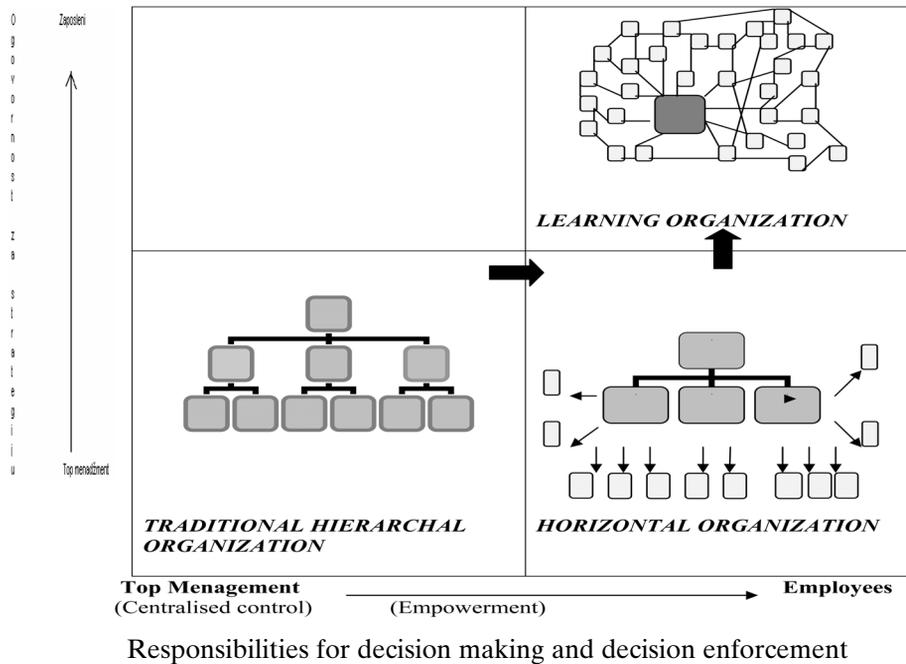


Figure 2: The Learning organization’s evolution

According to Daft, organizations have undergone a certain process of evolution, in three phases: (1) from hierarchally structured systems that built their success upon bureaucracy, in which the responsibility in decision-making and action implementation control is delegated to top management, (2) through hierarchally constituted systems that build their success upon interfunctional teams and training their employees to take over the authority independently, and (3) to organizational systems as learning organizations that base their success upon process teams and upon strategic responsibility of the employees. We are justified in wondering how many organizations today have reached the phase (3).

Every organization, according to the “frame and picture“ metaphor, is known to be more or less bureaucratic. According to Figure 2, the frame corresponds to phase (1), and the picture is the following: high horizontal and vertical specialisations, standardized processes, formalized behaviour and lack of flexibility. The consequences of such a picture for organizational learning are:^[19] any information, however objective, that may endanger the existing hierarchal system is

not welcome; certain information, due to its bad flow, most often does not reach the people that would learn most from it; slow implementation of some decisions. When we get to know the bureaucracy picture, we need not necessarily change the frame in order that we change the picture, since changing the frame without changing the picture would not ensure the conditions for the development of a learning organization. Hence we should educate bureaucratic models how to become learning organizations, or, as Senge says, “to learn how to learn“. The bureaucracy level should be reduced to increase the learning speed of bureaucracy models and thus maintain hierarchy without which no organization can survive.

CONCLUSION

A scientific field of management and organization is rather prone to the impacts of „fashions“. Since the emergence of scientific management up till the present times, literature has marked numerous “revolutionary“ inventions, that were never scientifically founded and were never proven in practice. The views presented in this paper rely on the historical development of theories and concepts, not only in the management and organization

sciences, but also in other scientific fields. New concepts stem from the weaknesses of the previous ones, in that they develop new, different approaches to the same problem and become a consistent and complete learning system to represent a new paradigm. It is the same with the concept of the “organization that learns“ or the “learning organization“. In order to survive, organizations have to change constantly. Nowadays, in an era of informatics and a high rate of change in the environment, when knowledge is doubled on a yearly basis, they have to change even faster. This is the main difference in their learning, and the speed has become their basic characteristics or capacity. Hence it is incorrect to maintain that bureaucratic organizations are non-learning models, while debureaucratized models are the learning organizations. As shown in the above analysis, the model is only a frame, whereas the substance of the model is in the picture, that is, in the characteristics of the system and the process that are going on within that model (frame). Every organization will be a learning organization if designed in such a way that there are no obstacles to learning and knowledge dissemination throughout the organization, to the information flow, to the employees’ satisfaction, to solving problems where they emerged. That means that bureaucratic models cannot survive today with the same characteristics they had one and a half a century ago, however they do survive with the characteristics that improved their potentials for change and adapting to the environment. Ford Motors Co., an image of “Taylorism“ and a synonym to bureaucratic organizations was indeed a learning organization. A century ago, with a change in the working practice, having introduced Taylor’s inventions, the process standardization and the assembly line, the company became a paradigm of learning and mass production. Today it is still a learning organization, only, in order to increase its capacity of learning faster and responding to change, it had to improve its bureaucratic structure by building teams. It is with pleasure that the author of this paper states that she is not in the minority, since modern literature lists a large number of authors whose approach to the development of new theories and concepts in management and organization is similar to hers.^[20]

BIBLIOGRAPHY

- [1] Miles, E.R, Snow, C. Ch, Mathews, A. J, Miles G., Coleman J. H, *Organizing in the Knowledge Age: Anticipating the Cellular Form*, in Osland J., Kolb D., Rubin I., *The Organizational Behavior Reader*, Prentice Hall, 2001.
- [2] Aleksić Mirić A, „Primena analize društvenih mreža u istraživanjima organizacionog dizajna“, XXXV Simpozijum o operacionim istraživanjima SimOpIs (2008)

- [3] Dierkes, M., Berthoin Antal, A., Child, J., Nonaka, I., *Handbook of Organizational Knowledge*, Oxford University Press, 2001
- [4] Ibid
- [5] Luthans F., *Organizational Behavior*, McGraw-Hill, New York, 1989.
- [6] Greenberg J., Baron R., *Ponašanje u organizacijama-Razumevanje i upravljanje ljudskom stranom rada*, Želnid, Beograd, 1998.
- [7] E. Nevis, A. DiBella, J. Gould, (1995), *Understanding Organizations as Learning Systems*, Sloan Management Review, Winter
- [8] Senge P., *The Fifth discipline: The Art and Practice of the Learning Organization*, Doubleday, 1990.
- [9] Ibid
- [10] Petković M, Aleksić A, „Perspektive eksploatacije i eksploatacije u procesu redizajna“, *Menadžment tehnologije i inovacija: Ključni faktor superiornih operacija i konkurentnosti*, ISBN 86 – 7680- 096 – 0. str. 33-38 (2006)
- [11] Gareth Morgan, *Images of Organization*, Sage Publications, Inc 2006
- [12] Nonaka, I., 1991, »The Knowledge Creating Company«, *Harvard Business Review*, Nov-Dec: 96; Nonaka, I., 1994, »A Dynamic Theory of Organizational Knowledge Creation«, *Organization Science*, Vol, 5, No.1, 14-37; Nonaka, I., Takeuchi, H., 1995, *The Knowledge Creating Company*, New York: McGrawHill
- [13] Senge P., *The Fifth discipline: The Art and Practice of the Learning Organization*, Doubleday, 1990.
- [14] Bird B., *Entrepreneurial Behavior*, Scott, Foresman and Company Glenview, Illinois, 1989.
- [15] E. Nevis, A. DiBella, J. Gould, (1995), *Understanding Organizations as Learning Systems*, Sloan Management Review, Winter
- [16] Peter M. Senge, *The Fifth discipline: The Art and Practice of the Learning Organization*, Doubleday, 1990., s 19
- [17] More on this Petković M., *Organizaciono ponašanje sa menadžmentom ljudskih resursa*, CID, Ekonomski fakultet, Beograd, 2008.
- [18] Daft R., *Essentials of Organization Theory and Design*, South-Western College Publishing, 1998., str. 346
- [19] Dierkes, M., Berthoin Antal, A., Child, J., Nonaka, I., *Handbook of Organizational Knowledge*, Oxford University Press, 2001
- [20] Grant, R.M., 2008, *The Future of Management: Where is Gary Hamel Leading Us?* *Long Range Planning* (41), 469 – 428.

Electronic Negotiation Systems (ENS)

UDC 005.574 ; 004.738.5:339

Doc. dr **Vojkan Vasković¹**, **Dario Kršić²**

¹ *The Technical Faculty of Bor*

² *Magistrand of the Faculty of Political Sciences*

E-business is a broad concept, in which business partners are connected by use of modern information-communication technologies (ICT). The communication alone is not sufficient to establish a business relationship; it is necessary that the parties in communication have technologies and tools for automatized negotiations at their disposal. Electronic Negotiation Systems (ENS) are especially significant in the realm of supply, with a special emphasis on public sector supplies. In this work the advantages of use of ENS in negotiation processes are analyzed and a review, as well as basic characteristics of some of the best-known electronic negotiation systems, are presented.

Introduction

The earliest electronic negotiation systems working via the Internet were the configurators, uploaded on the sites selling computers. These tools served as basis upon which the Internet sales of computers were conducted. They allowed for anyone who wanted to purchase a computer via the Internet to create their own configuration, i.e., to select the elements and components of the computer by deciding on the parts of the computer, the software supporting the site analysing whether it was possible to assemble the computer using these components. The customers are thus in a position to optimize the computer's performances on the basis of the amount of money they had to spend, since the software computed the total price of the chosen components. Today, these tools are numerous, supplied with various auxiliary programs (smart software agents). The customer can put together a computer (or any other device or machine) he likes, following a set of given rules, and the task of these tools is to use these same rules to show

the customer how much he will have to pay. The configurators, however, are only one in a series of the Internet *e*-negotiation systems. In addition to these, there are also *Negotiation Support Systems (NSS)*, and the *Decision Support Systems (DSS)*. These are the softwares created to help the negotiator during all or only certain stages in negotiations and may be categorized in different ways. The *ENS* differ from some other information systems in several key aspects. Firstly, they are directed towards the network and have to be linked to the Internet at all times. Then, they provide for the close link between the business processes within and out of the company (e.g., supply chain management), as well as a large number of access systems from any place you are. Their interface with the users is ensured through the web-browser: it is easy to understand and

common to many different applications. Besides the *ENS*, *Video Conferencing* is also used in economics or political negotiation processes, and this is also a type of electronic negotiations, given that information and communication technologies are used throughout all the phases of the negotiation process. The history of video conferencing dates back as early as 1956, when the US firm *AT&T* first tried its invention – a video telephone (*Pisturephone*). Fourteen years later, the users of the *AT&T* picturephone paid a monthly subscription fee of \$180, and as early as 1971 the *Ericsson* company presented their product – the transatlantic video telephone – *LME*. The first actual video conference was conducted using the analogous *TV* and satellites, then conferences followed using the digital systems, and then via the computer systems. These became a routine in the work of multinational companies in the 1980s. Today, the signal transmitting the picture and the sound is digital, therefore it can be sent in different ways. The video conference is most commonly carried out within a local network (e.g., *LAN*) or through the public telephone network (most frequently the *ISDN*, because of its financial profitability and a satisfactory quality of transmission).

Functions and activities of ENS

The negotiation systems used on the Internet differ from the systems used in autonomous computers and in the networks covering large areas in their mechanisms as well as in the methodologies they use. Some of these systems facilitate communication, others act as active mediators. There are also systems that facilitate a mutual preparation of the contents of documents (*Schoop and Quix 2001*), and the systems that allow the negotiators to present offers to be further forwarded to experts (*Cybersettle 2000, NovaForum 2000*). A mutual characteristic of both the software meant to be used in *e*-negotiating and of the systems

that incorporate some elements of *e*-negotiations is that they are uploaded on the Internet and are able to support, aid or act in place of one or more negotiators, mediators or assistants. They are, as said above, entitled the *e-negotiation systems (ENS)*, similar to the systems of *e-commerce, e-business, or e-market*.

The *ENS* can be defined as a software using the Internet technologies, positioned on the Internet and characterized by one or more following properties:

- a) supports decision-making and giving concessions;
- b) proposes offers and agreements;
- c) evaluates and critically analyses offers and counteroffers;
- d) provides a structural arrangement and organization of the process;
- e) provides information and expert opinion;
- f) facilitates and organizes communication;
- g) helps in preparations of agreements;
- h) provides access to negotiation knowledge.

As softwares uploaded on the Internet, capable of aiding one or a number of negotiators, mediators or assistants, the *ENS* allow for the use of *e-mail, chat* and video technology, as well as automatic negotiations and auctions. The role of the *ENS* is in some processes passive (*e-mail* and video). More advanced systems take an active participation in the process, including the estimation of the consequences of the offers placed, the propositions for new offers and agreements as well as a critical evaluation of counteroffers.

The overall role and behaviour of the *ENS* in negotiations is of crucial importance when it comes to their creation and use. While passive systems can be understood as fast and sophisticated transmitters of messages, active systems can provide support, facilitate work and act as mediators. The systems capable of accessing and processing knowledge and able to work

autonomously as regards their users are characterised by a certain level of intelligence and can be proactive. It is from this aspect that we can class the *ENS* into three broad groups:

1. *Passive systems* – facilitate communication and interaction of users situated in different places. They help them present their ideas, offers and arguments. These systems can also provide support in information collecting, organizing, and processing. Passive systems, such as *e-mail* and chat, are not concerned with the manner in which the contents is created, nor with the use of resources required for the given contents.
2. *Active facilitating-mediating systems* – help users in formulating, evaluating and solving difficult problems, giving concessions and creating offers, as well as in evaluating processes and agreements. As a rule, these systems follow a negotiation process model to which the users have to reconcile. They also have the components for problem and solution structuring, as well as those for offering evaluation and for creating counteroffers. Models built into active systems are the models of the problem, of the negotiator and of the process itself.
3. *Systems of proactive intervention-mediation* – are characterized by the same properties as the systems of active facilitating-mediating, however, they are capable of coordinating the negotiators' activities, of supervising their activities, as well as of giving propositions as to what offer should be given or what agreement should be accepted. In order to be able to act in this way, the systems of active intervention-mediation access and use the data bases and make use of the means of intelligent softwares that supervise both the negotiation process and the individual activities of the negotiators.

ENS functions and activities

Functions	Activities
Transfer and storage	<p><i>Communication, presentation and interaction</i></p> <p>Information transfer among heterogeneous systems; storage in arrayed systems; safety</p> <p>Retrieval, selection, comparison and collecting shared information</p> <p>Data formatting for use in other systems; data visualization, presentation of alternative data, user-system interaction</p>
Browsing and retrieval	
Formatting, presentation and interaction	

Functions	Activities
<p>Decision-making problem formulation</p> <p>Technical data on the decision maker</p> <p>Strategies and tactics</p>	<p><i>Decision-making and negotiator problem</i></p> <p>Decision-making problem formulating and analysis; viable alternatives; decision -making space , measuring</p> <p>Technical data on decision makers description notions; desires; alternative comparison measures; negotiators' models and styles</p> <p>Evaluation and selection of initial strategies and tactics</p>
<p>Forming and evaluation of offers and messages</p> <p>Analysis of the partners</p> <p>What if, sensitivity and analysis of stability</p>	<p><i>Process</i></p> <p>Forming offers and concessions: message and argument analysis; argumentation models</p> <p>Shaping and checking of the models of negotiating parties; evaluation and anticipation of their behaviour</p> <p>Offer and counteroffer analysis; balance analysis; possible agreements evaluation</p>
<p>Process, history and their evaluation</p> <p>Search for knowledge and its application</p> <p>Negotiations protocols</p> <p>Strategies and tactics</p>	<p><i>Knowledge</i></p> <p>Shaping the negotiations history; process analysis; evaluation progress/regress; history based anticipation</p> <p>Access to external information and their use, knowledge of the situations in negotiations and the problems emerging in the course of the process; comparative analysis</p> <p>Specification and observing the plan in the negotiation rules</p> <p>Estimation of the other party's strategies and tactics in negotiations; change of strategies and tactics</p>

Source: Gregory E. Kersten: *E-negotiation systems: Interaction of people and technologies to resolve conflicts*, <http://interneg.concordia.ca/interneg/research/papers/2004/08.pdf>

The use and the impact of passive systems upon the negotiation process and its outcomes has also been studied. Negotiations via *e-mail* have shown that a narrow scope of communication has a negative impact upon the negotiation process, therefore the scope should be increased by the methods of communication known so far. The findings in the research have also stressed the importance of the activities that are not related to the negotiation task itself, as regards the re-

lations and the outcomes of the negotiations. The activities that are not related to the task are very important to the negotiators who are supposed to establish a close relationship and trust. They ought to bridge the social differences existing between themselves and the other party, as well as use a positive or a negative "emotional style" instead of a "rational style". Other researchers perceived the presence of prejudices when it comes to negotiations via *e-mail*, i.e., "temporary

simultaneity“, “bridges burnt“, the information circle and the “malicious imputation“.¹

ENS review

In order that the differences among the passive, active and proactive *ENS* be better understood, we will give some examples of the existing systems developed at the Concordia University – *SimpleNS*, *Inspire*, *Aspire* and *eAgora*.

The *SimpleNS*, as a passive *ENS*, does not impose upon the negotiators the need to formulate and exchange complete offers. The system does not enquire into the negotiators’ wishes, it does not create a benefit function, nor does it show the negotiation graphs. It is only slightly more eligible than the *e-mail* system, since it allows for the separation of offers as regards messages, and the whole negotiation flow is readily accessible to view and chronologically presented on one side. The *SimpleNS* has only three pages: one with the case description, one with the data entered and one showing the negotiation flow.

A different, active system *Inspire* was developed in 1995, as part of the *InterNeg* research programme. Since 1996 it has been used to conduct anonymous bilateral negotiations. The system uses a threefold negotiation model:

1. prenegotiations;
2. negotiations; and
3. a phase following reaching the agreement (negotiations termination).

The *Inspire* system is commonly used in lectures and trainings. The use of the system is free of charge, on condition that the users fill in two questionnaires and that the developers of the system are allowed to use the obtained information, which they exchange for the purpose of further study. Typical negotiations via the *Inspire* system last three weeks, however, the users may demand that the terms are prolonged. During the negotiations the participants can check the history of the offers and counteroffers presented, as well as view a graphic presentation of the offer exchange flow. On reaching the agreement by the negotiating parties, the system decides whether the negotiations are concluded successfully. If the compromise was not successful, the system proposes entering the negotiations

termination phase. This phase starts by calculating successful alternatives prevailing in the compromise reached. Once the negotiations have been terminated, the parties may agree on whether either of them should present its desires to the other party. This allows for the system to create a negotiation flow graph. Since the users achieved a favourable agreement, no improvements of the situation are necessary. In the 1996 – 2004 period, 6,126 people from 62 countries used the *Inspire* system to negotiate. The majority of users were students, managers, lawyers, engineers, and physicians.

One example of a classic proactive electronic negotiation system is the *Aspire*, which is actually the *Inspire* active system expanded by a software agent called *Atin* ($Aspire = Inspire + Atin$). The *Atin* negotiation software retrieves the information from the basis of negotiation knowledge and gives advice to the negotiator. The advice is based upon:

1. the rules of negotiations derived from literature;
2. the status of the actual negotiation process; and
3. information on the negotiator stored in the database of one user. At the beginning of negotiations each negotiator decides, using the *Aspire* system, whether they wish to use the services of the *Atin*. The user’s agent can access only the information available to this user and his knowledge database; private information on the other negotiating party are not available.

The *Atin* constantly supervises the negotiation process, thus giving the agent an opportunity to warn the user about the actions he undertakes, especially those which may have a negative impact upon his situation in negotiations. The *Atin* uses simple “traffic signs“, to show the user the evaluation it created of the situation at one particular moment. Thus the green colour means there are no warnings for the user (negotiations proceed as planned), the yellow colour means a warning, while the red colour warns the user that the *Atin* perceives a certain step as a wrong one. In such a case the user opens a separate window in which the reasons for showing the red sign are shown, as well as a proposition towards the solution to the problem. Besides, the user can require that the agent make an evaluation of the previous activities, as well as advise on potential further steps. In order to give the best possible propositions, the *Atin* may ask the user for additional information (e.g., negotiation strategy, willingness to make concessions, etc.). then, the user may ask the *Atin* for advice concerning possible strategies. The agent then shows a list of strategies together with explanations of their positive and negative aspects.

¹ L. Thompson, J. Nadler: *Negotiation via Information Technology: Theory and Application*, *Journal of Social Studies*, no. 58/2002, pp. 109-124.

The *eAgora* system is a proactive *ENS* prototype providing the services of an electronic market to the users who wish to sell or buy goods in such a way. The services of this system include the existence of a software agent that presents offers and criticizes the ones presented by the purchaser (seller) and their partners in negotiations. If the user activates the agent, the agent will require the information on the approach and the strategy of the user. This data, together with the offers and counteroffers exchanged during the negotiations are used to determine a number of possible offers (packages) which are presented to the user. The agent analyses the information on the user, his approach, wishes and the reserve levels, in order that it should evaluate the offer the user wants to place, as well as the offers the user is given. If the user wants to propose an offer that violates the reserve levels of a certain disputable issue or that does not conform to the chosen negotiation strategy (e.g., a competition bound user offers a significant concession), the agent warns the user and criticizes the offer. It also criticizes the user's move to accept an offer that does not fulfill his reserve level. The agent's capability of criticizing helps the user understand the possible deviations from the strategy and the initially agreed wishes, as well as a need that they should be corrected.

Negotiations via video conferences (Video conferencing)

Video conferences, defined as *communication by which the sound and the motion picture are exchanged among two or more locations*², are the most suitable method of conducting international electronic negotiations. Using information and communication technologies (ICT), the video conference allows for the people situated in different places to see and hear one another, which is very important in conducting negotiations with high stakes. Therefore the video conference is frequently used, not only in *Distance Education*, but also in business, and increasingly so in international politics.

In terms of the quality required in transmitting the motion picture and the sound and in terms of financial means, we distinguish between the *Desktop Video Conference System* and the *Room-based Video Conference System*. Also, in terms of the type of the equipment used, we can distinguish between the *Desktop and Room-based Video Conferences*. Besides the basic equipment required for conducting a video conference, there is additional equipment which allows for presenting written materials, graphs, or the presentation of the screen background. The equipment used by

the participants in a video conference may come from different manufacturers and may vary in terms of model and size.

The desktop video conference is the most commonly conducted video conference, employing the computer to which the monitor, the video camera, the microphone, loudspeakers, and the processing unit called "codec" (*Coder-decoder*) are attached. The codec provides video conferencing via telephone (in case of desktop negotiations). Its task is twofold. On the front it has a role of the coder, that is, it receives the analogous video signal and codes it (digitalizes and compresses it). On the reception side it has a role of a decoder, that is, it decompresses the incoming, digitalized video signal and transforms it into the analogous signal. The quality of picture and sound transmittance largely depends on the codec, since losses occur during the compression of the outgoing video signal and the bandwidth. The consequences of a slow codec or a poor bandwidth are the interrupted picture and the delay in the sound signal. In February 1994 the *CU-SeeMe* software for *Macintosh* was created, making it possible for the video conference to be conducted. Next year the same was created for the *Windows*. The *Microsoft NetMeeting*, whose improved version is still used in computer-conducted video conferences, was created in April 1999.

As regards the type of communication network, the desktop video conference can be conducted in the following two ways:

- a) by an analogous video conference via a modem – the modem and an analogous telephone line are used to connect the computer with another personal computer, i.e., the participant that uses similar communication equipment.
- b) using digital networks – digital networks ensure a high quality of picture and sound transmission.

The above quoted equipment, the modem, the analogous or digital communication lines help conduct an Internet video conference, too. The Internet is, however, still too slow for conducting a quality video conference. An additional flaw is that the line capacity is shared with other Internet data, which causes an interrupted video picture and a delay in the sound signal. New methods in picture and sound compressions, as well as new capabilities of the Internet technology will allow for a higher quality video conferencing in the near future.

Every participant in an audio or a video conference must be supplied by a necessary software that controls the messages exchange process between the partici-

² Introduction to Videoconferencing, <http://www.video.ja.net/intro/>

pants. Certain programmes, such as the above mentioned *Microsoft NetMeeting* and the virtual classrooms packages produced by *Centra* and *LearnLinc* companies are specially created for conferences, while in some other cases the necessary functionality may be achieved at special *Web* sites.

Besides the change in the video picture, the sound and the data, the desktop video conference frequently includes the document sharing. The notion “shared document” means a possibility to add, amend, prepare or print a document which is simultaneously available to other parties. Thus, for example, if one of the participants has an open *Word* document and is writing in it, the other participant can see the same document on his screen and can add, alter, write in or print that same document.

The room-based video conference is meant for work among a larger number of participants, which meets all the conditions required in conducting any more complex negotiations. A video conference may have a very high quality of transmission, however, the price of the communication and equipment in this case is equally high. Contrary to the desktop video conference, the room-based video conference uses one or two large monitors similar to television screens, larger loudspeakers and a larger video camera, most commonly positioned between the monitors. Nowadays video-beams are increasingly used. The equipment is usually mounted on a moving platform, therefore it is not confined to only one location, especially as regards the video-beam. It is connected to the communication network by more than two digital lines (most frequently a combination of 3 to 6 digital lines is used). The desktop and the room-based video conferences are only the types of video conferences as regards the equipment used, and they can be employed in the *point-to-point* and the *multi-point* types of communication too. Participation of more than five parties in a video conference is considered to result into a poor, ineffective communication. The multi-point video-conference is conducted via a specific device called “bridge” (*Multiple conference unit*). In case a computer is used, there must be a specific software.

The *Satellite video conference* is a video conference via digital satellite television, and is commonly used by well-known world universities as a method of linking groups of students from different geographical areas. This communication may be conducted via electronic mail, via picture or via sound. The satellite video conference ensures a high bandwidth and great transmission speeds towards the satellite and back.

Today’s mobile phones allow for the meetings to be held in real time, with picture and sound, therefore we can also talk about a *mobile video conference*. They are available to all the subscribers of the third-generation network (3 G) who own the respective models of mobile phones. A number of persons can participate in such conferences, with the screen showing each of the participants. It is also possible that the screen is not shared, that it shows only the portrait of the participant currently speaking. These conferences have become a commonplace in the business world, at least when the negotiations including lower stakes are concerned. In the world of foreign affairs they can be used as a modernized version of the so-called “napkin diplomacy”.

CONCLUSION

The development of the ICT and electronic business brought forth a significant acceleration in the negotiation process. This acceleration reached the level at which it is difficult to follow the processes without appropriate tools. On the other hand, globalization of business made it necessary that the negotiation processes be conducted on a world level, among the parties geographically distant from one another. Companies became global, with a need for the communication to be conducted both within their organizational units and with the environment. Communication is carried out on a number of levels:

- Communication within the organization;
- Communication between organizations (bilateral);
- Communication among organizations (multilateral, network communication);
- Communication with local leaders;
- Communication with and among decision makers;
- Communication with the media;
- Communication between the conflicting parties.

In order that contacts on a global world level should be conducted, it is necessary that we dispose of the technology capable of supporting such contacts. It is the *ENS* that make the preconditions of business linking and negotiations.

The *ENS* differ from other information systems in that they are primarily directed towards networks and depend on an ever-present connection to the Internet. They allow for a close connection of business processes within and without the company (e.g., value chain systems and supply chain management) as well as a large number of systems ensuring access from any place. The negotiation systems used on the Internet dif-

fer from the previous systems that were used on personal computers and in local and even the networks covering large areas in both the mechanisms and the technologies of use.

Finally, a conclusion can be drawn that electronic negotiations in local and international business and political relations have a future, because of the safety of negotiating parties, because mutually favourable agreements can be reached in a shorter period of time and because of the lower costs in conducting the negotiation process in comparison to classic negotiations.

REFERENCE

- [1] Gregory E. Kersten: *E-negotiation systems: Interaction of people and technologies to resolve conflicts*, <http://interneg.concordia.ca/interneg/research/papers/2004/08.pdf>
- [2] L. Thompson, J. Nadler: *Negotiation via Information Technology: Theory and Application*, Journal of Social Studies, br. 58/2002.
- [3] Branko Rakita: *Direktna prodaja i poslovno pregovaranje na inostranim tržištima*, 'Plasman i tržište' - Naučno-stručni časopis za permanentno obrazovanje kadrova, Beograd, br. 3-4/2000.
- [4] *The Impact of the e-Economy on European Enterprises: Economic Analysis and Policy Implications*, http://www.eeuropestandards.org/Docs/COM_2001_711%20du%2029-11-2001-EN.pdf
- [5] *The 'e-Economy in Europe' Conference*, <http://europa.eu.int/comm/enterprise/events/e-economy/index.htm>
- [6] David Rothkopf: *Cyberpolitik: The Changing Nature of Power in the Information Age*, Journal of International Affairs, 2/1998.
- [7] *e-Learning Site - Negotiation Analysis*: <http://www.negotiation.hut.fi>
- [8] C. Richards: *Distance Education On-Campus Learning and E-Learning Convergences: An Australian Exploration*, International Journal on e-Learning, br. 1, 2000.
- [9] Fred Charles Iklé: *How Nation Negotiate*, Frederick A. Praeger, New York/Washington/London, 1968.
- [10] R. Fišer, V. Juri: *Kako stiči do DA*, 'Mono & Mañana', Beograd, 2005.
- [11] *Introduction to Videoconferencing*, <http://www.video.ja.net/introl>
- [12] Živorad Kovačević: *Međunarodno pregovaranje*, 'Filip Višnjić' / Diplomatska akademija MSP SCG, Beograd, 2004.
- [13] James R. Silkenat, Jeffrey M. Aresty: *International Business Negotiations: A Comparison of Cross-Cultural Issues and Successful Approaches*, American Bar Association, Chicago, 1994.
- [14] David Bollier: *The Rise of Netpolitik*, The Aspen Institute, Washington, 2003.
- [15] Paul Walker: *A Chronology of Game Theory*, <http://www.econ.canterbury.ac.nz/hist.htm>
- [16] *Berglund Center for Internet Studies*, <http://bcis.pacificu.edu/journal/2002/03/editorial.php>
- [17] www.management.org.yu/pdf/issues.pdf
- [18] http://www.carleton.ca/e-merge/v2_art/v2_art1/9.html
- [19] http://www.isn.ethz.ch/onlinepubli/publihouse/infosecurity/volume_7/a2/A2_index.htm, authors: Sheryl J. Brown and Margarita S. Studemeister
- [20] http://www.usip.org/oc/virtual_dipl.html.)
- [21] http://www-bsac.eecs.berkeley.edu/~warneke/pubs/cbnp_workshop-summary.html
- [22] http://www.cse.ohio-state.edu/sie-fast/nest/nest_webpage/ALineInTheSand.html
- [23] http://www.eng.ohio-state.edu/news/coe_news/nie/nie752/feature_wires.html
- [24] <http://www-bsac.eecs.berkeley.edu/archive/users/warneke-brett/SmartDust/>
- [25] <http://robotics.eecs.berkeley.edu/~cpi-ster/SmartDust/>
- [1] <http://www.csis.org/ics/dia/concept.htm>

Managing Action Programs for Organization Development

UDC 005.332.3

prof. dr **Ljubomir Drakulevski**, asis. mr **Leonid Nakov**

Univerzitet "Sv. Kiril I Metodij", Ekonomski Fakultet, Skopje, drakul@eccf.ukim.edu.mk; lnakov@eccf.ukim.edu.mk

XI International Symposium **SymOrg 2008**. 10th-13th. September 2008. Belgrade, Serbia

The process of managing organization development is fundamentally a comprehensive, highly planned and systematic approach to implement and further improve a broader, long-range perspective of the change management efforts. The very organization development, as an emerging discipline aimed at improving the overall organization effectiveness, developing the potential of the individual members and creating the basis for a continuous and profound change is neither a micro approach to change, nor it refers to a single, random or an ad-hoc change technique. Therefore, it is often considered as an integration of action programs aimed at creating and maintaining the organization capability to predict, adapt and change, particularly the attitudes, capabilities and the morale of the organization members. Nowadays, the principal issues of organization development emerges from transformational restructuring, reengineering and responsible flattening the management hierarchy, to creating and managing a reconfigurable organization, as a flexible and able to change system on an annual, monthly, weekly, daily, or even hourly time frame. The reconfigurable organization focuses the attention to the continuing need for a long-range strategies to improve strategic organizational decision making process and the relationships among organization members, in order to meet the changing conditions. These strategies are the framework for the planned change techniques, well known as the action programs for organization development. The process of managing the action programs for organization development would be a central point in the proposed scientific work. It is of such an importance that determines the necessity to further modify, continue or discontinue the overall change efforts in the organization. Finally, a successful action program for organization development must result in a modified or changed organization behavior and capacity for further organization development.

Introduction

The fundamental evolutionary definition of the management discipline organizational development has been created by Richard Beckhard¹, back in 1969, according to whom it is determined as an effort, planned, organization – wide and managed from the top, to increase organization development and health through planned interventions in the organization's process, using behavioral science knowledge.

The content of the above principal definition implies to the integration of theoretically – systematic and practically oriented methods and techniques, fundamentally known as interventions, which are principally distinct from the general field of organizational change management.

The basic reason for the distinction between the organizational change theory and the practice of organizational development lies in the momentum that most of the change management implementation methodologies have been influenced by the core values, concepts and framework of the organizational development, as a long range, stable, deliberate and highly planned framework for any change management effort.

At early days, in 40's, 50's and 60's, organizational development has been quite sober and business oriented, emphasizing the fact that an individual could flourish only when contributing to organizational purposes, theories predominantly influenced by the work of McGregor, Maslow and Herzberg.

OD has been perceived as mobilization of information, energy and resources that are present in an organization, but currently diverted to unconstructive channels, for organizational improvement.

Starting from the 80's, an enormous accent in the organizational development is given to the human – centered strategies and tactics which contributed committed practitioners of the organizational development to build-up a clear and prescriptive value orientation.

The importance of creating a value principally for the overall organization, and also for the individuals and groups or teams, in accordance with the prevailing view of the foremost management authors, is centered in the following assumptions:

1. Every individual affected by change should be involved in the change implementation
2. Any effort in developing the organization should rely on the capability of the employees to prepare and implement the action change programs, well known as action programs

¹ Beckhard R., "Organization Development: Strategies and Models", Addison - Wesley, Reading, Mass, 1969, p.9

3. The prevailing focus of this programs should be placed in the organizational dimensions that constitute the core competence and competitive advantage

The goal of any organizational development intervention is to create a methodological approach in order to effect change in the target organization, or in a specific organizational section, and reframe the structure, context and the behavior of the specific organization.

Organizational development is an ongoing process because an organization can not remain static and effective, at the same time. Therefore, organizations develop anticipative management systems and methods, such as action change programs.

As a process for continuous improvement, organizational development states that the completion of one change cycle leads to another cycle in the development process, whereas changes on the following cycle are on a higher level than of the previous one.

1. Action research model

In the theory of management exist two classical types of intervention models in the field of organizational development²:

- ✍ The planning model and
- ✍ The action research model

Evolutionary, the strategy for action science in organizational development was defined and vigorously advanced by the work of Kurt Lewin, back in 1946, and also by Chris Argyris, Donald Schon, John Dewey and others. In the field of the organizational development, action science is also known as action inquiry, action research – most commonly used, or organizational learning.

Action research aims to contribute both to the practical concerns of people in immediate problematic situation and to the goals of the social science by joint collaboration within a mutually acceptable ethical framework. As such, it is a type of applied social research intervention model.

Each action research focuses primarily on identifying and resolving difficult, complex, real – life problems, vital for the organizational change and development. It uses actionable data in order to detect and correct gaps between descriptive claims and practical outcomes.

In spite of the numerous individual methods and techniques for the organizational development intervention, such as sensitivity training, structural change,

process consultation, survey feedback, team building, intergroup development, role negotiation and many others, the fundamental types of intervention models form a broader perspective through which changes are planned, effected, monitored and controlled.

The first, planning model refers to creating, acting and stabilizing a plan for organizational development and consequently following a detailed prescription of the road to be followed.

However, the originally created plan is usually subject to modification and refinement, as a result of the internal and external unforeseen changes.

The organizational framework of the action programs for organizational development is placed in the action research model, that differs from the traditional planning model in the following respects³:

It is a cyclical or iterative process, meaning that the results from the interventions are fed back in such a way that further changes and improvements can be implemented

The very research signals the aim of generating knowledge which can be applied in other organizational settings

While planning model presumes a so called “one – off” intervention, the action research model emphasizes the cyclical character of the organizational change and development. At the same time, the goal of the planning model is to improve the personal and organizational effectiveness, whereas the goal of the action research model aims at generating new organizational knowledge and insights for application in different organizational circumstances.

The applicative importance of the action research model lies in the fact that it⁴ involves collecting information about the organization, feeding this information back to the client system, and developing and implementing action programs to improve system performance.

Fundamentally, the purpose of each action program is to increase the organizational effectiveness, by the ap-

2 Cummings T and Worley C., "Organizational Development and Change", West Publishing Company, Minneapolis/St. Paul, 8th ed., 2004, p.223

3 Huczynski A. and Buchanan D., "Organizational Behaviour", Prentice Hall International, 4th ed., 2001, p.567

4 Harvey D. and Brown R.D., "An Experimental Approach to Organizational Development", Prentice Hall International, 6th ed., 2001, p.16

plication of the organizational development value and techniques.

Therefore, the primary challenge of managers and change agents is to manage the above mentioned action programs, in order to direct the changes within the scope of the organization development.

1.1. Relationship between action research and organizational development

The challenge of detailing the relationship between the action research and the overall organization development, in fact, implies to creating an action research perspective to the organizational development. This approach stimulates continual inquiry, development and consciousness in our selves and our colleges, through creating processes and structures for so called collaborative inquiry.

The nature of their relations specifies the fact that both of them are pragmatic, rooted in participative management methods and aimed to improve the behavior through engagement of all concerned. In other words, both of them propose that we can not generate a valid understanding of a certain person, unless we fully engage with him/her.

Action research is a practice for systematic development of knowing and knowledge which brings together the action and reflection, theory and practice.

The organizational perspective of the action research bears the following dimensions⁵:

- a. Pragmatic and concerned with addressing practical issues
- b. Democratic, both in the sense of involving people and in seeking to enable people to create their own knowledge in learning organizations
- c. Extended epistemology of many ways of knowing and valuing, propositional and conceptual
- d. Value oriented in terms of contribution – economic, political, psychological, spiritual and ecological
- e. Developmental – from tentative beginnings toward more significant influence

Action research and the organization development involve an active interplay between me – my own experience and behavior, us – our immediate peers and them – the wider organization and encourage simultaneous attention to all 3 perspectives.

Initially, organization development, in relation to the action research, is needed in the following situations⁶:

- 1. The current nature of the organization is leading to a failure to achieve objectives
- 2. Change is required to react faster to external alterations
- 3. The introduction of factors, such as new technology requires change in the organization itself and
- 4. The introduction of change allows a new approach to be adopted

The contemporary state of development of the action research model, in the state of action programs for organization development, has been originally created as a model in consecutive phases, integrated with a feedback mechanism.

Table 1. The action research model

Phases	Stage 1	Stage 2	Stage 3
1	Key executive perception of problems		
2	Consultation with behavioral scientist consultant		
3	Data gathering and diagnosis by consultant		
4	Further data gathering		
5	Feedback to key client or client group		

5 Reason P. and McArdle L. K., "Action Research and Organizational Development", *Organizational Development*, Sage Publications, 2005, p.5

6 Paton R. A. and McCalman J., "Change Management - A Guide to Effective Implementation", Sage Publications, 3rd ed., 2008, p.217

Phases	Stage 1	Stage 2	Stage 3
6	Joint action planning		
7		Data gathering	
8		Feedback to client group	
9		Discussion and work on data feedback and data by client group	
10		Action planning	
11		Action (new behavior)	
12			Data gathering
13			Feedback
14			Discussion and work on feedback and emerging data
15			Action planning
16			Action

Source: Regents of the University of California, Reprinted from *California Management Review*, XII(2):26, Fig. 1

he popularity of the action research model grew in the 70's, owing to the intensive usage of the participative management and the concept of organization development. It is highly important to emphasize that the new behavior arises in the 11th phase, in the 2nd stage, which indicates the depth of the model.

In the essence of the participative management and the concept of organization development is the fundamental belief that effective change requires joint decision making by the managers and the employees, which is initially connected with the fact that the corporate environment and the conditions of business must be understood before the research begins, as a fundamental point of the action research model.

The fundamental scientific importance of the action research model is in the fact that it integrates the organizational perspective of the action research process.

As a phenomenological, i.e. qualitative management technique, action research possesses the characteristics⁷ of being:

- Subjective, as seen by the eyes of the study participant
- Interactive
- Value laden
- Inductive
- Showing interaction of factors
- Context bound and
- Imposes situational theory

The organizational dimension of the action research states that it links a highly persuasive demonstration of the linkage between the change program and the achieved performances. The original proof of this is the true that those individuals that participated directly in the change interventions are easily inclined to ac-

7 Graetz F, Rimmer M., Lawrence A. and Smith A., "Managing Organizational Change", John Wiley & Sons Australia Ltd., 2 ed., 2006, p.316

cept the so-called the cause-and-effect relationship, that has been developed during the usage of the action research model.

1.1.1. Reconfigurable organization

In order to predict and achieve the dynamic and intensive changes in the market circumstances, today's forms of organizations dramatically change.

Global, cultural, technological, competitive and management determinants change the prevalent method of doing business. Therefore, organizations usually react by flattering the management and particularly organizational hierarchy, restructuring around partly or completely various core business competences, reengineering the processes, downsizing the number of the employees, outsourcing the less fundamental activities, benchmarking etc.

The contemporary term for the above explained type of organization is reconfigurable organization⁸, which is defined as an organization that is flexible and able to change on an annual, monthly, weekly, daily, or even hourly time frame.

The reconfigurable organization imposes the need to meet the changing conditions by developing a long-range strategies for improving the organizational decision – making process. The process of creating a set of change techniques in order to constitute a systematic approach to the future organizational perspective leads to the organizational development.

Within the organization development, the long-term capacity of maintaining and further developing the reconfigurable organization is effected through the action programs for organizational development.

2. Action change programs

Action change programs for organization development are based upon a systematic analyses of problems and an active commitment of the top management to develop and implement the change effort.

The initial step in creating a sustainable action program is determining the organizational perception that the state of equilibrium needs to be changed in order to bring the system to new, qualitatively higher organizational vitality and predictability for changes.

The relationship of the organizational perspective of action research and the action change programs is conducted through 2 types of principles⁹:

- ⌘ The research principles, which suggest the need for being creative in defining the real research question, generating theoretical concepts from the field, integrating concepts with the real life assumptions, manipulating and using multiple perspectives, verifying interpretations with perspectives in the field and treating the research setting as a case study
- ⌘ The change principles, that refer to developing a collaborative relationship, conceptualizing the need of the changes to be made, changing the behavior and recognizing that expectations amplify or reduce resistances

2.1. Action programs in the model of organizational change

The model of organizational changes that emphasizes the necessity of the action change programs consists of the following phases¹⁰:

- I Anticipating the need of change – meaning that managers must anticipate the need for undertaking changes through action programs. The need for change must be felt by the majority of employees in order to convince them to adopt the new behavior
- II Developing the consultant – client relationship – this phase predominantly determines the overall success or failure of the action program. It is important to stress that the leader of the change initiative can be a non manager, or even a person from outside the organization
- III The diagnostic phase – where actual collection of data, relevant to the situation perceived to be the problem, takes place. It is a very sensitive phase owing to the fact that weak, inaccurate or faulty diagnosis can easily lead to creating a costly or ineffective action programs. This phase sets the stage for the action programs, in the scope of the long-range strategies and techniques
- IV Action Plans, strategies and techniques – where various interventions, activities or programs, aimed at resolving problems and increasing organization effectiveness, take place. In the framework of this phase are placed the so called theories of action, as programs, patterns, designs, sets of rules

8 Harvey D. and Brown R.D., "An Experimental Approach to Organizational Development", Prentice Hall International, 6th ed., 2001, p.455

9 Cunningham J. B., "Action Research and Organizational Development", Praeger Publications, 1993, p.243

10 Harvey D. and Brown R.D., "An Experimental Approach to Organizational Development", Prentice Hall International, 6th ed., 2001, p.16

or propositions that people use to design and carry out their actions. This phase ends with the implementation of the action programs

V Self – renewal, monitoring and stabilizing – for assessing the effectiveness of the change programs in attaining the stated objectives. Once the problem has been corrected and a change program implemented and monitored, means must be devised to make sure that the new organizational behavior is stabilized and internalized. Indication of success is when the system develops capability to maintain innovation without outside support

VI Continuous improvement process – the most important issue in this phase is determining the existence or not of the capacity of the leader to deal effectively with the use of power, and at the same time to achieve the organization vision

A useful method to increase the potential of the action programs for organization development, in the model of organizational change, is to increase the range or the depth of the available data, by interview or questionnaire, as a fundament for a better prepared action programs.

2.2. Dynamics of the action programs

In order to create an action program for the organization development, that is dynamic and sustainable at the same time, measuring the organizational progress, stabilizing the changed desired behavior and overall evaluation of the action programs are needed.

The feedback of information related to determining how efficiently the action program has been effected is a beginning of creating a dynamics of the action programs. It's importance is higher owing to the fact that it creates an organizational commitment among organizational members, that derives from the open communication and management's capability to reinforce the new behavior. This changed behavior is a result of a continuous and profound change, implemented through the action programs.

Probably the most intriguing phase of the dynamics of the programs refers to creating a stabilizing effect of the changes made in the whole or a section of the organization. An effective indicator of the effects of the action programs is the level of direct or indirect reinforcement to maintain the reached modified behavior, the higher the direct reinforcement is, the lower tend to be the indirect reinforcement techniques, as a non desired state. In this cases, certain form of continuing assessment should be introduced against future time degradation of the achieved results.

The final evaluation of the action programs must take place in the framework of the detailed change process, leading to an increased performances and relationship among organizational members, and particularly in increased key factor indicators and bottom – line measures.

By integrating the action programs in the model of action research, we develop the stages of the action research program¹¹, on the following way:

1. Problem identification
2. Preliminary diagnosis
3. Data gathering from the client group
4. Data feedback to the client group
5. Joint evaluation of data
6. Joint action planning
7. Action or implementation of proposals for change
8. Repeat the cycle – fresh data gathering and feedback of results of change

The above stated phases are the most important approach to integrate the content of the action programs, within the model of organizational change and the process of organizational development.

Each contemporary organization must manage the action programs for organization development in the attempt to make the entire benefit in the organization processes, structure and entire behavior.

CONCLUSION

The organization development is not only a process of organizational improvement, but far more a process of deliberate and mutual inquiry and belief in the change efforts.

On the other hand, the action research is not only a methodology, but an approach that shapes the methodological practices. It fully endeavors to make the most appropriate choice in various organization circumstances.

The actual choice must be clear, transparent, articulated to each selves, to other inquiry partners, individually or as a members of the groups or teams and of the broader organization.

The primary difference between the organization development and other behavioral science techniques is the application of the organizational – wide approach to the functional, structural, technical and personal relationships in organizations.

¹¹ Huczynski A. and Buchanan D., "Organizational Behaviour", Prentice Hall International, 4th ed., 2001, p.567

The organization perspective of the action research represents a major change from the traditional methods of management development and training. It functions through an iterative series of steps, involving data collection and joint problem solving, that brings about the new knowledge.

Action research is the process of systematically data gathering for the system objective, or the particular need or objective of the system, implementing the data in the system, involving the action programs for organization development with the application of altering selected variables that are based on specific data or on hypothesis and monitoring and evaluating of the action programs in order to achieve the continuous and profound change.

The fundamental action research model consists of 16 phases, organized in 3 stages, that comprise the entire sequence from the perception of the problems by the key executives, to the final action, whereas the new behavior arises in the 11th phase of the 2nd stage.

The research and the change principles are prevalent both for the action research and the action change programs for organization development.

Action programs are vital for the long – term capacity of creating and maintaining the reconfigurable organization, as a flexible and able to change on a various range of level, starting from the annual and ending with an hourly time frame.

Once the action programs are implemented, it's dynamics refer to measuring the organizational progress, stabilizing the changed desired behavior and overall evaluation of the action programs are needed.

Finally, while the goal of the action research model aims at generating new organizational knowledge and insights for application in different organizational circumstances, the objective of the action programs for organization development inclines to establishing a continuous improvement process, self aware of the change needs and of the potential to allow the flow of fresh data from the environment, in order to further develop the capacities for a qualitative and planned change technique.

LITERATURE

- [1] Beckhard R., *“Organization Development: Strategies and Models”*, Addison – Wesley, Reading, Mass, 1969
- [2] Cummings T.G. and Worley C.G., *“Organizational Development and Change”*, West Publishing Company, Minneapolis/St. Paul, 8th ed., 2004
- [3] Cunningham J. B., *“Action Research and Organizational Development”*, Praeger Publications, 1993
- [4] Graetz F, Rimmer M., Lawrence A. and Smith A., *“Managing Organizational Change”*, John Wiley & Sons Australia Ltd., 2 ed., 2006
- [5] Harvey D. and Brown R.D., *“An Experimental Approach to Organizational Development”*, Prentice Hall International, 6th ed., 2001
- [6] Huczynski A. and Buchanan D., *“Organizational Behaviour”*, Prentice Hall International, 4th ed., 2001
- [7] Kogut B. and Zander U., “Knowledge of the firm, combinative capabilities and the replication of technology”, *Organization Science*, 1992, 3 (3)
- [8] Pasmore A. W., “Participation, Individual Development and Organization Change”, *Organizational Dynamics*, June 1992, 18 (2)
- [9] Paton R. A. and McCalman J., *“Change Management – A Guide to Effective Implementation”*, Sage Publications, 3rd ed., 2008
- [10] Reason P. and McArdle L. K., “Action Research and Organizational Development”, *Organizational Development*, Sage Publications, 2005
- [11] Steward T. A., “Rate Your Readiness for Change”, *Fortune*, February 1994
- [12] Townley B., Cooper D.J., Oakes L., “Performance Measures and the rationalization of the organizations”, *Organization Studies*, 2003, 24 (7),
- [13] Waddell D. M., Cummings T.G. and Worley C.G., *“Organization Development and Change”*, Nelson Thomson Learning, Melbourne, 2000

Upgrading Direct Marketing by Using the CRM Concept

UDC 004.738.5:658.8

mr Ivana Domazet, mr Jovan Zubović, dr Božo Drašković

Institute of Economics, ivanad@ien.bg.ac.yu, jovanz@ien.bg.ac.yu, dbozo@ien.bg.ac.yu

XI International Symposium SymOrg 2008. 10th-13th September 2008. Belgrade, Serbia

Mass communication techniques and promotion mix which included advertising and sales promotion were favoured in previous decades. Recently direct marketing as a new tool with high development potential has become their competitor. Target markets and media became very fragmented and thus inhibit companies' efforts to approach mass markets. Direct marketing is a tool which comprises precise targeting of customers by using a variety of different techniques like data bases, e-marketing, direct mail, telemarketing, mobile marketing, promotion with direct response and catalogues marketing. Internet technologies offer several innovative tools for adapting marketing mix to specific business problems. Improvement of the Internet created new business opportunities and potential competitive advantages, some of which are of lower costs and prices, a perfect customer service, a wider variety and a products' customization. Along with computer technology, the Internet and database software developments, a most important company activity is becoming a two way communication between the companies and their customers. Customer relationship management (CRM) is a new concept which, as a result of changes made in management, strategic business planning and personalized customer services, develops fast. Developments of new information technologies have influence on business transactions to change from product push strategy to customer pull strategy, which will, as a result, change the position of the customer in the chain value. Customers, as most important company assets, are becoming sophisticated and increasingly demanding in their purchasing behaviour. In order to improve the company's competitive position it is important to analyze several aspects of Customer Relationship Management: Customer Selection, Customer Acquisition, Customer Retention and Customer Growth.

1. Introduction

In order to adequately respond to the challenges of the modern business environment, we must take into account some specific features of the situation the Serbian economy and society are in, but also the developments of the world theory and practice, primarily in the fields of marketing and management. New business strategy creation and the quality of business environment are key preconditions for the competitive growth of our economy.

The growth in Serbian competitiveness should be sought in shifting the focus towards the microeconomic level of the business decision making, as well as in adopting a new philosophy of production – strategic management and innovation. One way to significantly enhance the competitive level is the development of direct marketing via the CRM (Customer Relationship Management) concept. The focus of market oriented business shifts increasingly towards the consumers, as companies become aware of the growing importance and role the consumers play in profitable business activities. The companies explore, monitor and try to identify the existing and anticipate the customers' future needs and desires, since the basic aim of any company is to meet the needs in a profitable way and create customer loyalty, as basis of a long-term growth.

The companies' response to the change in demand, as well as a continuous adjusting the products and/or services to the customers' needs are only some elements that affect the customers' overall satisfaction and loyalty. It is necessary to carry on a segmentation and targeting processes of prospective clients and create marketing campaigns geared to each segment individually.

2. Features and concepts of direct marketing

Direct marketing is an activity by which a direct relationship between the company and a customer is created, its basic features being:

1. *the direct marketing is interactive*, which means that there is a two-way communication, i.e., a mutual contact between the participants (the company and the customer) in the communication process;
2. *the direct marketing implies (prompt) response or customer's reaction*. The customer's response may be: a telephone call, direct mail, an enquiry to get more specific information, an order, etc.
3. *the results of the direct marketing activities (customers' response or reactions) are measurable*. The results of the direct marketing activities are most commonly expressed in the form of response rates, which specifies a percentage share of the number of customers responding within a total

number of “contacted” customers, or in the form of a rate of conversion of enquiries into orders, that specifies a percentage share of the number of orders in the total number of enquiries.

Compared to the mass marketing (marketing based on varied forms of mass communication with customers), the direct marketing has a number of advantages (1, pp. 315-319):

- *Precise aiming (targeting)* – addressing specific, well defined target segments of existing and prospective consumers;
- *Controlability* – a possibility to control the media, message and other elements of the direct marketing campaign, such as the timing of activity, costs, etc.;
- *Personalization* – a possibility of addressing consumers on an individual basis; on the basis of a historical analysis of purchases, a psychographic analysis and an updated and well-developed database it is possible to create messages in such a way that they appear to be “made to measure” of each individual customer. This is why direct marketing is often called the “one-to-one” marketing.
- *Invisibility of strategy* – direct marketing is good in concealing the marketer’s strategy from the competition.
- *Economising* – modern database management systems allow direct marketers to select the best prospective buyers (prospects) for any product they wish to sell, and therefore reduce costs by the unit of order.
- *Possibility of testing* all variables affecting the success of the promotive campaign, such as mailing the customers list, the delivery size, the contents, the format of advertizing message, the shape and colour of letters, etc.
- *Possibility of cross-sales* – analysing the database of the existing buyers of a given product, direct marketers can obtain information on the customers’ possible needs for other products;
- *Possibility of creating long-term relationships with customers* – on the basis of updated and well-developed databases, the “real”, loyal and profitable customers can be identified with whom the company should create closer contacts and develop permanent relations;
- *Possibility of integration* with other elements of the marketing communication system – direct marketing is easily supplemented by other elements of promotive and marketing mix, allowing for a well-devised and integrated marketing communication.

A basic drawback of direct marketing is reflected in very *high initial costs* in attracting customers. Direct mar-

keting can be an especially *expensive form of promotion* if used towards only one sale. Besides, certain forms of direct marketing, such as direct mail and telemarketing, are very *aggressive* and are an *attack on the customer’s privacy*. Finally, if used inefficiently, direct marketing *may endanger the corporate reputation* and result in a decrease in sales.

Forms of direct marketing are often defined in terms of media, or means used in conveying advertizing messages. The basic media of direct marketing are:

- mailed media (direct mail and catalogues);
- printed media (newspapers and magazines), and
- electronic media (telephone, radio, television, cable television, the Internet).

A very large number of factors affect people’s behaviour and they can be classed as internal and external. Internal factors (psychological) refer to the mental state, the customer’s personality and his/her character traits. They affect the formation of customers’ attitudes and views and are strongly influenced by external factors. External factors are environmentally created factors that affect customers.

Until the appearance of marketing as a scientific discipline that gave rise to a succession of other disciplines, the customer had a marginal position and a passive role. The customers’ behaviour is a discipline focusing upon the customer and studies him/her both as an individual and as a member of the community, aiming to learn about their behaviour and about the factors that influence the behaviour. It does not, however, deal with the development and definition of the strategy of establishing and maintaining the customers’ relations, but serves as background for other disciplines that are being born. In the past decade or so a succession of new marketing concepts have developed, giving the role and importance of marketing a new, long-term dimension and focusing on developing not only the loyalty, but also the long-term collaboration and partnership relations with key buyers and customers; therefore, as such, they present a dynamic aspect of direct marketing.

- The most commonly mentioned **direct marketing concepts** in this context are as follows:
- Relationship marketing;
- Customer Relationship Management (CRM);
- Retention marketing;
- Licenced marketing;
- Loyalty marketing;
- Database marketing;
- Interdependent marketing;

- One-to-one marketing;
- Frequency marketing;
- Partnership marketing;
- Real-time marketing.

2.1. Relationship marketing:

The relationship marketing paradigm dominates the modern marketing practice, but also the academic circles, regardless of the fact that the ideas it is based upon are not new. The research has shown that the term *relationship marketing* is a specific challenge to the traditional marketing practice and academic thought. This is a new conception founded on the basic marketing premise, that it is a profitable way of meeting the customers' needs, viewed in the long term. The approaches to the development of programs and strategies as well as necessary elements differ as to whether, in terms of ensuring the ways of building stronger and longer-termed relations, it is regarded as a specific marketing field or as a development of the existing conceptions.

The importance of customers (and other partners) is stressed in a large number of cases, as is the development of long-term relationships with them, however, too much attention is paid to various sections of programmes and strategies, instead of their analysing as a whole. Therefore some authors stress the types of rewards the companies are to ensure, others pay particular attention to the customer cycle and the relationship marketing position within the organizational structure, while others still highlight the components and elements of the relation marketing, however, without a defined strategy and program, etc.

Relation marketing can, of course, be observed on different levels. The basic three are the following:

- Tactical level (similar to the activities in improving sales);
- Strategic level (stress on the development of partnership relations with customers);
- Philosophical level (reflects the essence of the marketing philosophy – the whole organization focuses upon the delivery of total satisfaction to customers and maintenance of its own business).

A large extent of interrelations is seen between relationship marketing and direct marketing and the CRM concept via different types of loyalty marketing which in turn can be viewed both as a separate conception and as part of relationship marketing.

2.2. Customer Relationship Management (CRM)

The CRM (Customer Relation Management) or *managing the relationship with customers* is a relatively recent concept that increasingly improves, due to the

changes in management, in strategic business planning and in the personalized customer service. In a modern market-oriented economy, alongside the advance of the computer technology, the Internet and database creating software, the two-way communication between the company and its customers or clients becomes a priority in business activities.

The Internet technology affects the changes in business transactions from the product push strategy to the customer's pull strategy, namely, the change that will result into the change of the customer's position in the value chain. Hence it is of vital importance to consider the elementary dimensions of the Customer Relationship Management (2, pp. 81-86):

- Customer selection;
- Customer acquisition;
- Customer retention;
- Customer growth.

The CRM means the possibilities, the methodology and the technology that allows for a company to work through the customer relationship regulation. The basic purpose of the CRM is to enable the companies to manage customers more efficiently by presenting reliable systems, processes and procedures.

The CRM is a corporative level of the strategy focusing on creating and maintaining lasting relationships with customers. There are a number of commercial CRM program packages supporting the CRM strategy in the market, however, it is not a technology per se, but a substantial change in the organizational philosophy, that places the stress upon the customer. These program packages, i.e., the development of a respective software and hardware, allow for the CRM system to become a largely automated process, the purpose of which is not only to offer information, but to serve as a significant support in decision making and in the market situation analysis. A successful CRM strategy, however, cannot be carried out by just installing and integrating the program package and cannot be executed in a moment. Change must occur on all levels, including the company policy, employee trainings, marketing systems, information management etc. This means that all the aspects of business must be harmonized with the CRM principles.

In order to be efficient, the CRM process must be integrated via marketing, sales, as well as via the customer relationship. A valid CRM has to:

- identify factors that contribute to a successful customer relationship;
- create a customer relationship practice;

- adopt measures necessary to make a good CRM;
- develop a customer -friendly relationship;
- suggest questions to be put to customers in order to solve a problem;
- propose a solution to the customers complaining about the service;
- monitor all the sales aspects, as well as support to customers.

In establishing the CRM segment in the company it is of greatest importance to specify the aspects that are crucial for its business, the information to be served to customers, to give an insight into the customers' financial past record, to identify the effects of CRM segments and to identify unnecessary information. The possibility to eliminate the unnecessary information is a very important aspect of the CRM system implementation. When creating a CRM structure, a very important task of the company should be the provision of as detailed information as possible for its primary (loyal) clients.

The CRM can be defined as a business strategy the purpose of which is to bring into accord the revenue and the profit with the customers' satisfaction and the value delivered to them, taking into consideration a number of levels: measuring, customers' behaviour, processes and technologies. For fruitful customer relationship to be developed it needs aligning all the elements in the company. The necessary elements in building a fruitful customer relationship are:

- knowledge (market and customers appreciation);
- targeting, i.e., offer streamlining and adapting;
- sales (customer acquisition);
- service (customer retention).

Of crucial importance are strategy planning and development, organization, implementation, as well as the CRM process control. Therefore the process of successful CRM concept implementation can be observed through (3):

- strategy development;
- information analysis;
- needs identification (appreciation of customers, their needs and desires);
- change definition (corporative revolution – from a reactive towards a proactive approach);
- building the future (building the corporate business and technical structures to deliver the expected benefits to the customers);
- measuring results and improving the CRM system.

While the transaction marketing, based on the idea that the customer should be subject to some influence so that the transaction be effected as fast and as efficiently as pos-

sible, the new marketing and relationship management concepts insist upon creating and maintaining contacts with every individual buyer (4, pp. 164-195) even after the transaction has been completed, which significantly contributes to the increase in the company's competitive advantage. A research carried out in the EU in 2006 confirmed that the firms without a developed CRM:

- lose an average of 50 percent of their clients over the period of five years;
- about 65 percent lost clients have actually left because of bad service and communication;
- the costs of acquiring a new customer are five times the costs of retaining the old one.

Whereas the firms with a developed CRM concept:

- grow approximately 60 percent faster compared to the competition without a developed CRM;
- expand their market by the rate of 6 percent annually;
- charge 10 percent plus for their products;
- realize the return on investment (ROI) of 12 percent;
- a 5 percent increase in the customer loyalty may result in a 25-85 percent increase in profitability.

The CRM focuses upon creation and maintenance of lasting relationships with the customers. Although there are a number of commercial CRM program packages in the market that support the CRM strategy, it is not a technology by itself; it is rather a crucial change in the organizational philosophy that places a customer in the centre of attention. The program packages, i.e., the development of appropriate software and hardware allow for the CRM system to become a largely automated process, with a task not only to provide information, but to serve as significant logistics to decision making and the situation analysis in the market. A successful CRM strategy however cannot be conducted by just a simple installation and integration of a program package and cannot be executed overnight. Changes have to occur on all the levels, including the company policy, the employee training, the marketing systems, information management, etc. That means that all aspects of business must be shaped in accordance with the CRM principles. The efficiency of the CRM process, which should be integrated through marketing, sales, and customer relationships means (5):

- identification of factors contributing to successful customer relations;
- development of the customer relationship practice;
- development of customer-friendly processes;
- devising questions that will help solving potential customers' problems in a most adequate way;
- suggesting the solution to the customers complaining about a product/service;
- sales monitoring as well as customer support.

In establishing the CRM concepts it is most important that a company stipulate the key aspects of business, such as which information should be served to customers, what the customers' financial history is, what the effects of the CRM segments are. A very important aspect, too, of the CRM structure implementation is the identification and elimination of unnecessary information. When creating a CRM structure, a major task of the company should be collecting as accurate as possible information on its primary (loyal) clients. In this context the CRM can be defined as a business strategy the purpose of which is to balance the revenues and the profit with the customers' satisfaction and the value delivered to them, within which a number of levels should be taken into account: measuring, customers' behaviour, processes, and technologies.

The basic structure of the CRM is three-fold:

- Operational – basic business processes (marketing, sales, services);
- Analytical – serves as support in the analysis of customers' behaviour and conducts the business philosophy and technology;
- Collaborative – provides contacts with customers by way of telephone, fax, the Internet, mail, direct contacts, etc.

The Customer Relationship Management combines the business strategy and technology aiming to identify, attract and retain long-term relations with customers – by creating *value* that results from the interaction between a business organization and customers. The CRM includes the knowledge of strategic management and Internet technologies, and the purpose of this concept is to identify the opportunity to establish profitable relations with clients, creating new relationships as well as retaining such profitable customer relationships.

As a strategic set of activities the CRM starts with a detailed analysis of the company's organizational strategy, and ends with measuring value for shareholders. The concept of competitive advantage that simultaneously generates value for both the customer and the company is a key to the CRM success, being a managerial approach to creating, developing and establishing relationships with precisely defined target groups in order to optimize the value for the customer, the corporate profitability and consequently, the value for the stakeholders. It is for this reason that the CRM is highly positioned on the priority list of the modern corporate agenda and is closely associated to employing information technologies, necessary in implementation of customer relations marketing strategies.

3. The long-term customer relationships development strategy

The long-term customer relationships concept must always have in mind the value chain of the customer relationships development, that is, the activities to be undertaken in order that profitable relationships should be developed. The customer relationships management chain is based upon four steps:

- definition of offer value;
- segmentation, targeting and positioning;
- business operations and delivery systems;
- measuring and feedback.

Strategy is the basis of the development of long-term relations with customers and key partners. The basic aim is to deliver a quality service and thus enhance a lasting customer satisfaction, which is a precondition of unquestioned loyalty. Customers' loyalty means the rise in profits which all affects the satisfaction and loyalty of employees in a services delivering company (customer and employee satisfactions are mutually conditioned). In order that the concept be conducted there must be some basic preconditions, and they are defined as to the concept needs. They comprise (6, pp. 124 – 126):

- Top management, leadership and vision oriented, expert and competent, aware of the value and importance of services marketing and long-term relationship development;
- Project team to introduce a concept into the organizational business practice, for the service providing companies that have not implemented it so far;
- Designing an appropriate micro- and macro-organizational structure of the company oriented to customers and to services;
- A governing service corporate culture;
- Appropriate technical-technological preconditions (primarily as regards the development of a data basis and information technology);
- Availability of the required human resources on various levels, the key factor being the persons that interact with clients;
- The necessary capital.

The phases of the long-term relationships with customers include: data collecting, data analysis, establishing and maintenance of long-term relationships, as well as the concept implementation monitoring, analysis, and control. The basic elements of the long-term relationships development stem from the elements necessary for a proper functioning of marketing in the field of services, and they are the following:

- Getting to know the consumers, their needs and desires, their characteristics, the influence of certain factors upon their conduct;
- Marketing, i.e., market-oriented thinking;
- Achievements of modern concepts that place the emphasis upon the customer relationships nurturing;
- Company capabilities and needs;
- Understanding the role and importance of every individual included in the service creation and delivery processes;
- Long-term way of thinking and behaviour;
- Operations are conducted company-wide.

Hence the process of long-term relationships development can be divided into the following steps:

- Data base formation;
- Customer identification and classification;
- Customer personalization;
- Customer differentiation according to their values and needs;
- Interaction with customers;
- A service process adjustment, treating every customer as an individual through direct contact or automated process;
- Loyalty program creation – rewards and added values;
- Continuous concept improvement (control, measuring and feedback information).

Introducing a new concept into the company is an investment into the future, therefore we must start from a planned long-term approach. The company must analyse the profitability of investment into the concept development and must compare its performance and results to the results of the leading companies in the industry and wider. At the same time, specific features of the company must be properly observed.

Threats and possible errors in the concept implementation have to be located and corrected. In the analysis of strengths and weaknesses in the concept implementation special attention should be paid to the following potential problems (7, 106):

- An assumption that the customer does want long-term relationships to be built (perhaps there is no reason whatsoever that the customer would ever want to go back to the seller, or the customer chooses to avoid being dependent on the seller);
- An assumption that a client (individual) is willing to interact and act together. An assumption that an individual's satisfaction is sufficient per se;
- If clients are transferred to "higher classes" and are notified as to how important they are for the company, their expectations grow higher;

- A problem not to "hurt" the clients that are not the "top" ones, either as regards their profile, or the attention paid to them by the company, however their contribution is important;
- A problem of change in the rules governing the relationships with key clients-donors that may cause confusion;
- Certain awards are introduced that prove to be unnecessary, since the clients would act in the same way even without them, therefore this is unnecessary cost;
- Sometimes clients build a relationship, not because they are loyal, but because they have no other choice, i.e., there are no appropriate substitutes. The change in the situation may result into negative effects, since the majority will leave.

Varied research conducted among the different level managers in the banking, telecommunications and public service sectors in the U.S.A. have shown that the biggest obstacles to the introduction of the long-term customer relationships are the speed required to introduce and activate the concept, the organizational culture, the issue of capital necessary for the process to start and a host of other initiatives present in companies.

The concept of long-term relationships means a continual interaction between the company and the customers. The communication between the company and customers is to ensure specific connections to be created, developed and improved. The course of these relationships, i.e., the method and the site where the customer and the company meet and exchange information must also be paid attention to.

To ensure the interaction we must achieve an accord between the interaction itself and the communication process, but also meet the other elements affecting positive attitudes forming (personal experience, influences by friends and family,...), those that will favour the brand and be a precondition for loyalty. The customer must be shown that the company cares about his satisfaction and his attitude.

Especially important in developing the long-term relationships are the following types of communication with customers:

- direct contact (by telephone or in person);
- direct mail;
- Internet and e-mail

In addition to these, the importance of certain promotional mass media (advertising in the first place) and word-of-mouth advertising must be understood. Mass

marketing in media is used parallelly, to acquire prospective new customers, but also to remind the existing customers of the products. The word-of-mouth advertizing is not under the direct control of the company.

There are, however, some limits in the communication with customers and some rules that have to be observed (7, p. 207):

- do not initiate interaction with the customer without a clearly defined aim;
- do not ask the customer the same question more than once;
- carry out the interaction in between two customer's choices (purchases);
- start interaction not with the product, but with a customer;
- interaction should be direct and adjusted to the concrete customer;
- make sure the customer (always) welcomes the interaction;
- a good approach is to use a principle (and technology) of mass adjustment to reduce the costs and make the message personal;
- protect the customer's privacy;
- initiate the dialogue by putting at disposal a phone number to be dialled free, or printing the web site address on whatever is connected with the company (business cards, memoranda, billboards, etc.);
- make sure the customer is well aware of the value of the interaction, otherwise it will not serve its purpose;
- take care of the customer's time (you cannot learn everything about the customer at once).

Establishing a dialogue with the customer is important because:

- dialogue is a means to acquire information;
- information is translated into knowledge (that is, knowing the customer and his/her wishes and needs);
- knowledge serves as basis to adjusting the offer and achieving customer growth;
- efficient and effective action brings customers' satisfaction, customers' trust and familiarity;
- customers' satisfaction, trust, and commitment bring in their loyalty;
- loyalty brings profit.

4. CONCLUSION

The interaction with customers initiates the company's profitability and the customers' satisfaction, since modern, highly competitive, business conditions require the

company to search for new, more efficient and more effective ways to enter the market, because the market performance of the company depends primarily upon how successful it is in meeting the customers' needs, thus creating loyalty and consequently the growth in profits. The majority of firms claim that their products and services are geared to the customers' needs and requirements, however it does not show in practice. Reasons are numerous, the key ones being the inconsistent implementation of the marketing concept, the growing needs and desires of the modern customer and the limitations of the classic marketing approach.

To formulate the marketing strategy rules it is necessary that we know both the customer and the way he purchases and uses products and services, as well as what causes his satisfaction or dissatisfaction. The overall activity must be market-, that is, customer- oriented. The starting point must be the customer's value for the company, hence the company has to adjust its behaviour to this fact, with the techniques and concepts of direct marketing contributing to this to a large extent.

The last couple of decades of the twentieth century bring a succession of new marketing concepts giving the role and importance of the customer a new, long-term dimension and focusing upon developing not only loyalty, but also long-term collaborative relationships with key customers and consumers, with a significant aspect of personalization of these relationships. The best and the most profitable customers merit the best treatment. The marketer's task is to identify his best customers and to maintain a continual and personalized communication with them. In order to obtain valid response and measurable results the marketing manager has to be trained to create the "customer's intelligence" on the basis of hundreds of incoherent details that a number of sectors collect in a day.

The CRM solutions are designed in such a way as to provide knowledge required to develop and implement "smart" strategies in order to maximize the customer's profitability, thus ensuring the competitive advantage for the company. The analysis of the CRM technologies helps us understand the customer, so we can avoid acting anew when a problem arises, but act proactively, discovering hidden possibilities to meet the increasing demand of the customers.

The key factors of the CRM concept success are the customers' expectations the firms should anticipate. Hence it is necessary that a platform should be created which allows for the communication with the customers, for collecting and for the analysis of essential information they

provide. Specialised statistical software packages within the web-sites allow for monitoring and collecting replies to various questions that can be stored in a respective data base. Therefore the record can be kept on the customers' habits and special interests they may have.

The objective the companies wish to achieve is to influence prospective customers to buy, to subscribe, to register, to answer questionnaires and polls, to generate recommendations, thus contributing to the company's competitive position in the long run. Prospective customers, as well as the company, have their own objectives – satisfaction of their needs and understanding, as well as strategies to achieve what they planned. The measure of the company's ability to persuade prospective customers to plan action and carry it out is the conversion as a result of the company's effectiveness and the customers' satisfaction. The process during which the customer becomes and remains a real customer, contributing to the company's business by his loyalty, is based on proven principles that incorporate analysis, the art of communication, the CRM concept and the fundamental knowledge of economics.

REFERENCE

- [1] Hanić Hasan, *Principi marketinga*, Beogradska Bankarska Akademija, Beograd, 2006.
- [2] Domazet I., J. Zubović, *CRM (Customer Relationship Management) a factor of global competitiveness improvement* (81-86), Medjunarodna naučna konferencija "Management and Marketing und Management and Marketing Under Globalization /International Scientific, Ekonomski fakultet, Beograd, 2007.
- [3] www.crm-forum.com
- [4] Milisavljević M., Maričić B., Gligorijević M., *Osnovi marketinga*, Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, Beograd, 2004.
- [5] www.en.wikipedia.org
- [6] Maričić R. Branko, *Ponašanje potrošača*, Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, Beograd, 2005.
- [7] Veljković Saša, *Marketing usluga*, Centar za izdavačku delatnost Ekonomskog fakulteta u Beogradu, Beograd, 2006.
- [8] Filipović V., Kostić Milica, *Marketing menadžment-teorija i praksa*, FON - Institut za menadžment, Beograd, 2003.
- [9] Rose S. Peter, Hundgins C. Sylvia, *Bankarski menadžment i finansijske usluge*, Data status, 2005.
- [10] Kotler Phillip, *A Framework for Marketing Management*, Prentice Hall, New Jersey, 2003.

Business Intelligence Model for Sales Analysis

UDC 005.94 ; 005.52:658.8

MSc Suzana Đukić¹, prof. dr Ljiljana Kaščelan²

¹HERMES SoftLab Crna Gora

²Faculty of Economics, Podgorica

As the technology is progressing and the dynamism of business environment is changing, not only the market competition keeps growing but the customers are starting to dominate the approach to the product. These days the supply exceeds the demand by far and we need more information and knowledge in order to build a better product and a product with added value. On the other side, we need to avoid being snowed under enormous amounts of internal and external data. The application of the business intelligence concept allows business systems to use only those pieces of information that, while being presented in the best way, are needed at a particular time to make business decisions. At the same time, if the concept is being implemented properly, the amount of data and information business system employees are receiving is being reduced, while simultaneously the quality is being increased. That is why the main objective of the business intelligence concept is to generate high-quality information business systems need in order to make correct business decisions.

1. Introduction

We live in a time marked by ever-increasing acceleration and mutual interdependency. That is why “the new economy” favours global players who are quick to notice changes and challenges and meet their requirements.

The times when you could build an information system “easily” and “tomorrow”, without a serious approach, are behind us. With the dynamic development of information technologies - data gathering, storage, analysis, processing and use - modern management and communication with the environment start to have a new character. Timely, complete and accurate information is one of the main business resources and is a key for making best business decision no matter what level we are talking about - operational or strategic management, current or long-term business activities.

Processing data, finding hidden relations between them, identifying new possibilities for better business efforts, all these are indispensable factors that help us make the best business decisions. In turn, such decisions are necessary if our company is to survive and grow.

Managing knowledge through business intelligence is a vital element of strategies of successful business systems that want to use information better in order to increase their market share, improve their relations with buyers and customers, increase profitability and hold market advantage over their rivals [1,2].

This paper is elaborating on a concept of sale business intelligence analytic system in a trading firm [3]; this includes:

- Identifying basic decision processes needed to analyze the sale of the company.

- Defining sources of data for the identified processes.
- Implementing data mart, defining its objectives, design and realization.
- Realizing the decision model, describing the way the OLAP tools are being used and presenting developed OLAP models.

The results we get by using the proposed business intelligence system can be used in turn to learn more about the customers and suppliers in order to facilitate negotiations with them, use the existing resources more efficiently, become more competitive and make right decisions needed to attain a better market position - since we always have to keep in mind that the market becoming more global all the time.

2. Identifica of decision models

Today companies are operating in an environment of extreme competition and developed channels of distribution, where more goods are services are available than are needed. In this time of the supply considerably exceeding the demand any increase of production is focused on increasing the amount of data and knowledge in order to produce a better product, a product with added value.

Some companies are trying to gain strategic advantages through more efficient use of existing resources, including their information system. By skilfully using analytical application one can turn data into information needed for making strategic decisions, thereby gaining advantage over his rivals.

The decision-making process is a generic process that can be applied to all forms of organized activities aimed at achieving a predefined goal. Our use of this process can be intentional or unintentional.

When trying to make deliberate decisions people do the following:

- consider all known available options;
- use the greatest available amount of data;
- carefully consider possible costs and benefits of every option;
- meticulously analyze the probability of various outcomes;
- invest the greatest possible amount of rational reasoning based on all abovementioned phases.

We do not analyze different types of data using the same method. It is important to identify the best analytic method to apply to a certain type of data. When the customer demand is defined, including the type of data and the method of data gathering and distribution, the choice of analytic method becomes the key for creating a high-quality decision-making basis. For instance, a simple descriptive statistics can sometime provide a better basis than a sophisticated business econometric model.

Data analysis and ideal problem for OLAP reporting, since the source of data for such a multidimensional analysis can be found in every company's sale invoices.

The realized models that are presented in this paper help understand the relations between all critical aspects of the organizations (costs, income and profit). Once this analysis is understood we can reduce a (possible) deviation between the planned and the real profit by modifying these elements.

Also we can answer the following questions: Which are the best-selling products, what are the most profitable shops, which is the key product as far as sale results are concerned? Has my business practice improved or deteriorated since last year/quarter/month? It is possible to compare similar products over the same time period and that reveals which brands are sought by consumers. These and many other answers make it easier for us to make best business decisions and discover relations that were not obvious before.

3. Data mart implementation

A data warehouse includes a large quantity of data organized in smaller logical elements, data marts. Data marts are usually subsets of logically linked data warehouse information that refers to a certain area.

A data mart that reflects a business segment of a company will enable us to implement an OLAP model. Such a model makes the following analyses possible:

- Analyzing profit, income and sales according to customers, groups of products and years.
- Analyzing sales according to producers, shops and years.
- Analyzing profit according to months and shops in any desired year.
- Analyzing profit according to groups of products, shops and years.
- Doing a comparative analysis of profit according to years, brand groups and customers.
- Analyzing income, profit and cost according to products, shops, regions and years.
- Analyzing profit in successive quarters.
- Analyzing income according to months, products in selected years.

Data marts can be used for exploration, data mining, managed inquiries or on-line analytical processing (OLAP) and they are a direct source of information for end customers. A data mart used for on-line analytical data processing needs to be easily and intuitively accessible by end users. The dimensional model is the best in such cases.

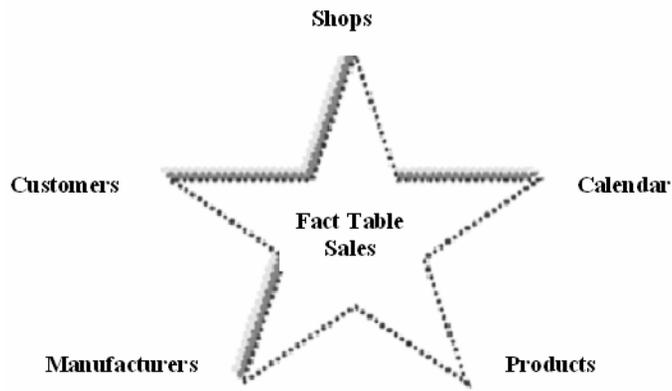
The most frequently used method for managing linked multidimensional analysis data is the star schema. The fact table is in the centre of the schematic. This table contains data for analysis and keys for links with dimension tables. The fact table usually include several million short records. The records in the fact table are compressed in order to improve performance, while the dimension tables have fewer records, but these are bigger. They give additional information for the fact table records by providing description, name and other text values. Every dimension table has a single primary key that directly corresponds to one of the components of a multiple key in the fact table.

In our example (Picture 3.1), the process of producing dimension tables is linked to inclusion of calendars, customers, producers, products and shops. Dimension tables can be organized in hierarchies. Each hierarchy level continues with another hierarchy level. According to [4], we observe the realization of the data mart through the following phases:

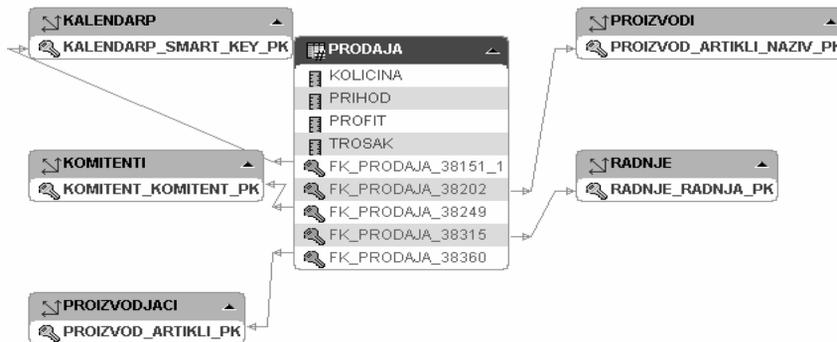
- Definition phase.
- Generation phase.
- Data loading phase.

The definition phase includes definitions of dimensional models and aggregations, generation of data sources and ETL procedures.

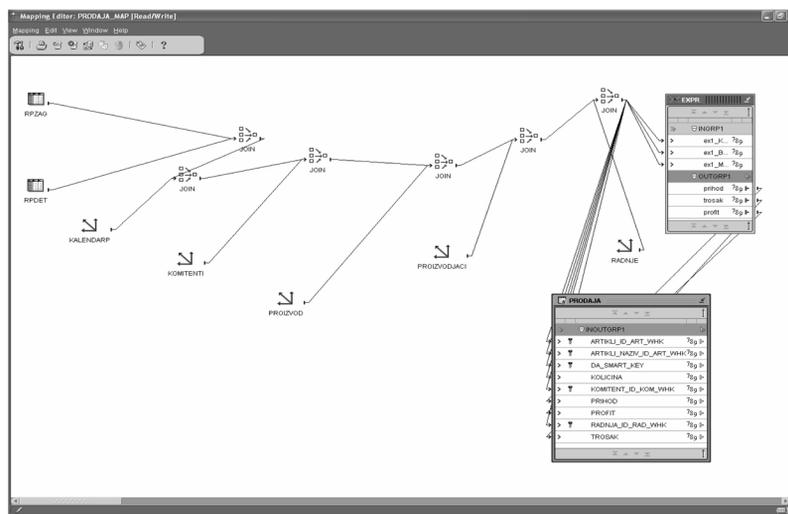
For instance, the star schematics definition looks like Picture 3.2.



Picture 3.1 Star schema 'Sales' 1



Picture 3.2 Star schema 'Sales' 2



Picture 3.3 Mapping the fact table 'Prodaja'

The generation phase includes configuration, validation, script and object generation.

The data loading phase includes a definition of sequence for execution of ETL procedure scripts. Definition of ETL procedure for a fact sales is described by Picture 3.3.

The suggested data mart model is realized through application of Oracle tools: Oracle9i RDBMS, Oracle9i Warehouse Builder [4].

The Oracle Discoverer [5], as part of Oracle's Business Intelligence set of tools, is used for implementing the identified models. Discoverer is intended to provide end users with an easy access to data and allow them to do data analysis and set-up ad-hoc queries [6].

4. Case study

For these analyses we used data from a trade company from Podgorica that sells chemical products in retail shops in six towns and also offers wholesale sale of its products. The Case Study data - for data mart realization we used records from 2005, 2006 and 2007. More than 2,000,000 lines have been imported. The fact of sales contained about 410,000 lines, the mapping procedure was excellent and lasted about 5 seconds.

The observed 4.1 model is analyzing income, profit and quantity categories. On the Page Item level we selected a year (or all of them) and product categories for which we do the analysis. We observe all this in relation with customers, towns or regions. This analysis will provide us with precious data on most profitable groups of products. We can also see which customers buy most of a particular product and this can affect future sales conditions, discounts, special conditions and the way we treat that particular customer. Picture 4.2 shows a graphical presentation of profit according to regions.

Picture 4.3 shows a multidimensional model that is being used for analyzing quantities of sold products according to brands. One of the possibilities (the one depicted here) is to analyze all the years - or we can select one of them. This clearly shows which brands are attractive and which are not accepted by the market. We can also display data on shops. For instance, we notice that only one Elisabeth Arden product was sold in Berane over all three observed years, while 11 Dolce Gabana products were sold in the same store.

One of the realized workbooks can look like the Picture 4.4. Here we do a comparative analysis of profit by month and by shops and we can observe monthly or seasonal oscillations. It is obvious that the central region is dominant as far as profit is concerned and that March is

the most profitable month. This analysis is valid for the entire observed period but if, for instance, we examine only 2006, then July is the most profitable month and the most profitable shop is the Central Depot in the central region (just like in the previous case).

The following OLAP model described by Picture 4.5, is a model of comparative analysis of profit, where select a product group for observed shops in Page Item. In this particular case we analyze profit from sale of the perfume product group. Adding an exception is simple - in this case it excludes the shops where the sale of perfume exceeded 1,000 euros.

The following Picture 4.6 shows a multidimensional model for analyzing income, profit and cost per product, ship, region and year.

The following OLAP model described by Picture 4.7 deals with comparative analysis of profit by quarter. The first quarter profit is compared to the second quarter and so on for two consecutive years, 2005 and 2006. The LAG function is used to realize this model. This function allows us to do this comparison but also to compare a single period of one year with the same period of the next year or following years. We are using the Rank function that enables us to rank the deviation percentage from the greatest increase to the greatest drop in consecutive quarters.

In the abovementioned example we can notice that there is no date for years before 2005 so the column for the preceding period for the first quarter of 2005 is empty, producing the number 1 in the rankings. On the other hand, the profit in the second quarter of 2005 has increased by 20.33 per cent compared to the first quarter of the same year. The rankings show that this is also the greatest single increase in the entire comparative list for consecutive quarters. The greatest loss of profit was in the fourth quarter of 2005 compared to the third quarter - 32.97 per cent.

The next observed model (Picture 4.8) is analyzing profit from sale of perfumes in 2005 by months. The greatest profit was made in September, despite expectations that this would happen in March due to the 8 March holiday. December was the next most profitable month.

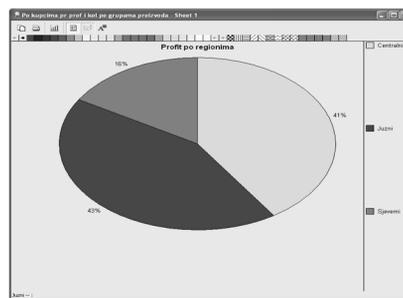
The 4.9 example shows seasonal oscillations. If we examine the Sun sun screen we notice that over half a year (October, November, December, January, February and March) not one item was sold, while the greatest profit, as expected, was made in June and July.

Oracle9i Discoverer Desktop - [Po kupcima pr prof i kol po grupama proizvoda]

Page Items: Da Actual Date Year: 2005 Grupa Naziv Naziv: Parfemi

	Profit SUM	Priloh SUM	Kolicina SUM
Centralni	5,486.86	11,578.09	862.00
Juzni	5,796.01	12,079.39	841.00
BAR	1,137.47	2,307.90	147.00
BELLA DONNA APOTEKA	36.48	96.55	10.00
HYGIA ZU APOTEKA	2.69	6.73	1.00
IN SPE DOO BILJNA APOTEKA ELIKSIR	212.52	424.01	25.00
INTERSERVIS RADOVIC OD	26.54	61.43	6.00
STELLA ALBA APOTEKA SA PO	98.11	162.14	8.00
SVETI IZVOR PEJANOVIC DOO	761.14	1,557.05	97.00
BUDVA	965.43	2,095.26	137.00
B&B	2.83	8.19	1.00
BINGO STR	387.97	813.79	54.00
BURBERRY STR	36.40	78.51	5.00
DULETIC PZU APOTEKA	113.14	219.56	12.00
HEMCO STR	10.73	26.91	4.00
JPU LJUBICA V JOVANOVIC MASE	126.01	349.49	13.00
MATIGOR TRADE DOO	61.50	126.56	7.00
PLIMA NO1 STR	152.32	324.83	31.00
POPOVIC PZU APOTEKA BUDVA	17.69	35.04	3.00
XXXX APONIA ZU APOTEKA	55.84	112.38	7.00
HERCEG NOVI	1,089.66	2,191.83	152.00
ART ZUROVAC I ORTACI OD	44.24	102.38	10.00
JALID OD PARFIMERIA JASNA	53.94	97.71	6.00
KNEZEVIC COMPANY I ORTACI OD	31.85	85.24	21.00
LIMOV RADOVIC OD PARFIMERIA NADJA	419.58	831.83	47.00

Picture 4.1 Analysis of profit, income and quantity of sold items according to customers, groups of products and years



Picture 4.2 Graphical presentation of profit according to regions

Oracle9i Discoverer Desktop - [Po proizvodjacima kolicina i po radnjama]

Page Items: Da Actual Date Year: <All>

	BERANE	BIJELO P	BUDVA	NIKSIC	POGORICA
	COSMETICS	COSMETICS	COSMETICS	COSMETICS	CENTRALNI
	COSMETICS	COSMETICS	COSMETICS	COSMETICS	COSMETICS
	MONTEFARI				
	Kolicina SUM				
CAVALLI	3		2		1
CAWA POLAND LTD	10				1
CHANTALLE	5		2		3
CHRISTIAN DIOR	7		1		1
CIOCCARELLI	60	3	15	3	24,738
CITY COSMETICS					5
COLGATE PALMOLIVE	301	26	86	15	227
COLOMER	6	5			3
COLOMER ITALY S.P.A.	175	29	30	7	5,644
COMPROF	11		1	3	1
CONTER SPA	27		8		5
CORSAIR INTERNATIONAL LTD	11	2	16		17,742
COTY HUNGARY KFT	1,002	136	726	65	251,020
DAVIDOFF PARFUMS	2				
DELICARTA SPA	44		34	2	81
DERIK U.S.A.	22		1		219
DILEK AKGUL LTD STL	8			3	11
DOETSCH GRETHER	23	2	2	4	3
DOLCE&GABBANA	11		6		3
DR TAYLOR LTD	32		1	3	16
DUNI	2				28
DURACELL					1
EDELSTEIN	1	1			5
ELICELL SRL					7
ELIZABETH ARDEN	1				3
EMANUELA BIFFOLI	4				
ENERGO TRADE DOO					1,183
ERCOUL COZMETICS	192	68	132	10	3,407
EUROCOSMESI	4		6	1	7
EUROITALIA	7				
EUROPAK					2
EUROPROSANI S.P.A.	522				12,611
EUROSALON CG DOO	16			1	3
FAIRNESS	13	1	8	1	10
FAO COSMETICS					196
FARMALOGIST DOO	2				
FENIX	15				2,939

Picture 4.3 Analysis of sold quantities of products according to producers, shops and years

	APRIL	AUGUST	DECEMBER	FEBRUARY	JANUARY	JULY	JUNE	MARCH	MAY	NOVEMBER	OCTOBER	SEPTEMBER
Centralni	36,378.74	61,077.90	59,214.17	42,402.02	32,270.02	61,489.70	62,120.75	50,883.23	59,659.00	48,221.09	60,265.09	58,513.51
CENTRALNI MAGACIN	34,939.22	61,017.66	52,304.58	41,073.33	32,165.27	60,999.49	61,584.35	49,226.51	59,343.62	47,812.68	59,742.79	58,270.55
COSMETICS MARKET 4 NIKŠIĆ			362.25					487.69				31.99
COSMETICS-MARKET 2 PODGORICA	1,439.53	60.25	6,547.34	36.95		490.21	536.41	1,169.02	315.38	408.42	490.32	242.96
MONTEFARM KONSIGNACIJA				1,291.74	104.75							
Juzni	242.30	39.80	3,862.48			157.80	31.33	947.57	109.21		70.20	289.04
COSMETICS-MARKET 1 BUDVA	242.30	39.80	3,862.48			157.80	31.33	947.57	109.21		70.20	289.04
Sjeverni	705.47	712.79	4,068.27	890.83	836.34	1,014.19	840.68	836.23	889.21	1,023.01	1,155.97	1,115.34
COSMETICS MARKET 5 B.POLJE			1,163.29									
COSMETICS-MARKET 3 BERANE	705.47	712.79	2,904.98	890.83	836.34	1,014.19	840.68	836.23	889.21	1,023.01	1,155.97	1,115.34

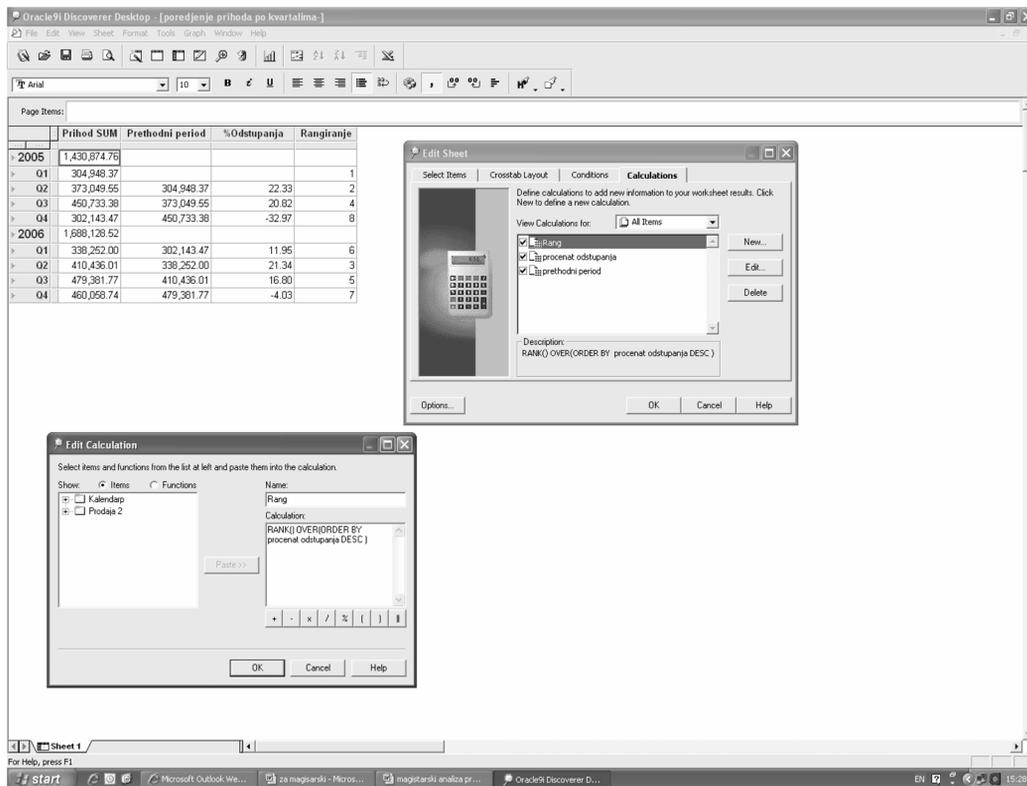
Picture 4.4 Analysis of profit according to months and shops in selected years

	2005	2006	2007
IN CO DOO		12.33	
KAMELIA KTR	153.14	412.96	
KISS STR		52.66	
KORAC VALENTINA		42.92	
KOVACEVIC ANA	2.39		
KUCA HEMJJE DOO	124.15	210.97	
LAURUS KOVACEVIC DOO APOTEKA	26.63		
LEKIC ANGEL DOO	76.73	6.43	
LEKOFARM IVANOVIC OD APOTEKA	4.84		
LISCA-M S.T.R.		36.90	
MARTEX DOO		5.09	
MEDITAS DOO	621.34	946.27	
MIL POP DOO	1,093.37	2,851.38	
MONTEPANO DOO	4.30	34.49	
MPM DOO	153.43	1,054.26	
ORTUS DOO	199.28	220.68	
PANACEJA DOO	22.46	17.79	
PLUS COMMERCE DOO	189.44	74.10	
PRAJD DOO	102.09	75.15	
RAZNATOVIC AD PODGORICA TPC	10.75		
ROSAKS-TRADE DOO		24.44	
RUDOVIC MILENA		35.29	
SLANA DOO	74.69	72.52	
STUDENTSKA ZADRUGA PODGORICA	23.33		
TAAL DOO	6.92	4.12	
TAM KOMERC DOO	69.12		
VENCOR DOO	6.56		
VIVAK DOO	38.41	9.46	
VOLI TRADE DOO	13.68	10.57	

Picture 4.5 Comparative analysis of profit according to years, product groups and customers

	NIKSIC			POGORICA			COSMETICS MARKET 2 PODGORIC			MONTEFARM KONSIGNACIJA		
	Profit SUM	Prihod SUM	Trosak SUM	Profit SUM	Prihod SUM	Trosak SUM	Profit SUM	Prihod SUM	Trosak SUM	Profit SUM	Prihod SUM	Trosak SUM
Deo krema				497.38	1,253.50	756.12	21.27	53.30	32.03			
Deo roll on muski				4,073.29	7,945.68	3,872.40	6.51	16.71	10.21			
Deo roll on zenski	2.51	8.75	6.24	4,989.95	10,896.40	5,697.35	56.39	97.37	61.98			
Deo sprej muski	3.89	10.77	6.88	14,638.62	34,300.59	19,461.97	23.66	67.00	63.34			
Deo sprej unisex	2.50	8.19	5.69	196.08	524.63	326.65	6.42	19.61	13.19			
Deo sprej zenski	21.11	67.72	46.61	6,328.12	14,649.55	8,321.43	61.79	219.43	137.64			
Deo stik muski	4.32	15.71	11.39	732.53	1,467.84	756.32	27.07	79.53	52.46			
Deo stik zenski	6.64	24.17	17.53	0.64	4.29	3.65	23.78	88.29	64.51			
Deplj krema decolorante				1,381.76	3,180.14	1,798.37	1.64	3.56	1.92			
Deplj krema	0.98	2.20	1.22	6,453.26	22,197.37	13,744.11	6.91	25.50	18.59	101.95	250.75	148.80
Deplj pjana				667.17	1,233.94	786.77	6.55	12.60	6.05			
Deplj trake	2.13	3.65	1.52	35,985.99	69,419.73	32,433.74	33.89	69.74	25.85	391.70	777.23	385.53
Deplj voskovi hladni i topli				1,391.46	3,647.39	2,256.93	1.21	9.92	8.71			
Deterdženti za rublje				7.57	32.88	25.31						
Dječije carape				37.68	86.42	48.74	6.88	14.93	8.05			
Dječije haljine	5.61	12.46	6.85	130.59	304.86	254.28	17.45	39.65	22.20			
Dječije kupa				780.54	2,109.00	1,328.96				4.38	8.53	4.15
Dječije ostale kozmetika							2.48	6.60	6.12			
Dječije mlijeko				79.61	216.65	137.04						
Dječije balzam				291.80	789.74	497.94	1.01	2.12	1.11			
Dječije šampon	1.41	3.84	2.43	3,245.94	8,570.95	5,224.01	1.04	2.12	1.08			
Dječije sapun				253.67	657.21	403.63						
Dječije setovi				16.53	38.79	22.35						
Dječije ulošci	0.46	1.74	1.28	3,118.83	9,758.77	6,639.95	14.27	49.89	35.62			
Dječije za aparate				-159.41	649.75	507.16						
Farba sa hidrogenom standard	12.75	32.72	19.97	17,263.85	40,147.30	22,883.45	374.10	1,369.17	995.07			
Farbe decoloranti				305.87	702.98	397.11	3.39	11.29	7.90			
Farbe za kosu				5,657.63	19,349.95	13,692.22	119.21	399.87	280.66			
Flavici				3,867.55	7,943.95	4,076.40	2.80	6.59	3.79			
Gel protiv komaraca				602.74	1,463.39	860.55						
Gel za ciscenje lica				455.53	1,193.44	737.91	21.40	77.75	56.35			
Gelovi za kosu				6,147.56	16,468.77	10,321.22	62.60	181.13	118.53			
Glodalice				1,187.57	2,458.09	1,270.52	3.45	6.05	2.60			
Gmizoci mositi				11.88	33.52	21.64						
Hidrogen i blani				1,242.47	3,591.52	2,349.05	34.46	108.27	73.81			
Higijena odjece i obuće							2.37	7.86	5.49			
Higijenske gacice za inkontinenciju				515.05	1,607.00	1,091.95						

Picture 4.6 Analysis of income, profit, cost per product, shop, region and year



Picture 4.7 Analysis of profit by quarters

The screenshot shows the Oracle9i Discoverer Desktop interface with a pivot table titled "Prihod po proizvodima po mjesecima". The table shows monthly revenue (Prihod) for various product categories from April to September for the year 2005. The categories include Ogrlice, Olovka za nokte, Olovka za obrve, Olovka za oci, Olovka za usne, Omeksivac rublja, Ostali bebi proizvodi, Ostali proizvodi od tekstila, Ostali proizvodi za lice, Ostali proizvodi za manikir, Ostali proizvodi za pedikir, Ostali proizvodi za trudnice, Ostali proizvodi za uljepšavanje, Osvježivac daha, Pakovanja i maske za kosu, Parfem - setovi, Parfemi, Parfim after shave, Parfimisana miješka i losioni, Parfimisani deo sprej, Parfimisani rolioni i stikovi, Parfimisani tus gel, Pelene jumbo, Pelene maxi, Pelene midi, Pelene mini, Pelene za inkontinenciju, Pincete, Pjena, gel i krema za brljanje, Pjena za održ. higijene seren., Plazni program, Podloge za nokte, Police reklamne, Pomada za olaksavanje disanja, and Posuda za farbanje.

	APRIL	AUGUST	DECEMBER	FEBRUARY	JANUARY	JULY	JUNE	MARCH	MAY	NOVEMBER	OCTOBER	SEPTEMBER
	Prihod											
Ogrlice		100.08	18.50	51.16	118.79			25.14		0.05	0.08	0.19
Olovka za nokte	25.75	31.51	12.58		8.81	20.03	47.56	22.14	27.60	15.86	11.45	11.22
Olovka za obrve	78.68	146.20	93.26	42.28	47.00	92.55	59.49	84.09	129.67	93.40	105.65	65.67
Olovka za oci	1,002.86	1,854.30	1,662.59	872.80	1,216.07	1,537.33	1,635.83	1,537.37	1,564.04	1,428.32	1,438.36	1,295.23
Olovka za usne	722.65	1,111.31	869.45	617.79	744.90	919.42	1,198.05	1,033.69	1,033.39	905.43	836.08	904.10
Omeksivac rublja										72.65	425.75	92.70
Ostali bebi proizvodi	785.11	925.70	597.67	403.95	518.64	1,144.65	1,247.23	1,836.02	1,091.80	557.18	1,196.97	1,090.92
Ostali proizvodi od tekstila			65.05							8.31	36.92	
Ostali proizvodi za lice	424.98	490.26	162.00	184.08	255.64	179.24	307.37	455.37	288.53	225.22	349.39	721.73
Ostali proizvodi za manikir									4.46			
Ostali proizvodi za pedikir			0.48									
Ostali proizvodi za trudnice	12.77	49.16	17.47	115.03	44.34	17.03	1.40	62.52	55.47	8.60	8.60	118.31
Ostali proizvodi za uljepšavanje											0.88	0.88
Osvježivac daha	49.69		76.79	46.54	9.96			44.75	13.55	67.33	17.90	
Pakovanja i maske za kosu	19.66	152.03	350.43		26.86	31.12		28.66	61.87	284.80	63.00	103.92
Parfem - setovi	344.46	146.68	778.13	515.97	171.99	98.28	59.69	842.26	156.51	1,288.91	3,186.00	56.51
Parfemi	1,588.43	3,330.83	4,393.87	962.70	599.72	2,330.61	2,236.34	2,042.56	1,210.12	2,296.19	2,336.49	5,589.01
Parfim after shave	693.84	794.21	640.06	18.40	128.83	188.05	26.15		72.91	149.85	65.74	196.02
Parfimisana miješka i losioni	37.70	270.59	198.26	16.15	26.99	327.87	317.09	124.20	132.90	103.63	66.86	308.47
Parfimisani deo sprej	293.30	353.01	431.90	43.24	26.42	469.02	534.53	156.73	136.08	264.59	401.42	811.58
Parfimisani rolioni i stikovi	186.91	216.76	83.51	301.39		43.88	2.25	19.66	20.85	37.57	64.58	564.48
Parfimisani tus gel	362.40	344.19	230.74	98.96	38.08	156.28	210.32		83.91	99.29	115.04	445.46
Pelene jumbo	440.64	730.10	365.56	302.26	329.14	20.02	580.00	540.07	715.86	300.09	387.03	449.10
Pelene maxi	356.98	670.24	933.11	612.52	491.97	493.46	512.36	765.81	405.42	567.38	224.72	532.45
Pelene midi	131.25	130.21	80.52	167.54	249.81	150.09	145.86	111.02	88.06	233.45	41.10	91.13
Pelene mini	69.28	69.42	62.69	69.06		106.58	100.33	91.05	59.03	134.17	40.99	
Pelene za inkontinenciju	3,237.42	3,807.61	5,773.14	3,500.91	4,643.76	3,236.55	3,435.56	5,701.20	2,889.82	3,740.57	3,685.33	3,918.90
Pincete		1,786.69	502.11			1,484.49	738.94	444.57	2,950.72	477.49	533.60	1,614.04
Pjena, gel i krema za brljanje	454.87	1,000.64	453.08	31.01	12.40	321.77	46.62	719.45	22.99	344.55	417.02	514.04
Pjena za održ. higijene seren.	44.05	8.88		20.63	26.64	26.11	26.37	70.78	14.62		47.36	11.84
Plazni program			4.60			94.36						
Podloge za nokte	141.68	390.23	423.39	142.11	70.91	544.82	504.87	218.84	313.81	313.59	379.12	200.06
Police reklamne				0.00		0.01		0.00				
Pomada za olaksavanje disanja	2.63	10.53		42.04	15.80	7.90	5.27	21.06	23.69			
Posuda za farbanje			1.23									2.46

Picture 4.8 Analysis of profit according to months and products in selected years 1

	APRIL	AUGUST	DECEMBER	FEBRUARY	JANUARY	JULY	JUNE	MARCH	MAY	NOVEMBER	OCTOBER	SEPTEMBER
	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod	Prihod
Set za manikir			3.95	63.07	147.17			168.20				
Setovi dekorativne	120.86	718.97	627.34	340.03	71.37	268.67	113.37	1,327.70	482.15	306.21	111.93	421.37
Setovi koz. muski	2,322.42	8,170.33	2,960.31	5,861.95	2,773.17	3,301.10	2,800.74	3,265.83	2,512.58	2,869.94	3,635.49	6,505.98
Setovi koz. zenski	926.77	2,315.63	939.19	4,590.09	1,684.67	1,305.28	1,195.66	4,908.52	1,518.31	571.03	1,218.59	2,666.80
Sir gauda 48%		8,977.51				11,458.14	3,736.21					
Sirup na bazi propolisa	101.32	50.37	29.98	105.59	82.31	78.39	35.28	86.23	66.40	77.61	70.55	31.00
Sjaj za oci	101.87	167.60	263.04	50.50	29.66	185.04	356.40	9.50	203.93	76.88	10.42	41.75
Sjaj za tijelo	621.50					8.40			8.66			
Sjaj za usne	1,518.62	2,003.73	1,875.03	336.67	2,238.06	3,082.10	1,956.15	2,261.59	1,561.36	1,333.93	1,560.56	1,464.60
Sjenka	1,260.62	1,672.82	1,332.50	952.24	1,248.45	1,523.62	1,180.21	1,455.15	1,374.67	959.16	670.22	728.43
Snale klik klik i ostale		8.23	2.69	7.75				12.10	1.80			6.50
Solje i case	376.06	569.64	430.25	256.11	209.83	861.80	581.26	461.12	418.03	285.60	516.03	950.78
Spirale i stapjaci za komarce		25.68				44.23	216.45		5.56			7.25
Sprej na bazi propolisa	6.65				16.61			13.29	9.97			
Sprej protiv komaraca	9.36	694.95	2.98			499.82	352.49		189.68	10.67	5.18	220.07
Stapjaci za sminku		8.17	6.81			7.02			140.02			3.50
Stapjaci za usni	786.20	1,098.26	411.52	555.13	71.25	902.25	739.13	1,574.60	969.64	189.18	215.74	603.01
Stik protiv komaraca	9.01	182.01				563.87	342.25		104.34			
Stipaljka		89.62	114.00	8.75		16.22		14.09	14.09	10.98		19.04
Sumeci vitamini	1,266.07	9.24		876.84	221.46	7.29	584.73	1,648.49	1,077.75			
Sun krema	188.12	167.69	4.96			774.69	1,553.89	126.39	186.70			21.76
Sun mlijeko	23.38	552.55				252.70	3,240.00	819.51				49.73
Sun proizvodj posle suncanja		226.82	4.46			875.98	469.90		105.66			
Sun proizvodj za samotamjenje	62.97		10.08			137.46	311.88	28.14	64.26	19.31	8.54	
Sun stik	124.11	25.62	12.34			75.89	37.75		25.04			12.34
Sun ulje		74.59	3.33			285.65	280.54		86.31			13.16
Sundjeni i mreze za kupanje			3.38	17.59	28.63		34.57	2.09	11.72			
Sundjeni za šminku			1.72									2.54
Švičice			0.80							0.65		
Tablete i tecna punjenja komarci		40.11	6.63			49.12	298.63		28.85			
Tamponi			15.00									
Tonik za lice	345.21	840.60	382.36	289.96	269.74	310.52	224.18	455.98	509.76	431.62	418.75	406.26
Toplomjeni	283.11	105.10	56.78	16.70	300.97	175.30	9.72	914.70	128.39	245.87	512.78	
Torbe i tasne			26.92	17.95								
Traka		229.36	141.53	39.29	30.57	71.93	1.73	5.31	58.87	39.61	3.12	23.49
Tufen	674.45	856.80	396.27	267.77	63.85	489.74	722.56	1,447.49	994.69	474.15	766.96	601.12
Turpije	16.38	119.86	46.49	10.35	2.07	130.22	57.92	10.59	201.47	51.52	50.53	138.00
Turpije za pete	24.06	24.06	12.03	6.01	3.01	180.03	107.98	21.05	47.39		21.05	74.90

Picture 4.9 Analysis of profit according to months and products in selected years 2

These analyses can clearly tell the acquisition department about periods when it is pointless to purchase a particular product or when they should focus on getting new stocks. This is particularly important for products with short expiry date.

5. CONCLUSION

Using business intelligence tools enables us to collect available internal and significant external data in order to transform them into useful information that can help business users make their decisions. Business intelligence systems are focused on improving information access and distribution capabilities, both for those who make and for those who use such systems.

Data based on use of business intelligence tools provide a trade company with an opportunity to identify not only advantages but also problems. Therefore the company can deal with causes in a timely manner instead of having to deal with consequences.

REFERENCES:

- [1] Balaban N., Ristić Ž.: Poslovna inteligencija, Ekonomski fakultet, Subotica, 2006
- [2] Ćirić, B.: Poslovna inteligencija, Data status, Beograd, 2006
- [3] Đukić, S., Model sistema poslovne inteligencije za analizu prodaje, magistarski rad, Ekonomski fakultet, Podgorica
- [4] Oracle Warehouse Builder User's Guide 10g Release 1 (10.1), PDF version,
- [5] Oracle Business Intelligence Discoverer Administration Guide, Release 10g, PDF version
- [6] Kaščelan, Lj., Kreiranje OLAP modela u Oracle Discoverer-u, INFO-M, Br. 13/2005, str. 18-22

Pluralism in Creative Organizational Development Management

UDC 005.342:005.412

Prof. dr **Slavica P. Petrović**

Faculty of Economics, University of Kragujevac, e-mail: pslavica@kg.ac.yu

XI International Symposium **SymOrg 2008**. 10th-13th. September 2008. Belgrade, Serbia

Pluralism, in the broadest sense, can be understood, on one hand, as the appreciation of different perceptions and interpretations of management problem situations in organizations, and, on the other hand, as a combined use of various methodologies, methods, models, techniques in problem situations structuring and problem solving. Initially determined in this way, pluralism should be treated as a research area that is specially significant for organizational development management, in theoretical, methodological and applicable senses.

A relevant break-through is made in dealing with pluralism in systems thinking and systems practice. In the first place, the important result of confronting the different system conceptualizations of organizational problem areas is the powerful Systems movement. At the same time, systems thinking has shown a great potential for fruitfully linking the theory with practice. Namely, in order to understand a management problem situation in a proper way, and to intervene in such situation effectively and efficiently, systems thinking, through employing the valuable contributions of social sciences, tries to support a variety of perspectives on the management problem situation under consideration. Also, systems thinking, through the combined use of methodologies for problem situations structuring, attempts to creatively manage the interventions in organizations. System research tries to improve pluralistic practice in organizations by continual thinking about relevant implications of pluralism at a theoretical level.

In order to identify the possibilities of founding the systems thinking on pluralism and to determine the usefulness of systems practice in organizations when they are managed by means of pluralism, it is necessary: a) to examine the relationship between pluralism, as a special developmental strategy of systems thinking, and strategies of isolationism, imperialism and pragmatism, and b) to consider the basic pluralistic systemic theoretical-methodological and applicable developments – System of Systems Methodologies, Total Systems Intervention and Multimethodology.

1. Introduction

Broadly speaking, pluralism in organizational development management should be understood as:

- a) *appreciation of different perceptions and interpretations* of the management problem situations under consideration, and
- b) an appropriate *combined use of various methodologies, methods, models, and techniques* in structuring the management problem situations and problem solving.

Initially defined in this way, pluralism is obviously a distinctive problem area, relevant in terms of both theory, methodology, and application.

The key reasons for a broad, well founded study of pluralism in the modern *Systems Science* and *Management Science* are numerous and varied [6, 2000, pp. 377 - 378]. Primarily, it is a well known fact that traditional approaches have become the issue of much criticism in various applied disciplines. In the systems thinking, in organizational theory, and in classic operational research, the old, orthodox approaches have become the issue of justified challenge, the new perspectives being opened in the paradigmatic sense. The relations be-

tween different approaches to the development of each particular discipline are the topic of special study. Challenging totalizing discourses that claim to command the truth and generating conditions for the emergence of respective relativism, appears as special support to research into pluralism. Besides, from the practitioners' point of view, pluralism apparently becomes indispensable in the processes of creative management of the development of modern organizations.

An important breakthrough has been made in the systems thinking and practice into the study of pluralism. In the first place, through the conflict among various systemic conceptualizations of relevant organizational problem areas, the *Systems movement* came out stronger. Simultaneously, systems thinking displayed a remarkable potential for a reasoned and useful linking of theory and practice.

Making use of respective contributions of social sciences, systems thinking tries to support a certain *variability of standpoint* on a complex and manifold management problem situation under consideration that we wish to apprehend and effectively and efficiently inter-

vene into. Furthermore, systems thinking applies a *combined use of methodologies* of management problem situations structuring to creatively conduct interventions in complex and dynamic organizations. Systems thinking tries to improve pluralistic practice through reasoning on the implications of pluralism on a theoretical level.

Dealing with pluralism in purposeful managing the relevant problem areas in organizations means:

- analysing the relationship between pluralism as a distinctive *Management Science* development strategy, that is, systems thinking, and the strategies of isolationism, imperialism and pragmatism, and
- analysing basic pluralistically-systemic theoretical, methodological and applicable developments.

2. Pluralistic strategy of systemic thinking and practice development

In defining the possibilities of using pluralism as basis to establish systems thinking and in determining the benefit the systems practices may have in organizations if managed through pluralism, it is necessary, in the first place, to analyse the relationship between *pluralism* as a distinctive strategy of systems thinking development and the *isolationism*, *imperialism* and *pragmatism* strategies.

The efforts to determine the nature of pluralism in the systems area and to find out whether pluralism is the best practice of improving systems thinking stemmed, on one hand, from a certain lack of trust in the success of the traditional Management Science (MS), and, on the other hand, from an evident development of Organizational cybernetics, the *soft* systems approaches and the critically-systemic alternatives to the orthodox traditional MS. Each of the mentioned theoretical-methodological alternatives was claimed to significantly contribute to the building of MS. Efforts were also made to investigate into how the relationship between the traditional MS and these alternative theoretical-methodological developments can be best explained scientifically and used in such a way so that MS should be most fruitfully applied in organizations and in the society. As regards the above mentioned, the following four MS *developmental strategies* emerged: isolationism, imperialism, pragmatism and pluralism [5, 1995, pp. 311 - 316].

The strategy of **isolationism** is supposed to result into the presence of various trends in MS, the trends that develop independently, on the bases of their own hypotheses, and with a minimum interaction. The promoters of isolationism deem their MS approach to be

self-sufficient. They believe that there is nothing to learn from other perspectives, which are considered useless. In such circumstances, the attempts of building the ideas of alternative methodological tendencies into a certain preferential position might weaken the given position, therefore they are taken as a serious threat. The isolationists are especially powerful in the traditional MS and in the Organizational cybernetics.

The *paradigmatic incompatibility*¹ can be quoted as supportive to isolationistic strategy. There are suggestions that isolationism should be abandoned since it disintegrates MS as a scientific discipline, prevents establishing purposeful relationships of different methodological tendencies, and discredits the profession with clients who do not believe that one method is enough to solve all the problems.

The **imperialistic** strategy has it that one MS approach is superior to its other methodological trends, capable of providing adequate premises for the development of MS as a distinct scientific discipline. It is simultaneously willing to incorporate certain aspects of other methodological trends, provided that they can, in terms of favoured approach, be useful and fortifying. The knowledge gained from other methodological developments will be integrated into the theoretical-methodological apparatus of the favoured approach as long as these do not endanger its key principles. The representatives of the imperialistic strategy believe that they can explain the presence of alternative approaches, as well as analyse the limited sphere of their use, in the category of the approach they consider to be the leading one. Especially powerful imperialistic aspirations are identified in the *soft* systems thinking (*hard* systems thinking is often taken to be a special case of *soft* systems thinking) [1, 1985, pp. 757 - 767] and Organizational cybernetics.

This MS developmental strategy of was abandoned since, in order to be applicable within any other paradigm, the methodologies and methods developed to function in one paradigm have to be “denaturalised“, that is, deprived of their key determinants, therefore the full potential available for MS cannot be realized. At the same time, the imperialistic scenario of MS development is considered to be feasible if broader, social impacts favour one approach over certain other methodological alternatives, endangering their chances to be applied.

¹ As the *paradigm* commonly means the apprehension of the world accepted by the scientific community, that is, a set of ideas, hypotheses, beliefs that lead its scientific activity, the *incompatibility of paradigms* could be presented in the following way: groups relying on different paradigms, when looking from the same point in the same direction, see different things [10, 1970, p. 150].

The **pragmatist** strategy develops the MS joining the best elements of trends that seem to even contradict each other, in accord with the criterion of practical applicability. The pragmatists do not bother to take “artificial” theoretical distinctions into consideration. They concentrate upon building an appropriate “collection of tools” in which the methods and techniques are taken from different MS trends and prepared to be jointly used in the course of problem solving, on condition the problem situation under consideration justifies the application of a given set of methods and techniques. The selection of methods and techniques, as well as the entire procedure, are deemed to be justified as measured by the results obtained in practice. The appeal of the pragmatist option is evident among the representatives of the traditional MS and some *soft* systems thinkers.

This strategy, however, was abandoned because it failed to support the development of MS as a distinct scientific discipline. Theory, which the representatives of the pragmatist strategy try to avoid, is necessary to explain why certain methods are successful, while others are not, that is, to enable us to learn from experience and to be in a position to pass the lessons learned to others. Besides, pragmatism is especially dangerous in the social field, as it may result in errors to be dearly paid for, otherwise possible to avoid by following relevant theories. Also, pragmatism may lead to the application of methods whose implementation is ensured, not because they are most appropriate to the problem situation under consideration, but because they further strengthen the position of the powerful.

The **pluralistic** vision means a continuous presence of a certain variety of trends within the MS. Theoretical, methodological and practical developments will be mutually shaped. It is an accepted fact that different approaches stress different relevant interlinked aspects of the complex and multilayer management problem under consideration. The strengths and weaknesses of the MS trends will be better understood and the field of effective application of each approach must be determined individually. The diversity of theories and methodologies available in the MS is understood not as heralding a crisis in the MS as a scientific discipline, but as expressing an growing competence and effectiveness in a certain variety of management problem situations [18, 2004, pp. 411 – 431].

Contrary to the above analysed options for the MS, the pluralistic strategy is understood as offering excellent chances for a successful development of the MS. As regards the views on the paradigmatic incompatibility, pluralism is, at least in a preliminary manner,

defended by the arguments that different theoretical-methodological MS developments are necessary as a support to different antropologically established cognitive human interests [3, 1972]:

- the **technical** interest in anticipation and control is supported by *hard* and cybernetic approaches,
- the **practical** interest in broadening mutual understanding of relevant stakeholders is supported by *soft* systems approaches, and
- the **emancipatory** interest in relieving the limitations imposed by power relations is supported by critical systems approaches.

Pluralism is considered to offer, as regards the foundations of a traditional MS, the best bases for the (re)construction of the MS as a cohesive discipline and profession.

3. Pluralistic systemic theoretical-methodological and applicable developments

The three basic, relevant formal expressions of the pluralistic systems thinking and practice development may be specified and studied:

- a) *System of Systems Methodologies*,
- b) *Total Systems Intervention*, and
- c) *Multimethodology*.

In the first place, the *System of Systems Methodology* (SiSiM) is a central instrument of the research directed:

- *theoretically*, towards explaining the relationships between varied systemic founded methodologies and
- *practically*, towards identifying the achievement in the application of systems methodologies of management problem situations structuring in different problem contexts in organizations [9, 1984, pp. 473 – 486; 4, 1990, pp. 657 – 668; 7, 2006 a, pp. 868 - 878].

The SiSiM attempts to show that different systems methodologies, relying on different hypotheses on the nature of different ideally-standard management problem contexts, can be understood as an appropriate, scientifically founded and practically beneficial *complementary* set.

The starting point in the building of the SiSiM was the idea that it is possible to develop an ideally-standard matrix of problem context, that may be used to classify systems methodologies in accordance with their key premises on the nature of problem situations.

The two basic dimensions of management problem situations in organizations are the following:

- a) the *system* dimension – defines the nature of the system within which the problems under considerations are located, and
- b) the *participant* dimension – determines the nature of the relations between the participants interested in the management problems situation and its improvement.

The *systems*, within which the management problems are located, are classed in a continuum from relatively simple to extremely complex, according to the following criteria: the number of subsystems, the number and the level of organization of the subsystems interactions, the preliminary determination / the prior lack of determination of the subsystems' properties, deterministic / probabilistic laws in the systems conduct, systems nonevolution / evolution over time, nongenerating / generating the subsystems own objectives, a considerable exclusiveness / openness of the systems as regards the environment. Relatively simple management problems are embraced and expressed by relatively simple systems, while extremely complex management problems situations are represented by complex systems.

In turn, the relations among the *participants* in the management problem situation under consideration

are observed as unitary, pluralistic or forced, in that the criteria for categorization of the participants' relations are the following: existence / non-existence of mutual interests, the level of compatibility / conflict of values and thinking, the level of consensus / lack of consensus on the goals and means, participation / no participation in the problem solving and decision-making processes, acting in accordance with the agreed goals.

The result of a one-off consideration into the specified key dimensions of the management problems situations – systems dimensions and the participant dimensions – is a respective matrix of six basic types of problems contexts in organizations: simple-unitary, complex-unitary, simple-pluralistic, complex-pluralistic, simple-forced, complex-forced.

Identifying the six ideally-standard problems contexts in organizations implies the need for a variety of methodologies of management problems situations structuring, having in mind that crucial differences between the problems contexts are to be reflected in different methodology types. Therefore, the next step in the building of the SiSiM is the linking the existing systems methodologies of problem situations structuring, that is, the management problem solving methods, with defined problem contexts – Figure 1. [16, 2006, p. 350; 17, 2007, p. 214].:

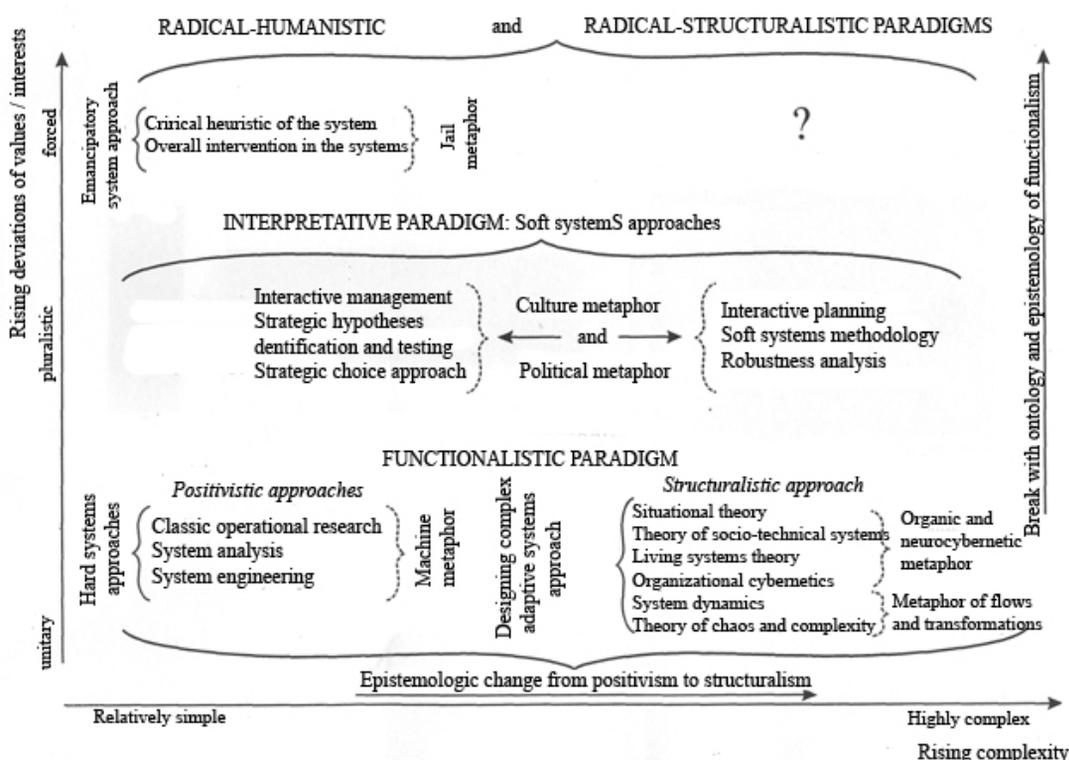


Figure 1. The System of Systems Methodology

Indeed,

- *hard* systems thinking, that is, positivistic-functional approaches, e.g., classic Operational Research, System Analysis, System Engineering, are geared to the problems located within relatively simple-unitary contexts, as it is assumed that it is easy to identify indirect goals in the system under consideration, and that it can be modelled mathematically;
- Socio-technical and Situational Approaches, Systems Dynamics, Organizational Cybernetics, Theory and Methodology of Complexity as structuralist-functional approaches to designing complex adaptive systems are associated with the complex-unitary contexts, as they are deliberately focused upon understanding problem situations as extremely complex systems;
- Different *soft* systems approaches of the interpretative paradigm of systems thinking, e.g., Identifying and Testing of strategic hypotheses, the Interactive Management, Strategic Choice Approach, the Methodology of *Soft* Systems, Interactive Planning, Robustness Analysis, the Development and Analysis of Strategic Options, are identified with simple-pluralistic and complex-pluralistic contexts;
- The forced problem contexts correspond with emancipatory systems approaches, e.g., the Critical Heuristics of the Systems, the Synergy Integration of the Team, and certain more recent post-modernist methodological developments.

The developed SiSiM brought several important *benefits* in its wake. First and foremost, the SiSiM requires the researchers to determine the methodology that is most adequate to a problem context under consideration, for any management problem situation they deal with. Then, the SiSiM helps understand the difficulties resulting from the application of a problem solving methodological approach that is inadequate to a concrete problem context – for example, in case of applying the Methodology of *soft* systems in forced management problem contexts. Finally, of crucial importance – especially in the long run – is the opening of a new perspective of systems thinking and *Management Science* development. In fact, appreciating the different methodologies as sets of instruments geared to different problem contexts, the SiSiM has offered an adequate method of departing from the debates on Operational Research and systems research in which the various methodologies/methods of problem solving are understood as competitive. An evident breakthrough made by the SiSiM suggested an opportunity to achieve pluralism based on different methodologies

(*hard*, cybernetic, *soft* systems approaches, etc.) developed from *more than one paradigm*.

However, the pluralism incorporated in the SiSiM is implicitly limited to different interventions into the organizational development management. Namely, the application of varied methodologies within one and the same intervention has not been taken into consideration. Another drawback of the SiSiM results from the lack of explicit distinction made between the methodology concept (as regards the entire theory of method application) and the methods or techniques concepts, which in turn results into a lack of flexibility in the use of methods, models, techniques, instruments together with methodology applied. For example, the selection of the Methodology of *Soft* Systems automatically requires the use of various techniques associated with this methodology (“rich images“, CATWOE, etc). In addition to the above said, not much attention is paid to other ways of understanding problem contexts. That is, the problem solver should examine the problem contexts in the light of different appreciations of the world, in order to determine which of the appreciations is most adequate in reflecting the essence of the management problem context he encounters.

A particular, relevant pluralistic theoretical, methodological and applicable development in the *Systems Movement* is represented by the Total Systems Intervention (TSI) [2, 1991, pp. 45 – 60; 6, 2000, pp. 368 – 373; 8, 2006 b, pp. 647 - 657]. Understood as a meta-methodology, the TSI could conduct academic research and counsel practitioners on which methodological approach is most beneficial in problem situations they deal with. The key SiSiM idea that pluralism should be based on different concepts of the management problem situation under consideration and on the use of respective methodologies in combination, is operationalized in the TSI.

As a new approach to planning, designing, problem solving in organizations, and evaluation, the TSI relies on the *critical* systems thinking in a philosophical, or theoretical sense. The basic liabilities of critical systems thinking – primarily identified as:

- critical and social awareness,
- human welfare and emancipation, and
- complementarism at academic and methodological levels

are incorporated into the TSI.

Certain crucial *principles* operationalized in the TSI are:

- Organizations are too complicated to be understood by means of one management model, and

their problems are too complex to be discussed via the so-called prompt identification.

- Organizations and their problems ought to be researched into using a respective rank of systems metaphors.
- Relevant organizational aspects and problems, highlighted by means of metaphors, may be linked with respective systems methodologies for intervention conduct.
- Different systems metaphors and methodologies may be used in a *complementary* manner in order

that varied vital aspects of organizations and their problems be identified and stressed.

- The strengths and weaknesses of systems methodologies can be estimated, and each methodology may be linked to respective organizational problems.
- The TSI develops a system interactive cycle of research. Relevant stakeholders are included in all the phases of the TSI.

The pluralism underlying the TSI is operationalized in each of its three key *phases* – Figure 2. [16, 2006, pp. 526]:

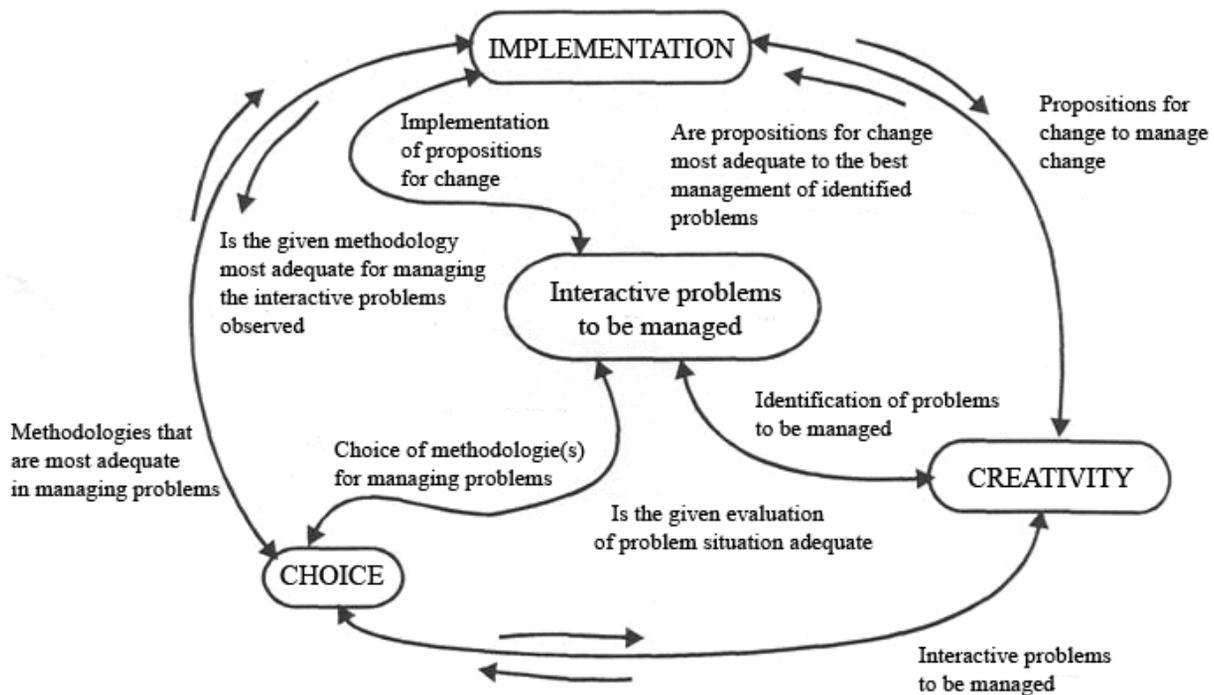


Figure 2. The Total Systems Intervention

The task in the *creativity* phase is to use the systems metaphors as organizing structures to help managers and other stakeholders think creatively of their enterprises. The given organizational metaphors – machinery, organic, brain metaphor, culture metaphor, political system metaphor, physical prison metaphor, the flow and transformation metaphor, the domination instrument metaphor [15, 1997] are focused upon varied relevant aspects of the organization under consideration and upon its problems – the organizational culture, the human and political aspects of organization, etc. Pluralism is introduced as a means to obtain a broader knowledge of management problems situations as well as to incorporate the concepts from alternative paradigms. The use of systems metaphors serves as support the formalization of the process by which a decision maker

analyses management problem contexts in the light of different views of the world. The result of the creativity phase is a set of key issues and problems that becomes the basis for the selection of systems methodology/methodologies of intervention in the organization under consideration.

In the *selection* phase, alongside the metaphor analysis, the SiSiM is used to identify the strengths and weaknesses of prospective candidate-methodologies. The intervention methodology/methodologies is/are selected on the basis of whether their strengths make them adequate for dealing with major organizational issues and problems identified in the creativity phase. The result of the selection phase is the “dominant” methodology which, if necessary, is to be supported by respective “dependent” methodologies.

During the *implementation* phase, the methodology/methodologies selected are applied to devise the required specific suggestions and to implement these, that is, to process the management problems situation in an adequate manner. The result will be a coordinated change caused in such aspects of the organization under consideration that are currently most vital to its effective, efficient, ethical, etc. functioning. The views of the participants as to what the major organizational problem areas are change over time. A dynamic aspect of the TIS means a continual iterative circling about the creativity, selecting and changing implementation, in accordance with the relations between the “dominant” and the “dependent” methodologies.

The TSI, therefore, encourages creative reasoning on the nature of the management problem situation under consideration, and once the decision on the character of the major organizational difficulties has been made, the SIS conducts the manager/researcher towards the type of systems methodology most adequate in creative dealing with the problems identified as major ones. As the intervention using the TSI proceeds, the nature of the problems situation is being analysed, which will be reflected in the selection of the systems methodology/methodologies. Namely, in dealing with highly complex, dynamic, interactive, multilayer management problem situations, the simultaneous identification of different relevant aspects revealed through different perspectives of observing the situation means the use of different systems methodologies in *combination* – one is “dominant” whereas the others are the “support” methodologies.

As a meta-methodology, the TIS has made an important theoretical-methodological and applicable step by making it possible to use the methodologies belonging to different paradigms *in one and the same intervention and in one and the same problem situation*. The TSI tries to devise an adequate, coherent way of managing different methodologies that rely on alternative epistemologic premises. On condition that it is practically impossible to use different methodologies alongside each other in complex problems situations, the TSI assumes that the best way in methodological pluralism is to – over a given time interval – treat one methodology as “dominant”, and the others as “dependent” and that the relationship among the methodologies is to be continually analysed and changed in accordance with new knowledge on the management problem situation under consideration.

A special, vital strength of the TSI is to link:

- pluralism in the creativity phase – research into the management problem situations via *different*

perspectives, that is, different conceptions of the world, with

- pluralism in the selection and implementation phases – an appropriate management of *different combined methodologies*.

If the greatest strength of the TSI was its activity on the meta-methodological level, in order to ensure that methodologies representing different paradigmatic hypotheses can be used combined, the activities on this level also resulted into certain TSI weaknesses. Similarly to the SiSiM, the TSI requires that the “total” methodologies be used, which evidently results into a substantial *lack of flexibility* in the use of methodologies, i.e., their methods, models, and techniques.

A separate, unsolved TSI problem refers to the assumption that it can remain “above paradigms”, selecting methodologies in accordance with a specific human interest they have to meet. The different paradigms, however, relying on the differently understood realities and built into different systems methodologies, provide answers to all human interests, in either an implicit or an explicit way [19, 1993, pp. 53 - 70].

A special systems theoretical, methodological and applicable development, relevant from the point of view of improving pluralism, is the **Multimethodology**. This development endeavours to link sections of methodologies that may come from different paradigms, in theoretically founded and practically useful ways [11, 1997 a, pp. 1 - 20; 12, 1997 b, pp. 407 - 440; 13, 2006, pp. 217 - 240; 14, 1997, pp. 489 - 509].

The basic idea of Multimethodology is that all problem situations involving varied material, social and personal aspects are extremely complex and multidimensional. Therefore, and in order that the intervention in the problem area under consideration be as efficient as possible, it is necessary to: a) identify all its relevant determinants within limited resources, and b) wherever possible, use a certain rank of methodologies (or their sections) that may be founded on different paradigms.

Important for determining the context of the Multimethodology are:

1. the real world *problem situation* under consideration,
2. the *theories and methodologies* available, and
3. the *agents* who make a selection and undertake intervention into a respective problem situation.

Similarly, the overall context of Multimethodology is determined by the *relationships* established between:

- agents and methodologies/techniques,
- agents and problem situation,
- methodologies/techniques and the situation in question.

Important dimensions of these relations can be highlighted via appropriate series of questions focused upon the design of the intervention.

Thus, the *context* of Multimethodology is determined by three conceptual systems and their important interrelations – Figure 3. [12, 1997 b, p. 420].

The conceptual system related to the contents of the *problem situation* under consideration includes three spheres/worlds – material, social, and personal, as well as the language as a medium. The distinctions among these spheres are analytical in character, since there are no separated ontological worlds, nor are they independent on one another.

The conceptual system of *intervention* includes the organizational agents who make selections and act. In the Multimethodology context the agents – with their knowledge, developments, relations with a problem situation under consideration, their personalities, values, obligations – are awarded the central position. Of course, any methodology or conceptual frame of ideas are, in reality, at the disposal of the agents, that is, those who use them in dealing with the problem situation [12, 1997 b, p. 428].

Leaning on the theories and methodologies available, the conceptual system of *intellectual resources* is built up of the following two conceptual frames relevant for methodologies integration:

1. the conceptual frame for *mapping* methodologies, and
2. the conceptual frame for *decomposition* of methodologies.

The conceptual frame for methodology *mapping* is the view that Multimethodology has to be expressed in the categories of two key properties of intervention:

- the multidimensional character of the problem situation under consideration – a material, social, and personal worlds, and
- different types of activities to be undertaken – understanding, analysis, estimation and action taking.

The result of the combining of the two key factors is an analytical grid that can be used to map the characteristics of various methodologies, the goal being the support to their linking together. The logic of this conceptual frame is that the overall intervention in the problem situation under consideration means dealing with three key dimensions of the situation – the material, the social, and the personal ones, via four different phases – apprehending, analysis, estimation, and action taking. Each section of the grid generates questions referring to the specific important aspects of the situation/intervention under consideration, and these aspects have to be identified.

The given conceptual frame can be used in different ways. In the first place, it is possible to examine and evaluate the strengths (and weaknesses) of individual methodologies and map them on the grid in order to find out to what extent they determine relevant issues. Or, alternatively, it is possible to test which methodologies may be helpful in a given specific aspect of intervention.

The conceptual frame of methodology *decomposition* has it that the essence of Multimethodology is to – upon respective decomposition of methodologies (which may be relying on different paradigms) into their methods, techniques, tools – provide for a creative linking of their parts. Therefore, when starting from the idea that the methods/techniques can be taken from one and purposefully applied within another methodology, it is necessary that different methodologies be studied in detail, to find out where the fruitful links can be created. In this process the methodologies must be decomposed systematically so as to identify their separable elements and their functions or purposes. We suggest that it be done in the categories of distinctions among the philosophy principles – why; the methodology phases – what, and techniques – how. In “moving“ one technique from one methodology (and paradigm) to another, its context and interpretation can be altered respectively.

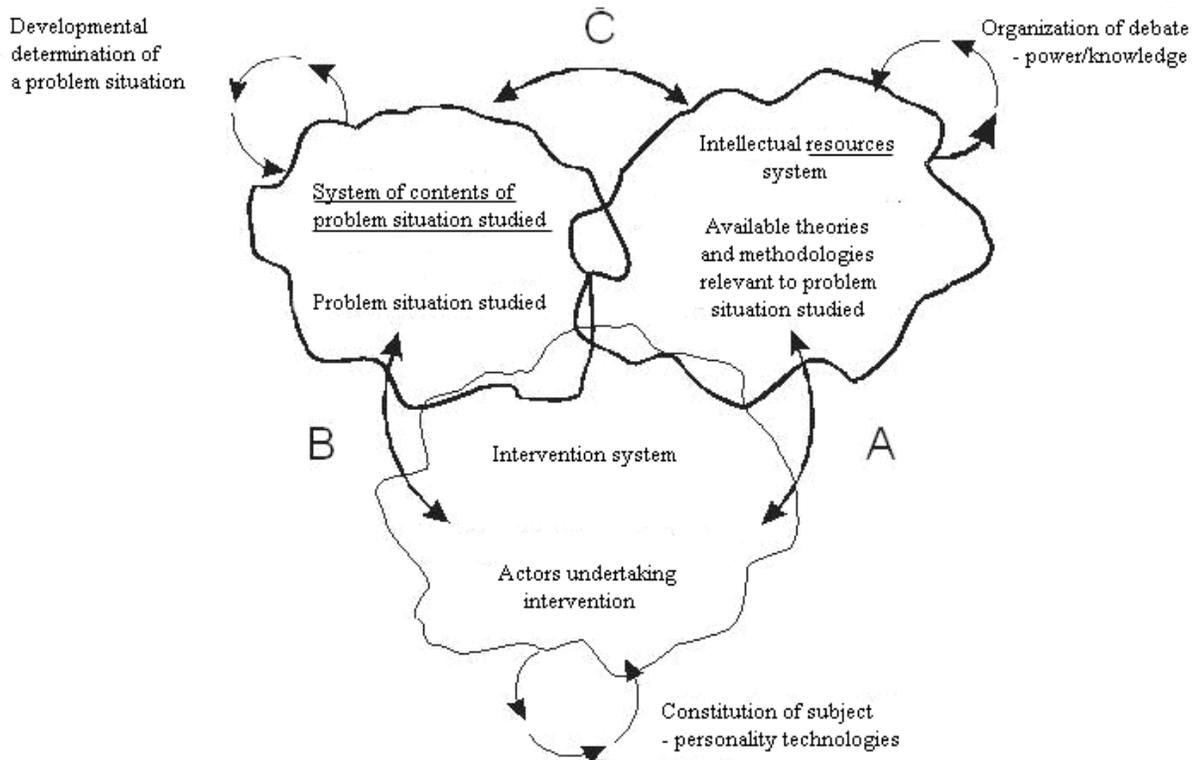


Figure 3. *The Multimethodology context*

The change in the management problem situation under consideration which is generated by the intervention depends on the context, and, by a rule, is rather limited. Critical thinking is carried out through four phases:

- *understanding* problem situation as it is,
- *analysis* as to why it is as it is,
- *estimating* how the situation can be creatively changed, and
- *acting* towards generating change.

Of central importance is to determine the boundaries in the research process. The agents' activities are related to three analytically separate worlds – the material, the social, and the personal ones, that provide the other important dimension for the given concept of critical thinking. Power is an integral part of all the three worlds, and knowledge (including methodologies and meta-methodologies) is undoubtedly linked with power. Interventions in organizational problem situations should be conducted in such a way to provide the conditions for discussion. In other words, the process of critical multimethodology is supposed to be a continual cycle of thinking, judging and acting.

4. Conclusion

With respect for the various perceptions and interpretations of management problem situations and the ef-

forts to ensure an appropriate combined use of different methodologies, methods, models, and techniques in management problem situations structuring and problem solving in organizations, pluralism obviously is a complex research field, relevant in both theoretical, methodological and applicable senses.

Dealing with pluralism in creative organizational development management means, above all, examining the relationship between pluralism as a specific strategy of the *Management Science* development and the strategies of isolationism, imperialism and pragmatism, on one side, as well as taking into consideration the basic pluralistic systemic theoretical, methodological and applicable developments – System of Systems Methodologies, Total Systems Intervention, and Multimethodology, on the other side.

Relying on the presented development of pluralism in systems thinking and the systems practice, a further global consideration of pluralism and its capacities in the creative management of organizational development requires a precise definition of essential aspects in the relations between pluralism and critical systems thinking, an analysis of the key dimensions of paradigmatic variety, a research into the theoretical, methodological and applicable difficulties related to paradigmatic incompatibility. Of special importance is the fact that the future of pluralism in the systems thinking and

practice is directly determined by the manner(s) in which theoretical pluralism can, or should, be processed. Furthermore, any individual development of pluralism (as a meta-paradigm, as a new paradigm, as postmodernism, as disparate pluralism, as critical systems practice) as a particular way of formulating and operationalization of pluralism should be valued from the point of view of the extent to which it enables pluralism to realise its full potential in organizational practice.

Of special importance for the improvement of pluralism in the systems thinking and the systems practice are the experiences in developing pluralism in other disciplines, especially in organizational theory (focus upon combined application of various methods for the purpose of improving our understanding of organizational phenomena), operational research (varied combinations of *soft* methods of operational research, as a rule managed by interpretative paradigm), information systems (complementarism in the use of methodologies), consultation in management (the efforts of management consultants with academic experience to point to the relevance of theoretical supports for the purpose of strengthening pluralistic consulting practice).

BIBLIOGRAPHY

- [1] Checkland, P. B., 1985, From optimizing to learning: a development of systems thinking for the 1990s, *Journal of the Operational Research Society*, Vol. 36, No. 9, pp. 757 - 767.
- [2] Flood, R. L. and Jackson, M. C., 1991, *Creative Problem Solving - Total Systems Intervention*, John Wiley and Sons, Chichester.
- [3] Habermas, J., 1972, *Knowledge and Human Interests*, Heinemann, London.
- [4] Jackson, M. C., 1990, Beyond a system of systems methodologies, *Journal of the Operational Research Society*, Vol. 41, pp. 657 - 668.
- [5] Jackson, M. C., 1995, Present positions and future prospects in Management Science, in: *Understanding the Process of Operational Research - Collected Readings*, Edited by Keys, P., John Wiley and Sons, Chichester, pp. 303 - 321.
- [6] Jackson, M. C., 2000, *Systems Approaches to Management*, Kluwer/Plenum, New York.
- [7] Jackson, M. C., 2006 a, Beyond problem structuring methods: reinventing the future of OR/MS, *Journal of the Operational Research Society*, Vol. 57, pp. 868 - 878.
- [8] Jackson, M. C., 2006 b, Creative Holism: A Critical Systems Approach to Complex Problem Situations, *Systems Research and Behavioral Science*, Vol. 23, No. 5, pp. 647 - 657.
- [9] Jackson, M. C. and Keys, P., 1984, Towards a system of systems methodologies, *Journal of the Operational Research Society*, Vol. 35, pp. 473 - 486.
- [10] Kuhn, T. S., 1970, *The Structure of Scientific Revolutions*, The 2nd edn., University of Chicago Press, Chicago.
- [11] Mingers, J., 1997 a, Multi-paradigm Multimethodology, in: *Multimethodology - The Theory and Practice of Combining Management Science Methodologies*, Edited by Mingers, J. and Gill, A., John Wiley and Sons, Chichester, pp. 1 - 20.
- [12] Mingers, J., 1997 b, Towards Critical Pluralism, in: *Multimethodology - The Theory and Practice of Combining Management Science Methodologies*, Edited by Mingers, J. and Gill, A., John Wiley and Sons, Chichester, pp. 407 - 440.
- [13] Mingers, J., 2006, *Realising Systems Thinking - Knowledge and Action in Management Science*, Springer, New York.
- [14] Mingers, J. C. and Brocklesby, J., 1997, Multimethodology: towards a framework for mixing methodologies, *Omega*, Vol. 25, No. 5, pp. 489 - 509.
- [15] Morgan, G., 1997, *Images of Organization*, SAGE Publications, London.
- [16] Petrović, S. P., 2006, *Sistemska mišljenje, Sistemske metodologije*, Autorsko izdanje, Kragujevac.
- [17] Petrovic, S. P., 2007, Systems Approaches to Solving Practical Problems, The 22nd European Conference on Operational Research - EURO XXII, Prague, Czech Republic, July 8 - 11, 2007, p. 214.
- [18] Petrovic, S. P., 2008, Coherent Pluralism in Managing Problem Situations, The 18th Triennial Conference of the International Federation of Operational Research Societies, IFORS 2008, Sandton, Johannesburg, South Africa, July 13 - 18, 2008, p. 77.
- [19] Schwaninger, M., 2004, Methodologies in Conflict: Achieving Synergies between System Dynamics and Organizational Cybernetics, *Systems Research and Behavioral Science*, Vol. 21, No. 4, pp. 411 - 431.
- [20] Tsoukas, H., 1993, The road to emancipation is through organizational development: a critical evaluation of Total Systems Intervention, *Systems Practice*, Vol. 6, pp. 53 - 70.

The Corporate Social Responsibility and Stakeholder Management

UDC 005.35 ; 347.72.032

dr Biljana Predić¹, mr Maja Ivanović-Djukic²

¹ Faculty of Economics Niš bpredic@ptt.yu

² Faculty of Economics Niš maja.djukic@eknfak.ni.ac.yu

XI International Symposium **SymOrg 2008**. 10th-13th- September 2008. Belgrade, Serbia

Over the past decade, enterprises are put under a strong pressure of different stakeholder groups and there have been a lot of ethical and social problems such as murder crimes, smoking at the workplace, AIDS at the workplace, sexual harassment at the workplace etc. It is for these reasons that managers pay an increasing attention to corporate social responsibility and stakeholder management. At the same time a higher level of corporate social responsibility and ethical behavior towards stakeholders make it possible for the firm to build a high reputation in society, and to acquire a competitive advantage. Therefore the corporate social responsibility and stakeholder management are increasingly becoming the focus of attention.

1. Introduction

The needs for social responsibility are increasingly higher in the modern business environment, making the responsible conduct and relationships with stakeholders the key factors of success. An increasing attention paid to corporate social responsibility has not been a voluntary process. A large number of companies became aware of the need for social responsibility only after they were taken aback by the public reaction to some of their former imprudent acts that shocked the public. The "Nike", for example, faced a strong customers' boycott after the "New York Times" and other media reported on the horrible treatment of workforce in the suppliers' factories in the early 1990s. The decision of the "Shell Oil" company to bury their obsolete oil-refining technology (Brent Spar) into the North Sea faced a strong opposition from the environment protecting organizations and was condemned in a host of articles in international journals in 1995. Such examples are numerous. And so the activities of all types of organizations have recently been under an increasing pressure of the public demand that their activities be conducted in a socially responsible manner [1 pp. 78-94].

This increasing demand for social responsibility was further supported by the globalization process, the multinational companies' expansion and the emergence of numerous ecological problems. Traditionally, the care about the companies' social responsibility was the concern of the Governments of states. With the globalization process the enterprises expanded beyond the national boundaries therefore the manufacturing, sales, payment ... processes do not end in one country and, consequently, the government of that one country does not have an insight into (cannot con-

trol) the company's business. Liberalization of foreign trade has simultaneously resulted into an enormous increase in foreign trade transactions. These transactions caused vast investments and eliminated the financial barriers, thus enhancing the mobility of multinational corporations. As companies expand, the chances that the states monitor and control their work are further reduced. Thus the governments have limited possibilities to monitor and control to what extent the multinational companies observe ethical and legal regulations and standards. It is for these reasons that the multinational companies are expected to exert a much higher level of ethics and social responsibility in their behaviour.

The problems of corporate social responsibility are increasingly visible due to the expansion of global corporations that cause many social problems. It is the corporation's responsibility, then, to solve these problems worldwide. It is also the long-term interest of global companies to solve social problems since this gives them an opportunity to avoid legal limitations in certain countries and build a reputation in the society. Solving social problems comes at a price. By successfully solving social problems and suffering some expenses the company shows it is ahead of its competition. These arguments are especially relevant in a global competitive environment, since, if the company is doing business in a number of countries, it means it will solve social problems in each of them.

Technology development is also responsible for the emergence of social problems. For example, the access to the Internet enables the company to use a less expensive, but more efficient marketing and sales of products and services, however it brings the danger of abusing a lot of information, and this gives rise to the

problem of protection and safety. Companies in the field of biotechnology are faced with ethical and social problems of genetic engineering, cloning, etc. Technology growth does offer more opportunities to the companies, however it burdens them with an ever greater social and ethical responsibility.

Another serious problem that highlights the importance of social responsibility is the emergence of alarming environment-related problems, such as air pollution, acid rains, radioactive waste, ozone layer damage and similar global problems. These incited the socio-economic awareness that made the companies pay more attention to social responsibility, since they directly affect different eco-systems and social welfare. The newly created awareness of the need to solve environmental and social problems made it a must for scientists and company managers to approach the company social responsibility issue in a more serious way.

Regardless of the fact that a higher level of social responsibility means higher costs in the company's business operations, it appears that the company's operations with the regard to the environmental and social needs do not collide with profit making. On the contrary, it may significantly increase its competitive advantage. Investing into social responsibility affects value creation in the company, both directly and indirectly. It is true that investment into elements of environmental protection and philanthropic behaviour means larger short-term expenses to the company, however, in increasing the safety and product quality the company builds positive reputation which has a favourable impact upon a long-term value creation and therefore these issues attract more and more attention. The corporation can build a good reputation only if it is socially responsible. For these reasons the practice of successful companies increasingly stresses the importance of social responsibility, while it becomes a frequent subject of academic study by the scientists from various fields of economics.

2. Social responsibility concepts and stakeholder management development

The corporate social responsibility (CSR) means a serious concern about the impact of the company's activity upon the society. The idea of social responsibility demands that individuals and organizations be aware of the impact of their activities upon the social system as a whole and insists that they act with responsibility in conducting any activity that may affect the system. These ideas on corporate social responsibility are not new, they are present in the mind and in the

practice of the company since the moment it is set up, however, they are expressed differently. The first ideas on social responsibility that theory knows date back into the year 1899, to Andrew Carnegie's "the Gospel of Wealth". He was the first to write about the need that a company help and improve the society and the environment it operates in. In the 1930-1950 period the state's influence becomes greater. The social responsibility at that time is focused on increasing the social welfare of the employees (retirement and insurance plans), their safety, health care, pension plans, etc. [2 pp. 395-403].

Since the 1950s a modern concept of corporate social responsibility is developed in which the key issues refer to moral standards and ethical behaviour such as: product safety, truthful marketing, employees' rights, opportunities for promotion, environment protection, etc. Since the 1960s strong human rights movements and those promoting consumerism, environmentalism, etc. emerge, generating new demands to companies. A general idea was that the one who has great power, should have big responsibility. Hence numerous organizations were invited to act proactively in search of the causes of social problems and finding solutions to them. Many companies became concerned with the safety of their products, environmental protection, providing opportunities and promoting the employees, etc. Such issue of concern was corporate ethical responsibility too. Moreover, the society now expected the company to participate in problem solving on a voluntary basis, regardless of whether it was affected by the problems concerned or not. In 1970s, however, due to a large number of problems (stagflation, inflation and unemployment increase, oil prices rise, greater operational costs in companies partly due to the previously enacted laws on consumers' interests protection and environmental protection) that threaten normal functioning of the company, Milton Friedman returns to the classic interpretation of social responsibility.

Such an attitude was largely criticised since the behaviour directed only towards satisfying one's own interests may harm the others and have a negative impact upon social welfare. A much more complex understanding of social responsibility arises, which says that business should be conducted in such a way that the influences of society be taken into account, therefore the organization is responsible to the society as regards the activities it carries out. One frequently quoted modern approach to social responsibility is the concept introduced by Archie Carroll. He combines various economic, legal, ethical and philanthropic princi-

ples by observing to which extent the company does its duty to the society and creates positive relationships with the stakeholders. The company's key liabilities, according to him, are of economic, legal, ethical and philanthropic nature, which he represents in the form of a pyramid, therefore the social responsibility pyramid is born [3 pp. 36-54].



Figure 1: The Social responsibility pyramid

Source: Archie C.: *Business and Society: Ethics and Stakeholder Management*, South-Western College Publishing, Cincinnati, Ohio, 1966, p. 39.

The social responsibility theory allowed for the stakeholder management concept to develop and become the prevailing one in the 1990s, in the conditions of high uncertainty of business, when the companies become largely dependant on the behaviour, expectations and objectives of a large number of varied interest (stakeholder) groups with whom they establish different relationships and interactions [4, p. 81]. This does not mean that there was no awareness of the presence and impact of interest groups before 1990s. For example, Preston quotes that 4 interest groups were identified in the General Electric Company as early as 1930: customers, employees, shareholders and social community. Their interests had to be taken into consideration since their influence upon the company's successful performance was great [5 pp. 361-375]. Such examples however were scarce in the theory and the practice of management. The earliest serious academic research and explanations of stakeholder management are associated primarily with Edward Freeman, who gives a detailed explanation of the notion of stakeholder, presents certain definitions of stakeholders and offers basic theoretical analyses of stakeholders in his "Strategic Management", published 1984.

According to Freeman, the term stakeholder was first used on the memorandum of the Stanford University, in 1963, and he adopts it in order to warn the management that it was of great importance that they should pay attention to the interests and expectations of those whose influence is not negligible, or who are affected by the company's business operations. Therefore he defines stakeholders in the following way: [6 pp. 364-369]

- Stakeholders are groups whose support help the company survive;
- Stakeholders may be any group or individual that affects or is affected by the performance in the organizational objectives achievement.

A rather detailed explanation of the notion and a definition of stakeholders are supplied by Archie B. Carroll. According to Archie B. Carroll, stakeholders can be defined as individuals, groups or organizations with whom the company interacts or is in the relations of interdependence. He believes that the term "stakeholder" is derived from the term "stockholder", defining the owner of a certain job or an investor. Regardless of the fact that the term "stakeholder" is much broader compared to that of "stockholder" (since besides the stockholders it includes a large number of other individuals and groups concerned with the company's operations and having a certain share in it), the root of the word "stake" that means interest, investment, participation, primarily refers to the shareholders-owners who invested their own assets, who are most interested in the company's business operations and have a certain share in it [3 p.7].

At the same time, however, "stake" (as claim) means a demand, pretending, expectations, search of something. It is clear that the owner or a shareholder expects that the completion of a business operation should mean achieving some of his objectives, since he invested his money into the business. However, there are other individuals that also have certain expectations and demands, who did not invest the money, but some other elements that entitle them to some requirements and expectations (for example, the employees who invest their work, time and energy; then the suppliers who invested the results of their work, the customers who pay for the products; the state that expects that the reason of its existence should be justified and that a certain social need be honoured, etc). They are all stakeholders. In addition to these, there is a host of other definitions and explanations of the term "stakeholder" that differ to a smaller or a larger extent. What is common to all these definitions is that they all view stakeholders as a very numerous and heterogeneous group of individuals and organizations, whose objectives frequently affect and precondition those of the company. In order that the survival and successful performance of the company be ensured it is necessary that they should be well managed. These are the reasons for the emergence of the stakeholder management concept. The concept means managing the company in such a way as to make it possible that the objectives of key stakeholders be achieved, so that

they may have a beneficial influence upon the company's business operations [3 p.81].

3. A need for responsible behaviour of the company

Economy and society are two interrelated factors that are mutually preconditioned. Successful corporations need a sound society: education, health care, equality, productive workforce. Safe products and good working conditions are not only attractive for the customers, but they also reduce internal costs of accidents. An efficient exploitation of land, water, energy and other natural resources enhances business productivity. Effective management, regulations, laws and property rights make the essence of efficiency and innovation. Sound standards and regulations protect both the customers and the competing companies from exploitation. A sound society can be said to offer numerous opportunities to the companies; by increasing the demand for their products, offering productive resources, imposing highly ethical standards, it creates favourable conditions for the companies to do business efficiently and in fair competition conditions on the market. Therefore, by a responsible behaviour towards the society the companies create better business conditions, acquire resources by the transformation of which they create greater value, build higher reputation, and consequently achieve a more favourable competitive position.

The importance of responsible behaviour is further stressed by the following: moral obligations, sustainability, work licence and reputation. The moral appeal tells us that the company is obliged to be a good citizen and do the right things since its activities affect the society both directly and indirectly. Virtually every activity in the value chain affects the society, causing positive or negative effects. When companies are aware of their influence upon the society, the influence may be rather subtle. Sustainability refers to their responsibility towards their natural environment as well as to the political system in the society. Work licence refers to the obligations the company has to meet so that it should be issued a work licence by the state and acquire the support of internal and external stakeholders. And finally, the reputation means that if the company is socially responsible, it will build a more favourable image of itself and of the society, more powerful brands, etc. [1 pp. 78-94].

As the society consists of a large number of interest groups that directly or indirectly affect the company's business operations and whose expectations from the

company are clearly set, the socially responsible behaviour means that the company should meet these expectations of key stakeholders and maintain correct relationships with the other stakeholder groups. Only if the company satisfies the key stakeholders' expectations can it expect to be able to do business effectively, since the achievement of the company goals is preconditioned by the behaviour of its key stakeholders. Andy Neely and Chris Adams depict the relationships between the company and its stakeholders in the following way: according to them, the stakeholders exert a certain influence upon the company's business operations and contribute to its achievements. The stakeholders' influence and the contribution will directly depend on the realization of their goals and their satisfaction with the company's results. Hence the stakeholders' satisfaction and their contribution to the company's business success are mutually preconditioned elements that they present as the bases of the prism. The amount of stakeholders' contribution to the company's success is preconditioned by the strategy, the processes and the company's competences, presented as lateral sides of the prism [7 pp. 7-15]. The graphical presentation of the prism is the following:

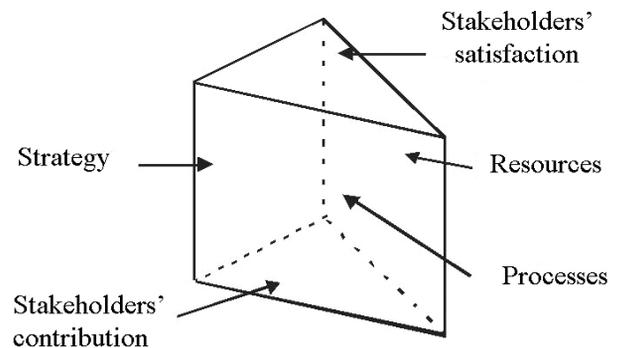


Figure 2: Performance prism

Source: Andy Neely and Chris Adams: *The Performance Prism Perspective*, *Journal of Cost Management*, 1-2/2001, pp. 7-15

Hence, to ensure a positive influence of stakeholders upon the company's business operations it is necessary to identify their objectives (as sources of satisfaction). Then the adequate strategy, processes and resources should be employed to coordinate and reconcile the key stakeholders' objectives to the objectives of the company.

A conclusion can be drawn that a need for responsible behaviour and creating fruitful relationships with key stakeholders is not only a philanthropic one, but is also a precondition for the survival and success of the com-

pany, since the company's success and that of the society are mutually enhanced. Typically, a close relationship between the society and the company operations means a more purposeful employment of company's resources that in turn brings benefit to the society. On the other hand, the company works in a competitive environment that also affects its success in its strategy realisation. Social conditions are the key segment of this context. In creating a strategy, a competitive context has a considerably weaker impact compared to the value chain, but may be of a considerably greater strategic importance for both the company and the society. The competitive context consists of a number of elements [1 pp. 78-94]:

- the quality and quantity of important inputs – material and human resources (e.g. transport infrastructure, etc);
- rules and initiatives that guide the competition (such as the intellectual property protection policy, transparency, safety against corruption, investment incentives, etc.);
- the volume and sophistication of demand, under the impact of such issues as the quality product standards and security, customer rights, fair relations with suppliers, etc.;
- local industries' support, such as providers, equipment and parts manufacturers etc.

Each of the quoted aspects of this context may considerably improve the company's competitive position and trigger a development of a social responsibility programme. For example, a chance of recruitment and hiring experts they need can be a key source of competitive advantage. The expertise and knowledge of the local population largely depend on the local education system, presence of discrimination, level of development of information infrastructure, the information system level, etc. The company's investments into one of these elements bring benefits to the society, and return to the company in the form of higher competitive opportunities. For example, due to the problems in recruiting the programmers with appropriate expertise the "Microsoft Company" started collaboration with the American College Association (which is responsible for the education and training of 45 percent population in the U.S.A.) for the purpose of improving the college curricula and providing technical support to the Association's faculties. A five-year project worth \$50 million has been carried out to modernize the technology used in instruction and improve the knowledge of the lecturers in this field. The aim was to get the students acquainted with the latest achievements and trends in this field as well as to standardize the biographies of IT graduates so that in the

recruitment process for a certain work post their skills should be already outlined. Thus the company brought substantial benefit to the society, and simultaneously provided itself with generations of prospective professionals who are the key value carriers and the source of competitive advantage [1 pp. 78-94].

This and a host of other examples show that there is an increasing demand for social responsibility and that modern companies are increasingly aware of this issue. And, while everybody clearly understands that irresponsible behaviour means great risk, not everybody is clear about what they should do. For these reasons many companies have not undertaken any radical strategic or operational steps but tried to solve the problem introducing only some "cosmetic" improvements (for example, improving their public relations activities, media campaigns, reporting on social responsibility in their annual reports, etc). Hence the measures the companies introduce and the social responsibility programmes vary to a large extent [1 pp. 78-94].

4. Social responsibility incentive measures

While everybody is aware that socially responsible behaviour brings benefits to both the company and the society, not everybody clearly understands what it is that should be done and what should be contained in the social responsibility programmes. One problem is that the issues related to social responsibility are generally associated with the ethics and relativism. The extent to which the companies will meet their obligations towards their stakeholders and support the achievement of their objectives depends on the legal regulations and the ethics of the management of the organization itself. The legislation affects all organizations in the same manner, while the ethics of the management varies from one organization to another, as well as from one management level to another. It is necessary that organizations define the scope of a minimal level of obligations they will always honour to their stakeholders and the society as a whole [8 p. 195].

On one hand, the level of socially responsible behaviour depends on the ethics of the management and the employees in the organization. On the other hand, the issues of social responsibility are not precisely stipulated, therefore one type of behaviour may be deemed responsible and moral by one group of stakeholders, while another group may condemn it as immoral and unethical. A large number of global companies, for example, conduct mass manufacture in the countries where the work force can be recruited cheaply, and where the state regulation is poor, and the environ-



ment protection and human rights standards are low. Foreign direct investments here enormously improve the economic and social development, therefore their behaviour is valued as ethical and socially responsible, due to which they are highly privileged. Then these companies observe legal regulations, pay taxes and honour minimum standards related to work force and environment protection, however, they do not find themselves responsible for social problem solving. They observe the ethical and other standards only to the level that entitles them to economic and social stability in the society in which they do business, and these standards may be by far lower compared to the desired ethical standards of behaviour [3 p. 55].

In order that this problem be solved the issues of social responsibility have to be stipulated precisely and become obligatory for all organizations, the standards of their implementation and the institution to control

their implementation should be established. Some of the key rules every company should observe are the following [3 p.59].

- manufacture and sell products that do not threaten customers' lives;
- avoid polluting water;
- observe the law in all aspects of business operations;
- promote sincerity, honesty, ethical behaviour among the employees;
- do not abuse advertising and commercials;
- grow environmentally-friendly relations;
- protect employees from sexual harassment;
- react promptly to customers' problems;
- provide health care for the employees;
- give away money to charity and education improvement;
- use nuclear-free materials;
- continually upgrade the quality; etc.

Sociological institutions in the form of sociological auditors have been formed or are still being formed in a large number of countries to control and evaluate the level of social responsibility of certain companies. In 1990 the "Domini index" was created in the U.S.A., to measure the organizational social responsibility. It was first implemented by Amy Domini, in 1990, in her analysis of 800 U.S.A. companies which she ranked according to the criteria of product quality, customer relations, results in environment protection standards implementation, philanthropic behaviour, employee relations, etc. [9 p.51].

It is important that simultaneously a legal act (code of ethics) be established to regulate the behaviour of all the employees in the organization towards the stakeholders and the society in general (customers in general, unions, etc.). The code of ethics and the ethical behaviour programme creation is a legal obligation of companies in some countries, meant to promote the level of social responsibility. All the examples quoted are from the practice, whereas various theories stress an increasing importance of social responsibility and its impact upon the change in the manner of corporate behaviour as well as in the behaviour of managers [8 p. 235].

5. CONCLUSION

The awareness of socially responsible behaviour was present as early as the first companies were set up and has been shown since in various forms. In modern business conditions there is a clearly expressed demand for a corporate responsible behaviour. On one hand, numerous problems in the environment (environmental, sociological, etc.) demand that the company be included into problem solving and prevent these problems from getting more serious. On the other hand, a consequence of the globalization in business is that the company's business activities expand beyond the boundaries of one country, therefore the governments are not in a position to control the behaviour of numerous global companies, but insist on improving their social awareness and responsible behaviour.

A higher level of socially responsible behaviour means more expenses for the company to suffer. However, the company's socially responsible behaviour is the basis of good reputation, the loyalty of most profitable customers, of attracting highly talented work force etc., which is a precondition of competitive advantage in modern business conditions. It is for these reasons that in the modern business conditions the companies pay increasing attention to social responsibility.

6. REFERENCE

- [1] Porter M. & Kramer M.: Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility, Harvard Business Review, 8 12/2006.
- [2] Predić B. Djukić M.: "Značaj društvene odgovornosti preduzeća", Ekonomske teme 10/2007. Ekonomski fakultet Niš
- [3] Archie C.: Business and Society: Ethics and Stakeholder Management, South-Western College Publishing, Cincinnati, Ohio, 1996.
- [4] Cooper S.: Shareholder Wealth or Societal Welfare: A Stakeholder perspective, u knjizi Arnold G., Davies M.: Value based Management, Context and Application, John Wiley and Sons, 2000.
- [5] Preston LE: Stakeholder management and corporate performance, 1994. Journal of Behavioral Economics
- [6] Freeman E., Wicks A., Parmar B: Stakeholder Theory and The Corporate Objective Revisited, Organization Science, Vol. 15, No. 3, May-June 2004.
- [7] Neely A., Adams C.: The Performance Prism Perspective, Journal of Cost Management, 1-2/2001
- [8] Johnson G., Scholes K.: Exploring Corporate strategy: Text and Cases, Financial Times Prentice Hall, 2002.
- [9] Pearce J.A. Robinson R.B.: Strategic Management, Formulation, Implementation and Control, McGraw Hill International Editions

Analisis Motivasion of Management CHEMES A. S. HUMENNÉ

UDC 005.32:331.101.3

Miloš Hitka¹, Mária Sirotiaková²

¹Faculty of Wood Sciences and Technologies in Zvolen

²Faculty of Economics in Poprad

XI International Symposium *SymOrg 2008*. 10th-13th- September 2008. Belgrade, Serbia

In this paper we analyze the motivating factors for the company management using the questionnaires. We apply the cluster analysis to divide the employees into similarly motivated and oriented groups. The resulting information concerning motivational factors can be later utilized in creation of a company motivational program..

1. Introduction

Employees' motivation is a topic number one in most companies today. There are never enough employees who achieve excellent job performance so we have to motivate each of them properly. Motivation plays one of the most important roles in a system of company human resources management. Managers from the area of manpower management have to deal with and find a solution to the problem of why some employees work less and why the others are able to achieve excellent results. (www.dieradosveta.sk). To be motivated means more than just to be happy or satisfied at work; motivated people try to do their best – not for somebody else's sake but for themselves. Motivation is a feeling lying somewhere inside a man, something that cannot be enforced. Motivation is in hearts of managers and it means much more than praise for a well done work. (Heller, 2005)

So if we assume that human resources are the basis of the company development we can state that a key to success is the management of human resources. One of the primary tasks of human resources management is to ensure a positive employees' behaviour. By this we mean the behaviour of employees which will lead to a fulfillment of the company strategy and an effective achievement of its goals. Such effective behaviour of employees presupposes their systematic motivation and execution of motivational processes. A lot of different motivational factors affect the employees' motivation. In standard practice the topic of employees' motivation is often undervalued and perceived as something generally valid but not actually required in many companies. Its internal basis and depth is not paid due respect, on one side, and its very frequent utilization is not taken into consideration, on the other side. Despite all these, the emotivation of employees is one of the most significant tasks in the employees' behaviour regulation. (Bajcura, 1985).

2. The objective of the paper

Our aim in this work is to develop an effective system of employees' motivation which would include actual changes and modifications in the area of human resources management and at the same time respond to particular conditions in a company. This system tool of personnel work will provide an opportunity to learn the motivational factors of employees which mostly influence the increase in their work performance. We plan to achieve the above mentioned objective through the survey of motivational factors of employees in CHEMES, a. s. Humenné. We plan to do it using a questionnaires, and then use a cluster analysis to divide employees into similarly motivated and oriented groups (Hitka, 2004). The resulting information concerning motivational factors can be applied in the development of the company program of motivation.

2.1 Characteristics of the current state of motivation in the company

CHEMES, a. s. Humenné plays an important role in its region and is one of the most relevant companies in the area of power industry. According to the data of a yearbook Trend Top 2003, according to its turnover the company occupies the eighth position among the biggest companies of the Prešov region and the eleventh place in the section of the biggest companies of power industry. The company is responsible for the development of the Industrial zone of CHEMES and a town Humenné by energy and services provision.

The basic motivational factors which are currently used are financial factors of different types, education of the employees and social care of the employees. The employees in CHEMES are paid in accordance with the principles of financial remuneration which apply to all the employees of CHEMES a. s. however, they are partially restrictive for the employees paid a contractual wage/salary. All the above mentioned principles are stated and explained in detail in a collective agreement.

Education and training are provided based on the article 141 of the Labour Code and the directions of the managing director concerning planning, execution and documentation of employees education where also requirements for individual levels of managers, specialists and employees education as well as forms of training activities that they are supposed to go through are mentioned.

Within the scope of social care, the plant catering and health care exceed the regulations of the law, in that various types of recreational and sport activities, social assistance in serious cases, financial allowances to support culture, sport and services or recreation are organized and financed.

2.2 Formation of a questionnaire

We have selected a questionnaire as a method to gather information about the state of motivation in CHEMES, a.s., since it allows us to collect a vast amount of information within a short period of time. The questionnaire had two parts. Questions concerning the basic information about the respondents such as their age, sex, education, number of years spent in the company and occupation category were included in the first part. The second part listed thirty motivational factors and the employees were supposed to express their opinion on them from the point of view of the required and the actual state or they could say how they imagine motivation in the company and to what extent they are satisfied with the current state of individual motivational factors in the company. To assess the factors, they had a five grades scale at their dispos-

al and the importance of individual motivational factors and satisfaction with their actual state were listed down from number 5 to 1. The questionnaire had two functions: it provided information about an actual state of motivation in the company and at the same time it included the requirements of employees in this area. Based on this information we were in a position to evaluate the areas in which motivation should be improved as well as the areas in which it is satisfactory.

A target group to find out the state of motivation in the company was a group of workers, supervisors and technical and economic staff (abbreviated to THZ). We handed out the questionnaires to the respondents and we received 123 of them back. We consider this to be a success since the questionnaires were anonymous. From the total number of 123 questionnaires 69 were filled in by workers (from the total number of 157 workers in a division), 37 by THZ (total number of THZ in the company is 145) and 17 by supervisors (from their total number equal to 37). So the percentage representation of individual monitored groups is 33,9 % workers, 25,5 % THZ a 45,9 % supervisors.

3 Results and discussion

3.1 Analysis of motivational factors

Taking the differences into consideration we selected three positions – worker, THZ and supervisor. The analysis was based on the employees' responses to the second part of the questionnaire. As mentioned before the questionnaire contained 30 motivational factors listed in table 1.

Table 1 Analysed motivational factors

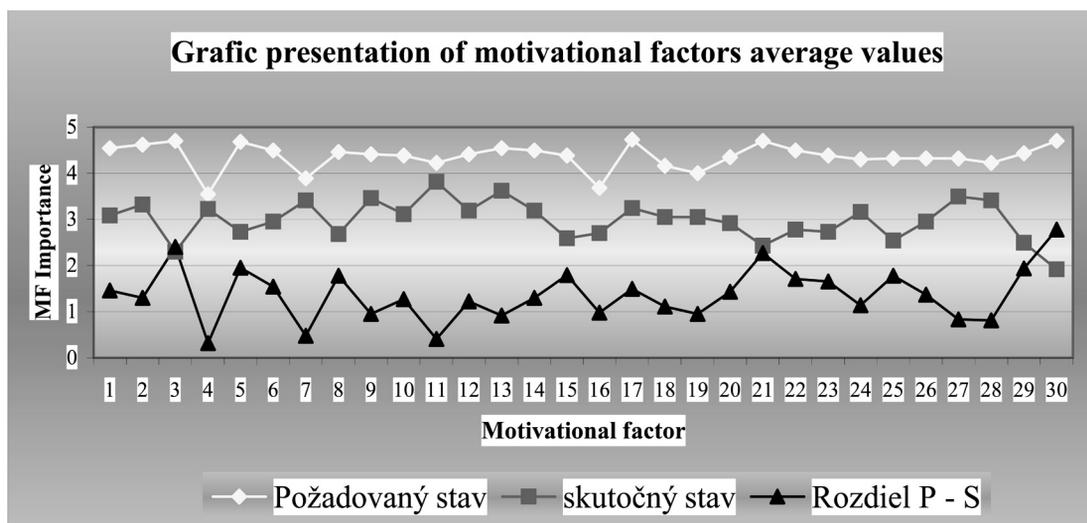
Seq. n.	Motivational factor	Seq. n.	Motivational factor
1.	Atmosphere at place of work	16.	Prestige
2.	Good working group	17.	Attitude of a supervisor
3.	Additional financial remuneration	18.	Individual decision making
4.	Physical intensity of work	19.	Self-realization
5.	Job security	20.	Social benefits
6.	Communication at place of work	21.	Fair assessment of an employee
7.	Trade name	22.	Stress /stress elimination at place of work
8.	Opportunity to utilize own abilities	23.	Mental stress
9.	Scope of employment and its type	24.	Company vision
10.	Acquaintance with working result	25.	Region development
11.	Working hours	26.	Education and personal development
12.	Working environment	27.	Relation of the company towards environment
13.	Working output	28.	Free time
14.	Working process	29.	Acknowledgement
15.	Powers	30.	Basic pay

The respondents assessed the required and the actually perceived level of motivation of individual motivational factors by the means of a grade scale from one to five. For the three groups we calculated the average values of all motivational factors and a difference between a required and actual state. Graphs 1 and 2 present the required and the actual state of motivation and a difference between them. On axis *x* are presented the individual motivational factors, whereas on axis *y* the average values of required and actual state of motivation of particular motivational factors are given. Based on the comparison of individual curves it is possible to determine which areas of motivation are the most problematic and in which areas the employees are satisfied.

The biggest variance between the requirements and the actual situation can be observed for motivational factors such as basic pay, additional financial remuneration and a fair assessment of an employee. The workers group proved to be least satisfied with the total financial remuneration. Motivationally weak are also factors such as working environment, atmosphere at the working place and the stress resulting from it. The employees in the production segment consider acknowledgement, working process, vision of the company or regional development also important. The respondents expressed total satisfaction with physical intensity of work, trade name and working output.

Table 2 Comparison of required and actually perceived motivation by THZ

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
1.	Atmosphere at place of work	4,54	3,08	1,46
2.	Good working group	4,62	3,32	1,30
3.	Additional financial remuneration	4,70	2,30	2,40
4.	Physical intensity of work	3,54	3,22	0,32
5.	Job security	4,68	2,73	1,95
6.	Communication at a place of work	4,49	2,95	1,54
7.	Trade name	3,89	3,41	0,48
8.	Opportunity to utilize own abilities	4,46	2,68	1,78
9.	Scope of employment and its type	4,41	3,46	0,95
10.	Acquaintance with working result	4,38	3,11	1,27
11.	Working hours	4,22	3,81	0,41
12.	Working environment	4,41	3,19	1,22
13.	Working output	4,54	3,62	0,92
14.	Working process	4,49	3,19	1,30
15.	Powers	4,38	2,59	1,79
16.	Prestige	3,68	2,70	0,98
17.	Attitude of a supervisor	4,73	3,24	1,50
18.	Individual decision making	4,16	3,05	1,10
19.	Self-realization	4,00	3,05	0,95
20.	Social benefits	4,35	2,92	1,43
21.	Fair assessment of an employee	4,70	2,43	2,27
22.	Stress / stress elimination at a place of work	4,49	2,78	1,71
23.	Mental stress	4,38	2,73	1,65
24.	Company vision	4,30	3,16	1,14
25.	Region development	4,32	2,54	1,78
26.	Education and personal development	4,32	2,95	1,37
27.	Relation of the company towards environment	4,32	3,49	0,83
28.	Free time	4,22	3,41	0,81
29.	Acknowledgement	4,43	2,49	1,90
30.	Basic pay	4,70	1,92	2,78



Graph 1 Required and actually perceived level of motivation by THZ

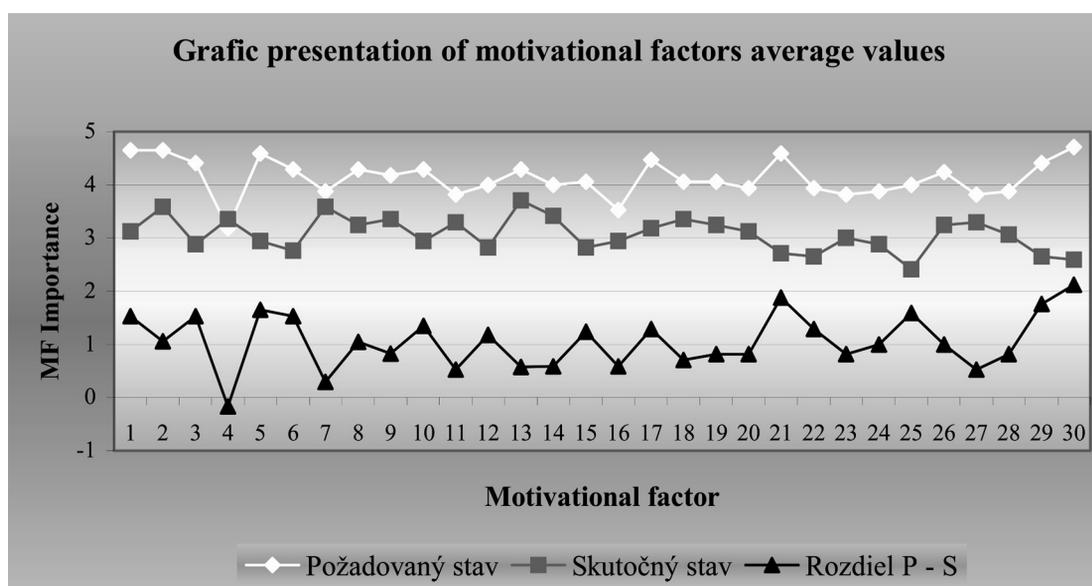
The THZ working in CHEMES a. s., Humenné also marked the basic pay, fair assessment of an employee and additional financial remuneration as poor motivational factors. Other motivators where we can observe a big variance between the required and the actual state of

motivation are the job security and powers. Employees are not satisfied with the opportunity to utilize their abilities nor with their acknowledgement. On contrary, THZ are most satisfied with working hours, physical intensity of work and trade name (company name).

Table 3 Comparison of required and actually perceived motivation by supervisors

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
1.	Atmosphere at a place of work	4,65	3,12	1,53
2.	Good working group	4,65	3,59	1,06
3.	Additional financial remuneration	4,41	2,88	1,53
4.	Physical intensity of work	3,18	3,35	-0,17
5.	Job security	4,59	2,94	1,65
6.	Communication at place of work	4,29	2,76	1,53
7.	Trade name	3,88	3,59	0,29
8.	Opportunity to utilize own abilities	4,29	3,24	1,05
9.	Scope of employment and its type	4,18	3,35	0,83
10.	Acquaintance with working result	4,29	2,94	1,35
11.	Working hours	3,82	3,29	0,53
12.	Working environment	4,00	2,82	1,18
13.	Working output	4,29	3,71	0,58
14.	Working process	4,00	3,41	0,59
15.	Powers	4,06	2,82	1,24
16.	Prestige	3,53	2,94	0,59
17.	Attitude of a supervisor	4,47	3,18	1,29
18.	Individual decision making	4,06	3,35	0,71
19.	Self-realization	4,06	3,24	0,82
20.	Social benefits	3,94	3,12	0,82
21.	Fair assessment of an employee	4,59	2,71	1,88
22.	Stress / stress elimination at a place of work	3,94	2,65	1,29

Seq. n.	Motivational factor	Required state	Actual state	Difference P - S
23.	Mental stress	3,82	3,00	0,82
24.	Company vision	3,88	2,88	1,00
25.	Region development	4,00	2,41	1,59
26.	Education and personal development	4,24	3,24	1,00
27.	Relation of the company towards environment	3,82	3,29	0,53
28.	Free time	3,88	3,06	0,82
29.	Acknowledgement	4,41	2,65	1,76
30.	Basic pay	4,71	2,59	2,12



Graph 2 Required and actually perceived level of motivation by supervisors

In the relationship between the importance of motivators and employees' satisfaction we observed the dissatisfaction in the group of supervisors as well as in the groups of THZ and workers with issues such as basic pay, additional financial remuneration and fair assessment. Communication at the place of work, atmosphere at work, job security and regional development do not correspond with the requirements affecting the level of motivation. Supervisors were quite satisfied with physical intensity of work, company name – trade name, working hours and the attitude of the company towards environment.

3.2 Creation of groups of motivationally oriented employees

We made a statistic verification of motivational factors by means of cluster analysis. In order to analyze the similarities in the motivational profiles of employees for individual job groups (worker, THZ, supervisor) we applied the method of agglomerate hierarchic

clustering. Its principle is that a group of elements gradually converge together, the nearest elements converge and in next steps more and more far-distant ones join. We processed the data gathered from the questionnaires and generated dendrograms, which helped us class the employees into similarly motivationally oriented groups – clusters, according the range of importance of individual motivational factors allocated by the employees. The result is that employees assigned into individual groups have similar opinions on individual motivational factors, therefore they are motivated by similar motivational factors.

The other group of motivators with average values 4,80 – 4,32 are the motivators concerning working environment such as atmosphere and communication at the work place, a good working group but also an attitude of a supervisor and the possibility of stress elimination at work place. The importance assigned to these motivational factors by the respondents of all groups show that they realize a negative impact of bad

relations in a working group. There are many ways to make relations in a working group better, so the supervisor plays a very important role influencing the behaviour of his subordinates in either a positive or a negative way in the course of managing them.

When comparing the importance of motivational factors we were also in a position to observe the workers' fear of losing their jobs. This is especially evident in the fourth group of respondents since the top position among the motivators belongs to job security motivator and its average value is 5.

There are results of a group which included both a group of THZ employees and supervisors in graph 6, where individual respondents are presented on the vertical axis (supervisors as A1 to A17 and THZ as B1 to B37) and there is a scope of variance in their responses presented on the horizontal axis. It was interesting to observe how employees from both groups mixed together in individual groups. Only one homo-

geneous group was formed, its members are THZ employees.

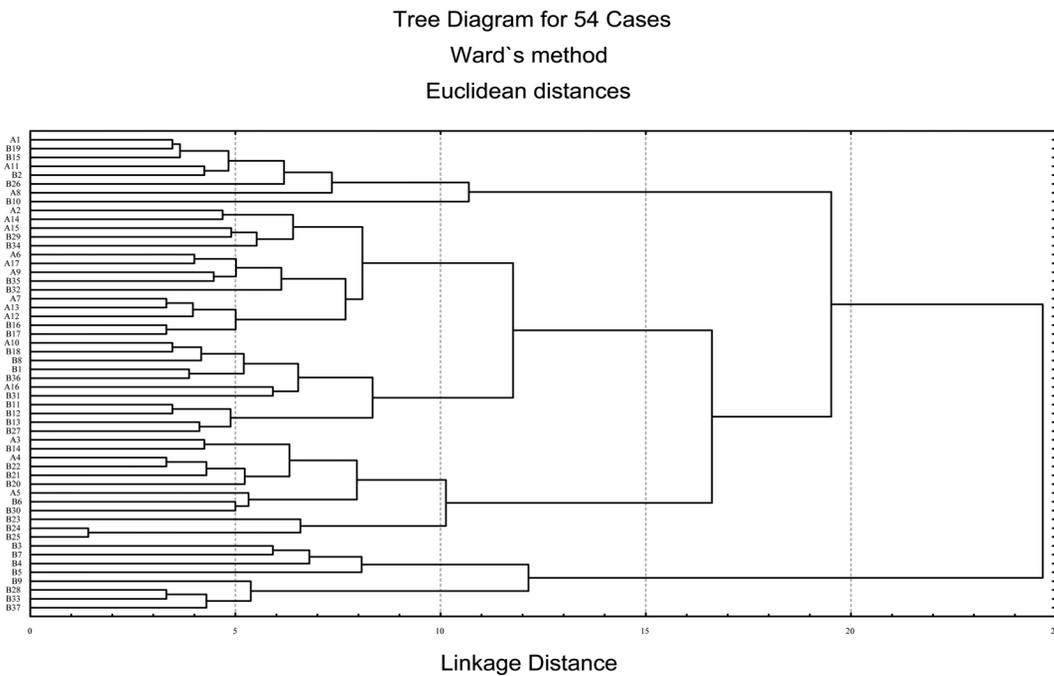
There are only five THZ members in the first group (19, 15, 2, 26 and 10) and three supervisors (1, 11 and 8).

Based on similarities of their responses six THZ were included to the second group (29, 34, 35, 32, 16 and 17) and nine supervisors (2, 14, 15, 6, 17, 9, 7, 13 and 12).

The third group that was analysed consisted from nine THZ (18, 8, 1, 36, 31, 11, 12, 13 and 27) and two supervisors (10 and 16).

The fourth group, slightly bigger compared to the third one is formed from 12 employees. Nine of them are THZ (14, 22, 21, 20, 6, 30, 23, 24 and 25) and three are supervisors (3, 4 and 5).

There are only eight THZ in the last group – the respondents with numbers: 3, 7, 4, 5, 9, 28, 33 and 37.



Graph 3 Hierarchic cluster analyses of motivational profiles of THZ and supervisors of CHEMES, a. s., Humenné

Motivators of individual groups are very similar. One of the most essential factors for the group of workers is a factor of money. It is related to welfare, the standard of living and the financial needs. It was affected by the basic pay, the additional financial remuneration and the fair assessment of the employee, which were all assigned

high average values. The basic pay as a motivator occupies the top position in almost all groups, in groups number 4 and 5 its average value is 5. The members of the fifth group consider the factor of money the most important one, all three motivators are positioned at the top of the list and have a maximum average value 5.

Job security as a motivational factor which can be found in all groups and is one of the most relevant. It results from the actual situation in the region and the opportunity to prove oneself with the same qualification in a similar company.

The next group of motivators at top positions in the THZ group are the motivators concerning working environment. A good working group, the attitude of the supervisor, the communication and atmosphere at work place but also the working hours and stress elimination at work place indicated a negative influence of disturbing factors which may cause stressful situations in a collective as a whole and may have an impact on the overall working comfort. It is necessary to realize that if there are bad working relations at work place, the employees do not feel good in their collective and

they are stressed, it influences their work performance and finally the business results of the company.

Form the individual group analysis it is clear that it is possible to group all the employees in the company under consideration according to their motivational requirements by means of cluster analyses. As we could see it was not so efficient to create or develop only one motivational programme and apply it for all the employees as it was supposed. On the contrary, if a company wanted to create individual motivational programmes for all its employees it would be very costly and uneconomic. That is why we recommend the implementation of the method of cluster analyses where clusters of employees sharing similar opinions about motivational factors can be created and the company can form motivational programmes for individual groups.

Table 4 Summary of most motivating factors for a group of THZ employees + supervisors

1st group of THZ + supervisors					
s. n.	Motivational factor	Average	s. n.	Motivational factor	Average
1.	Atmosphere at a place of work	4,88	6.	Scope of employment and its type	4,63
2.	Fair assessment of an employee	4,88	7.	Working output	4,63
3.	Good working group	4,75	8.	Company vision	4,63
4.	Attitude of a supervisor	4,75	9.	Additional financial remuneration	4,50
5.	Communication at a place of work	4,63	10.	Job security	4,50
2nd group of THZ + supervisors					
s. n.	Motivational factor	Average	s. n.	Motivational factor	Average
1.	Good working group	4,67	6.	Additional financial remuneration	4,47
2.	Job security	4,60	7.	Opportunity to utilize own abilities	4,47
3.	Basic pay	4,60	8.	Fair assessment of an employee	4,47
4.	Atmosphere at a place of work	4,53	9.	Acknowledgement	4,40
5.	Attitude of a supervisor	4,53	10.	Acquaintance with working result	4,33
3rd group of THZ + supervisors					
s. n.	Motivational factor	Average	s. n.	Motivational factor	Average
1.	Basic pay	4,64	6.	Fair assessment of an employee	4,45
2.	Opportunity to utilize own abilities	4,55	7.	Additional financial remuneration	4,36
3.	Communication at a place of work	4,55	8.	Job security	4,36
4.	Working output	4,45	9.	Attitude of a supervisor	4,36
5.	Individual decision making	4,45	10.	Powers	4,27
4th group of THZ + supervisors					
s. n.	Motivational factor	Average	s. n.	Motivational factor	Average
1.	Basic pay	5,00	6.	Attitude of a supervisor	4,83
2.	Job security	4,92	7.	Fair assessment of an employee	4,75
3.	Good working group	4,83	8.	Atmosphere at a working place	4,67
4.	Additional financial remuneration	4,83	9.	Communication at a working place	4,67
5.	Acknowledgement	4,83	10.	Education and personal development	4,67
5th group of THZ + supervisors					
s. n.	Motivational factor	Average	s. n.	Motivational factor	Average
1.	Additional financial remuneration	5,00	6.	Working hours	4,88
2.	Fair assessment of an employee	5,00	7.	Attitude of a supervisor	4,88
3.	Basic pay	5,00	8.	Opportunity to utilize own abilities	4,75
4.	Good working group	4,88	9.	Mental stress	4,75
5.	Job security	4,88	10.	Stress / stress elimination at a place of work	4,63

4 Conclusion

If the process is to be effective enough it should reflect the needs of employees and in a way it should influence their behaviour and performance in a direction which was defined beforehand. So it is necessary to work out an integral motivational programme in which the requirements of the company and its employees are put together. When the motivational programme is being created it is important to find out which and how motivational factors can influence individual employees and adapt them to the company possibilities. If the motivational programme in a company is worked out in this way it should encourage employees towards a higher performance, creativity, self-sacrifice, orderliness and match their value orientation with the goals of the company. Every single employee works motivated by a unique set of motivational factors, reacts to some of them in a positive and to the others in a negative way, sometimes with some objections. People working in a team are different. It is up to each company to find out what makes every member of a team give a maximum output. It is necessary to listen to the employees, to acknowledge and apply the motivational factors which are considered to be relevant.

The aim of our analyses was to find out the requirements concerning the required and the actual motivations of employees for selected motivational factors and consequently point out an opportunity to form motivationally similarly oriented groups. Based on the analysis of motivational factors in which we compared the required and the actually perceived levels of motivation we came to a conclusion that employees do not feel the level of motivational factors satisfactory. The results of the questionnaire analyses exactly say that employees consider the most important factors to be: basic pay, additional financial remuneration and also a fair assessment of an employee. All these factors belong to a group of wage motivators. But job security and factors concerning working environment are very important, too. For these motivators we found the biggest differences between the actual and the required state, as stated by the employees. According to the results it is clear that each employee should feel that he is helpful and conducive to the company and that his work in the company has a future, perspective and that it is equally financially compensated. He should be sure that he can stay in a company for a longer time. We recommend that the employees should be motivated through an opportunity to acquire a share in the profit, since this can encourage the entrepreneurial thinking and lead the employ-

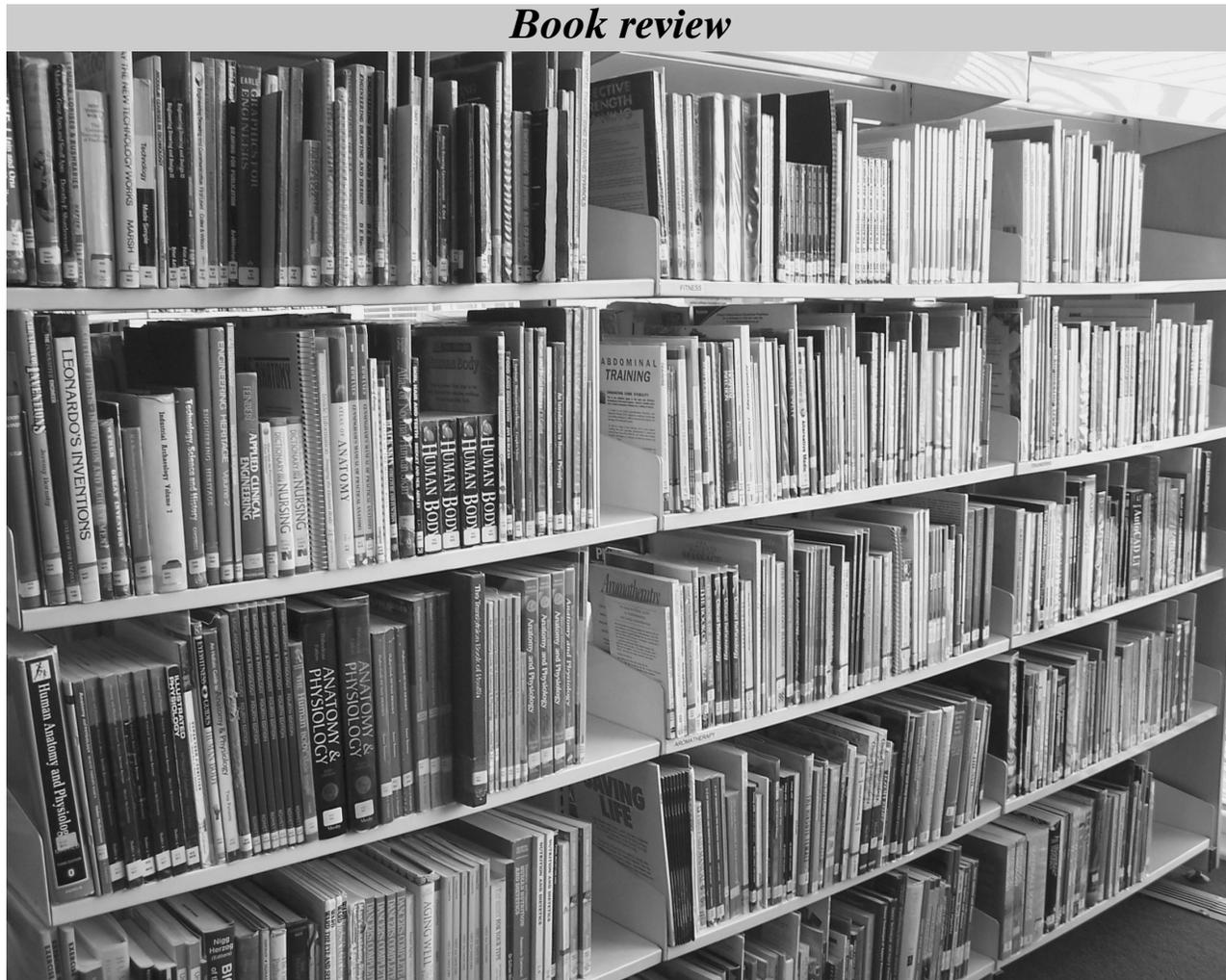
ees to initiative to fight against unthrift but also to increase the profit and the earning capacity of the company. The employees participation in the profit makes them feel that the results are distributed in a fair way and that they are shared because they see that the company profit does not belong only to the company owners but that a part of it is divided among the employees.

The results of cluster analyses showed that not only currently implemented motivational factors must be developed but also it is necessary to create some space for application of other critical motivators. At present the company motivates all its employees in the same way and implements the motivational factors such as: remuneration and assessment, education and communication. By means of our survey we found out that not all the employees have the same needs and that not for all of them the above mentioned motivational factors are important. It resulted from the analyses that other motivators are also relevant for the employees: the atmosphere and communication at work place, a good working group, the attitude of a supervisor, the stress elimination work place, actually, the motivational factors concerning the working environment. For the time being, the company does not pay enough attention to the last mentioned factors. The company management should approach employees in a different way, continuously analyzing the individual motivational factors through a statistic method and create different motivational programmes for them.

REFERENCES

- [1] Bajcura, A.: Teória a prax riadenia v súčasných podmienkach rozvoja ekonomiky. Bratislava: Vydavateľstvo a nakladateľstvo ROH, 1985
- [2] Heller, R.: Príručka manažéra. Ikar, Bratislava 2005, ISBN 80-551-0882-X
- [3] Hitka, M.: Metodika analýzy motivátorov v podnikoch DSP. TU Zvolen, 2004. ISBN 80-228-1331-1
- [4] Koubek, J.: Personální práce v malých podnikách. Grada, Praha 1996, ISBN 80-247-0602-4
- [5] Kolektívna zmluva na rok 2007, interný materiál, odbor personálnych činností CHEMES, a.s.
- [6] <http://www.dieradosveta.sk>
- [7] <http://www.wikipedia.org>
- [8] <http://www.xenium.sk> Note:
This work is a result of solution of the project titled VEGA 1/4647/07 Dynamic Model of Human Potential Motivation

Book review



CONTROVERSIES OF LEADERSHIP

**Leposava Grubić Nešić (2008), *Knowing How to be a Leader*,
Novi Sad: AB Print, ISBN 978-86-907943-1-7**

Questioning the theory and practice of leadership is important for a number of reasons. Leadership is a complex and ambiguous concept based on a new paradigm of management, which includes the processes of identifying the purpose and the direction of an organization, varied management impacts; of achieving goals. In our practice the leader has not yet got his distinct position; he is generally equalled to the director, the manager or the political leader. Whereas our directors and managers, mainly the leading public officials, protectors of laws and other legal norms, are focused upon their superiors, the leaders are predominantly focused upon their followers-collaborators. Leaders are councillors

rather than executive authorities, they deal with the unknown and the uncertain transforming them into the known and the clear. The new age warns that the times of leading the subordinated are far behind us, that a new type of manager emerges, the one that uses his knowledge, courage, cleverness, visionary and missionary qualities act *ex aequo et bono* (according to what is just, what is good), thus enabling his company to perform above the average.

Dr Leposava Grubić-Nešić, the author of a recently published, intriguing book *Knowing How to be a Leader*, maintains that leadership and leadership aspira-

tions make the basis of a successful organizational innovativeness, crucial for the organization's survival on the market. Therefore the leader has to adapt his /her behaviour to changes, to a new way of (systemic) reasoning, so in this sense his role is the one of a constructor, a manager and a teacher. The leader is a designer of the business processes, of organizational culture, and of the business climate in the organization, Dr Grubić-Nešić claims. He is also a mentor, guiding his collaborators in the direction desired, but also a protector of his followers against external environment.

Leader – manager. Therefore the author, although strictly focusing upon the interpretation of the idea of leadership, implies a broader context of this issue – the concept of entrepreneurial leadership, nowadays crucial in revitalizing the staggering economy. If the manager has leadership potentials and personal authority, he will be able to motivate people towards creative changes; he will be ready to take on the risk of such changes himself. The leader must primarily be a manager, says Dr Grubić-Nešić; he must be familiar with all the functions of management, therefore it is “absurd to favor either the manager or the leader“. Although the functions of the leader and the manager are complementary, the author does not forget to mention the attitudes according to which these roles are different, based on the premise that the manager is the “mind“, and the leader is the “soul“ of the organization. Thus, for example, according to the Benis' list of specific qualities of the manager and the leader, the manager is oriented to administration and acting according to orders and procedures, whereas the leader is focused upon people and innovations. The manager copies, maintains and counts on control, while the leader develops and advocates trust. Furthermore, the manager is oriented towards control and short-term goals, while the leader favours creativity and follows long-term paths. The former supports the actual, *status quo* situation, the latter is a creator, “looking beyond the horizon“.

Professional and organizational skills of the leader. Leadership requires two types of skills, Dr Grubić-Nešić states, and these are professional skill and organizational skill. Therefore this demanding function requires that the leader command enormous work energy, be highly intelligent, sociable and open-minded, honest, self-confident, with personal integrity and a desire to be a leader. The author also stresses the component of emotional intelligence (EQ) since the leader primarily “activates the emotions of his followers-collaborators and guides them in a certain direction“. The quoted qualities are also mentioned by H. Friedman, who relates them to the characteristics of a charismatic (he says: present)

personality: the leader's traits are basic self-confidence and the ability to project himself upon the others (Friedman's research into the secrets of charismatic management – B. R. Nj.).

Leadership theories. In her presentation of modern leadership theories Professor Grubić-Nešić first highlights two dominant orientations, opposing each other in their approach to referent qualities of a leader. According to one, the research into the leader traits should be focused to the personality traits and characteristics by which the leader differs from the rest, whereas the other approach is based on observing the leader's behaviour, the one that makes him a leader. Regardless of these conceptual differences, the majority of authors is of opinion that leaders can be classified (ideally-typically) into the groups of authoritative, transformational and charismatic leaders.

The initial academic dilemma in the study of the leadership phenomenon (traits or behaviour) is resolved by a compromise, a concept of the two-dimensional nature of the leader – oriented towards the *task* and oriented towards the *employees*. It is on this premise, the author says, that the theoreticians Blake and Mouton developed a managerial network of the forms of management behaviour identification, that is, four types of leadership behaviour. The first type includes leaders oriented towards the structure, strategy, environment, implementation, experimenting and adaptation (leader as a “social architect that analyses and designs“). The second type includes the leaders oriented towards human resources, the third type are the politically oriented leaders, while the fourth type includes leaders – visionaries.

The author proceeds to give a review and interpretation of relevant leadership theories. This section of the book is, in the author's opinion, its central part, and calls for closer attention due to its importance and informative quality. According to the *contingency theory*, the leader's success not only depends only on his management style (no successful style has proven universally efficient), but also on the specific conditions or a situation he is faced with. These are, most often, the requirements of the task, the expectations and the behaviours of the persons of the same rank and of the employees, the given organizational policy and culture. A broader interpretation within this theory is offered in Hersey-Blanchard's *situational model of leadership* oriented towards the study of the followers' willingness to take responsibilities, skills, capabilities and experience required to accomplish a task. The *contingency approach to leadership* is operationalized in the Fiedler's model of “three leadership situations“, analysed

through the relationships: leader – member, task structure, power on the basis of position.

The *normative decision-making* theory (Vroom, Yaton) studies the procedure of decision making as a key determinant of leader's efficiency. According to this model, the leadership decision-making styles may be authoritative, consultative and participant, depending on whether the leaders solve the problems autonomously, or make decision using available information; whether they include employees in data gathering, whether they talk to their subordinates on the problems individually or in groups, whether they make decisions jointly. The *transformational leadership* concept (Baas) promotes the idea of energetic leaders of distinctive personal vision, continually interacting with their followers, motivating and activating them towards a higher level of needs. In this work they use specific methods such as idealized situations, inspiring motivations, intellectual stimulations and individualized concerns.

L. Grubić-Nešić continues to explain the House's concept of the *charismatic leader* of great referent powers, self-confident and dominant, firmly confident of the ethicality of his own beliefs. She also explains the hypotheses of the *substitution for leadership* theory, according to which there are situations in which the leaders are redundant if the subordinates have mastered an extremely high level of knowledge and commitment to the task, if jobs are elaborated in detail and are performed in a routine way, or in case the applied technology defines the conduct of an individual to the utmost.

Leadership and ethicality. The leadership issue is by no means fully covered by the so far presented considerations. The author further brings up an important issue of the leader's role in promoting the ethical dimension of business activities. The more so because management in a *laissez-faire* atmosphere requires a high level of business ethics. In interpreting this dimension of business activities, professor Grubić-Nešić highlights two principles of ethical conduct. The first is the ethical *determinism*, which clearly distinguishes the ethical from the non-ethical leadership, via the criteria of leaders' motives, the tactics of influence they use and the way in which the leaders' character is formed. The other (disputable) principle of ethical behaviour is based on the doctrine of ethical *relativism*, expressed in the attitude that no leadership form is possible to qualify as non-ethical.

Women leaders. Towards the very end appears the issue of what happens when a woman, educated and engaged, masters the "language" and certain "serious" functions such as the leadership is, which are privileged and male by stereotype. In the analysis of the chapter titled *Women Leaders*, professor Grubić-Nešić appears to ask this question herself, situating the issue into the context of the gender principle. She infers the differences in the behaviours of the male and female leaders on the basis of the identification and self-authorisation criteria. Here she states that men leaders, opposite to women, identify themselves with others more easily (similar to them – B. R. Nj.), especially in cases of non-ethical behaviour; they also have a higher perception of self-authorisation, i.e., the feeling that they command more authority compared to others. Such a behaviour is conditioned, among other things, by the differences between the genders, important for the work atmosphere. Therefore, for example, broad, rich and open feelings are characteristic of women (female emotional engagement – B. R. Nj.); women are emotionally while men are creatively intelligent. Women notice details; men see the whole. Women communicate more easily, since they are better anatomically and physiologically prepared for verbal presentation. However, in their estimate of self-authorization, women are somewhat uncomfortable, due to their belief that the status achieved is in itself a significant success, therefore it is immodest to be over-ambitious.

Let us just add that, faithful to her primary academic and personal interest in universal problems of human resources development and maintenance and more humane relations in work and management (book *Human Resources Development*, 2005), L. Grubić-Nešić again insists on the importance of *human capital* and a new role of the leader in identification, development and maintenance of human resources in their organizations.

Intriguing in its choice of subject, systematic and accurate in the methodology of presentation, Dr Leposava Grubić-Nešić's book is a thorough, informative and above all a clever contribution to the study of theory and yet insufficiently mastered leadership practice, as well as still ambiguous issue of management. These qualities will certainly earn it due recognition in academic and professional circles.

Doc. dr **Biljana Ratković Njegovan**
(Prof. dr **Maja Levi Jakšić**)

Manual for Authors

TITLE OF PAPER IN ENGLISH (two lines at the most)

Marko Markovic¹, Ivan Ivanovic²
¹*Faculty of Organizational Sciences in Belgrade*
²*Faculty of Economics in Belgrade*

Abstract - *These are instructions for preparing papers that will be included in the journal. Your papers should be prepared according to the instructions.*

1. INTRODUCTION

Papers have to be written in English. Original papers should be typed one sided A4 format (210x297mm). Use margin 2,5 upper, 2 cm lower, left and right.

Maximal length of paper is 8 pages including tables, text, pictures, literature and other appendices. Pages are numbered with graphite pencil in upper right corner.

Send two copies of the paper (original + one copy) and diskette in format MS Word 6.0.

If the last page of text is not filled up, the columns on the last page should be even, of the same length.

2. SUBTITLE (SIMULATION MODEL) (example: SIMULATION MODEL)

In the middle of the first page, after one empty line, insert English title of the paper. Use font Times Roman Bold 14 pt.

The name of authors and the names of their institutions in font Times Roman 10 pt. should be centered as in the model given at the beginning of this instruction..

Other parts type in two columns 0,5 cm in between. Paper is typed normal space and double space between paragraphs. Font Roman 10 pt is recommended. Beginning of the paragraph is typed at the very beginning of the columns.

The title of the paper and names of authors are followed by short abstract in Italic. All subtitles are typed in Bold, capital letters same sized as in the previous text (not smaller than 10 pt).

3. SUBTITLE (example: COMPARATIVE ANALYSES)

$$\sigma^2(r_p) = E\left(\sum_{i=1}^n [r_{p,i} - E(r_p)]^2\right) \quad (12)$$

All equations type in one column, numerated at the right side, as illustrated.

4. CONCLUSION

All figures, tables or graphic presentations are adapted to the width of one column. If necessary, when the figures do not fit in one column, use the width of the page, and then continue as previously, in two columns. See the figure below.

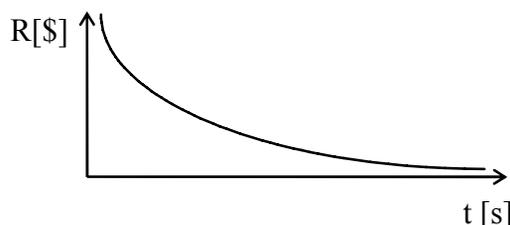


Figure 1. Graphic presentation of results

REFERENCES

Only the literature related to the problems and main ideas presented in paper should be including and ordinal numbers of the references type in angular brackets.

Literature in text has to be quoted in angular brackets to the order of their quotation. For example in [5] it is shown that. The example of literature is shown below.

- [1] Banks, J. and S.J. Carson., Discete - Event System Simulation Prentice - Hall, New - Jersey, 1984.
- [2] Bodily, S., "Speadsheet Modeling as a Stepping Stone", Interfaces, vol. 16, No.5, pp 34-52 1986.
- [3] Protic D., Simulation of work on Airport Belgrade. Proceedings of work, SINFF-N, page 75 -81. Zlatibor 19