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INTRODUCTION

Department of Management and Technical faculty “Mihajlo Pupin” from Zrenjanin have started the organization of International Symposium Engineering Management and Competitiveness (EMC) in 2011. Since 2013 the organization EMC symposium has been supported by the following foreign partners: Szent István University, Faculty of Economics and Social Sciences, Gödöllő, Hungary and Voronezh State University, Faculty of Economics, Voronezh, Russia.

The objectives of the Symposium EMC are: presentation of current knowledge and the exchange of experiences from the field of Engineering management, consideration of development tendencies and trends in Serbia and the world as well, gathering researchers from this field with the aim of expanding regional and international cooperation, raising the level of professional and scientific work at Technical faculty “Mihajlo Pupin” from Zrenjanin, expanding cooperation with economic and educational institutions and encouraging young researchers within this field. Taking into account that this Symposium is international, the importance of this event is obvious for the town of Zrenjanin, Banat region, Vojvodina and Serbia. Organization of EMC by Technical faculty “Mihajlo Pupin” from Zrenjanin represents this scientific-educational institution as one of the major representatives of economic and social development in Banat.

Within this Proceedings are presented all accepted papers received for III International Symposium Engineering Management and Competitiveness (EMC 2013). The papers are divided into ten sessions: Plenary session, Session A: Strategic management, Session B: Organizational behavior, Session C: Research and development management, Session D: Marketing management, Session E: Operation management, Session F: Economy, Session G: Ecology and sustainable development, Session H: Management information systems and Session I: Students’ papers.

We wish to thank Ministry of Education and Science, Republic of Serbia for supporting the organization of III International Symposium Engineering Management and Competitiveness (EMC 2013) as well as to Technical faculty “Mihajlo Pupin” from Zrenjanin and the dean Prof. Ph.D Milan Pavlović for their active role concerning the organization of the Symposium. We are also expressing our gratitude to all authors who have contributed with their papers to the organization of our third Symposium EMC.

Symposium EMC become a traditional meeting of researchers in June, every year. We are open and thankful for all useful suggestions which could contribute that the next, IV International Symposium Engineering Management and Competitiveness (EMC 2014) become better in organizational and program sense.

President of the Programming Committee
Professor Zvonko Sajfert, Ph.D.

Zrenjanin, June 2013.

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Session Editor's Preface

Every year, International Symposium Engineering Management and Competitiveness (EMC), has Plenary session. Plenary session appears, in the Proceedings of the Symposium, as well in the program of the symposium. Plenary session occupies a prominent place in the EMC Symposium, both in scientific and in organizational terms. Because of this, Plenary session is always at the beginning of the Proceedings and is implemented at the beginning of the program of the symposium. Plenary session consists of papers of good quality, which are interesting and important. At the same time, the program and organizing committee tries to include in the Plenary session papers from different countries, but of course, with respect to the above mentioned criteria. In this way, the respect is given to foreign teachers and partners involved in the organization of the symposium, further the organizers express their gratitude for attending the symposium and, finally, it provides an opportunity for all participants to see and hear many interesting experiences from different countries and regions.

Here follows the review of the papers published in the Plenary session.

The paper titled “**Substantial characteristics of social projects: theoretical and empirical perspectives**” specifies substantial characteristics of social projects at the present stage of development of Russian civil society. The sample data of 25 in-depth interviews with representatives of the business community, public authorities, and civil society institutions, all actively participating in community development in the Voronezh administrative region served as an empirical basis for this paper. Conclusions have been made about the nature, characteristics and objectives of social projects, spheres of social projects implementation significant for Russia, success and failure factors of social projects. Soft systems methodology has been used for stating and structuring the empirical data. The results obtained have enabled to lay the foundation for finding the concepts and mechanisms to coordinate the participants in community development.

The paper titled “**DEA model for assessment of institutional research productivity in Poland**” presents the concept of measuring productivity in Polish research units through DEA method. The author claims that the comparative analysis of productivity of research units with the DEA method can be a source of valuable managerial information, which could be the basis for scientific assessment in Poland. It can also assess the level of the conducted scientific research and identify the units of a model efficiency level in national circumstances. A separate optimization for each unit exposes strengths of the unit determined by the resources and the environment. Furthermore it allows also determining the so called “dead” resources, which do not influence significantly the results achieved by the unit. According to the author, the example used in the analysis has an illustrative character and requires further studies.

The next paper is titled “**Logistics system and logistics chains**”. It presents current knowledge in the field of logistics, including definition of terms, description of logistic system and logistic chains. Logistics is in general using multi-criteria evaluation based on financial effectiveness. Authors are participating on the project „Centre of Excellence for Systems and Services of Intelligent Transport“, where they are working on solutions of emergency and crisis situations in transport. In those cases the logistics is aimed on the fastest and the most secure solutions. A criterion of optimality is then transferred to time and value effectiveness instead of financial effectiveness. Maximum effectiveness of logistic systems (financial, time and value) is formed by existence and usage of information systems, and information support based on modern information and communications technologies.

*In the paper “**Traditional and atypical employment in light of empirical data**” some results of a questionnaire research which was aimed at the attitudes and expectations regarding atypical employment forms were presented. The study was conducted in Hungary and Slovakia. According to the research results, the respondents in the sample clearly favour traditional employment forms as opposed to atypical ones. A great majority of them would only accept an atypical job as a temporary solution: they believe that people only work in atypical jobs out of necessity because they have no other options. Comparing the two countries, it can be said that the Hungarians are indeed more open towards atypical employment forms. However, the differences are slight, mostly owing to the proximity and the cultural similarities.*

*The paper titled “**Social economy: remaking society with a human face**” focuses on social economy as a conceptual framework and an increasingly revisited topic in terms of finding alternative solutions to the current global economic crisis. The paper emphasizes the liberating potential of an anthropologically informed economics where social relations and human concerns are placed at the centre of economics. The goal of the paper is to challenge political and economic policies who still fail to provide minimum acceptable levels of economic and social well being to growing numbers of people and to re-examine the meaning and ultimate role of civil economy as a diametrically opposed approach to the ruling neoliberal economic order. The ultimate goal of the paper is to encourage further interdisciplinary studies and participation of scholars from diverse fields, such as business management, sociology, political science, and economics.*

*The paper titled “**Organizational culture in Bosnia and Herzegovina**” aims to explore the features of organizational culture in Bosnia and Herzegovina. The study was carried out on a sample of 26 Bosnian companies from three sectors of industry. Empirical findings show that the cultural profiles of three industries researched are rather divergent. This implies that culture of the organizations in Bosnia is influenced by the industry in which they function. On the other hand, organizational culture values have equalizing effects across three sectors of industry, which points out to the impact of Bosnian societal culture on the perceptions of organizational values.*

*The paper “**Strategic design information systems for increasing competitiveness of small Mexican business: vision based on the theory of the firm and resources**” refers to the fact that, In Mexico, the use and implementation of strategies related to information systems have not been consistently addressed a claim that can be applied to small, medium and even large companies. The aim of this paper is to highlight that businesses (regardless of their size) can achieve competitive advantage by their heavy investment in business intelligence systems. The high costs of implementing such systems can lessen with the use of existing information technologies. This paper presents the alternatives that small and medium producers can use to break into the culture of decision making based on information resources as well as inputs for the development of capacities for the development of strategies.*

*The paper titled “**The working condition quality comparison of the bank staff: the case of Turkey**” points out, that the working conditions of the bank employees play a great role in the success of banks. The main aim of this study is measuring the quality of working environment of the banks by using three factors, which are knowledge, consistency and trust, and comparing the working environment of the agents to the managers. 100 questionnaires were collected in banks in Turkey. The results show that the working condition quality of the managers is better than the working condition quality of the agents. But there is no significant difference on the consistency of the conditions. Duration has a significant effect on the working conditions which create trust on the employees to the company. This paper is a proof of presumption according to which managers do not have good conditions as expected.*

Plenary session contains papers dealing with a variety of topics: social projects, social economy, organizational culture, employment problems, the quality of working conditions, strategic aspects of information systems, logistics systems and institutional productivity. At the same time, the papers show the experience of eight countries in the sphere of the listed themes. Besides all the

differences, which arise from various issues and areas of research papers the Plenary session has some common components. These components can be summarized as follows: overcoming the global economic crisis, the social aspects of business and social responsibility of companies, finding ways to improve business performance and increasing the level of various organizational outcomes. These are the issues that have global relevance and importance. The additional importance of the Plenary session lies in the presence of papers from a great number of different countries. It can be concluded that the Plenary session papers have a high scientific and technical level, and that they are very interesting and useful in terms of practical application of the presented results and experiences.

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SUBSTANTIAL CHARACTERISTICS OF SOCIAL PROJECTS: THEORETICAL AND EMPIRICAL PERSPECTIVES

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ABSTRACT

This paper specifies substantial characteristics of social projects at the present stage of development of the Russian civil society. A social project is considered as a project system based on a set of measures of social orientation, has specific objectives, is located in space and time-restricted. The sample data of 25 in-depth interviews with representatives of the business community, public authorities, and civil society institutions, all actively participating in community development in the Voronezh administrative region served as an empirical basis for this paper. Conclusions have been made about the nature, characteristics, and goals and objectives of social projects and their role in socio-economic development of the region, spheres of social projects implementation significant for Russia, about active participants, success and failure factors of social projects, prospects and intensity of community development in the Voronezh administrative region and Russia as a whole. Soft systems methodology has been used for stating and structuring the empirical data. The results obtained have enabled us to lay the foundation for finding the concepts and mechanisms to coordinate the participants in community development.

Key words: social project, project management, project system, community development

INTRODUCTION

Social projects development and implementation is an essential element in managing sustainable development in any country. In this regard, it is of vital importance to carry out both theoretical and applied research in social engineering as a form of social activity of the economic entity and as a process of implementation of social innovations.

In our view, a contradictory situation in the regions of Russia has occurred due to imbalance between the potential and the results of socio-economic development. Outstanding innovative ideas come about which can provide an effective solution of social problems, state structures with a fixed social functionality are formed, there is proven experience in project implementation by the business elite. An example is the positive dynamics of social projects implementation by the largest Russian companies during the period from 2004 to 2010. (See Table 1)

Table 1: Social projects implementation by Russian companies

Availability of Projects	Proportion of the total number of companies (%)						
	2004	2005	2006	2007	2008	2009	2010
Projects targeted at employees and their families	70	71	80	79	77	77	79
Projects targeted at population at the companies' location	53	53	60	65	75	67	65
Projects for the companies' contractors	17	11	18	26	32	31	29

Source: Survey of Corporate Governance in Russia: A Comparative Analysis of the results 2004 - 2010. Russian Institute of Directors. Moscow, 2011 - <http://rid.ru/wp-content/uploads/2012/06/1CG-research-2004-2010.pdf>

In our study, we believe that the development and implementation of social projects is a system of multilateral and multilevel cooperation of representatives of business structures, government and civil society, permanently altering their role in social welfare and solving social problems under the influence of a number of trends. The latter include low susceptibility of a number of social problems to the traditional measures of influence, deepening inequalities between social groups, expansion of the social needs of the population, and others. (Moskovskaya, 2011)

However, a clear interaction between the key participants in the social and economic processes is missing, thus not allowing to reach the full potential of each participant. Actions of public authorities, business structures and civil society institutions are often spontaneous, causing short-term isolated effects not related to the general concept of the strategic development of the region and the country as a whole. The need to study the characteristics of social projects is caused by a profound structural transformation of all social relations associated with the post-industrial transition. In our opinion, a number of structural changes that have a major impact on social practices should be highlighted.

First, social needs and development priorities undergo changes. According to researchers, today the most significant social priority is not prosperity, but equal access to healthcare and education for all population groups (Grigorieva, 2011). Second, the methodological context of understanding social phenomena (practices) changes. Today it includes such concepts as nonlinearity, chaos, multipurposefulness and others. (Castel, 2009) Thereby, the criteria for validity of social knowledge shift towards the multiplicity of possible explanations for the processes under study (Yadov, 2009). Third, new challenges, such as social ecology, social security, and super-intensification of migration processes, grow urgent and relevant. (Bogomolov, 2010). Fourth, the essential characteristics of social services change in a way that they become continuous, individualized and global. (Mau, 2012). A modern man continuously increases his/her cultural and educational level, uses healthcare services, chooses a pension plan. The trajectories of choice of services become more individualized, they grow global and competitive. Fifth, social processes, like all modern practices, become more dynamic and technologically advanced. Such forms of effective interactions appear as social networks, communities of practice, crowd sourcing, etc. The above-mentioned structural changes are bound to affect the substantial characteristics of all contemporary social practices, including social projects. In the context of post-industrial changes, provisions of the new system paradigm proposed by G. Kleiner, are brought into focus. (Kleiner, 2011) In this paradigm, all social and economic phenomena are considered in the light of the creation, interaction, evolution, transformation and elimination of economic systems. Under this theory, a social project is seen as a project-type system based on a set of measures of social orientation, which has specific objectives, is located in space and restricted in time.

DATA DESCRIPTION AND RESEARCH METHODOLOGY

The major problem of any socio-economic survey is the availability of empirical data (or the possibility of obtaining it). In other words, the researcher is faced with the problem of quality and reliability of the sample data. Good quality of the empirical data is related to their amount, necessary and sufficient for adequate representation. In turn, reliability of the data is provided by choosing the right methods for data collection and processing methods.

During the period from July to October 2012 we conducted 25 in-depth interviews with representatives of business structures, civil society institutions, government and management authorities actively engaged in the development and implementation of social projects in the Voronezh administrative region. The respondents from the business structures included owners and managers of the enterprises operating in Voronezh. Among representatives of the civil society were social projects proponents, founders of movements and non-profit organizations, heads of the largest universities in the region, actors of youth organizations, and journalists. On the part of government and management authorities participated in the study were heads of departments, divisions and sections of the Government of the Voronezh administrative region.

The questionnaire included three sets of questions on the nature of social projects, the mechanism of social project management, and personal participation in social projects. This article presents the results of research into the nature, characteristic features, objectives of social projects and their role in socio-economic development of the region, spheres of project implementation significant for the current Russian reality, on active participants, success and failure factors of social projects, prospects and the intensity of community development in the Voronezh administrative region and Russia as a whole.

First of all, the study found that from a business perspective a social project is a project of public relations development, social organization, performing an external organizing function. In addition, the study demonstrated that in business structures actively implementing social projects the functions of ownership and control are combined, so the second most important aspect of community development is a businessman's (owner's) need for self-fulfillment, according to 70% of the experts. For representatives of civil society institutions a social project is inextricably linked with the improvement of the quality of life of the whole population or its individual groups and thus benefits the society. Most experts (65%) associate social projects with improved quality of life, and 35% - with the solution of specific problems for the benefit of the society or individual social groups. From the point of view of the representatives of public authorities, a social project is an instrument of the state social policy whose main distinguishing feature is implementation of social innovation.

Most representatives of business community associate social projects' objectives with material support, quantitative changes in the conditions of the life of an individual or of certain social groups, and to a much lesser extent with the change in qualitative characteristics of an individual. Thus, only one of the business experts points out that "a social project should change something in people's minds." One-third of the representatives of the civil society perceive the project objectives as something specific, they do not have an abstract view of a social project only in reference to a particular quantitative social issue. 55% of the experts distinctly point out that the project objectives are linked to external improved quantitative indicators of the living conditions, i.e. to social environment features which people consider external. Only 22% of experts in this group denoted the inward goal of social projects, i.e. a qualitative change in the human condition. All representatives of public authorities qualified creation of a comfortable environment and fight against anti-social phenomena as social project objectives. One of the experts associates the project objectives with implementation and dissemination of social innovation, "A social project is not just about the implementation of standards and government regulations. It is characterized by a novelty value, - new forms of service, new types of activity." None of the representatives of public authorities associate the project objectives with the development of self-awareness. Thus, the problems of individual people are not considered in general goal-setting.

It should be noted that even at the stage of defining the essence, nature and goals of the project the experts' opinions fall into three groups of binary oppositions: quantitative - qualitative, external - internal, action - process. External goals include changing conditions of the environment and overcoming the problems that have already emerged in a society (reactive goals). Internal goals include changing societal needs corresponding to structures of the social reality of the project initiators (proactive goals). Quantitative changes mean changes in the material life conditions of a particular person, group or society. Qualitative changes mean a change in an individual's, group or society consciousness. An action is a single procedure of implementing a social project, a process is the implementation of the long-term projects with a common social purpose.

Most business people pointed out that the hallmark of a social projects is absence of commercial orientation. Besides, experts believe that social projects and business projects differ radically at all stages of their life cycle, including the stage of accomplishing all the goals or objectives. Only one of the experts in this group mentioned the interrelation between the two, noting that "a social project is always a part of a business project in terms of the problems of employment, self-fulfillment, and education."

Civil society representatives identified two distinctive characteristics of a social project: first, the complexity of measuring goals and objectives in financial terms (55%), and second, cost and need for external financing (45%). Among the distinguishing characteristics of social projects representatives of state bodies named the effect of projects in a social sphere (67%) and absence of profits (33%). One of the experts pointed out that "the concept 'social' is absolutely incompatible with the concepts of 'business' and 'politics'." It should be noted that such a polarization of expert opinions (i.e. to see a social project as part of the business project and, conversely, to completely exclude business and politics from the social aspects) clearly illustrates a mutual mistrust of key actors in the process.

In response to a question about the role of social projects in the socio-economic development of the country, the region, a company and an individual, almost all business representatives were unanimous. Most experts agreed that high-quality, system social projects at any of the above levels make the process of socio-economic development balanced and sustainable, form relationships significant to the economy, contribute to the stability of the environment. Civil society representatives identified more practical aspects of the role of social projects, such as creation of labor markets, maintaining balance and social equilibrium, formation of a community of reasonable individuals, development of human potential. The majority (65%) of public authorities' representatives noted that social projects stimulate growth and development of public institutions, other experts pointed to a cause-and-effect relationship between the level of social and economic development and the quantity and quality of social projects implemented.

The analysis of respondents' views on the importance of social projects has enabled us to define their descriptive and normative features. The descriptive features include the following: overcoming specific urgent problems in a society; implementing state social policy; quantitative changes in the material life conditions of an individual or a social group; creating labor markets; implementing social innovations; two-way influence of the quality and quantity of social projects and the level of socio-economic structure (company, region, country). Normative (standard-setting, desirable, target) features include: encouraged development of state institutions; stability of the environment, balanced socio-economic development; formation of a community of reasonable individuals; development of human potential.

In response to the question on active participants in social projects, most business representatives defined them as devotees, people with a proactive approach to life, the leaders, that is, individuals. Almost half of the respondents (42%) reported an active role of the state and business in social projects implementation. Representatives of the civil society (80%) consider community organizations, volunteers, and people with their everyday concerns and unresolved questions as active participants in social projects. Only 20% of respondents indicated an active role of the state and business, and one of the experts stated that "a social project can only be inspired by an individual's personality." All representatives of public authorities consider state structures as active participants in social projects. Only 30% of the experts mentioned business structures alongside with the state ones. We would like to emphasize that the responses to a set of questions related to the key actors of the process highlight the need for their cooperation, information exchange, creation of a concept of social projects customers, support and encouragement of devotees and volunteers.

The question "Who is most interested in the results of social projects?" caused quite a wide range of opinions among the business representatives. One third of the experts reported that all participants in the process are equally interested, but from different perspectives. According to one of the experts, "The state is interested in increased power and influence, customers are interested in the regularity of social projects and support, business structures pursue an objective of better public relations and motivation of personnel, since employees are proud of their enterprise participating in social projects." One third of respondents believe that customers are those mostly interested for the sake of stability and productivity; 28% emphasized that target users of a social project are those most interested in its implementation. One expert noted that it is an individual personality who is most affected by a project.

Most of the civil society representatives responded that target users are affected, since "their problems of security and social guarantees are resolved"; 27% of the experts stated that everybody should be interested in an effective project. According to one of the experts, "Everyone living here who believes this to be their country. There should not be any contradiction. As soon as we start to make distinctions, social problems come up." The same percentage of experts (27%) believe that they project initiators and implementers of the process are those most interested in results, since they gain "the capitalization of a human personality." Half of the representatives of public authorities noted that the results of social projects are of most interest to the citizens, the population. One third of the experts believe that everyone should be interested; two experts mentioned that the main interested party is the state. According to one of them, "The state is the most concerned as all the effects of social projects are large-scale, long-term, and global. The result is often postponed."

In response to the question "What determines the success of a social project?", the majority of business representatives pointed out three factors, clear goals and objectives, the right selection and formation of instruments, and adequate resources. Many experts (42%) highlighted the role of the individual leader and implementer of the project. Two of the experts drew their attention to the readiness and maturity of the project consumer (target user). Most civil society representatives consider personal characteristics of the initiators, leaders, project team, and project partners as the key success component of a social project. According to one of the experts, "Success of a project depends on the initiator persistence, the strength and power of the first intention." Most experts stress the importance of coordination and resource management skills, while 35% believe the "right goals" are a significant success component. What stands out in the survey is the diversity of opinions of the representatives of public authorities on the components of success of a social project. Half of the surveyed experts stress the importance of the project timeliness and its focus on a specific category of citizens. One third of the respondents believe the key success factor is the interaction between all project participants, another third consider financing as a significant measure of success, one of the experts emphasizes a proactive leader's position.

The final question in the essential set was the one on the factors that affect the intensity of development of social projects in Russia and the Voronezh administrative region. Most representatives of the Voronezh business structures believe that the intensity of development is directly related to the activity and demands of civil society, and 42% of respondents believe that it is essential to create effective institutions for social projects preparation and implementation. However, most experts emphasize that it is the state structures which are responsible for the creation of such institutions.

Most civil society representatives associate community development with the development of a society, citizens' initiatives, and preservation of the democratic trend. What stands out in the survey is the analysis and inclusion of the own civic position in development factors. Thus, according to one of the experts, "For many involved in social projects it is a form of internal emigration, civil immunity, a meaningful existence in this paradoxical world." Over one third (36%) of respondents relate the intensity of development of social projects with governmental support and initiatives. Most representatives of public authorities associate community development with government agencies, government support and gubernatorial initiatives; and only one of the experts links community development with the development of the civil society.

RESULTS AND CONCLUSIONS

It is advisable to use the structure of "root definitions" from the Soft Systems Methodology by P. Checkland as a tool to organize and record the empirical data (Checkland, 1990). A root definition reflects a particular point of view on the process, the vision of the system by a party or parties. This is a clear and concise description of the process vision, through the mandatory structural elements. Information structured with consideration of all the foregoing elements, on the one hand, makes the report concise, and on the other hand, quite amply reveals the position of the process parties (see Table 2).

The empirical evidence derived from this study has enabled us to identify the sore points of the process: 1. Mistrust and lack of coordination of participants, search for options for cooperation, distribution of responsibilities. 2. The need for creation of stimulating public policies (regulatory, legislative, tax regulations and procedures). 3. Lack of social order, customers not ready, lack of consumers' interest. 4. Absence of effective institutions for social projects preparation and implementation, need for training personnel. 5. Lack of awareness, lack of promotion and popularization of social activity, ideas, project initiatives.

Table 2: Substantial characteristics of the structural elements of social projects

Structural elements	Representatives of business structures	Representatives of civil society institutions	Representatives of public authorities
Clients (benefit from social projects implementation)	Society ready to accept a social project	Specific users, beneficiaries, whose problems of security and social protection are solved	Citizens, population
Actors (key participants of the process)	Active people, the state as a regulator of the relations, business leaders establishing the level for social responsibility	Public organizations, volunteers, people with long-standing unresolved problems	State structures, business structures
Transformation (description of the nature of social changes)	Development of public relations, quantitative and qualitative changes in living conditions	Solving specific social problems, quantitative and qualitative change of the living conditions	Creation of a comfortable environment, elimination of anti-social phenomena, introduction of social innovation
Outlook (basic assumptions about the significance of the results of social projects)	Stable, harmonious and balanced socio-economic development	Creation of labor markets, preservation of social equilibrium, human development, formation of tastes, rituals, social criteria, consumer culture	Stimulate the development of the state, region, accelerate economic growth
Owners (people who seriously affect the launch and implementation of social projects)	Public authorities, major business	Society, public authorities	Public authorities
Significant environmental factors	Development of the civil society, social project customer institutionalization, promotion and popularization of social activity	Social landscape of the region, personal activity of citizens, civil society development, government support	Government support, governor's initiatives

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DEA MODEL FOR ASSESSMENT OF INSTITUTIONAL RESEARCH PRODUCTIVITY IN POLAND

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ABSTRACT

The objective of the article is to present the model concept of measuring productivity in Polish research units through DEA method. It describes the instrument to support management a research funding allocation by the Polish ministry.

Keywords: research productivity, Data Envelopment Analysis (DEA), assessment of Polish.

INTRODUCTION

Scientific achievements and prestige of scientists, scientific teams and institutions are a subject to a more scrutinised assessment process by different bodies. It is largely due to the growing role of science in the development of the knowledge-based economy as well as due to the common knowledge that the economic and social growth depend on the level of the research advancement and on the application of its results. High level and innovative research can become a driving force in the process of the country modernisation (Bonaccorsi et al., 2006; King, 2004; Coccia and Rolfo, 2008).

The evaluation of the research activity results is an important instrument in the organisational and financial management of research institutions. It becomes a crucial element in shaping the research policy and in implementing the research activities in different units of the research sector (Bernardin, 1996; Brennan and Teichler, 2008; Brennan and Shah, 2000). Evaluation and comparison of the research results improves the quality of science and creates a more competitive environment leading to wider openness of the research institutions to market needs and their greater flexibility in the co-operation with other research entities or units (Bonaccorsi et al., 2006).

Given the complexity of the research activity, the evaluation of research units on the national level is a difficult and complicated task. Scientific achievements or prestige of both individual researchers or research teams are a subject to diversified assessment methods. A traditional approach towards the evaluation of the level and the impact of the research achievements is expressed in a qualitative way and it is largely based on the opinions of other specialists in the relevant field of study. Currently, a range of criteria and methods for the research activity evaluation has increased due to the external pressure on the practical application of the research results (Butler, 2005; Coccia, 2008; Guena and Martin, 2007).

Since the early 70's in the research results management, more importance has been given to the questions of the research productivity and its evaluation. A research unit can be characterised by means of inputs and outputs combined with the transformation processes which turn the resources into the results. Consequently, research productivity is understood as a result of the research activity in relation to the resources used for a given activity in a given period of time (Karlsson et al., 2004; Leydesdorff and Wagner, 2009; Vasileiadou and Vliegthart, 2009;

Wagner-Dobler, 2005). The main objective of the research productivity analysis is the evaluation of the research activity and the quality assessment.

RESEARCH ASSESMENT IN POLAND

The present paper uses data from the questionnaires submitted by all public scientific units in Poland to the Ministry of Science and Higher Education (MNiSW) covering the period between 2001-2004 and 2005-2010 (Polish Ministry, 2005). On the basis of the submitted data, the MNiSW conducted a parametric assessment of the public scientific units. Public research units are composed of basic organisational units of higher education institutions (faculties), research institutions of the Polish Academy of Sciences, and non-university public R&D units. The research institutes are mainly public funded with the aim to produce scientific research according to the general guidelines set by MNiSW.

The parametric assessment and the categorisation resulting from this method constitutes a comparative system of the 'research production' of individual units. The system is based on the multiple outputs and as an input it considers a number of staff employed in a given unit to perform the scientific research and R&D activities.

Research outcomes of the parametric assessment are measured with regards to the two aspects: (1) results of research performance and entitlement to grant a PhD and PhD, DSc and (2) practical implementations. Each field is represented by detailed variables. There are three different groups of variables dependent from research field of unit. These are: (a) humanities and social sciences, (b) technical science and (c) art sciences. In general, respectively (a) 21, (b) 31 and (c) 36 quantitative variables are considered to which numerical values were assigned, which determine the weight of the features.

For every research unit (j) partial index of efficiency ($E_{j,k}$) is calculated as a weighted sum of variables in each aspect (k) as follows.

$$E_{j,k} = \frac{\sum_{i=1}^{n_k} X_{j,i} v_i}{N_j}$$

where:

- $X_{j,i}$ – value of i-variable for j-unit
- v_i – weight of i-variable
- n_k – number of variables in the k-field
- N_j – number of R&D employees for j-unit

In each of the homogenous groups relative effectiveness indexes ($E_{w,j,k}$) for each k group are determined.

They are obtained through referring partial efficiency indexes of the units to the highest index in the homogenous group.

$$E_{w,j,k} = \frac{E_{j,k}}{\max(E_{j,k})}$$

$E_{j,k}$ – partial index of efficiency for j-unit in k group

The final index of efficiency is a weighted sum of the partial indexes. Every homogenous group has different weights.

$$E_j = \sum_{k=1}^3 E_{w,j,k} w_{k,g}$$

$w_{k,g}$ – weight of partial index of efficiency for k field in the homogenous group g.

Each of the groups was given a weight depending on its scientific specificity of the so called homogenous groups. At first, the Ministry classified the research units into 19 homogenous groups according to the type of research activity they specialise in.

The obtained efficiency indicators form a ranking basis within the homogenous groups and determine the assignment of an adequate research category. The range is based on a scale from 1 to 5, which determines the distribution of financial resources for a research activity.

DEA ANALYSIS

For the evaluation of decision making units (DMUs) with multiple-inputs and multiple-outputs in a public sector, Data Envelopment Analysis (DEA) is now one of the most widely accepted methods to measure relative productivity of research institutions (Emrouznejad, 2008; Johnes and Yu, 2008; Kocher et al., 2006; Print and Hattie, 1997; Chen et al., 2010; Meng et al., 2007).

The reliability of DEA models decreases if too many inputs or outputs are used. The selection of comprehensive indicators becomes difficult if stakeholders aim to achieve a relatively holistic evaluation as too many variables disturb differentiation of DMUs.

Yet a different problem is observed in the case of research units which want to apply the system of research unit evaluation to create their research policy or to mark out new fields of the research activity. At the beginning of the evaluation, many research units prove no output values.

This is especially the case in the evaluation of public research units in Poland, where many different outputs are measured in the evaluation in order to produce relatively comprehensive performance profiles of these institutes.

The rules of parametric assessment that have been used so far have risen many doubts in the academic environment, concerning their rationale, usefulness and the criteria of the assessment. Different examples of DEA method implementation lead to the conclusion that its application for the evaluation of Polish research units productivity is well justified, which is a purpose of the present paper.

Research methodology

The study of the methodology of parametric assessment was initiated with the sampling of the variables. The analysis covered 65 units of the homogenous group G1 – units representing mechanics, materials, chemical and processing engineering. As the input variable the number of R&D staff was taken into consideration. The coefficients of variation were checked – all variables significantly differentiate the objects. The RGM method (Rybczuk et al., 2007) was used in the initial correlation analysis (Figure 1).

The figure shows the relationship of objects to objects (in the middle of the circle) features to features (circle line) and the features to objects. Next, Spearman's correlation analysis disclosed that the part of the variables is highly correlated and these variables convey similar information. It means that the number of variables can be limited, because its excess set only seemingly improves diversification of the assessed units. Variables highly and insignificantly correlated with the input variable were excluded from the analysis. After the correlation analysis was carried out, the number of output variables was reduced to 5 variables.

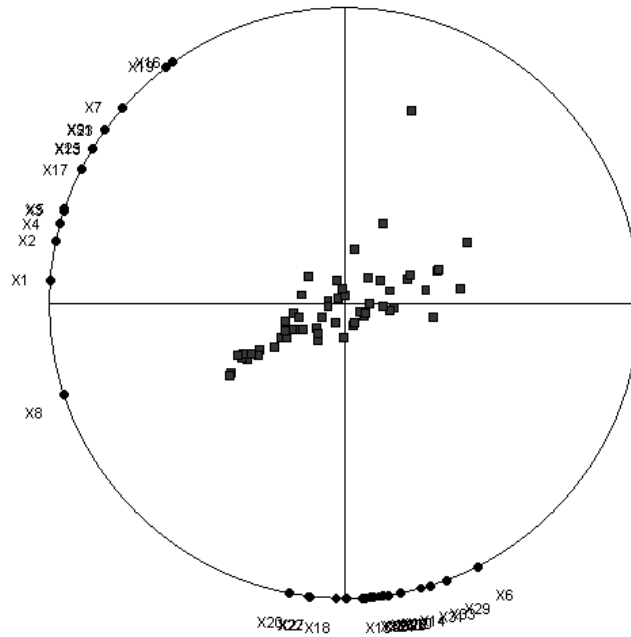


Figure 1: Illustration of the correlation analysis with RGM method
Source: Author's elaboration.

As a subsequent step the mechanism of factor analysis was applied. The factor analysis comprises a set of methods and procedures used to replace a big number of variables with a few insignificantly correlated factors. They keep relatively much information conveyed in the initial variables and at the same time each of them is a means of different merit content.

As a result of the analysis two factors were obtained. The separated main components describe over 81% of variation of the data. The variables inside the factors are highly correlated, the variables were therefore isolated which are attributed by the highest factor weight. Later, while assigning them to the factors, two fields were determined, which should be takes into consideration in assessment of the research units.

For the sake of the further analysis a model with one input variable (Input1) – and two output variables (Output1), (Output2) were taken into consideration. This set of variables enables a clear graphic interpretation of the results in a two-dimensional coordinate system (Figure 2).

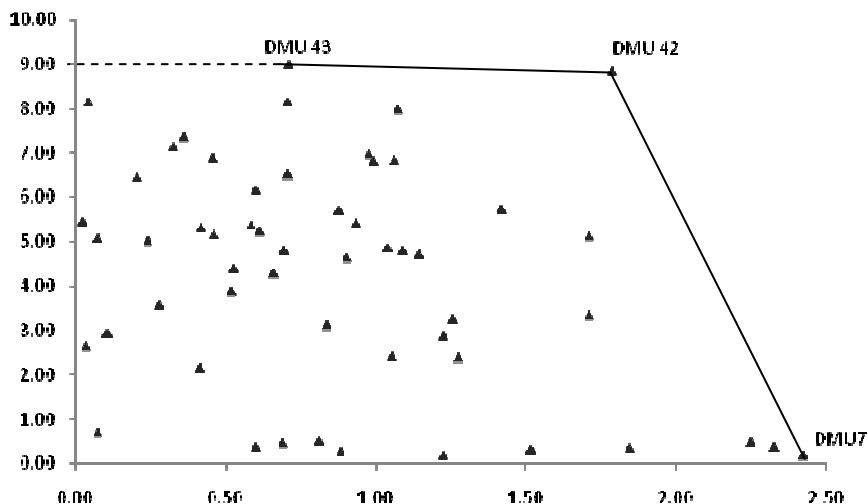


Figure 2: Illustration of the CCR model results
Source: Author's elaboration.

The CCR and BCC output oriented models were used. The results have shown that the level of productivity is quite diversified. The median shows that productivity of the half of the units is below 66.10%. The scientific units demonstrate also changeable economies of scale. Also comparison of two periods evaluation was done. On this basis setting the research categories could be more objective and clarified.

CONCLUSION

The author claims that the comparative analysis of productivity of research units with the DEA method can be a source of valuable managerial information, which could be the basis for scientific assessment in Poland. The application of the method may contribute to the increase of the objectivity of the weights which are currently arbitrarily assigned. It can also assess the level of the conducted scientific research and identify the units of a model efficiency level in national circumstances. A separate optimization for each unit exposes strengths of the unit determined by the resources and the environment. Furthermore it allows also to determine the so called “dead” resources, which do not influence significantly the results achieved by the unit.

The example used in the analysis has an illustrative character and requires further studies.

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LOGISTICS SYSTEM AND LOGISTICS CHAINS

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ABSTRACT

The article presents current knowledge in the field of logistics, including definition of terms, description of logistic system and logistic chains. The aim of logistics is to effectively manage flow of goods. Logistics is in general using multi-criteria evaluation based on financial effectiveness. Authors are participating on the project „Centre of Excellence for Systems and Services of Intelligent Transport“ where they are working on solutions of emergency and crisis situations in transport. In those cases the logistics is aimed on the fastest and the most secure solutions. A criterion of optimality is then transferred to time and value effectiveness instead of financial effectiveness.

Keywords: logistics system, logistics chain.

INTRODUCTION

Important parts of this paper are focused on organization of logistics support in solving crisis situations. Supply logistics – supplies of material and technology, supply of food, drinking water and energies in crisis situations, but also to the logistics of providing other supporting activities in solving crisis situation.

Special attention is dedicated to the issues of transportation, as no task of crisis solution agenda could be completed without solving transport-related issues, i.e. functional means of transport, trained operating staff and appropriate material resources. Transport logistics has to take care of optimum utilization of the existing transport routes which is efficiently supported by the use of information systems. Thus the transport quality is guaranteed, mainly as the reliability but also the capacity of transport routes is concerned. Transport system is unique, whereas an extraordinary situation within it may subsequently trigger critical conditions in other objects and systems. This is why the issue of crisis situations in transportation is also considered from the point of view of security and contingency management of the individual transport systems.

The term “logistics” may be understood as a system, tool, function, institution. Logistics as a system is an objective-oriented structure of activities focused on the accomplishment of performance objectives in the framework of the whole system. Main system components are: material system, control system, information system. Coordinating these, synergic effect may be achieved. Logistics as a tool is of a method/instrument nature. It is not an integrating element, it only achieves isolated partial solutions. Logistics as a function covers basic functions, i.e. purchase, production, sales or it is included within (such as financing). Logistics as an institution is understood as a certain organization unit which completely or partially includes the tasks of logistics. Logistics is generally understood as a management method.

The goal of any logistic activity is to optimize logistic activities with its components – logistic services and logistic costs while being focused on the requirements of the market. This is why logistic activities constitute marketing tools.

The customer views logistic activities in the form of logistic services. Basic services of logistics include delivery time, reliability of delivery, flexibility and quality of delivery. The part of logistic activities is logistic costs, where the costs of control, stock, storage, transport and handling costs belong. (Fig. 1)

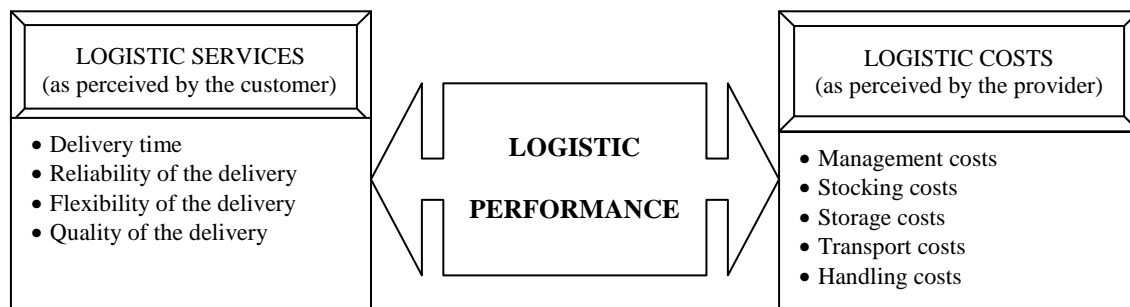


Figure 1: Components of logistic activities, Source: ownadaptation

Delivery time is the time which passes from issuing the order by the customer until the goods are available to the customer. Shorter delivery times enable to keep lower amount of stock and shorter period to make goods available. Reliability of the delivery is an expression of the probability of keeping the delivery time. The reliability of work procedures and delivery readiness belong to the factors with major influence on the reliability of delivery. Flexibility of the delivery expresses the ability of the dispatching system to react on the customers' requirements and wishes in a flexible manner (purchasing quantities, system of orders acceptance, type of packaging, transportation alternatives, providing information for the customer). Quality of the delivery is an expression of accuracy of the delivery in accordance with the delivery type, quantity and state of the goods delivered.

Management costs consist of the costs of planning, availability activities and the management of production itself. Stocking costs result from keeping goods on stock and fixing capital to finance the stock, various types of deterioration and loss insurance. Storage costs are formed by the fixed part (keeping readily available stock capacities) and variable parts (costs of processes to occupy and free storage capacity). Transport costs include internal (within the company) and external transportation costs, readiness costs, volume dependent costs. Handling costs include costs of packaging, handling operations and commission agent activities.

LOGISTIC SYSTEMS

Generally speaking, we may define the system as a set of elements connected by certain links with spatial and hierarchic arrangement. Each system within existing system hierarchy is a part of superior system and at the same time, it may be divided into smaller subsystems.

Logistics system is formed by purposefully arranged sets of all technical means, equipment, buildings, roads, employees involved in execution of logistics chains. Logistics system is a set of logistic elements which are the bearers of logistic functions (such as transport, packaging, handling, storage, orders, etc.). These elements are mutually connected with flows of material, information and values. Several subjects take part in logistic processes, for example producers, carriers, forwarding agents, distributors and so forth. The final benefit is oriented towards the final consumer (Fig. 2).

The predominant objective of the logistics system is to satisfy certain need of the object of the final effect, i.e. to reach the desired state of the logistic system's environment either in the defined period of time or within minimum required time. The internal objective is such behaviour of the logistic system which leads to cost minimization or, in case of flexible time period, to cost optimization. However, the objective is not to optimize partial areas, but it is always the optimum solution of the entire system. It is also necessary to assess the ensuing costs as a complete entity, because they are mutually dependent and it is necessary to fully recognize these mutual interactions when trying to minimize overall costs.

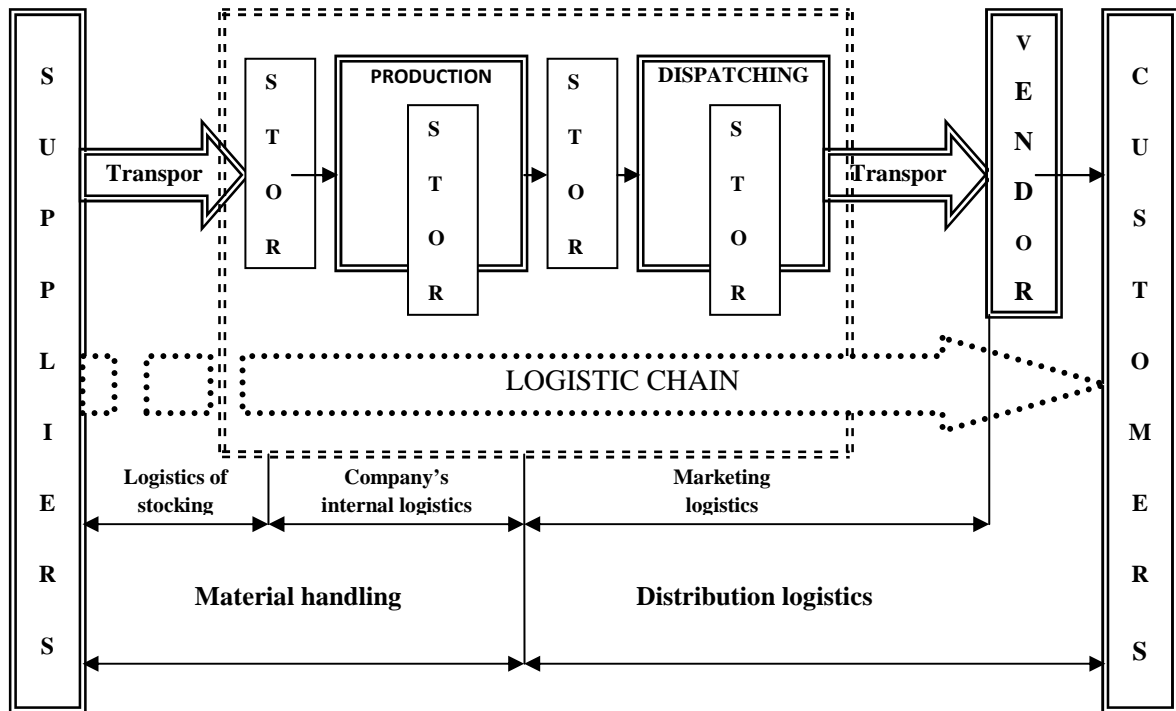


Figure 2: Logistic system diagram Source: own adaptation

Logistics system is formed by:

- node elements (procured and consumption elements, production locations, storage, branching, checking and servicing elements),
- link elements (active and passive connecting elements).

Quality and quantity features of logistic systems' elements are shown in Tab. 1.

Table 1: Logistic systems' elements Source: own adaptation

ELEMENT	QUALITY FEATURE	QUANTITY FEATURE
NODE ELEMENT		
PROCUREMENT	<ul style="list-style-type: none"> • availability • operational mode 	<ul style="list-style-type: none"> • quantity of goods • origin of goods
PRODUCTION	<ul style="list-style-type: none"> • operational mode • production process 	<ul style="list-style-type: none"> • formation of and demand for goods • modification of parameters
STORAGE	<ul style="list-style-type: none"> • ability and order of precedence in order execution 	<ul style="list-style-type: none"> • warehouse dimensions
BRANCHING	<ul style="list-style-type: none"> • procedure of the activity 	<ul style="list-style-type: none"> • time of delay • elimination of failure
CHECKING	<ul style="list-style-type: none"> • operational mode 	<ul style="list-style-type: none"> • time of delay
CONSUMPTION	<ul style="list-style-type: none"> • availability • operational mode 	<ul style="list-style-type: none"> • goods demand parameters
LINK ELEMENT		
ACTIVE LINK	<ul style="list-style-type: none"> • procedure of the activity • area of activity 	<ul style="list-style-type: none"> • parameters of movement • elimination of failure of the means of transport
PASSIVE LINKING	<ul style="list-style-type: none"> • the possibility of changes in precedence in the link 	<ul style="list-style-type: none"> • geometry of network connection • loading capacity of the network and objects

Quality features of logistics system elements express mainly those of their qualities which cannot be measured in standard physical units, some of those are common for more elements. Quantity features of logistics system elements can be generally expressed by specific values. A set of quantity indicators may be a quality indicator.

From spatial point of view, it is possible to classify logistic systems in three subsystems:

- macrologistics system,
- micrologistics system,
- metalogistics system.

Macrologistics system is presented by the environment. It is for example a region or an international area, a system within the boundaries of national economy, a country, sales market or the procurement area. Micrologistics system is formed by subsystems of the macrologistic system. The examples are company, military or hospital logistics and others, it is a system in the boundaries of a single company, department or production line. Metalogistics systems are constituted by cooperating forms between micrologistics systems of any type, they are the sum of all partial systems which are related to individual distribution channels.

LOGISTIC CHAINS

The basic role of logistics is to optimize material flow and the connected information flow with priority orientation on customer's requirements. General sequence of individual operations (steps and technologies) fine-tuned against each other in the nodes guarantees higher effectiveness of manufacturing or consumer process. Relative interrelation of all activities and links dynamically connecting the consumption market with raw materials and material market is a logistic chain.

Logistic chain is composed of partial flows of material and information which flow between various locations of process operations in production, warehouses, places of loading, unloading, reloading, transportation, switchboards, telephones, computer terminals and similar. It is a part of logistic system, which as a whole is formed by the set of all created logistic chains. Logistic chains have their distinctive features, which may be classified into groups as shown in Fig. 3.

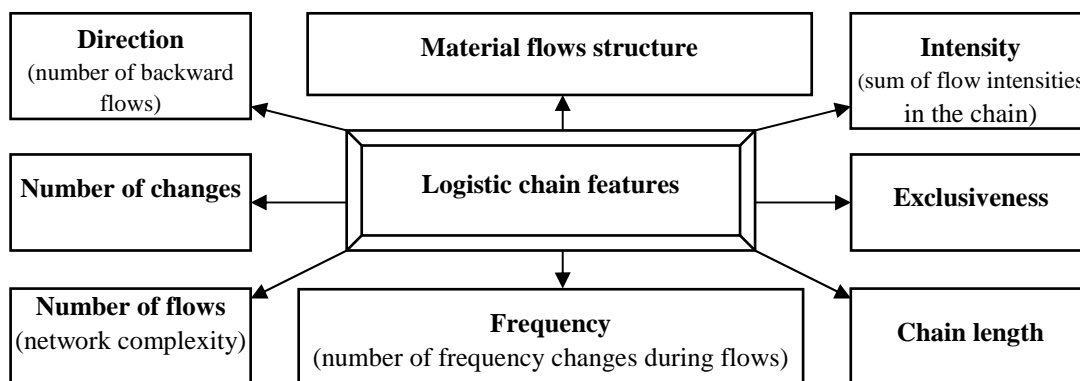


Figure 3: Logistic chain features, Source: own adaptation

Complete logistic chain is composed of partial tangible and intangible flows, which flow between the respective chain's links:

- tangible component is based on relocation of items (material, goods, waste), energies and people in order to satisfy the requirements of the final customer,
- Intangible component is based on exchange of information necessary to enable the above relocation of items, energies and people.

Logistic chains are planned exactly for the specific product or its parts. While planning, it is necessary to dutifully define the processes and observe certain principles. The primary requirement is to specify the relevant logistics indicators:

- stock volume
- running periods,
- probability of observance of the defined deadlines,
- capacities utilization.

Thorough and complete model of the chain enables besides explicit support of decision-making processes in production logistics of the company, but also the support of further processes connected with orders execution. Detailed knowledge of the logistics chain enables:

- to define optimum modes of operation,
- separate assessment of the costs of process, supervising and logistic activities,
- to analyse defects in system's structure,
- to define management and responsibility,
- to define availability, production and distribution strategies,
- to arrange organization structure.

The basic objective of the logistic chain is to provide the final consumer with the required combination of output – service performance (packaging size, delivery time, etc.) at minimum costs. The consumers themselves create the basic structure of the chain because there are only some combinations of the offered logistics activities they require. Optimal chain structure is formed when no other group of organizations generates more profit or higher level of customers' satisfaction relative to the monetary unit of production costs for the given product. An inherent support of material flow is the flow of information. This provides for the required free material dispositions in stocking, storage, transport and production process and informs all participants about the material flow. As seen from the viewpoint of their function, we may divide the information constituting the logistic chain in three groups according to the Fig. 4.

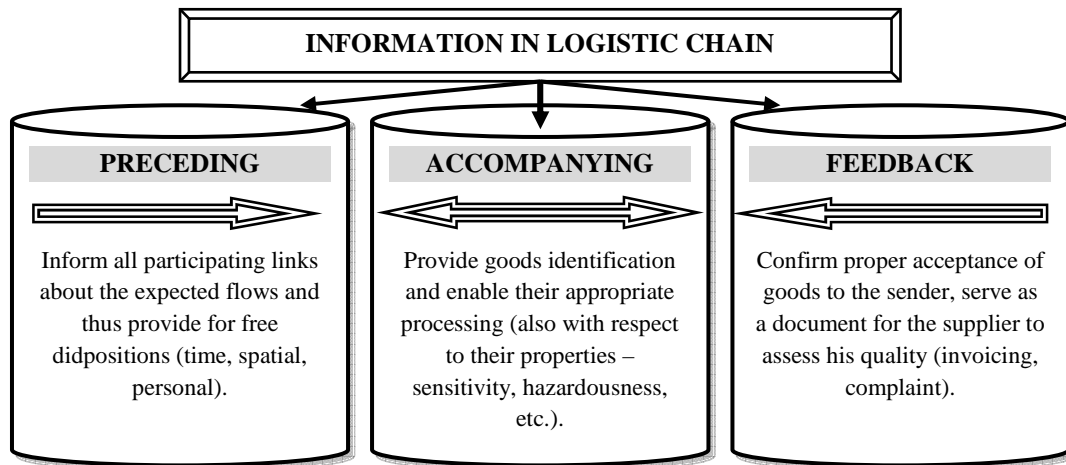


Figure 4: Classification of information in the logistic chain with respect to function, Source: own adaptation

Logistic chain is linked to the customer, his order and requirements. It is a union of passive and active elements.

Passive elements of the logistic chain:

- raw materials, base and auxiliary material, parts, unfinished and finished products – they are in the form of handled, transported or stored units. The objective of handling, transport, finishing, storing and other operations which passive elements subsequently undergo is to "overcome space and time". These operations are of non-processing nature only – the quantity or nature (physical, chemical or other properties) of raw materials, materials, parts or products do not change.
- packaging and means of transport – condition the goods' movement, in case their displacement is performed individually, for example for re-use,
- waste originating in production process, during goods distribution and consumption in case the disposal (liquidation) is the subject of responsibility of the producer or of the distributor of goods where packaging was used,
- Information, which movement precedes, accompanies and follows the movement of goods and/or the movement of money connected with it as a necessary assumption of its execution.

Active elements of the logistic chain:

- technical resources and equipment for handling, transport, storage, packing and fixing,
- auxiliary resources and equipment, which operate in connection with buildings, handling and storage areas and transport routes,
- technical resources and equipment used for operation with information data, resources for automatic tracking and identification of passive elements, computers, resources and networks for remote transfer of messages, information and data,
- managing employees (decision-making subjects), who purposefully influence the operation of controlled items (active elements) of the logistic system.

Active elements are the elements of logistic chains with the purpose of performing sequences of non-technological operations by means of passive elements, i.e. operations of packing, re-loading, unloading, storage, out storage, distribution, completion, checking, supervision, identification and collection, transfer and storage of information. Within the logistic chain links the active elements have to be matched with each other (as coordination and synchronization is concerned), but also active and passive elements as there is a need to achieve optimum passage of all passive elements through the chain.

CONCLUSION

The aim of this article was to present new concepts in field of logistics. Maximum effectiveness of logistics systems (financial, time and value) is formed by existence and usage of information systems, and information support based on modern information and communication technologies. We hope that presented article will contribute to development of human knowledge in this field.

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TRADITIONAL AND ATYPICAL EMPLOYMENT IN LIGHT OF EMPIRICAL DATA

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ABSTRACT

Regarding today's employment, flexibility and a high level of adaptability is an individual, as well as a social, necessity. Globalization and the ever increasing market competition have made it necessary for companies to utilize the human resources available to them in an effective way. Atypical employment enables work, or at least its potential availability, even for those who would not be able to work within the framework of traditional employment. In our current publication, we would like to present some results of a questionnaire research which was aimed at the attitudes and expectations regarding atypical employment forms. We are comparing the preferences and stance of our respondents, highlighting possible differences and similarities while using our experience to outline employment improvement suggestions.

Keywords: atypical employment, social employment, employee, employer, employment form.

NORMAL EMPLOYMENT-ATYPICAL EMPLOYMENT

“Work as an economic concept is a conscious human activity, the aim of which is to create something economically useful and valuable” (Pallas Great Lexicon, Volume 12). Doing work is not equal to employment; it took mankind thousands of years to be able to speak about employment, that is, having other people do relatively regular work. Even after the first forms of employment had come into being, it took further hundred years to look at one of them and consider it so typical or normal that we could regard different forms to be the “atypical” ones.

Basically, employment merely means that somebody gets (that is, employed) another human being to do some work, for which he contributes to their livelihood in the form of monetary or other compensation. This employment can be regular or occasional, and remuneration could be providing home, handing over the excess product or even giving them money. Modern typical employment assumes a dependency between the employer and the employee where the employed person does not work for “his own benefit” – that is, he does not work for his own profit and at his own risk – and, consequently, he depends on his employer; their relationship is fixed in a written job contract.

Both sides are obliged to obey this contract, and it involves another set of relationships on registering the new employee with the authorities (social security, etc.).

Compared to “normal” employment, atypical employment causes a change in the legally regulated relationship between employer and employed. Beáta Nacsa’s (1997) categories provide great help to us in navigating between the various new and old employment forms. In her system, an employment form is considered to be atypical if it can fit into more than two of the following four clusters: the length of daily working time, the period of the employment, the place of work and the legal relationship. Based on these clusters, we are going to see just a few types of atypical employment.

The most widely known and the most widespread atypical employment form is part-time employment. However, the validity of international comparison researches is somewhat shadowed by the fact that “Western European national labour codes do not usually define part-time jobs; instead, they merely claim that they last shorter per day than full-time work. In France, the legal definition for part-time work is that it is at least a fifth shorter than full-time work. In Denmark, the minimum amount of work in part-time jobs is 15 hours per week, while the top limit is 30 hours per week (Nacsa, 1997, p. 59.). At the same time, Antal Seres indicates in one of his works that part-time jobs do not necessarily reflect the aims and needs of the employees, but rather, the preferences of the employers. Looking at the entirety of the 27 EU member states (2006), we can see that in most part, the unskilled workers, women and the youngest and oldest workers find employment in this form. We also have to mention that this form is a dynamically expanding one. In Hungary, for example, KSH (2012) claims that “the greatest change brought forth by the economic crisis after 2007 was the re-organization of full- and part-time jobs. Almost 90 thousand less people worked in full-time jobs in the second quarter of 2012 than in the same period in 2008, while the growth in part-time jobs in this period was more than 40% for male and 60% for female employees.”

Another favourite form is flexible-time work, which does not necessarily appear in labour contracts. There are countless variations of this form, the most widespread of which is called “unbound” working hours; this latter could be a combination of working at home, standing “on duty” to be called in any time or even “normal” work.

Job division is a new and special form of employment which is hardly known in Hungary. The novelty of this form comes from the fact that it has no legal predecessor, and the required conditions for this type of employment were all created by the new Hungarian Labour Codes. The idea is that the employer makes a contract or a certain job with not one, but several employees to work in cooperation. Should one of them be hindered in doing their job in any way, the other person may step in line immediately.

Employment may be atypical because of the time period of the job. Employment made for a pre-defined time period still exists and is widespread among “normal” jobs, but it involves so few people in a given period that labour legislation believes it is not important enough to regulate it, even in a modern society. For this reason, one of the early forms of wage-employments, which appeared in the 19th century and is still present today, is day-labour. This form used to be common among lower classes, and it did not offer many chances to rise from their social stance.

Work contracts made for a pre-defined time period typically contained semi- and unskilled jobs (constructions, less frequently agricultural work), but after the change of the regime in 1989, this form spread into other, higher-qualified jobs as well. KSH mentions that “in 2010, a higher percentage of employers between 15 and 64 worked for a pre-determined time than in previous years (9.6%). Employers typically apply this form for fresh beginners who are at a disadvantageous negotiating position, which meant that young people were offered this employment form more often than other age groups. A quarter of those between 15 and 24 had such a contract (aged 15-19: 45.2%, 20-24: 23.7%), but the figures were high even among those between 25 and 29 (13.5%)” (KSH, Ifjúság, 2011, pp. 5-6). The form of occasional work has been the main cause for blacklegging in the last two decades, which is why there have been new regulations every few

years to make the situation more manageable and transparent. In 2012, the new Labour Codes of Hungary were created, and even the name suggested that by regulating occasional work, the most important factors will be flexibility and simplicity. The working contract does not have to be written down, but it is possible to make a written one using the sample contract provided by the law. As soon as the work is registered according to the law, the job will be officially created.

The atypical nature of the work may come from the place where the work is done. According to ILO, “regarding employees, the work will be done at home when it is fixed in an agreement made between the employer and the employee (telework-contract, outside work, permitted regular work at home). There are no unified figures concerning people working at home even among the older EU-members: in Austria, Belgium, Denmark, Great Britain and Iceland, the figures go higher than 20%, while the same figure is not even 10% in Southern Europe – at least according to the definition applied here” (Fazekas, Köllő, 2008, p. 61). At the same time, there are an even lower percentage of people working at home in Hungary. Although the 2011 researches of Sonda Ipsos showed that almost 37% of the Hungarian employees would have liked to work in this form of employment, the 2012 statistics indicated that only about 3% of all employees did telework, as opposed to the international average of 17%.

Finally, when it comes to more than two people in a job contract, more and more firms are applying atypical forms of employment by contracting out several pursuits (not even just secondary activities) instead of hiring their own employees to do the job (Szabó, 1999). Renting labour today is a functional form of employment only in fields where there is a great number of available workers. The new Labour Codes introduced in Hungary in 2012 regulated all the requirements and duties of the organizations who wish to rent labour. According to these requirements, the job rights are divided between the renting and the borrowing sides. The employee is employed by the renter, who also retains the duties of terminating the job, paying wage, remunerating the expenses of the employee regarding the fulfilment of the job as well as any other requirements of the job itself. Besides legal regulations, the financial and economic crisis also greatly affects the spread of labour renting. Fazekas and his co-writers (2012) point out the crisis when claiming that “labour renting is more and more popular, and in 2011, the amount of rented labourers among firms with more than 5 members rose to 7%.” The fact is, however, that even in spite of the frequent new regulations, there are still a lot of open questions regarding this atypical form of employment. It is still not clear, for example, who may receive governmental aid in this employment form, and it is also not sure which side is responsible for paying in certain types of fees after the employee (for example, the rehabilitation contribution to be paid after a change in working abilities).

RESEARCH METHODOLOGY AND RESULT

We conducted our research this year among the residents of Komárno in Slovakia and Komárom in Hungary. The aim of our research was to map out the current labour market situation in the region, then to come up with suggestions to improve on the employment rates of the population. The research consisted of two parts. Firstly, we conducted in-depth interviews consisting of nine questions; the aim was to see the labour market situation in the border areas. Secondly, in the main part of the research, we issued a questionnaire of 24 questions. The questionnaire consisted of two parts: one asking for personal information and another regarding non-traditional, atypical forms of employment. Both groups contained closed questions, particularly matrix and scaled questions. It took several days to ask all the questions in both cases; 400 questionnaires were filled in eventually, which, in order to retain the representative nature of the research, contained 200 Slovakian and 200 Hungarian ones.

We are starting the presentation of the sample by specification. The questionnaires were filled in at the Komárno and Komárom employment offices. Regarding habitation, 71% of the Hungarian respondents lived in cities, 29% in the country, while the same proportion in Slovakia was 48-52%, which means more Slovaks lived in the countryside. As for genders, 46% of the respondents were men and 54% were women; again the two genders were represented almost equally in the

samples. When it came to age, the highest age proportion among the Hungarian respondents was between 30 and 39, while the same category in Slovakia was 25-29.

27% of the Hungarian respondents were young entrants to the labour market (between 21 and 24), while the same category on the Slovakian side was barely 19%. As for education, almost 40% had no secondary degree, meaning they had finished secondary vocational school. The proportion of those with a secondary degree was also equally high in both countries, over 30%. There were no significant differences regarding primary and tertiary degrees among the respondents in either country. In Slovakia, the proportion of people with primary or tertiary degree was 18% in both cases, and even in Hungary, the number of respondents with a primary degree was only 7% greater than those with a tertiary one.

Besides personal data, we also put more emphasis on the current positions of the respondents: whether they were working somewhere, they were unemployed or they were in another status. The majority of the respondents, almost 78%, were not working, meaning that they had no job whatsoever. There were no significant differences regarding current employment between the Hungarian and the Slovakian sides (the difference was only 1-2%). This was to be expected as the questionnaires were filled in at the employment offices, where mostly unemployed people go. It was interesting for our research, however, that of the remaining 22%, only a fraction were doing some form of atypical employment work. The number of people doing traditional work on the Hungarian and Slovakian side was 17% and 9% respectively.

The rate of unemployment in 2012 was approximately 18% in the Komárno region; the situation was somewhat more favourable in Komárom-Esztergom County: 7.2%. The high level of unemployment on the Slovakian side was partly due to the fact that Nokia, which was located in the Komárom Industrial Park, also employed Slovakian employees through labour conscription firms; after the mass lay-offs, these people became registered unemployed again in the Komárno region.

Based on the questionnaire results, those people who were unemployed for 1-6 months were represented by a notably high percentage in South-Komárom (around 40%), but people with lasting unemployment problems were also represented high in North-Komárom (30%), which shows how serious the situation is in this region. People who had been unemployed between 7 and 12 months were in greater number in Slovakia (almost 20%) than in Hungary (well under 10%). The above figures show that even in spite of mass lay-offs, the Hungarian labour market was able to absorb a significant portion of the unemployed, while the same people in Slovakia became lastingly unemployed.

The questionnaire showed that more than three-quarters of the respondents have already heard of atypical employment, and only 21% claimed that they had never heard of these forms. The reason for this may have been that those people with low labour value may not have been in a situation in the labour market where they could have met the employment form in question. This means that they were mostly employed in traditional jobs, or they belonged to the group of the lastingly unemployed who had not worked for more than one year (or perhaps ever).

The majority of the respondents thought that atypical employment did not affect the acquisition of a “normal” job in any way, which meant they had neither negative nor positive opinion on the matter. The most positive effect is attributed to training organized by labour offices, labour renting and part-time employment. The positive gains come from the fact that the potential employees may acquire knowledge, skills and experience which meet the current demands of the labour market. Employees may even have the chance to get a permanent job contract through labour renting as firms prefer employing workforce they already know and have already trained. Also, part-time job enables employees who are not yet able to work in full time (students, young mothers) to return to 8-hour work later when they feel they can now afford it. Seasonal, occasional and public work has the most unfavourable effect. Seasonal and occasional work is often unofficial, and they provide no

previous job reference which could become an asset in later job searches. Public work, in most cases, is a downgrading employment form which does not provide professional development for the individual.

As for the question whether they would accept atypical work, opinions differed according to the type of the employment form. Still, 50-60% of the respondents would have only accepted such an employment form as a temporary solution. Our conclusion is that even if they received an atypical job, the respondents would still hope that their employer would offer them a job contract for an undetermined amount of time. People see atypical work as a springboard for another job, rather than a long-term solution.

The research seems to justify the assumption that the population of our focus region mostly refuses to work in atypical employment forms, instead insisting on the more traditional ways. They say in almost every case of atypical employment form that it is only a temporary, forced, solution, and they would not accept them if they had got any other chance. Occasional work, which reached almost 79%, received the most negative criticism. It was closely followed by seasonal work (63.5%) and public work (60%). A surprising piece of data was the high antipathy towards labour renting: almost 60% thought that they would only take such a job out of necessity.

Of all the atypical employment forms, people would choose labour renting as the best alternative, but even so, they hope to be able to return to traditional employment later on. 30-40% of the respondents also admit that atypical work has its advantages. This advantage is mostly shown regarding part-time job and teleworking, with their 40% and 47% respectively. When it comes to the reconciliation of work and private life, more than half (54%) of the respondents think that more flexible working hours would be more suitable for their needs. Atypical work is the form which favours flexible arrangements the most. The least favourable arrangement for the respondents would be shortened working week and shortened working days; this is partly because these employment forms are not as widespread in our region. 13% of all people think that neither employment forms we suggested is suitable to them, which we present as evidence that these people actively support traditional employment forms.

While conducting the research, we were trying to reveal how much chance for an economic growth the residents saw in atypical employment. We wanted to know whether the creation of new, non-traditional jobs would assist in climbing out of the current economic crisis as well as offering a solution to the permanently unemployed. Based on the results received, 62% of the respondents thought that atypical employment would help the economy to climb out of the crisis and 57% even said it would help the permanently unemployed. The results show that the respondents are not overly optimistic, and they are not sure that this relatively new trend is a secure solution.

However, we managed to talk to several people during the interview, whose answers indicated that they are not really optimistic regarding the current labour market situation in the region. They see no way out of unemployment, and they are distrustful towards the atypical employment forms mentioned in the survey. Many think that this kind of employment allows employers to exploit their workers even more, and they offer no real protection to the employees.

Finally, the main differences of atypical employment between countries typically appear in terms of the forms used. The Hungarians had a more positive attitude towards trainings organized by labour centres and public work than those people living on the other side of the border. 58% of the Hungarian population thought that training is useful and it helps people to find a new job. A great majority of the respondents also had a positive opinion of public works, and they appreciated the role of the state and the local governments in this matter. On the other hand, most Slovakian respondents found these trainings useless, and they claimed they would have accepted public works only as a last resort. Regarding labour renting, the Slovaks were also less enthusiastic: only 24% of them thought that this kind of job would assist them in finding more permanent employment, while 35% of the Hungarians trusted labour-renting companies more. The Hungarians are more

open, and they accept less traditional forms of employment more. With the exception of seasonal and occasional work, more than 20% of the respondents always thought that they would even accept the given form for a longer period of time. The same figures stayed under 15% in most cases in North Komárom. In both countries, almost 30% of the respondents would be willing to take teleworking as a long-term solution; however, this employment form is not typical either in Hungary or in Slovakia.

CONCLUSION

According to our research results, the respondents in the sample clearly favour traditional employment forms as opposed to atypical ones. More than half of the respondents believe that atypical employment is neutral regarding the chances of getting a normal job, that is, it affects these chances neither negatively nor positively. Also, a great majority of them would only accept an atypical job as a temporary solution: they believe that people only work in atypical jobs out of necessity because they have no other options.

This neutral, often negative attitude from the part of the respondents could be explained saying that they do not consider atypical employment secure and financially stable in the long run. The government would be well advised to create a detailed legal background which is equally capable of protecting the interests of the employees and the employers. As for the local governments, they should use their employment institutions to create trainings and courses where they would be able to emphasize the advantages of atypical work. The groups to be targeted should be those with the highest unemployment rate: these people could be young entrants, young mothers and the permanently unemployed. They all represent social strata the employment of which is as much of a challenge in Slovakia as in Hungary; also, these social groups are at some form of a disadvantage by nature. Comparing the two countries, it can be said that the Hungarians are indeed more open towards atypical employment forms. However, the differences are slight, mostly owing to the proximity and the cultural similarities of the two cities.

The biggest differences in opinion were mostly related to trainings and public work organized by employment institutions: the Slovakian population is very pessimistic, while the Hungarians are more optimistic about the above mentioned opportunities. Seasonal and occasional work is the least popular form in both countries; on the other hand, 30% of the respondents marked teleworking as the form of employment they would accept in the long run as well. However, these forms of employment are the

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SOCIAL ECONOMY: REMAKING SOCIETY WITH A HUMAN FACE

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ABSTRACT

This paper focuses on social economy as a conceptual framework and an increasingly revisited topic in terms of finding alternative solutions to the current global economic crisis. Although the contemporary economic theory considers these forms of economic activity as something marginal, the principles of social economy are feeding back into a system of promotion of welfare for workers and consumers, environmental protection and sustainable development. The paper emphasizes the liberating potential of an anthropologically informed economics where social relations and human concerns are placed at the centre of economics. The goal of the paper is to challenge political and economic policies who still fail to provide minimum acceptable levels of economic and social well being to growing numbers of people and to re-examine the meaning and ultimate role of civil economy as a diametrically opposed approach to the ruling neoliberal economic order. The ultimate goal of the paper is to encourage further interdisciplinary studies and participation of scholars from diverse fields, such as business management, sociology, political science, and economics.

Keywords: social economy, civil economy, relational anthropology, social dimension of economic behavior, social economy organizations

INTRODUCTION

"The 21st Century will be the century of the social sector organisation. The more economy, money and information become global, the more community will matter. And only the social sector nonprofit organisation performs in the community, exploits its opportunities, mobilizes its local resources, [and] solves its problems. The leadership, competence, and management of the social sector nonprofit organization will thus largely determine the values, vision, the cohesion and performance of 21st Century Society."

Peter F. Drucker, Drucker Foundation 1999

Over the course of the last two centuries, there has been an ongoing debate how to relate the practice of economics and the development of economic institutions to the question of social benefit. This struggle continues today, and it is especially meaningful in the context of global crisis and the need to transform the unjust economic structures and move away from the isolated creation of market values and recognize social and ecological values.

Despite the open criticism of neoliberalism which is today used as a term describing the process of de-regulation and liberalisation of the markets and the retreat of the state that hands over the responsibility for the society's interests solely to the forces of the market, we are still obsessed with an all-pervading economic perspective that understands humans as informed, rational individuals and neglects social dimension of economic behavior.

The predominant view of economic behaviour is still separated from the broader social and psychological conditions that explain human behaviour. The absence of social dimension in economics can be traced in other fields of study because according to Tzvetan Todorov (1998:23) "studying the great currents of European philosophy as regards the definition of that which is human, one reaches an unexpected conclusion: the social dimension, the element of life in common, is not generally considered necessary for man." For the most part of the last two centuries, the typical pillars of social economy – humanity, sociability, happiness – are almost totally absent.

The failure of mainstream economics to address these issues is a key reason for the increasing interest in finding new strategies and paradigms that are more just, equitable, and responsive to the broader needs of society. Emphasizing mutual and collective benefit and being animated on the principle of reciprocity, the social economy represents a response to this disconnected, and by some, even anti social view because unlike public and private sector economies, social economists are working towards the reinsertion of social goals, reciprocity and solidarity into economic thinking and decision making. For this reason, social economy should be elevated to a much more strategic and dominant position as a way of organizing our economic life.

SOCIAL ECONOMY: HISTORY, MEANING AND PRINCIPLES

Social economy is theoretical approach first developed by the 19th century French economic thinkers who distinguished social economy from political economy and applied economy, as the ‘contribution of the economic sphere to social justice’ (Moulaert & Ailenei, 2005: 2040). However, the roots of social economy go back to the concept of the *civil economy* that was part of an Italian intellectual tradition that began in the 15th and 16th centuries as Civic Humanism and continued until the golden period of the Italian Enlightenment in the schools of Milan and Naples. It is interesting to mention here that the first Chair in Economics ever established in Europe was the Chair of Civil Economy at the University of Naples in 1753, held by Antonio Genovesi, the first great interpreter and theorist of the civil economy as a distinct field.

In most western economies, a range of names is interchangeably used to collectively describe the organisations and programs aiming to create social value in society. Although the term social economy usually coexists with other terms, such as the third sector, enterprises with social goals (Belgium), social cooperatives (Italy), cooperative enterprises serving the general interest (France), etc, for the purpose of this paper social economy is used because it represents the most useful and inclusive term referring to:

“the production of goods and services not solely provided by the non-profit sector, but also, in some cases by private enterprises with shareholder agreements that force the majority of shareholders to agree to social objectives undertaken by the firm. Among the organisations that belong to the Social Economy, one can find associations cooperatives and mutual organisations and more recently foundations. This kind of economy is regulated by stakeholder principle, which stands in stark contrast with shareholder capitalism. The “Social Economy” is a broader concept than the non-profit sector“.

OECD (2003), *The Non-Profit Sector in a Changing Economy*, Publication Services, Paris, p.298.

Recently, the term has gained attention in relation to welfare reform and the role of the non-profit sector in social and economic life (see Evans & Syrett 2007; Kay 2005). While existing definitions of social economy vary, the dominant conceptualisation of the term in the current social economy literature (see Lyons 2001; Haugh & Kitson 2007) uses ‘social economy’ as a simile for the economic impact of the third sector - including nonprofits, cooperatives and mutuals which are present in many western democracies. Besides this wide conceptualization of the term, there is also a narrow application of the social economy language. It is more recent and it is used in policy discourses in Canada, and in academic studies in Europe (see e.g. Evans & Syrett 2007; Kay 2005).

Narrow definition of social economy typically equates the social economy with “social enterprises” understood as revenue generating, non-profit activities that are meant to serve social or community purposes. Such organizations combine social with economic objectives and are formed by people to provide services for themselves or others, which is the product of mutuality or altruism. By some definitions, wherever people gather together to pursue economic activities with a view to meeting social as well as economic needs, you have elements of the social economy. Although typically the social economy represents economically large and a significant employer, there is a general lack of recognition of this important sector. Absence of complex regulatory policies and procedures that would fit the ways that social economy organizations operate represents the potential drag to the development of this important sector.

The key feature of social economy is *reciprocity* as an authentic economic principle that embodies *social* as opposed to merely *commercial* attributes. According to Nancy Neamtan (2005), social enterprise has a specific set of internal organizational properties because it „aims to serve its members or the community, rather than simply striving for profit; is independent of the State; establishes a democratic decision-making process in its statutes and code of conduct, requiring that users and workers participate; prioritizes people and work over capital in the distribution of revenue and surplus; bases its activities on principles of participation, empowerment, and individual and collective responsibility.“ In his seminal book *The Great Transformation* from 1944, Karl Polany proposes an alternative economy, which is re-embedded in politics and social relations. He points out the important anthropological insight stating that “human beings desire social recognition more than material wealth and that culture restricts commercial exchange: pace Adam Smith, “not the propensity to barter, but reciprocity in social behaviour dominates”. As a result, the economic system should be a function of social organisation, not vice-versa.”(Pabst, 2010).

HAPPINESS-ECONOMY LINK

“Happiness in the true sense is impossible for the individual to attain unless he seeks the happiness of the others”.

Kenji Miyazawa (1896-1933)

According to Bruni and Zamagni (2007), the economy-happiness link is the key feature of the whole 18th century Italian tradition for „there is no happiness outside life in society and there is no society without intentional love for the public good.“ Despite the fact that public happiness was rooted in the concept of civil economy, representing an important feature of Genovesi's vision of economics and society in the first decades of 1700s, throughout the 19th and a good part of the 20th century people used Smith to claim the need for individual self-interest by thus neglecting his broader, anthropological vision of human action and of society. Although it is quite possible to be rich in solitude and without others, in order to be happy, it takes at least two (Bruni and Zamagni 2007). According to Bruni (2004), due to the impact of the hedonist approach to economics and writings by J.S. Mill, Wicksteed and Pareto, ethical conception of happiness had been removed. Consequently, the methodological thinking shifted away from an emphasis on civil happiness after the Civil Humanism era so that the idea of public and relational happiness died out. This is mostly owed to misapprehension that all humans exist as rational beings that find happiness in maximizing their personal utility.

Although Smith clearly claims that self-interest is a powerful motive in human behaviour, it is by no means the only motive. The “official” theory of economic behaviour still focuses on extrinsic motivations only, being monetary or other, but always instrumental, that are added to intrinsic motivations which are considered irrelevant per se. For this reason, conventional economic theory restricts its field of study to extrinsic motivations alone, leaving it to psychology, philosophy, or sociology to study motivations. Homo oeconomicus becomes a poor representation of human behaviour because the person in relation to others is what is missing. Only in recent years, with authors such as Ken Arrow, Partha Dasgupta, Amartya Sen, and others, have we come to a new understanding of Smith's thought. In Smith's less known work, *Theory of Moral Sentiments*, first published in 1759 but continually updated and republished until his death in 1790, it is possible to find that Smith clearly acknowledges that the most natural and human way of getting things from others is by mutuality, friendship and love (as in the family) and by thus points out the trait of human sociability and the fact that each of us has a need for something from others, and this need cannot be satisfied alone. This 'relational anthropology' basically means that relationships with others have to be seen as goods in themselves, not just as a means for acquiring material goods. For Bruni (2004), market relationality is defined by the exchange and the relationship, not just the exchange alone. In other words, market relationality means that each person needs others not only for provision of goods, but also for companionship and happiness as well.

When signing contracts and doing local or international business, people meet and recognize each other, and besides acquiring commodities, they also acquire personal well-being. Since happiness is the main determinant of human motivation, happiness rather than utility deserves to be the focus of an economic discourse. Unlike utility, which according to Pareto represents the property of the 'relation between a

man and a thing,' happiness comes out of relationships between people. Therefore, mainstream economics has to embrace the new scientific paradigm, the relational one, because we cannot continue to isolate economics from its social context. It is a paradox that a field of study such as economics, which is by dealing with consumption choices, institutional structures, market exchanges or production of goods and services, basically concerned with relations between men living in society, for over two centuries neglects the category of person and excludes human sociability.

SOCIAL ECONOMY PLAYING FIELD

The organizational world today consists of three different sectors, each behaving according to a specific operational logic. In his book *Social Enterprise in Anytown*, John Pearce (2003) offers a clear description of the complex relationships between all 3 aspects or sectors of the economy and views them as systems (Figure 1). According to Pearce (2003), each system is 'essentially about a different way of managing the economy, about a different mode of production'. The private sector which John Pearce calls the first system, is profit-driven, seeking to maximise financial returns to individual owners. The second system, the domain of governments, is about redistribution and planning, while the third system is about citizens taking action to meet and satisfy needs themselves and working together in some collaborative way. It is basically derived from family and the household economy, but it extends to do different ways people exchange with each other on voluntary basis (recreation, clubs, self-help groups, etc.). It also includes to a wide range of more formally structured organisations, some of which organise their affairs as charities (e.g. faith-based organisations, non-profits) or member-based associations (e.g. trade unions, service clubs), and others that explicitly pursue social goals using business means. The common feature is that the values of mutuality, self-help, caring for people and the environment are given higher priority than maximizing profits.

Although all three sectors of the market described above are distinct and operate on different economic principles, they are not hermetically sealed off from each other. There are numerous overlaps so that certain organizations operate at the boundaries of these distinctions. For example, universities and public/private partnerships might be placed at the borders of the public and private sectors. While some non-profit/private partnerships could be placed at the borders of the social economy and the private sector.

Millions of people around the globe practice social economy. Co-operatives, credit unions, mutuals, trade unions, business associations, non-profits, charities, volunteer organizations, cultural organizations, religious organizations, and recreational groups of all types and orientations are part of the social economy. What they all have in common is „the promotion of mutual and collective benefit and the building of community that results from the operation of reciprocity either at the economic or social level“ (Restakis 2004). Since the "basic rule of the co-operative is contributive justice and reciprocity," (Bruni and Zamagni 2007), the potential of cooperatives is in creation of satisfactory economic conditions for all people because they work and consume in order to produce for their own and other people's welfare, rather than for profit. This means "assuring individual and collective freedoms, protecting ecosystems as well as promoting sustainable development through abolishing all forms of exploitation, domination and exclusion, promotion of fair trade, ethical consumption, solidarity finance, and worker-managed productive enterprises" (Mance 2007).

The challenge of social economy organisations is that they are not so easy on raising capital than investor-owned firms and correspondently they are slower in responding to expansionary opportunities that might emerge in a specific industry. For this reason, many cooperatives and mutuals find it easier to simply convert back to investor-owned firms. However, on the other side, the capital invested by social economy organisations in local communities is more securely rooted in such communities than investor-owned capital. In this context, in his essay *Building Social Economy* A. Pabst (2012) discusses the implications and possible effects of renewed emphasis on the principles of reciprocity and mutuality such as transforming welfare, social policy and reconnecting finance to the real economy concluding that „instead of free-market fundamentalism or bureaucratic statism, it is the individual and corporate members of civil society who collectively determine the norms and institutions governing production and exchange.“(Pabst, 2012).

CONCLUSION: LIBERATING POTENTIAL OF RELATIONAL ANTHROPOLOGY IN ECONOMY

An approach based on relational anthropology and formation of markets that are accountable, self-regulating, profitable, humane, and competitive has the potential for rebuilding our economy and embedding welfare in communities (Bruyn 2000). Drawing upon the ideas by Karl Polany, Luigino Bruni and Stefano Zamagni, in contrast with the idea of the self-interested *homo oeconomicus*, this paper claims that humans are more relational, ‘gift-exchanging animals’ who are naturally disposed to cooperate for mutual benefit (Pabst, 2012). This is clearly shown in the ground-breaking book *Civil Economy* (2007) by Luigino Bruni and Stefano Zamagni where the authors point out that the concept of ‘civil economy’ shifts the primacy from rights and contracts to the social bonds and civic ties upon which vibrant democracies and market economies depend.

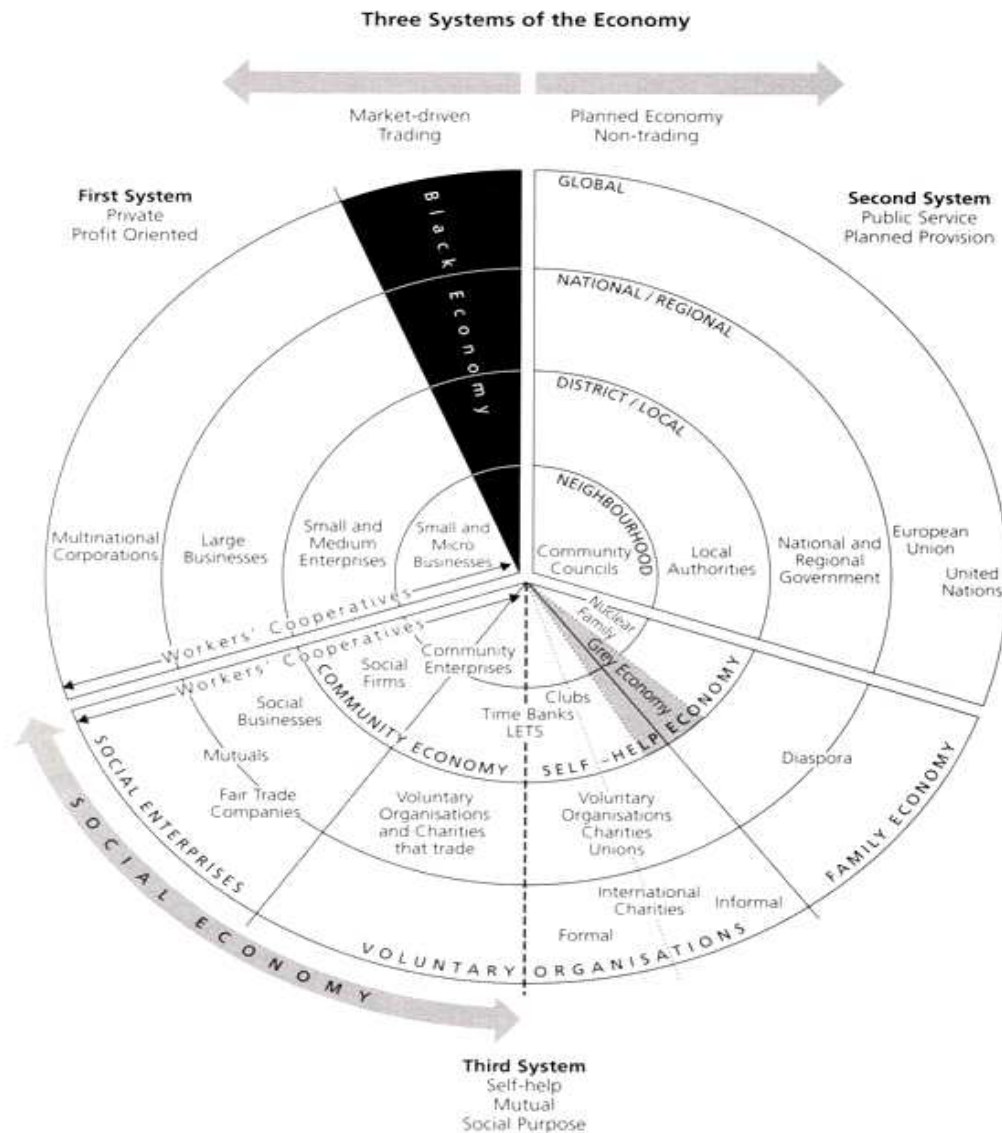


Figure 1: Three Systems of the Economy

Source: B.C. Alberta- Social Economy Research Alliance, available at <http://www.socialeconomy-bcalberta.ca/social-economy>, accessed April 2013.

Some of the most innovative research in contemporary economics deals with the modern, liberal separation of private and public goods in favour of ‘relational goods’ and a renewed emphasis on the reciprocal bonds of sympathy that tie individuals together. Such research (Zamagni 2007,2011; Restakis 2006, 2010; Pabst 2010, 2012) generally points out the three key benefits of social economy: social innovation which is linking technological and organizational innovations to social initiatives, economic

justice which is fostering sustainable development to promote social solidarity and collective welfare which promotes social inclusion and economic wellbeing through cooperative governance practices.

In the contemporary global environment where innovation, sustainability and entrepreneurship are becoming increasingly important organizational capabilities, cooperatives, and other forms of businesses where *social* relations are „mobilized for collective goals through the social control of capital“ (Restakis, 2006) provide “a unique opportunity to chart an alternative to the complicit collusion of central states and free markets that characterize liberal political economy” (Pabst, 2012). Shifting the focus “from a self-interested pursuit of power or wealth (or both at once) to the quest for the common good” (Pabst, 2012), social economy organizations like social enterprises and co-operatives could „in the long run have humanizing effects on the operations of the market as a whole“ (Restakis 2004). Confirming the long documented evidence of the primacy of cooperation, the reported experiences on social economy in Australia, Arizona, British Columbia, Wisconsin and Quebec reflect „the infinite purposes and means by which human beings in society act together to achieve common ends“ (see Pabst 2012), and by thus raise hope of the potential of collective approaches for sustainable living and building a world with more justice, fairness and happiness.

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ORGANIZATIONAL CULTURE IN BOSNIA AND HERZEGOVINA

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ABSTRACT

The main aim of this paper is to explore the features of organizational culture in Bosnia and Herzegovina. The study was carried out on a sample of 26 Bosnian companies from three sectors of industry. Empirical findings show that the cultural profiles of three industries researched are rather divergent. This implies that culture of the organizations in Bosnia is influenced by the industry in which they function.

Keywords: organizational culture, Bosnia and Herzegovina.

INTRODUCTION

Bosnia and Herzegovina (for the remainder of the text referred to as Bosnia) as we know it today was developed under the heritage of the communist regime, which was based on the centrally planned society, both in economic and political sense, the realities of troublesome and painful recent history, and ongoing social and economic transition. The radical transformation of the Bosnian society in the early 1990s has set the platform for transition toward a democratic civil society. In the economy, the market is replacing a former monopolistic and ideology-prevailing system. Combined with these two tendencies is the cultural modification, when existing values and norms are reassessed, removed, renewed, and redefined. However, there is a perceptible lack of research how these alterations have impacted the belief systems on organizational level.

RESEARCH FRAME

The main aim of this paper is to explore the features of organizational culture in Bosnia and Herzegovina (for the remainder of the text referred to as Bosnia). I use adapted GLOBE II methodology in order to find answers to the research question. More precisely, questionnaire Alpha was used with the purpose of measuring managerial reports of organizational practices “as is” and “should be”. In questionnaire Alpha, there are 34 questions enquiring about how things are in Bosnian organizations (“as is” items) and 41 questions asking about how things should be in Bosnian organizations (referred to as “should be” items).

Culture defined

Since my investigation is conceived along the model of culture developed by the GLOBE team (House et al., 2004), I use the GLOBE definition which depicts culture as “shared motives, values, beliefs, identities, and interpretations or meanings of significant events that result from common experience of members of collectives that are transmitted across generations” (House and Javidan, 2004: 15). Since these are psychological attributes, this definition can be used at both the societal and organizational levels of investigation. Within the GLOBE project nine dimensions of society and organizational culture are studied (House and Javidan, 2004: 11-13):

1. *Uncertainty avoidance* is the extent to which members of an organization or society strive to avoid uncertainty by relying on established social norms, rituals, and bureaucratic practices.

2. *Power distance* is the degree to which members of an organizations or society expect and agree that power should be stratified and concentrated at higher levels of an organization or government.
3. Collectivism I, *institutional collectivism*, is the degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.
4. Collectivism II, *in-group collectivism*, is the degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.
5. *Gender egalitarianism* is the degree to which an organization or a society minimizes gender role differences while promoting gender equality.
6. *Assertiveness* is the degree to which individuals in organizations or societies are assertive, confrontational, and aggressive in social relationships.
7. *Future orientation* is the degree to which individuals in organizations or societies engage in future-oriented behaviours such as planning, investing in the future, and delaying individual or collective gratification.
8. *Performance orientation* is the degree to which an organization or society encourages and rewards group members for performance improvement and excellence.
9. *Humane orientation* is the degree to which individuals in organizations or societies encourage and reward individuals for being fair, altruistic, friendly, generous, caring, and kind to others.

The composition of the quantitative research sample

The research in Bosnia was conducted on the sample of 158 middle managers from 26 Bosnian companies (3 companies from the telecommunication sector, 13 companies from the financial services, and 10 companies from the food industry). The research was conducted during 2009.

Empirical findings

As it can be observed from Table 1, the highest organizational culture practice scores were recorded in power distance (5.49) and uncertainty avoidance (4.59). In-group collectivism (4.10) and assertiveness (4.02) scores are about the neutral range on scale. Humane orientation (3.76), institutional collectivism (3.59), future orientation (3.53), gender egalitarianism (3.52), and performance orientation (3.41) scores are relatively low.

It is interesting to observe that the financial services score the highest on almost all cultural dimensions, except on uncertainty avoidance, power distance, and assertiveness. On the other hand, food industry scores the lowest on almost all cultural dimensions, apart from power distance, uncertainty avoidance and future orientation. Moreover, food processing industry scores shows the biggest contrast compared to the overall country scores. Telecommunication sector scores represent the best the overall score on organizational culture practices for Bosnia. The three branches of industry scores almost the same on assertiveness (Bosnia overall score – 4.03, financial sector – 4.02, food industry – 4.01, telecommunications – 4.08). From Table 1, it can be easily noticed that within three sectors of industry ranking of cultural dimensions is somewhat dissimilar. As a final point, it can be concluded that the cultural profiles of three industries researched are rather divergent. This implies that culture of the organizations in Bosnia is influenced by the industry in which they function (ANOVA test showed seven out of nine statistically significant differences between cultural practices).

As portrayed in Table 2, the three sectors show unexpected similarity to each other for value scores. With only few exemptions (uncertainty avoidance, assertiveness, and power distance) the three industries score in a relatively narrow range. Moreover, the ranking of cultural variables is almost the same in all sectors which are researched. Organizational culture value scores have equalizing effects, which points out to the influence of Bosnian societal culture on the culture of Bosnian organizations.

Table 1: Ranking of the nine organizational culture practices scores for Bosnia and Herzegovina

Cultural Dimensions	Overall score		Financial Sector		Food industry		Telecommunication sector	
	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
Uncertainty Avoidance	2	4.59	2	4.60	2	5.27	5	3.64
Power Distance	1	5.49	1	4.99	1	5.92	1	5.91
Institutional Collectivism	7	3.59	7	3.96	8	3.14	7	3.45
In-Group Collectivism	3	4.10	3	4.44	5	3.72	3	3.93
Gender Egalitarianism	8	3.52	9	3.67	6	3.33	6	3.50
Assertiveness	4	4.03	5	4.02	3	4.01	2	4.08
Future Orientation	6	3.72	6	4.00	4	3.75	8	3.41
Performance Orientation	9	3.41	8	3.84	9	2.86	9	3.30
Humane Orientation	5	3.76	4	4.16	7	3.23	4	3.67

Table 2: Ranking of the nine organizational culture value scores for Bosnia and Herzegovina

Cultural Dimensions	Overall score		Financial Sector		Food industry		Telecommunication sector	
	Rank	Mean	Rank	Mean	Rank	Mean	Rank	Mean
Uncertainty Avoidance	5	5.06	5	5.14	5	5.34	6	4.51
Power Distance	9	2.90	9	3.06	9	2.73	9	2.80
Institutional Collectivism	7	4.96	7	4.87	7	4.99	7	5.15
In-Group Collectivism	2	6.03	2	5.96	2	6.02	2	6.18
Gender Egalitarianism	6	4.97	6	4.94	6	5.01	5	4.97
Assertiveness	8	4.41	8	4.62	8	4.33	8	4.10
Future Orientation	3	5.91	3	5.84	3	6.01	3	5.91
Performance Orientation	1	6.31	1	6.39	1	6.22	1	6.26
Humane Orientation	4	5.52	4	5.45	4	5.54	4	5.64

CONCLUSION

Empirical findings show that existing cultures of organizations investigated are shaped under the influence of the industry in which they function. On the other hand, organizational culture values have equalizing effects across three sectors of industry, which points out to the impact of Bosnian societal culture on the perceptions of organizational values. Strong discrepancies between the cultural practices and values at organizational level stand for a positive modification of cultural processes in Bosnia. This may advance Bosnian competitiveness at micro and macro levels. It could be expected that the organizational cultural practices will move towards the anticipated degree with the fulfilment of the ongoing transition. This should be tested in some years from now, on a much bigger and diversified sample. A future research should also focus on identifying the differentiation variables of nine cultural dimensions, such as company size, ownership structure, managerial styles, etc.

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STRATEGIC DESIGN INFORMATION SYSTEMS FOR INCREASING COMPETITIVENESS OF SMALL MEXICAN BUSINESS: VISION BASED ON THE THEORY OF THE FIRM AND RESOURCES

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ABSTRACT

In Mexico, the use and implementation of strategies related to information systems have not been consistently addressed a claim that can be applied to small, medium and even large companies. However, these firms and multinational companies also have achieved competitive advantage by their heavy investment in business intelligence systems. This study aims to inform the SME business sector resources that can be used as a basis for the development and creation of strategies to increase their competitiveness. The high costs of implementing such systems can lessen with the use of existing information technologies. This paper will present the alternatives that small and medium producers can use to break into the culture of decision making based on information resources as well as inputs for the development of capacities for the development of strategies.

Keywords: Capacities, competitiveness, resource information system, value, competitive advantage, strategy.

INTRODUCTION

In Mexico, According to the National Survey of Employment, Wages and Training in the Trade Sector (Encuesta Nacional de Empleo, Salarios y Capacitación en el Sector Comercio), (ENESCOM, 2005), about 95% of establishments engaged in trade did not have systems for planning and decision making, or simply did not know them. 91% of business has no system to identify or create a customer portfolio and base and 88% do not have systems to identify their suppliers. This reflects one of the main issues which characterize most Mexican companies "sail on a sea of uncertainty" added to the market imperfections (monopoly or oligopoly), the incorporation of global markets and the inefficiency of Mexican institutions and others factors in which it was not enriched, as it will focus on the point of the lack of culture of information in decision-making by the companies.

Good management of this resource could provide companies sustainable competitive advantage to meet the dynamic market changes. In this vein it can be formulated the following question What effects would be achieved in terms of competitiveness for SMEs if they seize and exploit low cost alternative information resources making them inexpensive business intelligence systems? It is noteworthy that these resources are from public sources and have had a strong but insufficient diffusion in academic and business sectors. So while the development of an entrepreneurial culture on the use of such intangible resources could provide further impetus to the development of entrepreneurial skills in addition to promoting competitiveness.

Importantly, the application and usefulness of this resource will be linked to economic activity and the enterprise carries to give treatment that achieves to create value, in other words, the development of strategies for competitive advantage depends on the skills and capabilities firms have to use.

THEORETICAL BACKGROUND AND LITERATURE REVIEW

Mexico has been influenced by the changes caused trade liberalization and integration of global markets implicitly bringing advances in science and technology, which changes the environment in which

companies operate in the production structure of our country. This means that each of these production units has to analyze in detail its position in the market, and in particular the obligation to take advantage of the large body of information technologies to realize it. According to Torres (2000) strategy formulation leads companies to thoroughly review its environment and its competitive scheme so they can define a competitive strategy.

Nelson and Winter (1982) consider the promise and the problems that bring the evolution of the economic changes generated by globalization. They argue that economic analysis with the use of resources of a company engaged in the business strengthens its decision making, but more importantly highlights that companies should focus on a better understanding of technological change and the dynamics of competitive process.

In this context, the SME and overall Mexican company must constantly analyze their marketing and organizational plans to address these changes resulting from globalization. For most of the SMEs, globalization means a constant threat. However, there are companies with their capabilities, features and trade liberalization has meant making profits because they can export their products or import profitable products as the technology for commercialization. Unfortunately, most companies intend production to the domestic market of the country which makes it a threat.

Foreign direct investment and the entry of products have represented the extinction of many companies to take over the majority of the market. This reflects that growth and sustainability in the market is the major challenge faced by companies in this millennium. According to (Peng, 2006) the strategies that a company should propose, should be based primarily on a combination of planned and deliberate action on those activities that are not emerging, but the basic premise is to design strategies that SMEs can know themselves and know their opponents with an assessment of their forces (F) and weaknesses (D), as well as the opportunities (O) and threats (a) in the environment around them.

Be knowledgeable, capacity development, the use of equity by companies and government support represent some of the alternatives to address this challenge. Strategies to perform must consider social, political and governance factors. It is noteworthy that the regulation for market concentration by Mexican institutions has been poor, their lack of ethics and a high level of corruption in their structures has allowed national and multinational companies exploit these flaws as competitive advantages generating unfair practices. A recent example is the case WALMART occurred in April this year.

In this vein, to analyze the environment should lead to a result that defines what are the strengths and weaknesses of the company in relation to its current and future competitors, to make these sources of dynamic competitive advantage. Companies are different among them; their behavior is described in the theories of the firm on how to compete (Peng, 2006). There are three leading perspectives in which companies have to build and develop strategies to achieve competitive advantage known as the tripod strategy. The first is a vision based on the industry where it is suggested that a company should review first the forces driving competition in the sectors of economic activity with which it interacts.

Companies face competitors and prevail in a rivalry with them. These potential competitors are considered as a threat for its possible entry into the sector, displayed bargaining power of suppliers, the bargaining power of customers and the constant threat of the entry of substitute products (Porter, 1985). The second view is focused on the resources and capabilities of a company. The binding constraint on the rate of growth of a company is provided by the current management capabilities (Penrose, 1959).

It is therefore important to note that companies should have the ability to identify competitive forces and generic strategies through a model that highlights specific business activities in which they can better implement competitive strategies. If a small producer in the food sector develops its skills could add value to their product but with more emphasis on marketing activities using information on marketing and commercialization that could identify its clients in a certain area and more. Surely an information system for the producer will have a strategic impact.

The value chain considers a company as a series of activities where each margin adds special value to the products or services of a company (Porter, 1985). The skills and abilities of the entrepreneur or

business managers are a key part of the strategic design to provide them with sustainable competitive advantages, but there are different capabilities in all human beings that can limit maximum utilization of resources bounded rationality (Simon, 1947).

The present information is an essential element for survival in a competitive environment. Its evolution has been in recent years "explosive" under the technological revolution that has become an affordable, everyday and indispensable tool because without it the permanence of a company in the market would be virtually impossible. According to Laudon (2008) an information system is a tool with which a company can process information and can be defined as a set of interrelated components that capture, process, store and distribute information to support decision-making and control an organization.

Firms need to emphasize work with intangible assets such as a particular technology, the intellectual and information resources. The latter are often invisible in a company and can be a real source of unique competitive advantage that can be sustained with time as set by Itami and Roehl (1987)

RESEARCH METHODS

To support the above assumptions it was used an analytical and exploratory method as well as the fieldwork. According to the data observed in the ENESCOM (2005), a random search was conducted in the National Directory of Economic Units (Directorio Nacional de Unidades Económicas, DENU) in the municipality of Zapopan in order to find a small or medium enterprise (SME). The high probability of finding a company with the required characteristics facilitated finding the candidate: PNEUMAX as the company selected for the experiment; lacks an information system that allows you to develop strategies to position themselves in the market. It was proposed to address the implementation of an information system.

To achieve this, it was examined and determined which the possessed information needs were and the proposal was based on the value added, that when using a geographic information system (GIS) as a tool for commercialization and generating marketing strategies in order to improve decision-making and achieve efficient resource management and reduce uncertainty that the company had on market characteristics. The implementation of this system required the organization and systematization of statistical and geographical data available.

Structured information in the proposed geographic information system (GIS), allowing administer, manage, analyze and model situations present in the geographical areas where there are launched the company strategies, which potentiates its use as a support tool in planning activities and decision making.

The resources used to implement the system are the following:

- IRIS GIS Software 4.2, Google Earth or Arc Map 10.
- Digital geographic products: Digital urban maps, business directory geo-referenced DENU 2011, national geo-statistical frameworks with a projection and a datum CCL ITRF92 reference.

The cost was representative only, the following table shows:

Proposal	
Urban mapping work zone	0
Google earth	0
Business directory 2012	1,667
Training	12,000
Total	13,667

Source: Own elaboration

CASE: DISTRIBUIDORA PNEUMAX OE MEXICO

PNEUMAX is a marketer and distributor of pneumatic equipment: cylinders, valves, solenoid valves, hoses, pistons, drivers, etc. It also offers specialized services automation machinery. Currently the firm has two places in the country: the matrix, located in the city of Guadalajara and one in the State of Mexico.

This case study presents the results obtained by the company PNEUMAX of Mexico to implement a geographic information system that allowed it to develop properly and timely marketing strategy to position its product portfolio in the market. Also the system implemented by PNEUMAX was aimed to expand its market in other regions and gain greater market share.

- Location: Volcano Popocatepetl 1844 Colony The Urban Colli, Zapopan, Jalisco. C.P. 45070. Phone: 36 20 35 99.
- Activity: Wholesale of other machinery and equipment for general use, 435,419.
- Economic unit size: 15 employees.
- Mission: To be a leader in the domestic market of pneumatic elements offering customers products and services that meet their needs in price, quality and service.
- Vision: The Company has a very important purpose, the continually expanding in order to be the best company of pneumatic equipment, with criteria of competitiveness, quality products and services.

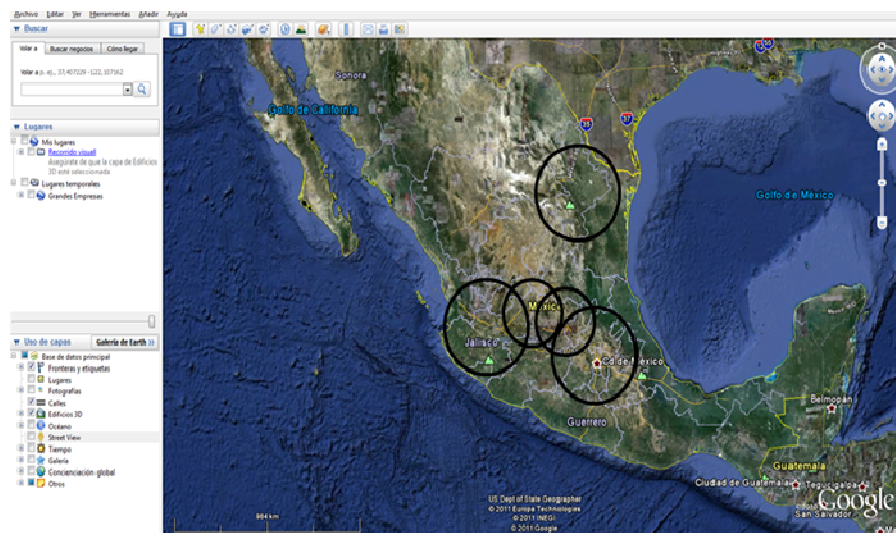
The recommendations to the company PNEUMAX are based on the following assumptions:

- To identify the information needs of the company.
- A training program for sales management, on management of GIS.
- Consult and acquiring banks geo-referenced information requirements (business directory).
- Lower network GIS software Google Earth.
- Hardware for processing and output of information according to business needs: computer and printer.

The recommendation is centered on the implementation of a geographic information system (GIS) as it seeks to strengthen the marketing strategies for PNEUMAX more productive and therefore more competitive in the market.

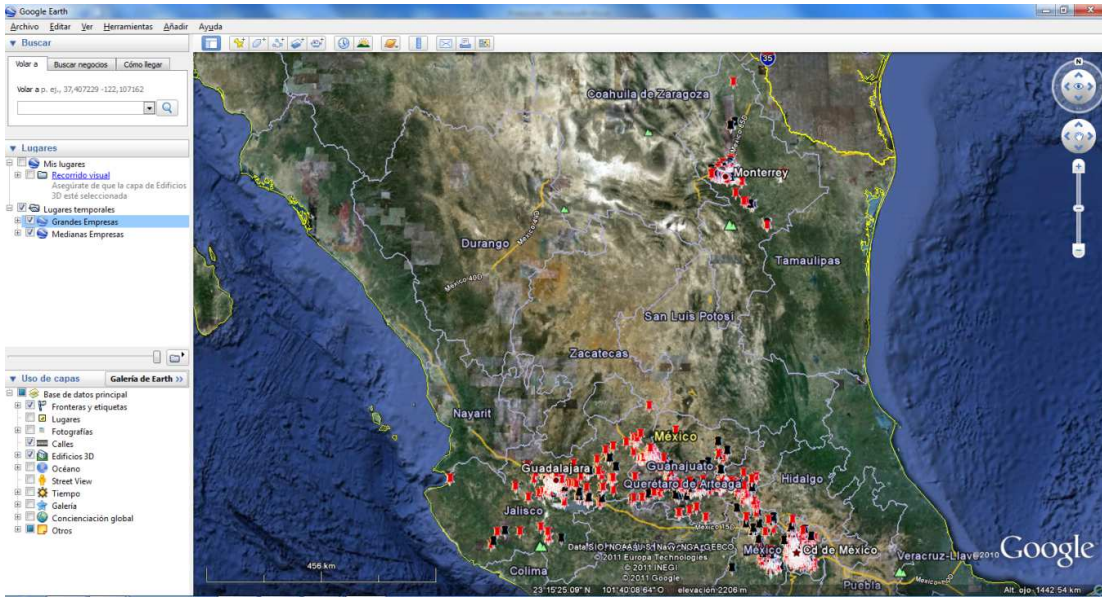
MARKETING PLAN

For the definition of the working area began by identifying the geographic coverage in order to define the areas of sales, as shown in the Map 1 below.



Map 1: PNEUMAX. Area Sales in the North, North Central, South Central and West regions.
Source: Google Earth.

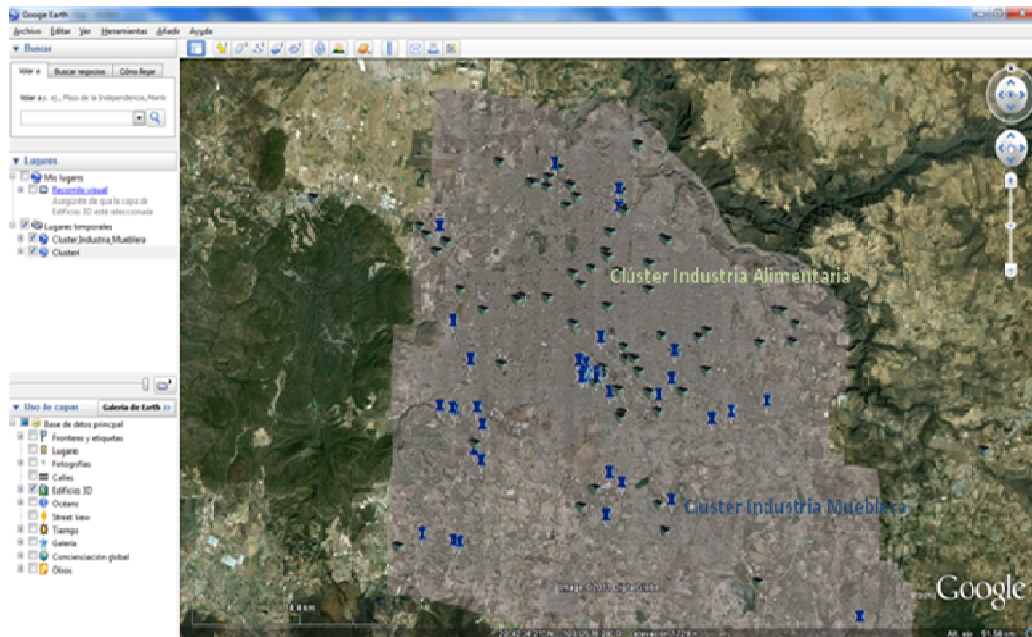
Geo-referencing the establishments' directory by mapping to determine the distribution and concentration of more than 3035 companies in each State selected. This allows, from a spatial perspective, to observe the composition of the market and to determine the areas of sales, to establish clusters and get the database to develop the marketing plan. The map 2 below shows the geographical distribution in the space market.



Map 2: NPNEUMAX. Spatial distribution of clients.

Sources: Google Earth and own elaboration with information data from INEGI.

The black dots represent large corporations and the red dots the medium-sized business. Once known the geographic distribution on the map, it begins to generate the cluster according to the activities and occupation. PNEUMAX handles profiles of services and products according to the characteristics of firms, depending on their activities and spin. This classification allows the firm to determine the needed profiles to be able to offer their products and services packages. So, the next step is to classify firms by size, but especially for their activities. The following map3 is an example.



Map 3: PNEUMAX. Allocation of cluster

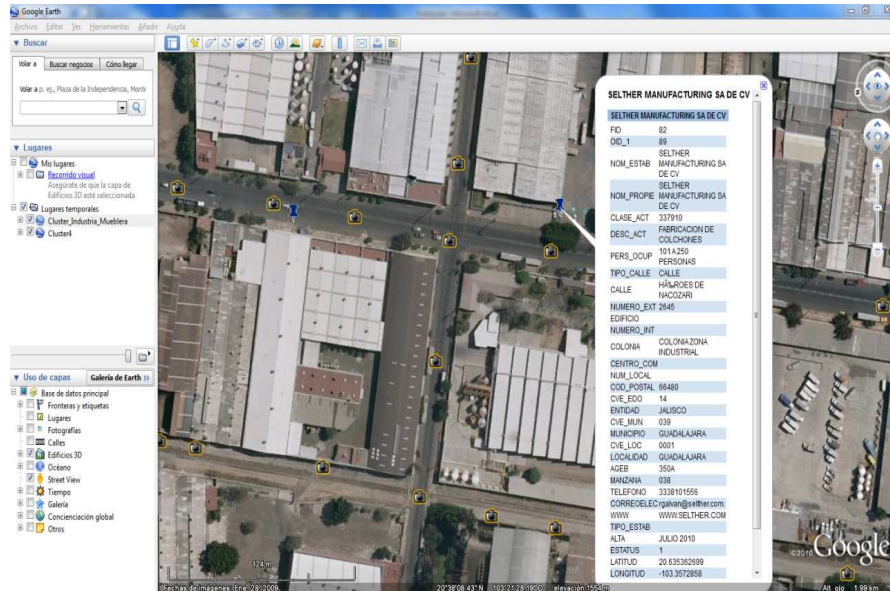
Source: Own elaboration with data information from INEGI.

This procedure used spatial analysis tools of GIS support called ARC MAP, in order to structure and define the cluster. Note that this system will be good enough to convert formats .shape to formats .kml, extensions that the system recognizes in Google Earth interface.

As seen in the maps above, the determination of cluster or clusters was based especially in the activities of the company. For example, it can be seen the concentration in the city of Guadalajara of companies

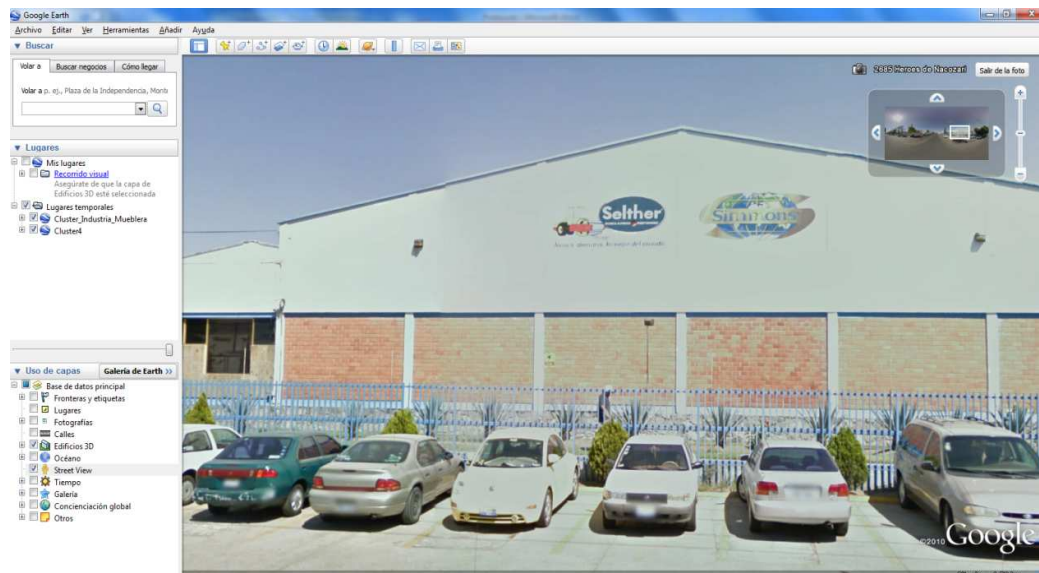
engaged in furniture category with a blue pin and those involved in the food industry with a pin in the form of a factory.

The specificity of this information has more added value, as each geographical object representing a firm on a map is associated directly with a database that identifies and determines specific characteristics of each of the companies, such as its name and social registered name, address, email address and the name of its legal representative.



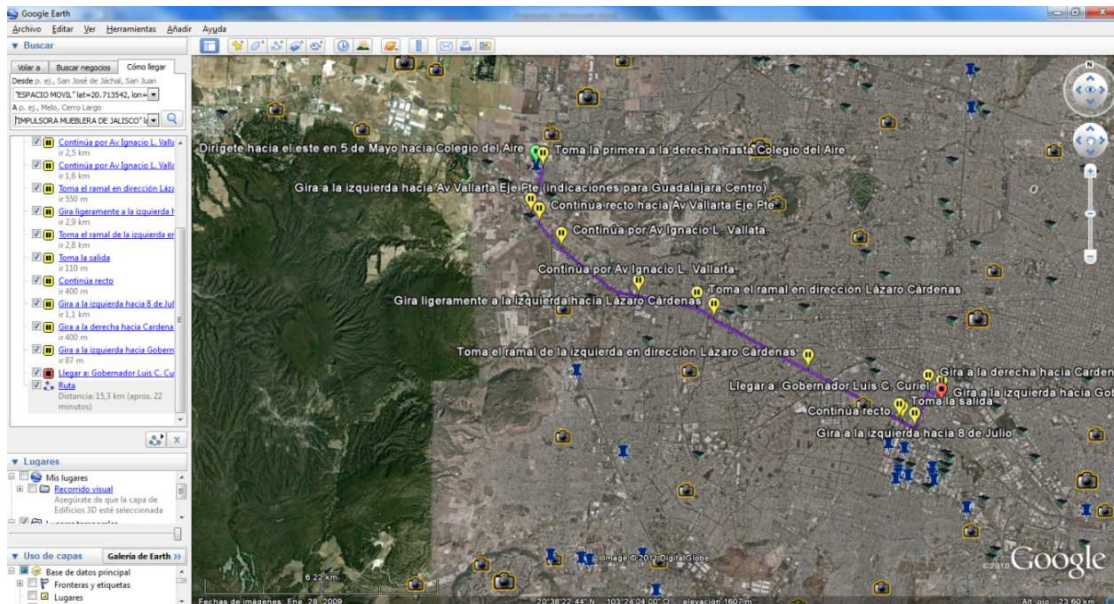
Map 4: PNEUMAX. Database related companies' directory
Source: Based on information from INEGI.

The system also features three-dimensional pictures of the streets of the cities of the country, giving them a concrete picture of companies to visit (See map 5).



Map 5: NPEUMAX. Street view to display companies
Source: Based on information from INEGI and Google.

Another important thing to mention is that the company can trace routes and visit sequences and determine which direction to take to get from one point to another.



PNEUMAX. Map 6: Tracing route and guide tours.

Source: Based on information from INEGI and Google.

Based on this information, management takes appropriate decisions to determine which vendors will cover the new market. Moreover, according to this analysis of the information obtained, it may be a need to hire new vendors that meet and attend the new outlets and sales points.

Now PNEUMAX geo-referenced has a directory that allows it to implement effective marketing strategies which can steer the company to achieve its objectives and to boost productivity and become a competitive company in the field of its product distribution

RESULTS AND CONCLUSIONS

The results are reflected primarily in the planning and organization functions: setting goals and the appropriate course of action to achieve them. By implementing a geographic information system, it has helped to define strategies to positioning in the market portfolio of products offered, the design of a strategic plan for marketing based on a detailed analysis of the composition of potential customers in the metropolitan area of Guadalajara, Monterrey, Mexico City, Queretaro and Guanajuato. The creation and implementation of an efficient logistics aims to set the procedure for promotion, sale and distribution of products. Moreover, the geographic information system allowed the organization to define the direction of human resources effectively, to implement strategies designed in order to achieve the goals: customer acquisition and increased volume of daily sales. The information system allowed the company to have a control to ensure that activities conform to planned activities by management.

In short a good implementation of an information system can provide:

- Increased accuracy and effectiveness in the strategies developed.
- Reduced risks and uncertainty in decision making.
- Physical assessment of the current market.
- Physical assessment of the potential market.
- Placing a product in a chosen segment.
- Optimization vendors, outlets and sales routes.
- Exploration of new markets.

Now regarding the implementation costs are reduced significantly, the use of public information packets and software can be reduced from 70% to 90%.

PNEUMAX SA de CV	Price(pesos)
Commercial proposal	
Urban mapping work zone	50,000
Arc Map 10	38,626
Directory of firms 2010	1,700
Training on ARC MAP by persons	12,180
Total	102,506
Alternative proposal	
Urban mapping work zone	0
Google earth	0
Directory of business 2012	1,667
Training	12,000
Total	13,667

Sources: ESRI, INEGI.

Now it can be assumed that the high costs of implementation and access to information can be more limiting for companies who cannot have information systems. However it is observed that with affordable substitute products, costs can be used by companies as a strong business intelligence tools.

The importance of being able to develop a culture of information use and management, use of information technologies and systems focused on the business of small and medium entrepreneurs will have a direct impact on the competitiveness of SMEs

Increased government intervention mechanisms developed by institutions such as INEGI, Secretary for Economic Development, Chambers of Commerce and industry among others would be essential for the specialization of SMEs in development strategies.

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THE WORKING CONDITION QUALITY COMPARISON OF THE BANK STAFF: THE CASE OF TURKEY

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ABSTRACT

The bank staff represents the bank to the customers. The working conditions of the bank employees play a great role on the success. The main aim of this study is measuring the quality of the working environment of the banks by using three factors, which are knowledge, consistency and trust, and comparing the working environment of the agents to the managers. 100 questionnaires are used to evaluate the quality of the working condition quality of the banks. Semi-structured interviews and snowball sampling is used to reach various departments of the banks. The working condition quality of the managers are better than the working condition quality of the agents. But there is no significant difference on the consistency of the conditions. Duration has a significant effect on the working conditions which create trust on the employees to the company. This paper is a proof of that the managers do not have good conditions as expected. The managers can be disturbed by the managers which are above them.

Keywords Bank staf, working condition quality, agents and managers.

INTRODUCTION

Staff motivation is an important key component of success on today's competitive environment (Okorley and Boohene, 2012). It is also more important on the sectors where CRM is important such as banking. Because the staff directly interacts with the customers at these sectors. The managers are accepted as more valuable personel than the agents. Because their qualifications, such as education, leadership and experience, might be unique and their contribution to the organization is expected to be more (Allen and Meyer, 1996). For this reason the working conditions of the managers are expected to be better.

Motivation can be defined as a combination of external and internal factors that force the employee to work harder (Byars and Rue, 2002). So motivation is also related with the quality of work (Armstrong, 2003). But the quality of working environment is more important as we cannot diversify internal motivation easily (Berman, et al, 2010). Therefore it is necessary to search the quality of working environment for better results (Bashaw and Grant, 1994).

The working environment quality of the bank staff is elaborated with this study and it is tried to compare the environment of agents and managers to each other. The questions are prepared to eliminate the impacts of the perception differences.

METHODOLOGY

Total 100 interviews are used for this research. 50 of the participants are managers and the rest of the participants are agents. One employee and one manager from each company is interviewed. Semi-structured interviews are used and the snowball sampling is used. The participants are from 15 different participation bank branches, 15 different conventional bank branches, 10 participation

bank departments and 10 conventional bank departments. Totally employees of 3 participation banks and 3 conventional banks participated this research.

SERVQUAL is used to measure working conditions quality, the staff is taken instead of consumers and three components are determined as knowledge, consistency and trust (Parasuraman and Zeithaml, 1988). Knowledge is a combination of evaluations about the share of information, intelligence and knowledge of the managers. Consistency is a combination of evaluations about the meeting ability of the existing conditions with the offered conditions, meeting the expectations. Trust is a combination of evaluations about the proactivity of the managers, communication and the rest of the conditions.

Knowledge represents the ability of reaching the necessary information at the working environment. Consistency represents the ability of meeting the expectations of the employees. Trust represents the confidence of the employees on the company.

The questionnaire has 39 questions. The 8 questions of the survey are used to form the variable of knowledge, 4 questions of the survey are used to form the variable of consistency and 26 questions are used to form the variable of trust. One question is taken out due to the results of factor analysis. After the measurement, independent sample t-test is used to compare the managers to the other employees. On the other hand one way and two way ANOVA is used for evaluations.

The hypothesis which are shown below are tested:

- H₀: There is no significant difference of the working condition quality perception for knowledge between the managers and the other employees.
- H₁: The working condition quality of the managers for knowledge are better than the working condition quality of the agents.
- H₀: There is no significant difference of the working condition quality perception for consistency between the managers and the other employees.
- H₂: The working condition quality of the managers for consistency are better than the working condition quality of the agents.
- H₀: There is no significant difference of the working condition quality perception for trust between the managers and the other employees.
- H₃: The working condition quality of the managers for trust are better than the working condition quality of the agents.
- H₀: There is no significant effect of gender on trust.
- H₄: There is a significant effect of gender on trust.
- H₀: There is no significant effect of duration on trust.
- H₅: There is a significant effect of duration on trust.
- H₀: There is no significant effect of gender and duration together on trust.
- H₆: There is a significant effect of gender and duration together on trust.

FINDINGS

The frequency table of our data is shown on table 1. The number of the female participants seem to be less than the male participants. The age is densed between 26-35 and the number of the people with bachelors' degree or undergraduate degree is the highest. The duration shows the working duration at the same company.

The descriptive statistics of the data can be seen on table 2. The distribution of gender is be positively skewed, with a tail on the right, the distribution of age is negatively skewed, with a tail on the left, the distribution of education is negatively distributed, with a tail on the left, the duration is more near to normal distribution than the others.

Cronbach-alpha is found as 0,9868. KMO measure of sampling adequacy is 0,679. Therefore the data is appropriate for factor analysis. Three factors together could explain the observed subject with a power of % 87,626.

Table 1: Frequency Table

		Frequency	Percent
Gender	male	79	79
	female	21	21
Age	18-25	10	10
	26-35	53	53
	36-45	34	34
	46-55	3	3
Education	primary	2	2
	high school	27	27
	college	7	7
	bachelors'/undergraduate	58	58
	master	6	6
Duration	1-3 years	50	50
	4-6 years	44	44
	7-10 years	6	6

Table 2: Descriptive Statistics

	gender	age	education	duration	position
Mean	1,21	2,3	3,39	1,56	1,5
Median	1	2	4	1,5	1,5
Std. Deviation	0,40936	0,68902	1,01399	0,60836	0,50252
Skewness	1,446	0,095	-0,613	0,59	0
Std. Error of Skewness	0,241	0,241	0,241	0,241	0,241
Percentiles	25	1	2	2	1
	50	1	2	4	1,5
	75	1	3	4	2

Table 3. Independent Sample t-test results

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
KNOWLEDGE	Equal variances assumed	7,776	,006	-2,554	98	,012	-,4050	,15855	-,71963	-,09037
	Equal variances not assumed			-2,554	86,848	,012	-,4050	,15855	-,72014	-,08986
CONSIST	Equal variances assumed	1,423	,236	,149	98	,882	,0250	,16787	-,30813	,35813
	Equal variances not assumed			,149	86,705	,882	,0250	,16787	-,30867	,35867
TRUST	Equal variances assumed	5,807	,018	-10,857	98	,000	-1,4224	,13102	-1,68240	-1,16240
	Equal variances not assumed			-10,857	97,539	,000	-1,4224	,13102	-1,68242	-1,16238

The results of independent sample t-test can be seen on table 3. With the results of independent sample t-test, according to the p value, which is 0,006, our first research hypothesis is supported and null hypothesis is rejected at the %1 significance level. According to the p value, which is

0,441, our second research hypothesis is not supported and null hypothesis is accepted at the %5 significance level. According to the p value, which is 0,000, our third research hypothesis is supported and null hypothesis is rejected at the %5 significance level.

Table 4: Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
1,182	5	94	,324

The Levene test of equality of error variances, which is on table 4, has shown that parametric tests can be used for the rest of our research hypotheses.

Table 5: Results of Two Way ANOVA

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	32,465(a)	5	6,493	10,143	,000
Intercept	177,377	1	177,377	277,098	,000
GENDER	,712	1	,712	1,113	,294
DURATION	20,412	2	10,206	15,944	,000
GENDER * DURATION	,046	2	,023	,036	,964
Error	60,172	94	,640		
Total	688,778	100			
Corrected Total	92,637	99			

For the rest of our hypotheses, two way ANOVA is used. The results are on Table 5. Our fourth research hypothesis is rejected and null hypothesis is accepted at the %5 significance level. Our fifth research hypothesis is accepted and null hypothesis is rejected at the %5 significance level. Our sixth research hypothesis is rejected and null hypothesis is accepted at the %5 significance level.

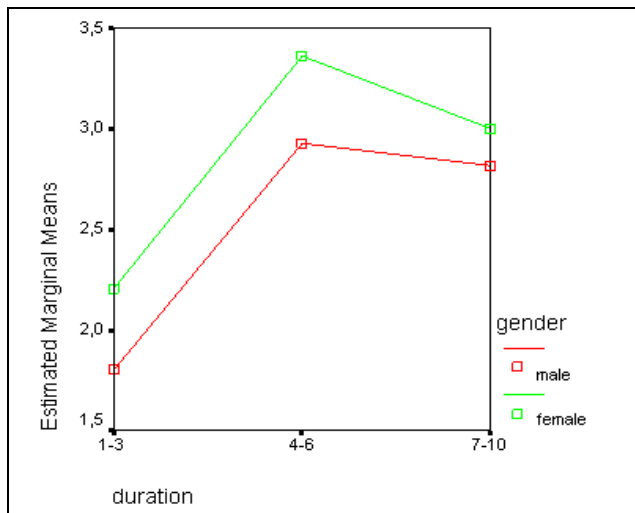


Figure 1: Means Plot Diagram

The means plot diagram of gender and duration is on figure 1. The means plot diagram indicates that there is no interaction effect between gender and duration. But both variables have fundamental effects.

CONCLUSION AND FUTURE PLANS

During the semi-structured interviews, 12 of the managers explained that their managers or stakeholders were trying to provide them good conditions for success. But in time they were trying to deteriorate the conditions deliberately with some reasons the managers are not aware. All these three managers claimed that the effort of deteriorating the conditions is not related with their

performance or the situation of the business. For this reason, they cannot get what they expect and they score consistency questions lower than the others.

It might be usual to see the quality perception of the agents finding the working condition quality lower than the managers. Because they might be having worst conditions, compared to the conditions of the managers. Managers have higher qualifications and experiences and they are harder to find. But it is not usual to see the consistency of the conditions of the managers equal to the other employees. An effort of disrupting the comfortable conditions of the managers seem to be existing. The expectation management of the managers cannot be done successfully at the banks. 29 of the agents claimed that there is no bottom-up approach in their organization. The monitoring is always done as a top-down operation. Hence the problems of the agents are not monitored by the head management and their problems can be solved if their managers pay attention.

It is argued that the gender has a significant effect on work motivation (Bergström and Ternehall, 2005). On the other hand our research could not find any significant effect of gender on working condition quality. But our data has shown that duration has a significant effect on the quality of working conditions.

It is planned to improve the collected data and compare the results of the participation bank employees to the conventional commercial banks. The working conditions of these two bank groups might be differing. Our next study will be surveying this difference. Because the staff of the participation banks have a significant increase. The staff of the participation banks, which was 13.454, increased with 1.471 people between september 2011 and september 2012 with a higher rate than the other commercial banks (BDDK, 2012).

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APPENDIX: Results of SPSS

gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	79	78,2	79,0	79,0
	female	21	20,8	21,0	100,0
	Total	100	99,0	100,0	
Missing	System	1	1,0		
Total		101	100,0		

age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	10	9,9	10,0	10,0
	26-35	53	52,5	53,0	63,0
	36-45	34	33,7	34,0	97,0
	46-55	3	3,0	3,0	100,0
	Total	100	99,0	100,0	
Missing	System	1	1,0		
Total		101	100,0		

education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	primary	2	2,0	2,0	2,0
	high school	27	26,7	27,0	29,0
	college	7	6,9	7,0	36,0
	bachelors'	58	57,4	58,0	94,0
	master	6	5,9	6,0	100,0
	Total	100	99,0	100,0	
Missing	System	1	1,0		
Total		101	100,0		

duration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-3	50	49,5	50,0	50,0
	4-6	44	43,6	44,0	94,0
	7-10	6	5,9	6,0	100,0
	Total	100	99,0	100,0	
Missing	System	1	1,0		
Total		101	100,0		

position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	employee	50	49,5	50,0	50,0
	manager	50	49,5	50,0	100,0
	Total	100	99,0	100,0	
Missing	System	1	1,0		
Total		101	100,0		

Statistics

		gender	age	education	duration	position
N	Valid	100	100	100	100	100
	Missing	1	1	1	1	1
Mean		1,2100	2,3000	3,3900	1,5600	1,5000
Median		1,0000	2,0000	4,0000	1,5000	1,5000
Std. Deviation		,40936	,68902	1,01399	,60836	,50252
Skewness		1,446	,095	-,613	,590	,000
Std. Error of Skewness		,241	,241	,241	,241	,241
Percentiles	25	1,0000	2,0000	2,0000	1,0000	1,0000
	50	1,0000	2,0000	4,0000	1,5000	1,5000
	75	1,0000	3,0000	4,0000	2,0000	2,0000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	26,233	69,034	69,034	26,233	69,034	69,034
2	4,700	12,368	81,402	4,700	12,368	81,402
3	2,365	6,224	87,626	2,365	6,224	87,626
4	,980	2,578	90,204			
5	,770	2,026	92,230			
6	,711	1,872	94,101			
7	,602	1,585	95,687			

8	,286	,752	96,439			
9	,194	,511	96,950			
10	,183	,481	97,431			
11	,160	,421	97,852			
12	,124	,327	98,179			
13	,114	,300	98,478			
14	,097	,255	98,734			
15	,085	,223	98,957			
16	,079	,207	99,164			
17	,059	,154	99,318			
18	,046	,122	99,440			
19	,042	,111	99,551			
20	,032	,084	99,635			
21	,030	,079	99,714			
22	,025	,067	99,781			
23	,020	,054	99,834			
24	,016	,042	99,877			
25	,011	,029	99,905			
26	,008	,021	99,926			
27	,007	,019	99,945			
28	,007	,019	99,964			
29	,006	,014	99,979			
30	,003	,009	99,988			
31	,002	,006	99,994			
32	,001	,002	99,996			
33	,001	,002	99,998			
34	,000	,001	99,999			
35	,000	,000	100,000			
36	2,163E-05	5,691E-05	100,000			
37	1,163E-05	3,062E-05	100,000			
38	1,632E-15	4,294E-15	100,000			

Extraction Method: Principal Component Analysis.

Rotated Component Matrix(a)

	Component		
	1	2	3
h1	,250	,258	,917
h2	,840	,276	,175
h3	,899	,208	,253
h4	,228	,362	,858
h5	,175	,775	,242
h6	,278	,794	,195
h7	,939	,234	,134
h8	,939	,238	,144
h9	,238	,262	,924
h10	,926	,225	,231
h11	,932	,235	,151
h12	,626	,216	,162
h13	,314	,827	,221
h14	,358	,840	,213
h15	,776	,194	,246
h16	,942	,237	,168
h17	,293	,837	,217
h18	,934	,224	,164
h19	,883	,137	,108
h20	,838	,286	,230
h21	,897	,283	,167
h22	,836	,162	,185
h23	,912	,285	,150
h24	,298	,685	,261
h25	,939	,255	,156
h26	,945	,230	,145
h27	,946	,250	,154
h28	,260	,280	,913
h29	,865	,317	,131
h30	,289	,843	,125
h31	-,280	,667	,599
h32	,356	,871	,085
h33	,913	,274	,012
h34	,366	,853	,072
h35	,912	,280	,026
h36	,928	,264	,026
h37	,932	,272	,036
h38	,937	,250	,041
h39	,934	,262	,028

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a) Rotation converged in 5 iterations.

Rotated Component Matrix(a)

	Component		
	1	2	3
h1	,226	,265	,920
h2	,825	,298	,202
h3	,888	,226	,275
h4	,203	,368	,859
h5	,149	,786	,253
h6	,254	,805	,208
h7	,929	,254	,157
h8	,929	,258	,167
h9	,214	,267	,926
h10	,917	,242	,250
h11	,922	,254	,174
h12	,628	,217	,160
h13	,288	,841	,237
h14	,335	,851	,223
h15	,767	,207	,260
h16	,931	,257	,192
h17	,267	,849	,231
h18	,924	,244	,187
h19	,877	,155	,128
h20	,825	,304	,252
h21	,884	,304	,191
h22	,828	,179	,204
h23	,901	,304	,172
h24	,281	,690	,263
h25	,929	,274	,178
h26	,934	,251	,169
h27	,936	,269	,177
h28	,237	,284	,914
h29	,853	,337	,155
h30	,273	,845	,125
h32	,347	,868	,075
h33	,913	,284	,021
h34	,356	,852	,065
h35	,911	,290	,035
h36	,927	,275	,037
h37	,930	,284	,048
h38	,936	,262	,053
h39	,933	,273	,039

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a) Rotation converged in 5 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,679
Bartlett's Test of Sphericity	Approx. Chi-Square 79,470
	df 3
	Sig. ,000

One-Sample Kolmogorov-Smirnov Test

		CONSIST	TRUST	KNOWLEDG
N		100	100	100
Normal Parameters(a,b)	Mean	1,4925	2,4416	2,9500
	Std. Deviation	,83519	,96733	,81456
Most Extreme Differences	Absolute	,372	,174	,206
	Positive	,372	,152	,206
	Negative	-,278	-,174	-,174
Kolmogorov-Smirnov Z		3,723	1,740	2,055
Asymp. Sig. (2-tailed)		,000	,005	,000

a) Test distribution is Normal.

b) Calculated from data.

***** Method 1 (space saver) will be used for this analysis *****

RELIABILITY ANALYSIS - SCALE (ALPHA)

Reliability Coefficients

N of Cases = 100,0 N of Items = 38

Alpha = ,9868

***** Method 1 (space saver) will be used for this analysis *****

Group Statistics

	position	N	Mean	Std. Deviation	Std. Error Mean
KNOWLEDGE	employee	50	2,7475	,92392	,13066
	manager	50	3,1525	,63502	,08980
CONSIST	employee	50	1,5050	,67099	,09489
	manager	50	1,4800	,97917	,13848
TRUST	employee	50	1,7304	,67722	,09577
	manager	50	3,1528	,63218	,08940

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
KNOWLEDGE	Equal variances assumed	7,776	,006	-2,554	98	,012	-,4050	,15855	-,71963	-,09037
	Equal variances not assumed			-2,554	86,848	,012	-,4050	,15855	-,72014	-,08986
CONSIST	Equal variances assumed	1,423	,236	,149	98	,882	,0250	,16787	-,30813	,35813
	Equal variances not assumed			,149	86,705	,882	,0250	,16787	-,30867	,35867
TRUST	Equal variances assumed	5,807	,018	-10,857	98	,000	-1,4224	,13102	-1,68240	-1,16240
	Equal variances not assumed			-10,857	97,539	,000	-1,4224	,13102	-1,68242	-1,16238

ANOVA

Between-Subjects Factors

		Value Label	N
gender	1,00	male	79
	2,00	female	21
duration	1,00	1-3	50
	2,00	4-6	44
	3,00	7-10	6

Descriptive Statistics

Dependent Variable: TRUST

gender	duration	Mean	Std. Deviation	N
male	1-3	1,8011	,73583	38
	4-6	2,9256	,80757	36
	7-10	2,8160	,30672	5
	Total	2,3777	,93121	79
female	1-3	2,2033	1,08537	12
	4-6	3,3600	,75381	8
	7-10	3,0000	.	1
	Total	2,6819	1,08314	21
Tota	1-3	1,8976	,83870	50
	4-6	3,0045	,80751	44
	7-10	2,8467	,28444	6
	Total	2,4416	,96733	100

Levene's Test of Equality of Error Variances(a)

Dependent Variable: TRUST

F	df1	df2	Sig.
1,182	5	94	,324

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a) Design: Intercept+GENDER+DURATION+GENDER * DURATION

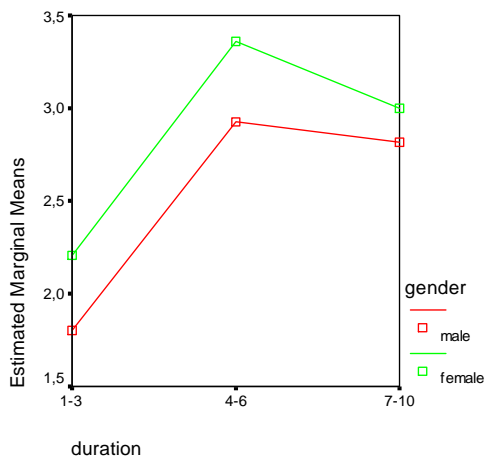
Tests of Between-Subjects Effects

Dependent Variable: TRUST

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	32,465(a)	5	6,493	10,143	,000
Intercept	177,377	1	177,377	277,098	,000
GENDER	,712	1	,712	1,113	,294
DURATION	20,412	2	10,206	15,944	,000
GENDER * DURATION	,046	2	,023	,036	,964
Error	60,172	94	,640		
Total	688,778	100			
Corrected Total	92,637	99			

a) R Squared = ,350 (Adjusted R Squared = ,316)

Estimated Marginal Means of TRUS



Session A: STRATEGIC MANAGEMENT

Session Editor's Preface

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Session Editor's Preface

To be successful, modern organizations must understand and apply strategic management as a systematic approach to managing change. Strategic management seeks to promote companies' proactive approach to the environment and strongly emphasizes precisely the need for prompt recognition of changes and change management. Understanding contemporary strategic management enables managers in companies to professionally deal with new, unstructured problems that more commonly occur in business activities.

Strategic management is not only dealt by the top management of the company. In a dispersed organizational structure of modern organizations, many employees at different hierarchical levels, have to face issues of strategic analysis, strategic planning and strategic decision-making. Also, strategic management is not only relevant for companies, but also for all those in the economic and social structure, as well as those in government bodies dealing with economic problems.

What follows is the review of papers published in Session A: Strategic management.

*The paper titled “**Quality cost model as a tool for managing continuous improvement**” presents the development of a quality cost model that includes all possible quality cost components such as Prevention, Appraisal and Failure (P.A.F.) costs. Based on reviewing and analyzing various quality cost models, a generic quality cost model is developed. The proposed model can be used as a tool to calculate various quality costs. In addition, it can be used to determine the most serious failure cost. A case study has used to validate the proposed model. In this case, the implementation showed that the model is able to identify and quantify the hidden cost related to the quality in electronic assembly plant. Also, it is used to identify the potential improvement opportunities within the plant.*

*The paper “**Dubrovnik port authority cruise partners analysis**” deals with the analysis of Dubrovnik Port Authority cruise partners and their share in Dubrovnik Port Authority business in order to be able to develop adequate tariff and reservation policy toward each of them. The criteria for choosing the port depends on the view point. The final costumer, in this case cruise company, becomes interested in the port included in the cruise itinerary on the basis of the quality and the recognition of the port product. The study contributes to the development of the joint management of ports and cruise companies.*

*The paper “**Promotion of insurance companies by investing in preventive measures**”, above all, points out the importance of market competition in insurance domain. This paper has the aim to indicate some characteristics of insurance, insurance policy provision and its promotion, and especially to point out and to propose investing in preventive measures of protection from risks and damage occurrence as one of the most efficient approaches of promoting the insurance companies. These activities often have significant strategic importance for the company.*

*The paper titled “**The implementation possibilities of collaborative planning, forecasting, replenishment model - “CPFR” model**”, points out the need for modern organizations to simultaneously respond to the double challenge: the necessity for an adequate response to customer needs and the need for a higher level of operational efficiency. The paper presents the Collaborative, Planning, Forecasting, Replenishment model (CPFR), that represents the innovative business system, and whose implementation brings many benefits. Beside the benefits, in this paper the authors have also dedicated attention to main characteristics and implementation possibilities of this model.*

The paper “**Risk management - basis of integrated management system**” deals with the necessity for integration of different management system. Standard ISO 9000 is taken as a basis for integration of standards. The standard ISO 9001:2008 considered that the risk management issues are in the framework of business process management, while the standard ISO 9004:2009 gives recommendations on how to manage the organization in order to achieve sustainable success. The aim of this paper is to show the advantages of organizations that have integrated management systems, the requirements of ISO 9001:2008, ISO 9004:2009 and BSI PAS 99:2012 related to risk management, as well as the importance of integration based on risk.

The paper titled “**Knowledge management and innovations as a key of competitiveness**” discusses the importance of knowledge management in innovation for organizations. In today’s society, innovation and knowledge management are no longer luxury items. Instead, they are necessities and a means of economic development and competitiveness. Knowledge and innovation are inseparable. Knowledge management competencies and capacities are essential to any organization that aspires to be innovative.

The paper “**Knowledge management system “Hospital Knowledge 1.0”**”, presents a knowledge management system (“Hospital Knowledge 1.0”), developed to fulfill the needs of General Hospital Zrenjanin. It allows the entry, store, search, and review of medical information generated within the institution gathered from documents and generates various types of reports. The overall objective is supporting and enhancing the educational work of the institution, thus providing a solid foundation for scientific research. This system implies further development of knowledge management in the institution, which can result in the creation of a comprehensive decision support system with elements of artificial intelligence.

The paper “**Managing change and competitiveness in terms of global economic crisis**” points out the importance of studying change in terms of the global financial and economic crisis. This current global economic crisis is a point of transformation in the globalization process and the creation of a global knowledge economy. In the extremely turbulent crisis global economy, competitiveness becomes highly sensitive and complex. It becomes hyper competitiveness. In this paper the authors examine and analyze different ways of managing change and competitiveness. One of the most efficient ways to manage rapid, turbulent and unpredictable changes is to implement innovation, which could handle the changes and used as effective system of attaining competitiveness.

The paper titled “**Knowledge management and global competition challenges**” identifies knowledge as the main factor underlying the new model of organization management. The basic imperative of modern economy and crucial global competitive factor lay in continuous improvement of knowledge and work productivity. The application of modern management techniques is an essential precondition for the success of business in general.

The field of Strategic management is very broad; consequently, the papers in this session cover a large number of different topics, such as: models for business improvement, change management, competitive analysis, knowledge management, risk management, insurance in companies, complex systems. The papers mainly provide theoretical insights; therefore, they are extremely useful for extending theoretical knowledge in the field of strategic management in general, as well as extending theoretical knowledge in these areas individually. It should be noted that the papers present various practical ways to improve business, in strategic context. From this it follows that the papers have significant scientific, technical and practical importance in the field of strategic management in organizations.

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QUALITY COST MODEL AS A TOOL FOR MANAGING CONTINUOUS IMPROVEMENT

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ABSTRACT

Determining the quality cost is one of the best ways that can assist industrial or business organizations to know clearly the investment and return of their quality improvement efforts. The information provided by accurate quality cost calculation is also a significant tool that can assist our assessment of the effectiveness of quality management system, as well as identification of quality issues within the organization and creation of opportunities for improvement. The purpose of this paper is to show the development of a quality cost model that includes all possible quality cost components such as Prevention, Appraisal and Failure (P.A. F) costs. Based on reviewing and analyzing various quality cost models, a generic quality cost model is developed. The proposed model can be used as a tool to calculate various quality costs. In addition, it can be used to determine the most serious failure cost. A case study has used to validate the proposed model. In this case, the implementation showed that the model is able to identify and quantify the hidden cost related to the quality in electronic assembly plant. Also, it is used to identify the potential improvement opportunities within the plant.

Keywords: Quality cost, Modeling, Direct Quality Cost, and Improvement opportunities.

INTRODUCTION

The ultimate goals for all successful organizations are making the customer accept and buy its products. For this reason they need to work harder to design a quality system for whole the organization and also they need to spend a lot of money to make sure that every process during the production line is within the required standard. In the end, the goods or the service must meet the customer required however; organizations want to get some profit from its business. As they produce better products, they get a higher profit. So the logical questions here would be how much should they spend to meet the customer's expectations and the same time be profitable. A quality cost study can bring a light to the status of a quality system. The analysis of quality cost is a significant management tool that provides: a method of assessing the effectiveness of quality management as well as a tool for investigating quality issues, opportunities, saving and action.

LITERATURE REVIEW

The earliest writer for the concept of cost of quality is Dr. J.M. Juran's in his first quality control hand book (1951) chapter 1, "The Economics of quality" most other papers and articles of that time deal with more narrow economic applications. Among the earliest articles on quality cost system are Dr. W. J Masser's 1957 "the quality manager and quality cost". In 1963 the U.S Department of Defense issued MIL-Q-9858 A, a quality program requirement, making cost of quality a requirement for many Government contractors. This document helped to focus attention on the implementation of cost of quality measurement. Unfortunately there is no agreement between authors about the definition of the cost of quality (Chiadamrong, 2003). However, cost of quality is

defined as those costs associated with the non- achievement of product or service quality as defined by the requirement established by the company and its contracts with customer and society (Besterfield, 1994).

QUALITY COST MODELS

Many authors have introduced a quality cost models. These models can be classified into four groups of generic models. The P-A-F- (prevention, appraisal and failure) Crosby's model, opportunity cost model process cost model and ABC (activities based costing) model (Andrea and Vince 2007).

Prevention, Appraisal and Failure (P-A-F) Model - Most cost of quality models are based on P-A-F classification. This model classified cost of quality into four categories:

- *Prevention Cost* - The cost of all activities specifically designed to prevent poor quality in products or services , for example the cost of new product review , quality planning , quality improvement team meeting , quality improvement project and quality training
- *Appraisal Cost* - The cost associated with measuring, evaluation or auditing products or service to make sure everything is in conformance to quality standard and performance requirement. These cost include the costs of calibration of measuring and test equipment and the cost of associated suppliers and materials.
- *Internal Failure - Costs* The cost that occur before delivering the product to the customer For example, in scrap, rework, testing and material review.
- *External Failure Costs* - The costs occurring after delivering the product to the customer, for example, product recalls, warranty claims, customer's returns.

Crosby's Quality Cost Model - Crosby defines the cost of quality as "the sum of price of conformance and price of non conformance (Crosby, 1975) the price of conformance is the cost involved in producing a good quality in the first time. The price of non conformance is the money wasted when the products or the services fails to meet the standard.

Opportunity and Intangible Cost - Intangible costs are costs that can be only estimated for example profit not earned losses in productivity, customer goodwill or drops in employee morale. While these costs do not have a firm value, managers often attempt to estimate the impact of the intangible costs

Process Quality Cost Model - This model was introduced by British Standard institution (BS) in the BS 6143 part 1:1992 guide to the economics of quality. The model mainly focuses on process rather than product or service. Process cost is the total cost of conformance and non conformance for a particular process. The cost of conformance is the actual process cost of either producing products or services first time to required standard by given specified process, where cost of non conformance is the failure cost associated with the process not being executed.

Activity based Cost (A-B-C) Model - This model was developed by Coop in 1998. Under this model, accurate costs for various cost objects are achieved by tracing resource costs to their respective activities and the cost of activities to cost objects

A NEW EMPIRICAL QUALITY COST MODEL

The model is based on BS 6143 standard and targeted to identify the opportunities for cost reduction by focus on failure costs in attempt to drive them to zero also to invest in the prevention activities in order to reduce the appraisal cost.

1. The proposed model goes through a series of steps
2. Choose an indentifying process and its boundaries
3. Specifying the information resources and the date needed
4. Collect the costs of each element using the BS6143 as guide of quality costs
5. Analysis the result and implement the improvement

Mathematical models which represents the elements of quality cost

Prevention cost: these costs mainly occurs with the quality control activities department. These costs depends on the estimation of the time that spent on these activities:

- QEC: Quality engineering cost. These costs are including the activities related to quality plans.

$$QEC = \left(\frac{X_4}{X_2}\right) \prod_{i=1}^3 X_i$$

X_1 = Number of employees responsible on quality function

X_2 = Number of working hours.

X_3 = Percentage of the time developed to this activity.

X_4 = Average salaries.

- CMC: maintenance and calibration of production equipment used to evaluate quality. These are the costs of maintenance and calibration

$$CMC = \prod_{i=5}^6 X_i$$

X_5 = The cost of maintenance and calibration of equipment.

X_6 = Number of equipment.

- SQC: Supplier quality assurance. These are the costs of any activities that confirm the quality of the supplier

$$SQC = \prod_{i=7}^8 X_i$$

X_7 = Number of employees.

X_8 = Average salaries.

- TQC: Training. These are the costs of any quality training programs.

$$TQC = \prod_{i=9}^{11} X_i + (X_{12} + X_{13})$$

X_9 = Number of training staff.

X_{10} = The cost of one hour training.

X_{11} = Number of hours spent on training.

X_{12} = The cost of training material.

X_{13} = The cost of external training.

- AQC: Audit. These costs are including the activities related to the auditing of the quality system

$$AQC = \left(\frac{X_{17}}{X_{18}}\right) \prod_{i=14}^{16} X_i$$

X_{14} = Number of auditors.

X_{15} = Number of visits.

X_{16} = The number of hours in one visit.

X_{17} = Average salaries.

X_{18} = Number of working hours in a month.

Appraisal cost - these costs associated with the quality control activities such as measuring, and evaluating the quality system:

- LAC: Laboratory acceptance testing. These costs associated with inspection of any new material

$$LAC = \prod_{i=19}^{20} X_i$$

X_{19} = The cost of the lot.

X_{20} = Percentage of the cost of the lot.

- INC: Inspection and test. These costs associated with the inspection process

$$INC = \prod_{i=21}^{22} X_i + \left(\frac{X_{26}}{X_{24}}\right) \prod_{i=23}^{25} X_i$$

X_{21} = Number of full time employees.

X_{22} = Average salaries.

X_{23} = Number of senior staff.

X_{24} = Number of working hour.

X_{25} = The percentage of the time spent on performing this element.

X_{26} = Average salaries.

- IPC: In-process inspection (non-inspectors). These costs associated with the inspection process during the production line

$$IPC = \left(\frac{X_{30}}{X_{28}}\right) \prod_{i=27}^{29} X_i$$

X_{27} = Number of employees.

X_{28} = Number of working hour.

X_{29} = The percentage of the time spent on performing this element.

X_{30} = Average salaries.

- RTC: Review of test and inspection. This cost included the cost of reviewing **and** checking the quality reports.

$$RTC = \left(\frac{X_{34}}{X_{32}}\right) \prod_{i=31}^{33} X_i + \prod_{i=35}^{36} X_i$$

X_{31} = Number of seniors staff.

X_{32} = Number of working hour.

X_{33} = The percentage of the time spent on performing this element.

X_{34} = Average salaries.

X_{35} = Number of full time employees.

X_{36} = Average salaries.

Internal failure cost - These costs resulting from product or services not conforming to requirement prior delivery to the customers.

- SC: Scrap. These costs included the cost of the material, labor and overhead of any fail to confirm quality requirement

$$SC = \prod_{i=37}^{38} Xi$$

X_{37} = The value of the scrap.

X_{38} = The overhead cost.

- RRC: Rework and repair. These costs associated with any activity or rework or repair any failure

$$RRC = \prod_{i=39}^{40} Xi + X_{41} + X_{42}$$

X_{39} = Number of employees.

X_{40} = Average salaries.

X_{41} = The total price of the units.

X_{42} = The labor cost.

External Failure cost - These costs included any failure cost may occur after delivering the product or the service to the customers.

- CMC: Complaints. The cost of dealing with the customers complains such as investigating and solving any problem

$$CMC = \left(\frac{X_{45}}{X_{43}}\right) \prod_{i=42}^{44} Xi$$

X_{42} = Number of employees.

X_{43} = Number of working hour.

X_{44} = The percentage of the time spent on performing this element.

X_{45} = Average salaries

- WRC: Warranty replacement the expenses of repairing the product during the warranty period.

$$WRC = \prod_{i=46}^{47} Xi$$

X_{46} = Number of products

X_{47} = Price of the unit.

The total quality cost

$$TQC = QEC + MCC + SQC + QTC + LAC + INC + IPC + RTC + SC + RRC + CMC + WRC$$

Illustrative example - A case study has been done in an electric company located in Libya. The production process for the model (2931) has been chosen. It has three basic stages. 1) Auto insertion stage, 2) the manual insertion stage, and 3) Final assembly stage. The data collection was gathered from different departments. The BS6143 guide has been used to collect the costs. In order to achieve the most efficient quality costs, it was necessary to analyze the different quality costs (i.e. prevention cost, internal failure, etc.). The outcome of the analysis was based on the percentages obtained for the quality costs. Tables 1-2 present outcomes classified according to each cost category.

SUMMARY AND CONCLUSION

As discussed in the paper a quality cost study can bring a light about the status of a quality system. The analysis of the cost of quality is a significant management tool that helps to determining the problem, opportunities areas. A generic quality cost model is developed. The proposed model used

as a tool to calculate various quality cost using BS 6413 as a guides for cost elements. This approach made it more detailed. The obtained mathematical equations are modular in nature and can be used for other cases. Tables 1-3 showed the summary and the result using the cost of quality model according to each cost category. There is a significant different between the cost of conformance (%66) and the cost of nonconformance (%34). The appraisal costs were % 46 of the total cost .management should investigate its appraisal activities. There is a great opportunity to reduce some costs especially cost related with inspection and testing.

Table 1: Internal and External Failure cost

Coding	Cost elements	1 st qtr	2 nd qtr	3 rd qtr	4 th qtr	Total cost	Source
SC	Scrap	2500	2500	2500	2500	10000	Accounts and Q.C. departments
RRC	Rework and repair	3000	3000	3000	3000	12000	Q.C
CMC	Complaints administration	1000	1000	1000	1000	4000	Estimated time
WRC	Warranty replacement			1500	1500	3000	Accounts depart
Total						29000	

Table 2: Prevention and appraisal cost

Coding	Cost elements	Qtr1	Qtr2	Qtr3	Qtr4	Total	Source
QEC	Quality control and process control engineering	1000	1000	1000	1000	4000	Estimated time
MCC	Maintenance and calibration of test and inspection	3000				3000	Q.C dep. Main
SQC	Supplier assurance	1000	1000	1000	1000	4000	Q.C. dep
QTC	Quality training	5000				5000	Training office -
AQC	Audit	1000				1000	Estimated
LAC	Laboratory acceptance testing	10000	10000	10000	10000	40000	Accounts Depar.
INC	Inspection and test	1000	1000	1000	1000	4000	Q.C Department
IPC	In- process inspection (non- inspector)	5000	5000	5000	5000	20000	Estimated time
RTC	Review of testing and inspection date	500	500	500	500	2000	
Total						83000	

Table 3: Percentage of each category of quality costs

Quality cost category	Percentage of total quality cost
Prevention cost	%20
Appraisal cost	%46
Internal failure cost	%25
External failure cost	%9

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DUBROVNIK PORT AUTHORITY CRUISE PARTNERS ANALYSIS

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ABSTRACT

Dubrovnik Port Authority cruise management is based on existing known parameters of operations and forecast elements, which have their origins in realistic expectations of income, expenditures and obligations according to the capital investments of the port authority. The main goals of Dubrovnik Port Authority can be summarized through the capital investments, organization and operations. Capital investments refer to construction of infrastructure and development of port suprastructure. In order to forecast future Dubrovnik Port Authority cruise traffic we should be aware of our main cruise partners and their plans. The subject of this paper is to analyze Dubrovnik Port Authority cruise partners and their share in Dubrovnik Port Authority business in order to be able to develop adequate tariff and reservation policy toward each of them. The criteria for choosing the port depends on the view point. The final costumer, in this case cruise company, becomes interested in the port included in the cruise itinerary on the basis of the quality and the recognition of the port product. The methods of analysis and synthesis of the result of desk research process will be used. The study should contribute to the development of the joint management of ports and cruise companies.

Keywords: cruises partners, cruise management, criteria, expectations, forecast.

INTRODUCTION

On the 10th of December 2009 the reconstruction and development of operative quay in port Dubrovnik has been completed. It was a crucial phase of Dubrovnik aquatorium development. The final result of this project is about 1200 meters of new quay line with about 13.500 square meters of new area and 11 meters of draught, with possibility to accommodate three mega cruise ships at same time. The works on the first phase of infrastructure project at the area "Batahovina I", was completed in November 2011, creating additional 200m of operative quay. Today the existing passenger port of Dubrovnik primarily serves for accommodation of passenger cruise ships and local ship and ferry traffic. It consists of 88.000 square meters of land operative area with the quay line of 1.455 meters in length. It is divided in eleven berths (from berth 4 to berth 14) and the accompanying aquatorium which comprises two thirds of Gruž bay total area.

Dubrovnik Port Authority business goal is to keep and continue good relationship with its business partners, especially cruise companies that are very much aware of new trends, possibilities and port products according of which they are choosing their itinerary destinations. In the past years Dubrovnik was one of the unavoidable destinations in the Eastern Mediterranean cruises and Dubrovnik Port Authority goal is to remain and even attract some other cruise companies. Main Dubrovnik advantage is good geographical position and mild winters what is giving Dubrovnik Port Authority possibility to prolog cruise season on winter months. In order to be able to negotiate and demand some out of season calls Dubrovnik Port Authority should be informed about plans and cruise market overall world business situation.

DUBROVNIK AS A CRUISE DESTINATION

Dubrovnik is Croatia's leading cruise destination, which generated about 80% of the total turnover of this kind on the Croatian Adriatic. Dubrovnik is characterized by high turnover and mega ships,

a short stay at the destination, and the fact that for the most itineraries this is the only Croatian destination. Dubrovnik region is characterized by favorable position in the south of the Croatian part of Adriatic coast, and represents an important strategic point on the way between the eastern and western Europe (Kesić et al., 2006).

Table 1: Cruise traffic in Dubrovnik

"CRUISE" DUBROVNIK		
year	calls	pax
2003	480	395.342
2004	504	457.334
2005	553	510.641
2006	574	603.047
2007	606	667.769
2008	700	850.828
2009	628	845.603
2010	705	916.089
2011	681	985.398
2012	653	950.721
2013	684	1.164.815

Source: Dubrovnik Port Authority

ACTIVITIES ORIENTED DIRECTLY TOWARD TARGET CRUISE OPERATORS

The best manner for the promotion of the port and destination is direct and personal contact with the executive directors of companies that organize cruises. Such contacts should be organized whenever possible, and if possible prior to concluding the schedule for the next season. The cruise trip season on the Mediterranean lasts for a relatively long period of year, practically from April to October. The majority of tourism operators, especially Americans, fixing schedules for cruise trips and excursion programs that are offered no later than September/October, while European operators fixing their plans around January/February. It is recommended that contacts with cruise operators, i.e. directly with the persons entrusted with determining itineraries, should be made together with port representatives, in order to exchange information about the port offer and destination. A particular aspect of these visits can be providing information on the safety of ships and passengers at the destination.

Although this is a major economic activity, it is a fact that a large percentage of decisions are based upon personal recommendations. It is very important to maintain constant contact with current clients.

Table 2: European cruise market

Market	Operators
German	Aida Cruises, Hapag -Lloyd, Peter Deilmann, Phoenix Reisen, Sea Cloud Cruises, Transocean, Hansa Touristik; Delphin Seereisen.
British	Hebridean Island Cruises, Travel Dynamics, Elegant Cruises, P&O, Royal Caribbean; Celebrity, Cunard, Swan Hellenic, Page & Moy, Saga, Thomson.
United States	Celebrity Cruises, Crystal Cruises, Cunard, Holland America Line, Princess Cruises, Radisson Seven Seas, Royal Caribbean, SeaDream, Silversea, Star Clippers, Windstar Cruises.
European	Compagnie des Iles du Ponant, Croatian Cruise Lines, Club Mediterranee, Costa Cruises, Kristina Cruise, MSC, Euro Crociere.
Spanish	Pullmantur, Iberojet.

Source: Dubrovnik Port Authority

Due to the considerable growth of various cruise operators, which are increasingly offering various voyage programs or satisfying the desires of various interest groups of passengers.

Knowing tourist benefits are relevant to understand and predict tourist buying behavior according Kotler (2001); (Kotler et al., 2006). Widening of the network of clients, attention should be directed toward those operators that have still not recognized Dubrovnik as a must-see.

Moreover, on the occasion of choosing the cruise operators with whom it would be necessary to achieve contact within the framework of short-term and long-term goals, it is necessary to follow and analyze the order books of shipbuilding yards in which the development and orientation of the operators can be seen.

According to Cruise Industry News Annual Report (2013) the latest news from March, 2013 passenger capacity by Europe – based cruise lines are set to grow 23 percent from the start of this year to 2020. While average annual growth rate will be about 3 percent, the peak will come in the year 2015 when capacity will increase by 8.5 percent. In addition will be the capacity dedicated to European passenger sourcing by North American brands. The forward growth pace, however, is significantly slower than the previous eight years, from 2005 to 2013, during which passenger capacity grew by an estimated 113 percent. Carnival Corporation's European brands are dominant among the regional cruise lines with 44 percent market share this year, followed by MSC Cruises with 23 percent, Royal Caribbean's European brands with 11 percent, Thomson with 4 percent and Luis, 3 percent. So far, all Carnival's growth going forward is concentrated up until the year 2017, when the latest AIDA ship will add a full year of service. Company capacity will rise 22 percent over the 5 year period. In other developments, the Europe – based brands are maintaining their European deployment, although many brands are shifting more capacity away from Mediterranean to Northern Europe. According to Cruise Industry News (2013), the Europe – based brands were able to carry 5.9 million passengers (double occupancy) at the start of the year 2013 and will be able to carry 7.4 million by the year 2020.

Word leading cruise companies and operators like Carnival, MSC, Royal Caribbean and Celebrity Pulmantour include Dubrovnik in their itineraries generating port and city revenue (Table 3, Figure 1, Figure 2).

CONCLUSION

According to a new marketing concept of social marketing, port must define the desires, needs and goals of the business partner but also the entire community in which it operates and to realize their benefit in a way that is more efficient than competitor's.

The basis of performance management structure of the port is a process of creating the business environment, selecting target markets and designing appropriate products in order to achieve the objectives set in the pre-designed development strategies and policies. It is one of the mechanisms of port management process through which the creation and maintenance of the continuity of relations with the business environment affects the desired market position. There is the awareness that the process of keeping all cruise partners in port of Dubrovnik requires persistent and hard work, but only that can give us the results that we definitely need for future development of the port.

Three leading cruise companies present in port Dubrovnik as Carnival Corporation with eight companies under it Aida Cruises, Carnival Cruise Lines, Costa Crociere, Holland America Line, Iberocrueros, P&O Cruises, Princess Cruises and Seabourn Cruise Line, MSC and Royal Caribbean Cruises according to market predictions and preliminary reservation requests will remain leading companies in port Dubrovnik. Main port characteristic having 1200m straight line of operative coast with 11m of depth is providing unlimited accommodation of any cruise vessel operationally is attracting mega vessels. In order to fulfill some gaps according to Seatrade Communications Ltd. (2015) in offseason Dubrovnik Port Authority should focus on slammer vessels, still remaining in the Mediterranean during winter time and by Dubrovnik as brand destination attract those vessels to the port.

Table 3: Cruise companies in Dubrovnik

Period from 1.1.2012 to 31.12.2012 Dubrovnik							
Company	Calls	GT total	GT average	Length average	Hours average	Vessel pax capacity	Pax generated
TOTAL	653	35.093.886	53.743	206	13	1.063.783	950.721
AIDA CRUISES	7	296.023	42.289	202	10	10.500	35.695
ALL LEISURE GROUP PLC	5	71.784	14.357	140	25	2.479	2.017
AEGEAN ODYSSEY CRUISES	6	71.436	11.906	140	14	1.800	1.770
Barska plovidba - ad Bar	1	8.697	8.697	118	5	300	103
Carnival Cruise Lines	13	1.664.676	128.052	305	11	47.970	54.004
Celebrity Cruises	27	2.564.374	94.977	276	10	59.666	59.256
Compagnie des iles du ponant	21	222.384	10.590	140	19	5.095	3.662
CONSTELLATION CRUISE HOLDINGS / co R-TOURS MONTENEGRO	1	5.888	5.888	118	26	300	151
Costa Crociere SpA	96	8.790.101	91.564	264	8	290.478	223.001
Croisimer	22	65.890	2.995	110	40	3.960	6.853
Crystal Cruises	4	275.480	68.870	250	10	4.320	3.532
Cunard Line	8	724.652	90.582	294	8	16.460	15.913
FRED OLSEN CRUISE LINES LTD	2	72.088	36.044	212	10	2.140	2.156
FTI Touristik GmbH	8	76.560	9.570	139	5	3.360	2.853
GCCL (Cayman) Small Ships Management Limited	38	45.828	1.206	58	33	1.976	1.813
HAPAG-LLOYD, Kreuzfahrten GmbH	3	89.444	29.815	186	17	1.846	971
Helios Shipping Ltd	6	25.200	4.200	90	12	750	554
Holland America Line	21	1.671.760	79.608	275	10	46.079	41.381
Iberocruceros s.l.	20	945.240	47.262	223	6	38.200	27.526
International Shipping Partners	1	5.218	5.218	102	13	128	49
Kristina cruises	2	25.814	12.907	137	34	620	1.251
LOUIS CRUISE LINES	14	547.169	39.084	204	13	24.962	20.015
MAJESTIC INTERNATIONAL CRUISES INC.	2	20.834	10.417	135	14	1.246	1.035
MANO MARITIME LTD	2	33.704	16.852	164	12	1.918	1.603
MS Artania Shipping Ltd.	1	44.656	44.656	231	6	1.260	979
MSC Crociere S.A.	72	7.584.849	105.345	303	6	238.868	224.377
NAUTICAL RESEARCH FOUNDATION LTD.	1	177	177	32	307	0	0
Norwegian Cruise Line	11	1.029.138	93.558	294	8	34.430	25.056
P&O Cruises	15	1.336.992	89.133	268	8	36.222	35.776
PASSAT Kreuzfahrten GmbH	3	48.642	16.214	156	5	1.500	594
Passat shipmanagement ltd	1	20.704	20.704	176	6	600	368
Plantours&Partner GmbH	3	45.201	15.067	144	7	1.260	852
PRESTIGE CRUISE HOLDINGS INC.	26	1.371.807	52.762	220	10	24.172	23.204
Princess Cruises	23	1.647.571	71.634	236	9	46.400	42.224
Pullmantur Cruises Zenith Limited	22	1.043.086	47.413	207	6	41.800	31.421
Royal Carribean Cruises	19	1.353.178	71.220	269	7	40.100	36.686
SEA CLOUD CRUISES	11	35.754	3.250	113	15	940	702
Sea Dream Yacht Club	14	60.662	4.333	104	15	1.680	1.659
Seabourn cruise line	33	575.256	17.432	152	14	12.710	7.935
Silversea Cruises Inc.	11	282.839	25.713	174	14	4.504	3.916
STAR CLIPPER CRUISES	15	57.867	3.858	127	10	3.030	2.734
TITAN S.R.L.	1	1.140	1.140	60	13	40	19
V Ships	2	29.966	14.983	187	16	784	618
V.SHIPS LEISURE	11	171.768	15.615	186	18	4.990	2.759
VARIETY CRUISES	26	20.613	793	54	27	1.340	1.283
World Cruises Agency	2	11.776	5.888	118	16	600	395
TOTAL	653	35.093.886	53.743	206	13	1.063.783	950.721

Source: Dubrovnik Port Authority

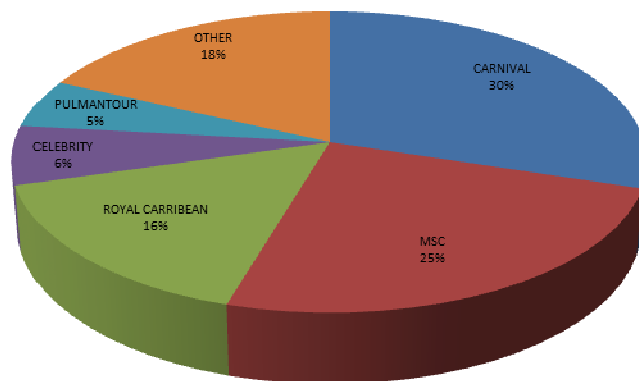


Figure 1: Cruise companies according income in port Dubrovnik – 2012
Source: Dubrovnik Port Authority

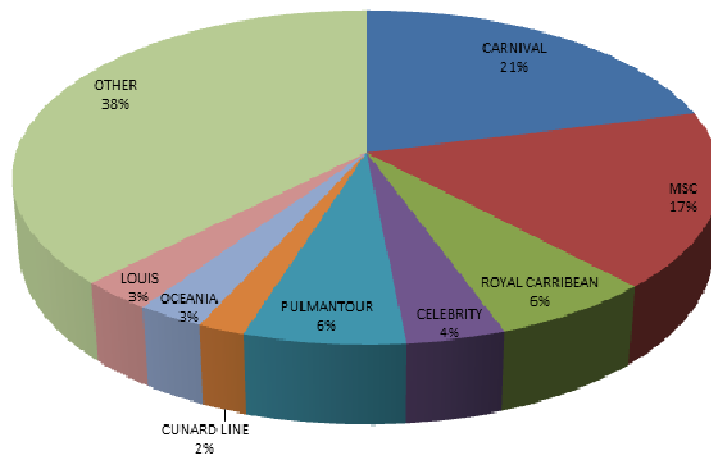


Figure 2: Cruise companies according calls in port Dubrovnik - 2012
Source: Dubrovnik Port Authority

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PROMOTION OF INSURANCE COMPANIES BY INVESTING IN PREVENTIVE MEASURES

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ABSTRACT

Likewise in all other parts of the economy, market competition in insurance domain is equally significant. In such circumstances, in which most of insurance companies provide same or similar business offers to their customers, and at the same time having in mind all specifics of insurance domain, gaining competitive advantage and differentiating from the competition in the mind of the customers requires special activities and efforts of those companies. This paper has aim to indicate some characteristics of insurance, insurance policy provision and its promotion, and especially to point out and to propose investing in preventive measures of protection from risks and damage occurrence as one of the most efficient approaches of promoting the insurance companies.

Keywords: Insurance companies, insurance policy, insurance promotion, insurance marketing

INTRODUCTION

Insurance as area of economy, in service of protection of both individuals and companies from the risk of damage occurrence, is characterized by some specificities of insurance companies doing business on the market. Beside the segment of compulsory insurance, which is regulated by the laws of the countries, business of insurance companies takes place in the market environment in which the dominant state is presence of many competing companies that are providing similar or the same business offers of insurance policies to its customers. Effort for gaining competitive advantage, that these companies have to put in, is bigger than in the other areas of economy, mostly because of latent demand for insurance policies and for unwillingness of the customers to take the risk on their own.

In such circumstances marketing performance of insurance companies inevitably has to be created through innovative solutions, not just in provision of services but also in promotion of insurance policies, in order to achieve the market goals of the company and in order to send the uniform message to customers through various channels. Marketing channels that are used to supply this kind of products and services are also specific compared to other products and areas of the economy. Due to immediacy of concluding insurance policies contracts and other characteristics of insurance, basic sale channels are personal selling, as element of direct marketing approach, and selling through different types of agents.

This paper has aim to indicate basic characteristics of insurance as business activity and its marketing by usage of different activities through several marketing channels. In that sense this paper also has aim to propose and point out new approaches in promoting the insurance by investing in preventive measures as one of the most efficient approaches in building the company's position in the mind of the customers.

INSURANCE, ELEMENTS AND CHARACTERISTICS

As it was already mentioned before, insurance is one specific area. Basically it represents association of all participants that are exposed to same risk and danger, with goal to jointly bear the damage that will occur to just a few of them. Its basic function is to put down the risk to the lowest rate possible, which is than acceptable either for individuals or for the companies. As group of authors says, insurance is consisted from three major parts. Those are economic, technical and juridical (Avdalović et al. 2010). This kind of substantiality of different elements has led to the fact that none of the proposed definitions in the literature is generally acceptable, in fact they are relative according to the position from which they are observed. Even though there are different classifications of insurance, there are two major groups, life and non-life insurance.

In order to successfully function as insurance business, it is necessary to follow its unique methodology which key elements are risk, insurance premium, and damage compensation (Avdalović et al. 2008). These three elements, as constitute parts of every insurance policy, have key function in marketing communications with customers and during the selling process of insurance policies. Insurance premium is partially function of insurance costs, and it behaves like the price of any other product or service. The only difference between insurance premium and prices of other products and services that substantially changes the way of doing business is the fact that the cost of insurance is unknown until the expiration of the insurance policy. Hence, this type of product price has to be based on the forecast of future payments. Besides that, major influences on level of insurance premium rate have legislative provisions that limit the rate of insurance.

Main functions of insurance are protection of property, financial function and social function (Avdalović et al. 2008). Property protection as primary function executes directly and also indirectly. Indirect protection of property is based on preventing the damage to occur, that is, in preventive elimination of the causes for the damage occurrence. Direct protection is based on the payment from funds for compensation in the case of damage occurrence. Advantages that are provided with indirect protection of property have led this kind of insurance into foreground and display it as one of the key elements in marketing of insurance companies.

Customers, in other words subjects of insurance, could be equally both individuals and companies. In the literature the term policyholder indicates different persons. As author Šulejić says, this term is sometimes confused with the term contractor of the insurance and sometimes with its consumer. This is due to the fact that it usually happens that same person has both named roles (Šulejić, 1991).

It can be argued that, at least in most developed countries such as USA, insurance is major part of the economy and financial market. For example, in USA there are more than 6.200 registered insurance companies, which employ more than 2 million workers and have equity of about 2.7 billion dollars (Insurance Information Institute, 1994; American Council of Life Insurance, 1994). Based on this data it could be concluded that innovative approach toward customers is inevitable, in order to differentiate from competition and to gain competitive advantage. Such an approach should be promoted not only from sales agents but also from offer itself, and insurance companies with their marketing communication efforts as a whole.

INSURANCE MARKETING CHANNELS AND POLICY PROMOTION

Marketing channels are one of the key elements in provision of any product. They are defined as set of institutions which allocate products from point of production to the point of consumption (Lovreta et al. 2006). In accordance with that, every connection between individuals or organizations that provides process of exchange is marketing channel. As author Škorić says, sales channels represent organized system of interdependent and at the same time independent intermediaries that are included in physical and ownership flow of goods and services toward customers (Škorić, 2011). Those channels take on characteristics and structure based on number of participants and their level in the chain between customers and producers. Author Drucker ones

said that the purpose of every business is to create customers and that there are only two functions that contribute to this and make results, marketing and innovations, and everything else are the costs (Drucker, 1973). Having this in mind, it can be said that the same principle is equally applicable to insurance companies, for insurance is specific area of the economy, so it is clear that the insurance companies have to change their approach in managing and provision of policies on the market.

The most commonly used channels for sale of insurance policies are elements and parts of direct marketing. Those are personal sale, sale through network of own, independent or exclusive companies` agents, sale through brokers or other intermediaries on the market. Besides the basic marketing channels for provision of insurance policies, due to the growing market competition, as a supplement to these channels alternative channels have appeared. Their role is additional but with accent on sending integrated marketing communication messages to the customers through multichannel approach. In this way it is easier to provide the services, by allowing customers to be in more frequent contact with the company`s offer and by activating the latent demand for this kind of services.

In order to achieve success on the market with the provision of insurance policies it is necessary to perform more than one activity. Above all, it is necessary to realize what is the risk that customers are facing, and after that to find a way to present that risk to the customers. It is also important to ensure that decisions that are made by customers about accepting the risk are based on reliable information. After that innovative solution needs to be provided to the customers in the form of insurance, advice and help, in such a way that the costs of getting the insurance policy for the customers can be lowered based on this solution.

When it is about the promotion of insurance policy and insurance companies, it is obvious that practically all usual methods are in use. Those are in most cases channels of mass media and mass communication such as TV commercials, radio commercials, news ads, and so forth. Also in use are some other additional media channels such as outdoor promotion that is mostly covered through street billboards, bus advertising, etc. Institutions of direct marketing in that sense represent direct appeal to customers, because direct marketing has a goal to raise preferences for products and services thanks to engagement of many electronic media (Salai et al. 2007).

Apart from standard ways of promoting the insurance companies, in the light of emphasized need for corporate social responsibility, but also because of more efficient use of resources and lowering the costs of doing business it is important to bring in some changes, i.e. new approaches to promotion. One of the most efficient approaches for lowering the costs in insurance is investing in damage and risk prevention. On that basis there is a need to create adequate promotional activities, which will be discussed in the following lines.

PROMOTION BY INVESTING IN PREVENTIVE MEASURES

As it was stated above, one of the most important ways for managing the risk is prevention (Avdalović et al. 2010). It includes treatment of the potential source of danger with technical means and aids. With such activities it is possible to reduce or totally prevent the risk occurrence or its further development. Considering the specific area such as insurance, promotional activities based on investing in preventive measures provide wide range of potentially useful possibilities.

As the group of the authors says, marketing communications not only enhance the selling of the products but also shape the opinions and permanently change general values (Salai et al. 2007). Considering that, it can be concluded that application of preventive measures in promotion of insurance could significantly contribute to provision of insurance policies on the market, and also to the development of values that insurance companies represent in customers` minds. One of the possibilities for investing in prevention could be investing in different traffic and other infrastructure facilities in large cities on the places where the traffic safety is endangered. It would

prevent occurrence of traffic accidents, and therefore it would massively reduce the number of paid insurance policies and also costs for the insurance companies. Based on investing in such infrastructure facilities, but at the same time in many other sorts of risk and damage prevention, insurance company would gain right to connect its name with the social responsible activities. In addition to the benefit for the company through increased presence in customers` minds achieved by various public relation activities, insurance company could also be identified with the values and attitudes of the customers, which would ease the provision of services on the market and strengthen company`s brand value.

From above stated it can be concluded that investing in risk and damage prevention is potentially most efficient way of promoting insurance companies. With such activities the approach to the customers would be open and it would be much easier to provide services to them. Besides that, by investing in preventive measures costs would also be reduced, which would increase overall market success.

CONCLUSION

Strong competitive struggle on the market is also present in insurance area of economy. In order to gain competitive advantage in such circumstances, insurance company has to provide its customers with greater value compared to other market offers.

Insurance specificities condition some adjustments in market approach and provision of products to customers. Besides in domain of market research and marketing channels, special adjustments are required in promotion of insurance companies and insurance policies. As it is stated in this paper, potentially most efficient method of promotion of insurance companies and their offer would be investing in prevention of risk and damage occurrence. Not only that in this way it is possible to send message to customers about the risks they are taking and to strengthen the company`s name in the mind of customers, but it is also possible to reduce the costs of insurance company. This would ensure easier provision of insurance policies on the market and would provide insurance companies with element for further growth and development.

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THE IMPLEMENTATION POSSIBILITIES OF COLLABORATIVE PLANNING, FORECASTING, REPLENISHMENT MODEL – “CPFR” MODEL

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ABSTRACT

More demanding conditions and a large number of challenges facing the economy, are forcing business subjects to struggle every day for competitive positions on their markets. On the one hand, there is a necessity for an adequate response to customer needs, through the processes of value creation and customization, and on the other, the need for a higher level of operational efficiency and achieving some savings. In such a paradoxical situation, companies can meet both of these conditions, through the implementation of innovative business solutions and better organization of logistics activities. Collaborative, Planning, Forecasting, Replenishment model (CPFR) represents the innovative business system, which implementation brings many benefits, not only to retailers, but to manufacturers too. By applying this model, business partners can increase product availability and reduce inventory costs throughout the whole supply chain. Beside the benefits, in this paper we have also dedicated attention to main characteristics and implementation possibilities of this model.

Keywords: CPFR model, inventory management, information system;

INTRODUCTION

Modern trends and market changes raise many new forms and interaction patterns among members of the supply chain. Traditional competition between individual business subjects is replaced with various forms of vertical marketing partnerships. These networks can be implemented in different business areas, improving the entire supply chain. Logistics is one of the sectors suitable for the implementation of these cooperation forms. With efficient organization and implementation of logistics activities, supply chain members can realize significant cost savings and advantages over their competitors. Therefore, various collaborative models, based on the mutual alignment of business processes and the mutual exchange of information, have been established. Among them, collaborative planning, forecasting and replenishment model ("CPFR" model) takes its place.

THE DEVELOPMENT OF COLLABORATIVE PLANNING, FORECASTING AND REPLENISHMENT MODEL

By the end of the 20th century, various collaborative relationships between trading participants appeared on B2B market. Different models of business cooperation, through which suppliers are increasingly incorporated into retailers operations, have been developed. These models have been followed with a number of initiatives that supported the establishment of long-term partnerships between manufacturers and retailers. Among them, special attention was dedicated to the “efficient consumer response” initiative (ECR), launched in 1993, in FMCG sector, in order to quickly and efficiently meets customers' demands. In the same period, in the United States, a set of initiatives

known as "quick response" (QR), which encourages partnership and promotes effective product flow management, was launched too (Sheff, 2002).

However, many expected benefits that have been promoted with these initiatives, lacked. One of the stumbling rocks was the implementation of "EDI" information systems, to which a number of trade partners were not ready yet. In this way, the critical mass of companies, needed for successful implementation of presented ideas, could not be formed. However, despite the difficulties that have slowed the adoption and expansion of "ECR" and "QR" initiatives, they significantly contributed to the importance of mutual information exchange between leading commercial and manufacturing entities. If producers could get retailers forecasts data, regarding future sales and procurement activities, they would be able to organize their production and delivery processes in a much more efficient and effective way. On the other hand, retailers could avoid the situation of insufficient product availability in their stores, as well as numerous ancillary consequences that may ultimately lead to the loss of loyal customers.

Under the principles of "ECR" and "QR" initiatives, Wal-Mart and Warner Lambert were the first companies that implemented collaborative planning, forecasting and replenishment model (CPFR) in 1996. The use of CPFR model brought them significant improvements and cost savings in the area of inventory management (Harrison and Van Hoek, 2008). Following results of their cooperation, Committee for manufacturing and Trading Standards (VICS) published the special "CPFR" guide in 1998. Close cooperation between trading partners has resulted in the adoption of a joint business plan, which involved future promotional activities too. Retailer and manufacturer have also agreed on a joint participation in the activities of monitoring and forecasting sales and product ordering.

BENEFITS OF COLLABORATIVE PLANNING, FORECASTING AND REPLENISHMENT MODEL APPLICATION

There are numerous reports that indicate benefits of "CPFR" model application. The results of several case studies confirmed that. Positive effects are reflected in the forecasting process improvement (for 30 - 40%), customer service and sales level increase (15% to 60%) and in the reduction of order cycle (from 15% to 20%) (Ireland and Bruce, 2000). Separate benefits for manufacturers and retailers are presented in Table 1.

Table 1. Benefits of the use of CPFR model (AMR Research, 2001)

Retailer benefits	Typical improvement
Better Store Shelf Stock Rates	2% do 8%
Lower Inventory Levels	10% do 40%
Higher Sales	5% do 20%
Lower Logistics Costs	3% do 4%
Manufacturer benefits	Typical improvement
Lower Inventory Levels	10% do 40%
Faster Replenishment Cycles	12% do 30%
Higher Sales	2% do 10%
Better Customer Service	5% do 10%

The organization "ECR Europe" has also singled out several positive effects of "CPFR" model. Among them, the most important are (ECR Europe, 2001):

- Meeting customer needs more efficiently – out-of-stock reduction and shorter cycle orders, contribute to the stability and security of the entire supply chain, with a higher level of product availability and greater customer satisfaction; with the use of "CPFR" model, the right product reaches the right place at the right time.
- Reliable and accurate demand forecasting - the exchange of information related to sales forecasts between trading subjects is the basis for the synchronization of different processes in the supply chain with significant synergy effects; economic entities, depending on their

positions and activities in the channel, from different points of view, analyze and interpret market movements and changes, as well as information related to consumers; the combination of different experiences and knowledge improves the process of sales forecasting; once the planning and forecasting processes align, the basis for future monitoring and corrective activities is created.

- Improving relations between trade actors – with the establishment of collaborative relationships, trade partners would be able to exchange information and achieve a better insight into supply chain business operations, through direct communication channels; one of the most important effects of business cooperation is reflected in the increasing tendency towards the realization of "win-win" agreements.
- Sales growth – with the use of "CPFR" model, retailer companies can decrease out-of-stock problems in their stores; higher level of product availability positively affects, not only retailers income, but the income of other supply chain participants.
- Inventory reduction - most companies hold safety stocks in order to compensate possible forecasting demand errors; thereby, with the improvements in forecasting processes, they can reduce the levels of safety stocks, and increase levels of product availability;
- Cost reduction – the adjustment of production schedules with demand forecasts, shortens the preparation period, eliminating dual operations and other discrepancies and leading to cost reductions; lower inventory levels, also contribute to the reduction in capital costs, administrative costs and inventory holding costs.
- Higher level of capacity usage - accurate sales forecasts contribute to the increase of effectiveness and utilization levels of production capacity.

Many case studies and pilot projects have witnessed the benefits of the implementation of "CPFR" model. Boone et al. (2001) used the simulation model, to analyze and compare the performance of Fortune-500 companies, after the implementation of "CPFR" and the classic "reorder point" (ROP) method. The results showed that the implementation of "CPFR" model significantly contributed to the increase in shareholders value and meeting customer requirements, while reducing inventory levels and shortening cycle service orders.

IMPLEMENTATION REQUIREMENTS FOR "CPFR" MODEL

To achieve the benefits, arising from the implementation of "CPFR" model, business partners have to face many challenges and meet certain requirements. According to ECR Europe (2001), key challenges are:

- selection of the "right" partner,
- top management involvement in the implementation of "CPFR" concept,
- building trust,
- reliability (establishing legal ties)
- harmonization of operational capabilities (operational connection)
- establishing adequate motivation and reward system and building corporate business culture.

Establishing collaborative relationships in b2b market depends on the willingness of supply chain participants to cooperate for the realization of joint and individual goals. It is important for both parties to understand that the success can only be achieved through mutual, direct information exchange and joint coordination of business activities. The synchronization of business activities, improvements in social relationships and the increased trust level, are the results of establishing "CPFR" concept.

Because of its significant impact on companies operations and profitability, all employees, from top management to sales staff, should be acquainted with the implementation and enforcement of "CPFR" concept. Resources of both business partners (technological, financial, information and human) should be allocated in order to provide efficient and effective realization of joint project.

Personal dimension, as an integral part of the exchange process, has an increasing role in promoting long-term relationships between business partners. Greater degree of trust between the seller and the buyer contributes to reducing harmful conflicts, reducing transaction costs, promoting adaptive organizational forms (such as network relations), providing quick information from formed working groups and promoting effective responses to potential crises (Rousseau et al. 1998). Also, mutual trust encourages managers to take risks and invest in even closer cooperation with trading partners. Due to the exchange of confidential information during the implementation of "CPFR" model, there is a need for defining specific business rules and legal circling the entire process. Legal ties between business partners are based on agreements (contracts), which define roles and responsibilities of both parties in trade process. Although the contracts are common in practice, nowadays some companies operate under the auspices of a simple "handshake". However, contract signing provides dual benefit for buyers and sellers. First, if all is not going according to plan, the protection by the existing legal system is provided. Secondly, all planned activities can be defined in contracts, which significantly facilitate the regulation of trade.

Globalization, increasing competition and technological progress have great influence on companies to cooperate on operational plan too. Operative relation between business partners facilitates the process of exchange by reducing transaction costs. Consequently, trading partners, in order to effectively implement "CPFR" model, must mutually adjust their business capacities. In addition, there are also a number of programs and initiatives for standardizing such forms of cooperation, including the "efficient consumer response" (ECR) (Tosh, 1993). The reward and motivation system of business partners must be in accordance with the level of goals accomplishment process, in order to ensure the desired involvement and commitment of all employees. There is a need for encouraging teamwork and compliance of individual (employees) and mutual objectives (company). In this way, in addition to external, there is a tendency for establishing internal collaboration, which greatly depends on the business culture of trading partners. If positive atmosphere for establishing and developing collaborative relationships exists, realization of mutual projects and goals will be much easier.

In addition to these assumptions, the use of "CPFR" model to a great extent depends on the technology and IT solutions, which are used in trade relations. In collaborative relationships, the application of modern information system brings many benefits, supports the decision-making process and increases the efficiency and transparency of transactions, both in the enterprise and between business partners. With "ERP" and "EDI" systems, manufacturers and retailers can establish functional (internal) and intra-organizational (external) connections, which facilitate the realization of various business processes and joint aims.

MAIN „CPFR“ ACTIVITIES

"CPFR" model represents a general framework for collaborative planning, forecasting and replenishment that can be applied in different economic sectors. Figure 1 illustrates its basic activities. Central spot belongs to end customer, whose requirements and wishes initiate other business activities. In order to satisfy them, retailers and suppliers (manufacturers) are developing their business relations in following areas:

- Planning - establishing basic rules of collaborative cooperation; defining the marketing mix and periodic business plans;
- Supply and demand management - monitoring and analysis of sales data via POS terminals; order management;
- Execution - preparation and delivery of orders; product acceptance and restocking shelves; monitoring sales transactions; debt payment;
- Control - comparison of planned and completed activities; analysis of possible deviations and key performance measurement; information exchange and setting future business guidelines.

These collaborative activities are logically arranged in sequence. However, some companies do not realize them in this order. Also, collaboration between trading partners may be based only on one activity (such as planning), while others can be carried out in traditional manner, within a company. Each collaborative activity, from planning to control, consists of few tasks, which are divided between business partners (manufacturers and retailers).

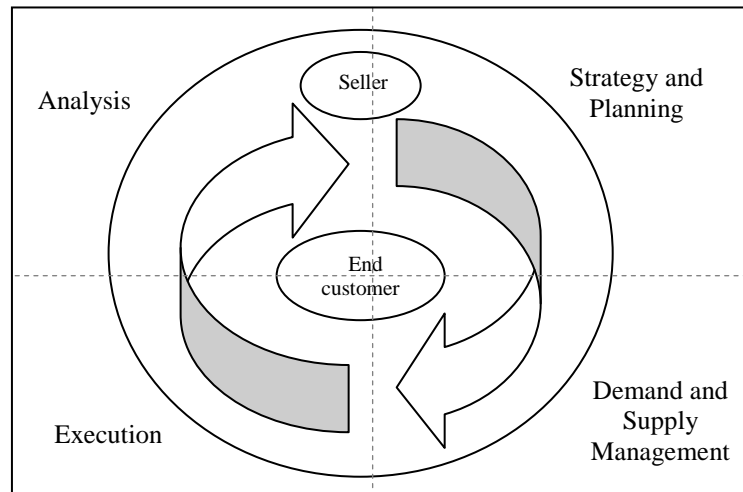


Figure 1. Main activities of „CPFR“ model (Vics, 2004)

As part of the planning process, trading actors set the basis for future long-term cooperation and make joint business plans. They define goals, along with the roles, duties and responsibilities in future collaborative relationships. Joint business plan comprises events that may affect the demand and supply process, such as promotions, new product introductions, closing / opening of new stores and others. Demand and supply management is reduced to sales forecasts (using data obtained through the POS terminal) and order planning (including needs for future products based on sales forecasts, delivery time and other factors). Execution activities are related to orders generating tasks (based on demand and supply forecasts) and their implementation (which includes the processes of production, transportation, storage and product delivery). Control process includes deviation management tasks, as well as key performance measurement tasks, in order to evaluate the degree of objective realization process and the development of alternative strategies. All these tasks are mutually arranged between trading partners (manufacturers and retailers), who work together in order to achieve them.

THE IMPLEMENTATION OF COLLABORATIVE, PLANNING, FORECASTING, REPLENISHMENT MODEL

As with most other strategic projects, a number of factors affect the implementation of "CPFR" model. They are divided into several phases (ECR Europe, 2001):

- Preparation – the analysis of internal company needs and opportunities;
- Selection between three different "CPFR" models;
- Setting "CPFR" development plan - defining further steps of "CPFR" concept;
- Results assessment and re-evaluation of "CPFR" strategy.

During the preparation phase, the willingness of trading partners to start the process of mutual cooperation is determined. This phase also includes activities such as evaluation of internal demands and opportunities, analysis of collaborative potential of business partners and the process of defining implementation strategies. It is necessary to relay the support of higher management, in order to perform resource allocation, and implement the necessary organizational changes. After establishing favorable environment, the "company segmentation" process comes next (ie, selection of business partners with great collaborative potentials). After that trading partners are working together in order to define mutual CPFR strategy. After completion of the preparatory phase, business partners are choosing the "CPFR" model, they want to implement. The establishing of basic "CPFR" model aims to define a framework for building business relationships with those partners, who either do not want or are not ready to enter into collaboration, despite the numerous benefits that it brings. In some cases, it can also be used to prepare the company for future collaborative relationships. Unlike the basic, the goal of developed "CPFR" model is to support and facilitate the implementation of "CPFR" initiatives in those companies that are ready for vertical integration in marketing channels. It represents the limited form of cooperation, primarily focused

on the implementation of joint promotional and sales activities for a limited number of products. This greatly reduces the potential benefits that can be realized in the case of full integration. Through this cooperation, trade partners are preparing for the implementation of an advanced form of "CPFR" model. Unlike the developed, the advanced model represents the total integration of all business processes, including promotional, sales and planning activities through the establishment of close, long-term relationship between trade partners. The entire collaborative process is based on the implementation of modern information solutions, which enables the realization of several potential benefits. In the case of basic CPFR model, attention is paid only to internal subsystems, while for the remaining two (developed and advanced), representatives from all trading partners have to be included. After evaluating the results of "CPFR" initiatives, the possibilities concerning their expansion are analyzed. Business partners may choose to extend the collaborative framework (including new products, processes and collaborative relationships expansions into new geographic areas), implement new sophisticated IT solutions and develop more comprehensive information exchange.

In order to specify further steps of "CPFR" implementation process, retailers and manufacturer should develop special CPFR plan. Development plan is mainly focused on extending "CPFR" collaborative initiatives on other business activities. The collaboration success is analyzed for all three "CPFR" forms.

CONCLUSION

Technological advance had a profound influence on the evolution of relations in the supply chain. Businesses subjects are starting to act more proactively, initiating interaction with customers. In such circumstances, guided by common goals, the members of the supply chain, in addition to the strategic, establish operational forms of cooperation in various business areas. The implementation of collaborative planning, forecasting and replenishment model (CPFR) can provide a significant contribution to the efficient realization of production and information flow. It consists of several stages, from preparation, which analyzes the internal needs and opportunities, to strategy re-evaluation stage. With the implementation of CPFR model, partners in the supply chain define common goals, which they realize through several activities: planning, demand and supply management, implementation and control. There are numerous reports that evidence all the benefits that can be achieved with this model. Positive effects of its implementation are reflected in the forecasting process improvement (for 30 - 40%), increased level of customer service and sales (15% to 60%) and order cycle time reduction (from 15% to 20%). Several pilot projects and case studies, including the performance simulation analysis of Fortune-500 companies, confirmed these improvement results.

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RISK MANAGEMENT – BASIS OF INTEGRATED MANAGEMENT SYSTEM

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ABSTRACT

Integration of different management system becomes necessity, so that the number of organizations that have more integrated management system have a trend of growth. Standard ISO 9000 is taken as a basis for integration of standards,. However, within the ISO standard does not yet exist a standard that would define the requirements for integrated management systems. Therefore, there is a significant British national standard PAS 99:2012, which defines these requirements. The Standard recognizes the importance of risk management business processes in integrated management system. Last Updated ISO 9000 standard also recognizes that the risks are crucial for overall quality management. The standard ISO 9001:2008 considered that the risk management issues are in the framework of business process management, while the standard ISO 9004:2009 gives recommendations on how to manage the organization in order to achieve sustainable success. The aim of this paper is to show the advantages of organizations that have integrated management systems, the requirements of ISO 9001:2008, ISO 9004:2009 and BSI PAS 99:2012 related to risk management, as well as the importance of integration based on risk.

Keywords: quality, risk, integration, integrated management systems.

INTRODUCTION

The development of any organization requires an appropriate management system which establishes policies and objectives of the organization and provide the conditions for achieving the goals. Depending on the specifics of the organization, management system may include: quality management system, environmental management system, management system, safety and health at work, safety management information system etc. Given the formal and substantial coincidence of certain aspects of the various organization's management systems has imposed the need for their integration. Therefore it is often mentioned the integrated management system of the organization. Framework for the integration of systems management organizations makes the process approach and the PDCA cycle.

British Standard PAS 99 *Specification of common management system requirements as a framework for integration* (PAS = Publicly Available Specification) defines requirements regarding the implementation of the integrated management system of the organization. The first version of this standard was published in 2006, and the other was in 2012. Standard also emphasizes that one of the basic principles of integrated management systems are risk-based business activities. The risks of the business is in indirect reference with ISO 9001:2008, and within quality management. Therefore it is recommended integration and management system based on risk.

INTEGRATED MANAGEMENT SYSTEMS

Management system is a set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives (PAS 99:2012). This definition should also include the following observations:

- Note 1. A management system can address a single discipline or several disciplines.
- Note 2. The system elements include the organization’s structure, roles and responsibilities, planning, operation, etc.
- Note 3. The scope of a management system may include the organization, as a whole specific and identified functions of the organization, specific and identified sections of the organization, or one or more functions across a group of organizations.

Integrated management system is the management system that integrates all of an organization's systems and processes into one complete framework, enabling an organization to work as a single unit with unified objectives. Basis of the integrated management system is standard ISO 9001, also there are other standards that can be included: ISO 14001, OHSAS 18001, ISO 22000, ISO/IEC 27001 etc. In all systems of management there are some common elements that can be managed in an integrated manner. The main elements of the framework for the integration of management systems are the process approach and PDCA cycle.

National Organization for Standardization UK (BSI) in 2006 published a standard PAS 99:2006 which defined the requirements that have to be met if needed to integrated management system certification. PAS 99:2006 has been fully harmonized with the standards ISO 9001, ISO 14001, OHSAS 18001, ISO/IEC 20000, ISO/IEC 27001 and ISO 22000. This means that it recognizes the common and specific requirements of individual management system. The release of new and revision of some old standards of governance, as well as the newly established experience in their implementation, led to a revision of the old and the formation of the new standard PAS 99:2012.

Many of the elements and clauses used in the PAS structure will be recognised by users of management systems standards. The framework however, has been extended to formally include elements which have not necessarily been a feature of management systems standards in the past, although they are important to the success of the organization. The new structure is: a) Context of the organization; b) Leadership; c) Planning; d) Support; e) Operation; f) Performance evaluation; g) Improvement (Figure 1).

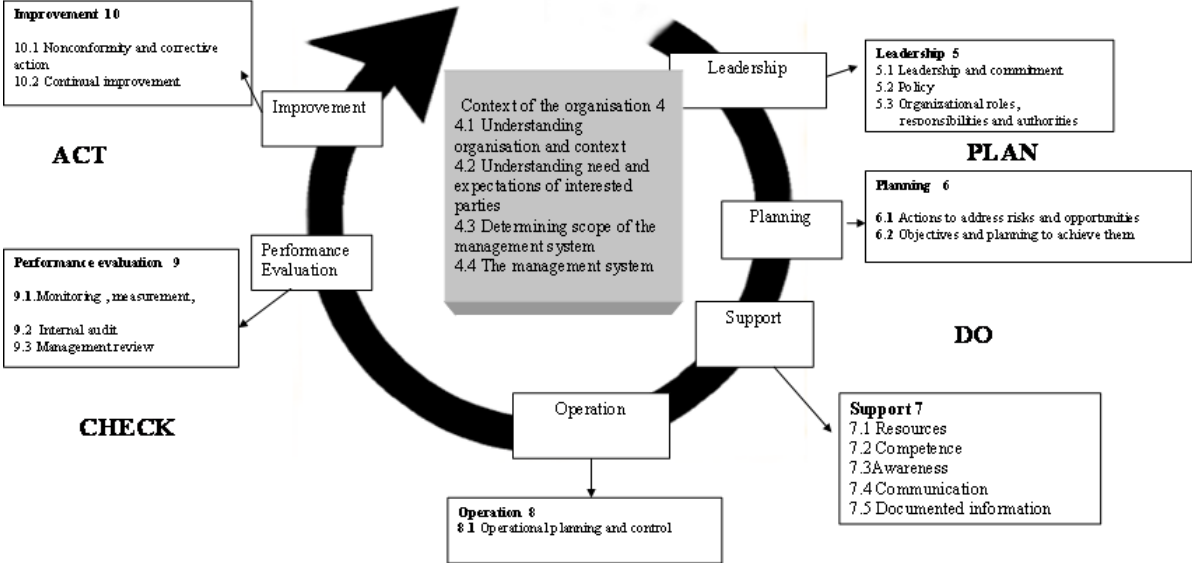


Figure 1: The environment of the integrated system (PAS 99:2012)

This PAS has been produced to help organizations to achieve benefits from consolidating the common requirements in all management system standards/specifications and to manage these requirements effectively. The benefits may include: a) improved business focus; b) a more holistic approach to managing business risks; c) less conflict between systems; d) reduced duplication and bureaucracy; e) more effective and efficient audits both internally and externally; f) easier facilitation of the requirements of any new MSS that the organization wishes to adopt.

According to Rajkovic (2009) in Serbia there are 265 organizations with IMS. Most organizations have established two management systems (238), three (22), four (3), five (1) six (1).

ISO 9000 AND RISK MANAGEMENT

Last update of ISO 9000 was published in late 2008. The standard is recognized by the fact that the risks are one of the key elements that determine the overall quality management. ISO 9000:2008 version gives the formal approach to the problem of risk management within the quality management system and the problems of business process management. ISO 9001:2008 is at first sight less explicit in its risk based approach because there is no general requirement to identify and assess critical characteristics related to quality. Examples of the requirements of ISO 9001:2008 indirectly associated with the risk management are shown in Table 1.

Table 1: Examples of the requirements of ISO 9001:2008, indirectly associated with the risk management (Avanesev, 2009)

ISO 9001:2008 (clauses)	Comments
5.6. Management review	Review should include an assessment of improvement opportunities and needs for changes in the quality management organization. One of the conditions of this review is to analyze changes that could affect the quality management system
6.2. Human Resources	By meeting the requirements to ensure the necessary competence, you can manage the risks associated with human resources.
6.3. Infrastructure	The provision and maintenance of infrastructure (i.e. buildings, equipment, information environment) needed to achieve conformity to product requirements, would manage the risks associated with the control of infrastructure
7.2.2. Review of requirements related to the product	The requirement to review contract prior to its signing, including determining the organization's ability to fulfill certain requirements, significantly reduces the risk of default on contractual obligations in the future
7.3.7. Control of design and development changes	It is necessary to evaluate the effect of the changes on constituent parts and product already delivered.
7.4. Purchasing	Definition of criteria for evaluating vendors and their systematic evaluation reduces risks of the vulnerability of organizations associated with the activity of suppliers and partners
7.5. Production and service provision	Provision of controlled conditions for production (i.e., availability of necessary information, instructions, equipment, measurement and testing, etc.) significantly reduces the risk of release of nonconforming products.
8.2.1. Customer satisfaction	Monitoring information relating to customer perception as to whether the organization has met their requirements is an important element for the identification of risks associated customer dissatisfaction, and hence the risk to the reputation /image of the organization and, consequently, declining market share
8.2.2. Internal audit	Internal audits help to identify operational risks
8.5.3. Preventive action	The organization shall determine actions to eliminate causes of potential non-conformances in order to prevent their occurrence, i.e. to conduct risk assessment.

The importance of ISO 9004:2009 lies in the fact that it makes recommendations for achieving sustainable business success. In the standard application states that the same is intended to help organizations to achieve sustainable success. The sustainable success should involve the organization's ability to achieve set targets in the long run. In theory the new approaches show a model-based management systems approach to management throughout the organization. The methodology of systematic approach has great potential applications in organizational systems, as it allows the integration of different management systems. Table 2 gives examples of requirements in ISO / DIS 9004:2009 related to risk management.

Table 2: Examples of the ISO/DIS 9004:2009 related to risk management (Avanesev, 2009)

ISO/DIS 9004 (clauses)	Comments
4.5. Sustained success	An organization's environment will be always changing and uncertain; therefore, in order to achieve sustained success, it will be necessary for its management to constantly monitor and regularly analyze the organization's environment to identify potential risks
5.2. Strategy and policy formulation	The formulation of an organization's strategy should be based on analyses of demands, products, risks and opportunities
5.3. Strategy and policy planning	To give effect to its strategy and policies an organization seeking sustained success should establish and maintain processes that evaluate strategic risks
6.1. Resource management. General	To ensure the availability of the resources for the future activities, the organization's management should identify and evaluate the risks of their potential scarcity
6.4.2. Suppliers and partners – selection, evaluation and improvement of their capabilities	In selecting and evaluating partners, and continually improving their capabilities, the organization's management should consider issues such as the risks connected with relationships with partners
6.5. Infrastructure	The organization's management should identify and assess the risks associated with its infrastructure and take action to mitigate the risks
6.7. Knowledge, information and technology	The organization's management should establish processes for assessing the evaluation of risks related to changes of technology
6.8. Natural resources	The organization's management should consider the risks and opportunities related to the availability and use of natural resources (such as water, oil, minerals and raw materials) in the short term, as well as in the long term
7.2. Process planning	In the organization's planning processes, consideration should be given to possible financial and other risks
8.1. Monitoring, measurement, analysis and review. General	To achieve sustained success in an ever changing and uncertain environment it is necessary for the organization's management to monitor and regularly analyze the organization's environment to identify potential risks
8.3.1. Measurement. General	The methods used for collecting information and data regarding key performance indicators should be practicable and appropriate to the organization (e.g. risk assessments and risk controls)
8.3.2. Key performance indicators	Specific information relating to risks, and opportunities should be considered when selecting the KPIs
8.3.3. Internal audit	Internal auditing can be an effective process for identifying problems, risks and nonconformities that are subsequently addressed through root cause analysis and the development and implementation of preventive and corrective action plans
8.4. Analyzing	The organization's management should analyze the organization's environment, identify risks and opportunities, and establish plans to manage them
9.3. Innovation	The organization's management should assess the risks accompanying the innovation activities and prepare preventive actions to avoid or minimize the risks, including contingency plans where necessary

Inclusion of risk management standard ISO 9000 can help organization to:

- identify and analyze the risks typical for the QMS;
- facilitate communication with top management regarding operational risks and the potential consequences for the organization;
- effectively manage organizational processes (through improved coordination and monitoring of the risks associated with the process);
- improve decision-making on priorities and activities
- increase the confidence of stakeholders, particularly customers and shareholders;
- establish a relationship with the financial sector;
- improve compatibility with other generic ISO standards;
- become more flexible for implementation of improvements.

PAS 99:2012 AND RISK MANAGEMENT

At the center of contemporary management standards is the "risk based approach". Risks could have a positive or negative impact upon objectives. Positive risks are opportunities that may need to be seized to ensure an organization thrives whereas negative risks pose a threat. Management systems are there to manage risks in order to achieve objectives. ISO 9001:2008 is at first sight less explicit in its risk based approach because there is no general requirement to identify and assess critical characteristics related to quality. If the process approach is to be adopted, the initial step should be to identify the processes and sub-processes involved in the organization. For each process the following tasks should be carried out: a) identification of the inputs and outputs; b) identification of the risks associated with the process; c) identification of those risks that could have a significant effect, and prioritizing them; d) deciding on control measures and implementing them (PAS 99:2012). When considering the approach to risk management of business processes, we need to respond to the following questions: What could go wrong? What are the effects and what consequences can occur if something goes wrong? What are the chances of that to happen?

Risk management should be conducted on the basis of standard ISO 31000:2009 *Risk management -- Principles and guidelines*. Standard ISO 31000 is the result of best practices in the field of risk management, which was launched in November 2009. It is based on the Australian-New Zealand standard AS / NZ 4360: *Standard for Risk Management*. From this standard is taken request that risk management, as a function, should be incorporated into other management activities, and not to be treated as a separate, stand-alone activity. ISO 31000 provides generic guidelines for the design, implementation and maintenance of risk management throughout the organization. It is applicable to all organizations, regardless of their size, business methods, and similar industries, and covers all types of risks to which the organization is exposed. It is estimated that it will be the largest ISO 31000 global standard that will replace all national standards for risk management. Based on ISO 31000, standards are clearly defined: Principles of Risk Management, Risk management framework and the risk management process, and for organizations that intend to improve their risk management system, are important Attributes of good practice referred to in the standard as a tool for measuring and evaluating what they currently do (Pejčić et al., 2009).

Risk assessment of integrated management systems commonly used qualitative methods. Simplified approach to risk assessment for the integrated management system, according to PAS 99:2012, performed according to the matrix shown in Table 3. Estimated size of risk for each process requires certain actions to reduce or control the risk. The only acceptable risk should not take any action, but it should be checked periodically sustainability of the assessment of these cases, it may cause a change of context which could result in a worsening of the level of risk for facilities that were at one time ranked as acceptable safe (Adelsberger, 2013).

The concept of PAS 99 standard is based on the fact that the integrated management is suitable for any organization, regardless of size or industry, which has at least two management systems. The

goal of integration is the formation of a unified management system with a unique documents, policies, procedures and processes.

Table 3: Risk matrix (PAS 99:2012)

Probability → Consequence ↓	Very improbable	Not probable	Rarely occurring	From time to time	Fairly regularly
No effect	Acceptable risk	Acceptable risk	Acceptable risk	Acceptable risk	Acceptable risk
Negligible effect	Acceptable risk	Acceptable risk	Acceptable risk	High risk	High risk
Slight effect	Acceptable risk	Acceptable risk	High risk	High risk	Very high risk
Considerable effect	Acceptable risk	High risk	High risk	Very high risk	Very high risk
Great effect	High risk	High risk	Very high risk	Very high risk	Very high risk
Very great effect	High risk	Very high risk	Very high risk	Very high risk	Very high risk

CONCLUSION

All organizations, regardless of type and size, face risks that may affect the realization of their vision, mission and operational objectives. All activities of the organization include the risks that must be managed. The organization that conducts the process of risk management and its decisions based on the estimated risk, have a professional approach to the protection of persons, property and business (Keković et al., 2011). The process of risk management contributes to the effectiveness of decision-making by taking into account the uncertainty and the possibility of future, the intended or unintended events and circumstances and their impact on the protected values of the organization. This system is more effective if it is integrated into the quality management system. Integration of different management systems in the organization becomes imperative to increase efficiency and optimize the management of the organization. Because of this, integration has become a must for the future of all organizations which have at least two implemented management systems.

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KNOWLEDGE MANAGEMENT AND INNOVATIONS AS A KEY OF COMPETITIVENESS

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ABSTRACT

In today's society, innovation and knowledge management are no longer luxury items. Instead, they are necessities and a means of economic development and competitiveness. The term knowledge management is most frequently used to describe the range of practices and activities that are used in a variety of organizations to identify, create, represent, store, disseminate, and encourage the adoption of relevant human insights and experiences. Innovation is often equated with creativity and is generally understood to be the successful introduction of a new artefact, method, or process. The ideas behind the development can come from a deliberate process of deductive development from a knowledge base or from an intuitive and even accidental "bright idea" in which it may be difficult to identify the role of knowledge. Knowledge and innovation are inseparable. Knowledge management competencies and capacities are essential to any organization that aspires to be innovative. This paper discusses the importance of knowledge management in innovation for organizations.

Keywords: knowledge, management, innovation

INTRODUCTION

As Alvin Toffler (1990), said, we are living in a "knowledge-based society", where knowledge is the source of the highest quality power. In a world where markets, products, technology, competitors, regulations and even societies change rapidly, continuous innovation and the knowledge that enables such innovation have become important sources of sustainable competitive advantage.

Innovation is the mainstay of an organization. The speed of innovation has been made possible by rapidly evolving technology, shorter product life cycles and high increase in new product development. For organizations to remain competitive, innovation is essential. Owing to changing customer needs, extensive competitive pressure and rapid technological change, innovation has become increasingly complex. Innovation depends intensively on the availability of knowledge. The complexity created by the richness of knowledge has to be identified and managed to ensure successful innovation. Knowledge management has important implications for innovation, and therefore it is imperative that we understand the role of knowledge management in innovation.

INNOVATION

There are many definitions given to innovation. Drucker (1975) defines innovation as the process of equipping in new, improved capabilities or increased utility. Others define innovation as the process of introducing new ideas to the organizations which result in increased performance. Innovation is concerned with the process of commercialising or extracting value from ideas. An innovation is any new or substantially improved good, service or process that has been commercialised. For example, innovation can be the introduction of changes in management, work

organization, the working conditions, or marketing systems (Rogers, 1998). Chen and others (2004) define innovation as the introduction of a new combination of the essential factors of production into production systems. It involves new product, new technology, new markets and new combinations. According to Cardinal and others (2001), the innovative process encompasses technical, physical and knowledge based activities that are central to form product development routines. Innovation is defined by Herkema (2003) as a knowledge process aimed at creating new knowledge geared towards the development of commercial and viable solutions.

Although there are many definitions given to innovation, most definitions share common issues relating to knowledge, which may be turned into new products, processes and services to improve competitive advantage and meet customers' changing needs (Metaxiotis & Psarras, 2006). Innovation is not just about product innovation, it is also concerned with product, market and production competencies, as well as administrative competencies, as defined by Lowe (1995).

More than seventy years, Schumpeter identified five different types of innovations: 1) new product, 2) new methods of production, 3) the exploration of new market of production, 4) new source of supply and 5) new ways to organise business.

KNOWLEDGE MANAGEMENT

In our daily life, we deal with huge amount of data and information. Knowledge is built from data, which is first processed into information. Information becomes knowledge when it enters the system and when it is validated (collectively or individually) as a relevant and useful piece of knowledge to implement in the system. This is the reason we need knowledge management. Knowledge management is one of the hottest topics today in both the industry world and information research world.

Knowledge is increasingly recognized as the most important resource in organizations and a key differentiating factor in business today. It is increasingly being acknowledged that knowledge management can bring about the much needed innovation and improved business performance. Knowledge is defined as a dynamic human process of justifying personal belief towards the truth (Nonaka & Takeuchi, 1995). Besides the meaning of knowledge is the identification of the kind of knowledge that is to be managed. There are various kinds of classification of knowledge: formal (explicit) and tacit (expertise) knowledge, foreground and background knowledge, knowledge of business environment or knowledge for control activities. According to the Oxford Dictionary, knowledge is defined as "understanding gained through experience, observation or study". Bollinger and Smith (2001) define knowledge as the understanding, awareness, or familiarity acquired through study, investigation, observation, or experience over the course of time. It is an individual's interpretation of information based on personal experiences, skills, and competencies.

Knowledge is dynamic as it is created in social interactions among individuals and organizations. Knowledge is also humanistic, because it is essentially related to human action. Knowledge has the active and subjective nature represented by such terms as "commitment" and "belief" that are deeply rooted to individuals' value systems. Information becomes knowledge when it is interpreted by individuals (Schoenhoff, 1993) and given a context and anchored in the beliefs and commitments of individuals.

To an organization, knowledge is defined as what people know about customers, products, processes, mistakes, and successes (Grayson and O'Dell, 1998). It resides in databases or through sharing of experiences and best practices, or through other sources both internal and external to the organization. Organizational knowledge accumulates over time, and enables organizations to attain deeper levels of understanding and perception that lead to business astuteness and acumen, all characteristics of wisdom. Wisdom is acquired as organizations gain new knowledge through the transformation of collective experiences and expertise (Bollinger and Smith, 2001).

There are a variety of disciplines that have influenced on the field of knowledge management. These are: cognitive science (in understanding of knowledge workers), social science (understanding motivation, people, interactions, culture, and environment), management science (building knowledge-related capabilities), knowledge engineering (eliciting and codifying knowledge), artificial intelligence (automating routine and knowledge-intensive work) and economics (determining priorities). Many approaches have been developed to guide organizations to manage their knowledge more effectively and a number of key factors have been proposed. These include: strategic management, information and communication technologies (ICT), human resources as well as organizational culture and structure.

Unfortunately, there is no universally accepted definition of knowledge management. But there are numerous definitions proffered by experts. Put very simply, knowledge management is the conversion of tacit knowledge into explicit knowledge and sharing it within the organization. Putting it more technically and accurately, knowledge management is the process through which organizations generate value from their intellectual and knowledge based assets.

Knowledge management is referred to as the process creating, codifying and disseminating knowledge for a wide range of knowledge intensive tasks (Harris et al., 1998). These tasks can be decision support, computer assisted learning, research or research support. According to Brelade and Harman (2001), knowledge management is obtaining and using resources to create an environment in which individuals have an access to information and in which individuals obtain, share and use this information to raise the level of their knowledge. In addition to this, individuals are encouraged and enabled to obtain new information for the organization.

Knowledge is the key resource that must be managed if improvement efforts are to succeed and businesses are to remain competitive in the global markets (Drucker, 1991; Davenport & Prusak, 1998). Better management of knowledge within the organization will lead to improved innovation and competitive advantage. Sustainability requires special content and processes for knowledge management. According to Levinthal & March (1993), the main purpose of knowledge management is to enhance exploitation (i.e. where existing knowledge is captured, transferred and deployed in other similar situations) or exploration (i.e., where knowledge is created). Exploitation is to reduce problems of reinventing the wheel by using existing knowledge more effectively. Although it is important for innovation, it is exploration through knowledge sharing that allows the development of new ideas and solutions.

Knowledge management is the formalisation of and access to experience, knowledge and expertise that creates new capabilities, enables superior performance, encourages innovation and enhances customer value (Gloet & Terziowski, 2004). Knowledge management is about supporting innovation, the generation of new ideas and the exploitation of the organization's thinking power (Parlby & Taylor, 2000). It also includes the capture of insight and experience to make them available and usable when, where and by whom they are required. According to du Plessis (2007), knowledge management is a planned, structured approach to manage the creation, sharing, harvesting and leverage of knowledge as an organizational asset, to enhance an organizations ability, speed and effectiveness in delivering products or services for the benefit of clients.

In today's information-driven economy, organizations uncover the most opportunities from intellectual rather than physical assets. To get the most value from an organizations intellectual assets, knowledge management practitioners maintain that knowledge must be shared and serve as the foundation for collaboration. Yet better collaboration is not an end in itself; without an overarching business context, knowledge management is meaningless at best and harmful at worst.

Consequently, an effective knowledge management program should help a organization do one or more of the following: 1) foster innovation by encouraging the free flow of ideas, 2) improve decision making, 3) improve customer service by streamlining response time, 4), boost revenues by getting products and services to market faster, 5) enhance employee retention rates by recognizing

the value of employees' knowledge and rewarding them for it, 6) streamline operations and reduce costs by eliminating redundant or unnecessary processes. A creative approach to knowledge management can result in improved efficiency, higher productivity and increased revenues in practically any business function.

KNOWLEDGE MANAGEMENT FOR INNOVATION

Knowledge is the primary source of an organization's innovative potential (Marshall, 1997). Effective knowledge management involves: 1) identifying knowledge, 2) creating new knowledge, 3) building competence, 4) effective management of innovation (Enkel *et al.*, 2002). Knowledge creation is the first step to facilitating innovation in the company, and new knowledge is the most important source of innovation. Better management of knowledge within the organization will lead to improved innovation and competitive advantage. It is important to investigate how to create the desired innovation and which specific requirements and critical factors can support innovation. Effective knowledge management can lead organization to successful innovation.

Leading management and organizational theorists (Winter, Drucker, Kougot, Zander) have popularized the concept of knowledge as a valuable strategic asset by suggesting that for an organization to remain competitive it must effectively create, locate, capture, and share knowledge and expertise in order to apply the knowledge to solve problems and exploit opportunities.

Organizations are interested in managing knowledge for several reasons. Core competencies are based on the skills and experiences of the people who do the work, and may not exist in physical form. Therefore, it is important that organizations find a way to tap into this knowledge base in order to preserve and expand their core competencies. Some believe that knowledge is the driving force in today's economy. If this is the case, then it becomes critical for an organization to find ways to accessing existing knowledge and creating new knowledge. Some organizations believe that by focusing exclusively on people, technologies, or techniques, they can manage knowledge. However, that exclusive focus on people, technologies, or techniques does not enable an organization to sustain its competitive advantages. It is, rather, the interaction between technology, techniques, and people that allow an organization to manage its knowledge effectively (Bhatt, 2001).

Shankar et al. (2003), categorized organizational knowledge engrossed across the various value propositions, measurable objectives to achieve business goals, for an engineering organization into:

- knowledge related to product development leading to product and service leadership;
- knowledge related to process integration leading to operational excellence;
- knowledge sharing with suppliers leading to strategic alliances with those suppliers;
- customer demand and transactional knowledge leading to customer intimacy;
- tacit knowledge of employees leading to employee capability, and
- knowledge related to the development of environmentally friendly products leading to environmental concern.

According to du Plessis (2007), there are three main drivers of the application of knowledge management in innovation. Firstly, the role of knowledge management in innovation is to create, build and maintain competitive advantage through utilisation of knowledge and through collaboration practices. Secondly, the role of knowledge management in innovation is that knowledge is a resource used to reduce complexity in the innovation process, and managing knowledge as a resource is critical in innovation. Thirdly, the benefit of knowledge management applied to the innovation process is the integration of knowledge both internal and external to the organization by making it more available and accessible.

Knowledge management plays a crucial role in the development of sustainable competitive advantage through innovation. There are several important functions that knowledge and knowledge management play in innovation (du Plessis, 2007) including:

- knowledge management enables the sharing and codification of tacit knowledge,
- knowledge management and its role in the innovation process through the use of explicit knowledge,
- knowledge management enables collaboration in innovation,
- knowledge management enables the managing of various activities in the knowledge management life cycle,
- the creation of a culture conducive for knowledge creation, sharing and collaboration.

Cavusgil and others (2003) suggested that tacit knowledge is critical for organizational innovation capability. Collaboration between organizations helps in the sharing of tacit knowledge, which in turn impacts on innovation capability. Where a lot of tacit knowledge is used for innovation, collaboration between cross-functional teams is necessary. Scarbrough (2003) believes that knowledge creation, sharing and leveraging build employee skills that are particularly relevant to the innovation process. Knowledge management also contributes to the creation of a culture conducive to innovation through the way that knowledge creation and sharing behaviour is measured and rewarded.

According to du Plessis (2007), the value proposition of knowledge management in the innovation process is as follows:

- assists in creating tools, platforms and processes for tacit knowledge creation, sharing and leverage in the organization, which plays an important role in the innovation process,
- assists in converting tacit knowledge to explicit knowledge,
- facilitates collaboration in the innovation process,
- ensures the availability and accessibility of both tacit and explicit knowledge used in the innovation process, using knowledge organization and retrieval skills and tools such as taxonomies,
- ensures the flow of knowledge used in the innovation process,
- provides platforms, tools and processes to ensure integration of an organization's knowledge base,
- assists in identifying gaps in the knowledge base and provides processes to fill in the gaps in order to aid innovation,
- assists in building competencies required in the innovation process,
- provides organizational context to the body of knowledge in the organization,
- assists in steady growth of the knowledge base through gathering and capturing of explicit and tacit knowledge,
- provides a knowledge-driven culture within which innovation can be incubated.

CONCLUSIONS

Organizations are interested in knowledge management to achieve critical business objectives. These include improving an organization's performance, obtaining higher quality, sustaining competitive advantage, sustaining preservation and leverage of knowledge to develop a learning organization, and striving towards operational excellence. No matter how big or small the organization, if it does not innovate, it will not be able to survive. Organizations are realizing that intellectual capital or corporate knowledge is a valuable asset that can be managed as effectively as physical assets in order to improve performance. The focus of knowledge management is connecting people, processes and technology for the purpose of leveraging corporate knowledge. Knowledge creation takes different forms such as new business, improved organizational processes and systems, new products and services. Implementing new products and processes, as well as obtaining and creating new knowledge, is an undeniable requirement for market competition.

Organizations must cultivate a knowledge sharing culture to be innovative. By sharing knowledge, new ideas and knowledge are created.

To innovate requires different types of knowledge, capabilities, skills and resources. No single individual in an organization possesses all the required skills. Innovation is not a solo act, but a multi-player game. It depends on working with many different players, typically involving people working together in teams inside an organization. However, to be productive, it is important to form links between organizations. Smart organizations have recognised the importance of linkages and connections. This involves getting close to customers to understand their needs, working with suppliers to deliver innovative solutions, linking with collaborators, even competitors, to build and operate innovation systems. Innovation networks are more than just ways of assembling and deploying knowledge in a complex world

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KNOWLEDGE MANAGEMENT SYSTEM "HOSPITAL KNOWLEDGE 1.0"

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ABSTRACT

"Hospital knowledge 1.0" is a knowledge management system designed to work in a local intranet. It allows the entry, store, search, and review of medical information generated within the institution gathered from documents and generates various types of reports. The overall objective is supporting and enhancing the educational work of the institution, thus providing a solid foundation for scientific research. There are three specific goals: supporting physicians to retrieve stored medical information through a local network, automation of all activities related to Continuing Medical Education, creating a database of relevant contacts of medical institutions in the surroundings.

Keywords: Knowledge management, medical data, information system, data flow modeling, data flow diagram.

INTRODUCTION

Evidence-based medicine is defined as the integration of research evidence, clinical expertise, and patient preferences and values in clinical decision-making, (Sackett et al., 1996). This model of medical practice has influenced decisions and actions throughout the health care industry for about a couple of decades. Proponents of evidence-based practice believe that explicit knowledge as well as tacit knowledge forms should constitute central pillars of clinical or micro level health care decision-making, (Boateng, 2010).

Since the 1990s, organizations throughout the world have begun investigating and applying principles of knowledge management (KM) in order to protect their intellectual assets and investments, (Choo & Bontis, 2002).

There are many definitions of KM but at its essence it entails 'getting the right knowledge to the right people at the right time' (Davenport & Prusak, 1998).

Findings from the research indicate that five key elements must be considered by organizations seeking to implement successful KM programmes: organization and technical climate, information, technology application and human expertise, (Moffett & Hinds, 2010).

This is also true of healthcare organizations that have the additional goals of improving patient care and decreasing medical errors, (Davenport & Glaser, 2002) Knowledge management is the intentional application of processes and procedures that enhance the production, codification, and dissemination of knowledge throughout an organization for the purpose of achieving competitive

advantage. As the pressures on hospitals mount to increase productivity and decrease cost, the management of their knowledge resources is essential, (Drucker, 1997; Wickramasinghe et al. 2004).

When viewed within the current context of personnel shortages in hospitals, the use of techniques to protect organizational knowledge becomes increasingly important.

Knowledge management is the systematic process of creating, maintaining and nurturing an organization to make the best use of knowledge to achieve sustainable competitive advantage or sustainable high performance, (Davenport & Prusak, 1998). Knowledge continuity management focuses on operational knowledge to be transferred to new employees.

The aim of this study is to review the organization of expert meetings with the implementation of IT where the backbone is knowledge management system (KMS) "HOSPITAL KNOWLEDGE 1.0" which is designed according to the specific needs of our institution by a bottom-up approach.

METHODS

Systematic knowledge management with IT support in our institution began 2003rd year. We designed professional meetings according to precise organizational scheme for the whole institution, with the implementation of IT. Expert meetings were a form of professional gathering of physicians in General Hospital Zrenjanin. Their main purpose was presentation of professional work and improvement of professional communication. Presentation of professional work included: protocol, analysis and application of medical knowledge in our institution at a time.

The main reason for those meetings was the application of the medical model of evidence-based knowledge in a concrete situation in our hospital in accordance with the wishes and expectations of the citizens of this region.

For this purpose, it was recommended that the work includes a protocol by which it was possible to evaluate the results of treatment or prevention, control and monitoring of the quality and professional expertise of doctors, bill procedures and information for patients.

The use of IT has enabled the recording of the complete flow of the expert meeting by archiving textual data, video data, and audio data. IT has also enabled the ability to search by title, presenter, and discussants. Systematic knowledge management with the support of IT is divided into two phases (two time periods). Phase 1: from 2003rd to 2009 and phase 2 from 2009. to present day.

Phase 1 covers the period from the 2003rd by 2009.

In order to support systematic knowledge management, we equipped conference hall with 100 seats, multimedia PC, video projector, canvas and camera.

Expert meetings were organized at a predetermined organizational chart regarding time, place, program and form. Listeners were able to give a performance evaluation of the Expert Meeting.

We were able to record the event (Text, Photo, video, audio) and to create archive and reuse. The main event of each expert meeting was the presentation of professional work, which meant that a certain doctor treat a subject of expert meeting to pre-arranged protocol of development, application, selection and approval of presentation that includes all the management structures in the hospital.

In this way, we ensured that everything what was said could be written down or recorded. It had a vocational relevance and support at the hospital as an institution, and it had important forensic medical significance. We have been able to store data on the CD and thus create a media library.

Each CD medium has been carefully designed as a follow-up document of the meeting, which included the complete material: lecture (PowerPoint presentation), video (meeting and discussion) and any additional documents. The meeting was addressed in terms of cataloging as follows: topic of the meeting, the lecturer, the contents, universal decimal classification, keywords, project coordinator, facilitators, designer and publisher with contact information.

Phase 2 covers the period from the 2009. to present day.

In 2008 The Ministry of Health has issued a decision on the mandatory collection of points for physicians in order to get license renewal. The Ministry of Health introduced Continuing Medical Education (CME). It is governed by Health Council of Serbia and Serbian Medical Chamber and it is required by law. As in the previous stage, in this period our institution started to organize professional meetings with the same dose of seriousness. We used all available resources and opportunities: conference hall with 100 seats, video screen, PC, camera and recorder as required. The essential difference was that in this stage we introduced the KMS unlike mediatheque that we had used in the first phase.

Each year the Department of Education sends the proposals of educational programs to the Serbian Medical Chamber four times a year. Programs have to be accredited by Health Council of Serbia.

Department prepares an annual schedule of educational programs on the basis of accredited programs.

In order to improve the whole process of professional education in hospital and respond to the demands of the Ministry of Health and Health Council, we designed and implemented KMS "Hospital Knowledge 1.0" which focuses on methods and information technologies capable of supporting knowledge management in hospital. Hospital Knowledge 1.0 promotes methods and tools to: capture, disseminate, make readily accessible (on the local intranet), sharing (through different types of socialization such as expert meeting, expert collegiate and forum), support reuse of clinical knowledge and data (with standard document formats).

FINDINGS

The period during which we use IT for the preparation and presentation of knowledge in our institution covers 11 years. In this period it was held 52 meetings. The average number of participants was 60 which is 33.33% of the total employed doctors in the hospital.

We decided to model our system in order to improve the organization, administration, implementation, monitoring, distribution, using and archiving of educational activities in our hospital. For that task we used data flow modeling (DFM) method.

We created Data Flow diagrams in Powerdesigner 15. After modeling diagrams, we created conceptual data model (CDM). After CDM we created physical data model (PDM) of the system. Next, we created our database in MS Access 2007. In the next phase we created all the necessary SQL queries.

In the end, we created an GUI application with all the necessary forms, graphics and reports.

The hospital has 200 computers connected to the local network and there is access to the archived data from the expert meeting from the office and from any place where the computer is (medical rooms, nursing rooms, and department). In the library, one can view, print, and get an electronic copy of the professional meeting. Administrative services are also performed by the system including creation of certifications and creation of regular reports as required by the Serbian Ministry of Health, Serbian Health Council, Serbian Medical Chamber and hospital management.

DISCUSSION

History of professional meetings in our hospital is long, from the moments of the founding of our institution. Doctors have always been interested in keeping abreast of modern medical advances and their application in daily work, which is primarily motivated by professional prestige and reputation among colleagues and patients.

Significant changes in the acquisition, presentation and application of medical knowledge are primarily reflected in the enthronement of knowledge model based on the evidence, the application of IT, globalization of the world and certainly the world medical community, (Guptill, 2005; Bordoloi & Islam, 2012). These changes caused that professional meetings in our institution were designed in such a way to be of most use to clinicians in their daily work.

Another important factor in changing of the working conditions of doctors compared with the previous period is that in addition to individual interest, motivation, and the desire for personal professional development, more in the foreground, the duty to apply knowledge based on evidence, which can have a medico-legal suit.

It is particularly interesting part of the professional work that deals with the application of knowledge in the specific conditions at the hospital, taking into account various aspects, primarily the training and skills of application specific knowledge, but also other aspects such as organizational structure, human resources, technical and material equipment and financial opportunities. As medical knowledge base and good practice guides usually come from highly developed and rich countries, once the implementation of this knowledge is very delicate task. A special attention is dedicated to communication with the patient, to an available and clearly meets the needs and expectations of the patient and in accordance with the actual circumstances of treatment we might gain his trust.

The main purpose of knowledge management system "Hospital knowledge 1.0" is to manage medical knowledge gained from documents such as professional papers and presentations. The second purpose is to automate workflow in the Department of education and scientific Research related to CME.

To achieve our goals we started to analyze the system. The system under the scope was Department of education and scientific Research. Tasks related to CME have had the highest priority in our observation.

In the analysis of our system we encountered two types of problems. Problem with managing knowledge and problem with workflow related to CME. Both problems are one single unit and are interrelated.

Problem with managing knowledge

The problem of storing electronic data and efficient searching of that data is present from the moment when the institution started to organize professional meetings. Earlier we have been able to store data on the CD and thus create a media library. This approach is somewhat outdated because of its weakness. Most data are distributed across different media and searching is very difficult. The specific problem is that there is a great danger of losing the media or physical damage of the media causing the data on the medium to become practically unusable.

Using the KMS we have the opportunity to access centralized multimedia data. With its regular backup, data becomes practically eternal. In our organization KMS is the best way for storing, dissemination and make readily accessible (on the local intranet) of all the documents for education.

Problem with workflow in the Department of education and scientific Research

Each year the Department of Education sends the proposals of educational programs to the Serbian Medical Chamber four times a year. Programs have to be accredited by Health Council of Serbia.

In addition, the Department is required to make dozens of reports and information. Some of them must be prepared for medical chamber, some for Management and administration. There are also, information for heads of medical departments. The most extensive task is to create and print the vast number of certificates for physicians.

As we can see, the paperwork related to CME in the Department of Education and research seems to be broad. The fact is that it could be hardly done, if the work is done in a traditional way without the use of IT. Reports and certificates that are required must contain a multitude accurate data.

With introduction of the KMS administrative work in the department are multiple shorter. It reduces the possibility of error because the data is entered only once and only in one place. Integral part of our KMS is complete automated workflow of department, which give us possibility to get the job done. Moreover, we can get all the reports and information and we can get statistical data for management, also. KMS enables automatic creation of reports and certificates that previously had to be created in a word processor and spreadsheet programs such as Word and Excel. If we would not use the KMS to process data, administration in the department would be very difficult and extensive. Reports and certificates would almost have to be made separately. The possibility of error would be high, considering that we have to enter manually the license number, reference number, program number, date of decision and other important data. This leads to the fact that the Department of education and scientific Research must either engage another person or to overload the existing administrator so that he cannot efficiently perform other tasks.

Both of these problems we successfully solved with creation and implementation of KMS which is based on system analysis with DFM. DFM is a well known method for system analyses. It is based on Data Flow Diagrams (DFDs). DFM is promoted in 1970s, (Yourdon & Constantine, 1975; DeMarco, 1979). It is a graphical process model that shows the flow of data between the various processes or subsystems of the system.

Our tendency is to make an SQL server database and application in PHP in the near future.

CONCLUSIONS AND IMPLICATIONS

We concluded that our knowledge management system "Hospital knowledge 1.0" is capable to manage medical knowledge gained from documents (such as professional papers and presentations). It successfully supports all four KM processes (processes for applying knowledge, processes for capturing knowledge, processes for sharing knowledge, and processes for creating knowledge).

We concluded that our system completely automates workflow in the Department of education and scientific Research related to CME.

We concluded that our KMS "Hospital Knowledge 1.0" implies further development of knowledge management in the institution, which can result in the creation of a comprehensive decision support system (DSS) with elements of artificial intelligence (AI).

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MANAGING CHANGE AND COMPETITIVENESS IN TERMS OF GLOBAL ECONOMIC CRISIS

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ABSTRACT

The importance of studying change in terms of the global financial and economic crisis is crucial. This current global economic crisis is a point of transformation in the globalization process and the creation of a global knowledge economy. In the extremely turbulent crisis global economy, competitiveness becomes highly sensitive and complex. It becomes hypercompetitiveness. In this paper we tried to examine and analyze different ways of managing change and competitiveness. One of the most efficient way to manage rapid, turbulent and unpredictable changes is to implement innovation, which could handle the changes and used as effective system of attaining competitiveness.

Keywords: Change Management, Global Economic Crisis, Hypercompetitiveness, Innovation.

INTRODUCTION

The global financial and economic crisis, which still lasts, is a *point of transformation* in the globalization process and the creation of a global knowledge economy. Global economy after the global financial and economic crisis has entered a new stage of development. Given the devastating consequences of the crisis, both directly and indirectly, which is immediately felt in different countries and regions of the world, we can rightly conclude that we live in a world that is nothing like the one that existed before the global economic crisis.

In such turbulent circumstances, there is an urgent need for inventing alternative solutions. Capitalist social relations, and capital-related in their midst bear the seed of revolution, the great scientific, technological and social change.

It is necessary to critically examine the nature, character and dynamics of changes in the context of competitiveness and innovation in creation of a new global economy.

IMPORTANCE OF CHANGE IN CURRENT GLOBAL ECONOMY

In general, the economy, especially if we consider capitalist, market economy, has always been the most dynamic parts of society. Change is an essential element of the economy as a whole. Recognizing the importance of studying the possibilities of change and change management, we must first examine the concept, meaning and nature of changes in the current phase of the global economy.

An economist who first noted the critical importance of the changes in capitalism, highlighting the role of entrepreneurial initiative and innovation, was Joseph Schumpeter. Seeing the intrinsic

variability and developmental nature of the capitalist (market) economy, he said: "Any existing structures and all the conditions of doing business are always in a process of change. Every situation is being upset before it has had time to work itself out. Economic progress, in a capitalist society, means turmoil." (Schumpeter, 1943).

Defining the current economic situation almost always requires an answer to the question: where is the source, the origin of the change? It is clear that the main source and generator of changes is to be sought in the *environment*. The environment is what is the focus and starting point of research into the causes and nature of the competitiveness of enterprises today. Hence, every serious research of competitiveness of enterprises cannot avoid analyzing change in the environment.

The process of globalization is an undeniable fact that has greatly shaped the contemporary design of the world economic and social system. Our main task is to analyze the globalization and to unfold its essence, purpose and properties.

The globalization is not just another wave of the internationalization. It is a model of transforming international economic relations based on neoliberal economic theory, which requires free market, profit maximization, trade liberalization, private initiative and entrepreneurship, free competition, internationalization and diminishing regulatory role of the government. The background of this transformation is the role of technology and innovation. Technology and innovation mean nothing else then – change.

From the economic point of view, the globalization is depicted as a process of total transformation of the world economy. It breaks the boundaries and creates conditions for faster and more efficient exchange of individuals, capital, goods, services, information and knowledge at a global level. Such globalization model revolutionizes the core concepts of relations and communication at the world level. It transcends its economic origin, tending to transform all the layers of the society at the global level. The modern global society really is in the process of overall transformation, mutating from the stage of inter-national and inter-country organism to a completely new formation.

The imagined aim of the globalization was to establish new world economic equilibrium, and in the end to formulate new, global terms of business and new global economy. In spite of the fact that the global economy is known by different names (digital economy – Tapscott, network economy – Castells, ecological economy – Farrel, weightless economy – Leadbetter, knowledge economy – Drucker, Stehr), the most frequently used term is *knowledge economy*.

In the today's hypercompetitive global knowledge economy it is knowledge that becomes strategic and competitive resource. The new knowledge economy is the goal that many national economies in the world are likely to accomplish. In this ultimate state of economy the critical competitive factor and resource is knowledge. All sectors of the knowledge economy depend on maintaining and developing new knowledge. The most of workforce is engaged in the knowledge-driven and knowledge-productive organizations and the most of the wealth is created therein. There are many original knowledge sectors created in the economy, such as: consulting, pharmaceuticals, education, ITC industry etc.

However, the process of creating new economy is incomplete. Not all of the economies of the world are in the same stage of the development. The globalization has stressed and deepened the contradictions that existed between the developed and underdeveloped countries. There is a huge gap between the developed countries, on one hand, and the underdeveloped, on the other. This big gap is getting even bigger, in spite of the efforts of many international bodies (World Bank, UNESCO, International Monetary Fund, OECD, etc.).

The core characteristics of the neoliberal globalization, especially the belief in the role of the free market, and denying any active role of the national state in the economy sphere, resulted in many

distortions and imbalances within the countries and globally. This promotion of free market and liberal trade philosophy led to the complete deregulation of the financial markets, and the process of financialization, which is a kind of rapid expansion of financial markets, development of many and new types of financial instruments and growth of the financial sector as a whole. They altogether led to the deepest global financial and economic turmoil after the Great World Recession 1929-33. This global crisis started as a financial crisis in US economy, at the end of 2007, and rapidly evolved into a grave global recession, encompassing nearly all major sectors of economy in the developed as well as the underdeveloped countries.

The basic framework of the globalization is built-up on the old paradigm – the neoliberal market-dominated doctrine, which in its core bears the concepts and views on economy no more compatible with the fundamental changes in the needs, motivation, resources and factors that typically shape the modern economic landscape of most of the countries today.

Philip Kotler (Kotler, 2009, p. 18) talks about the transition to a completely new type of global economy, which he calls "the economy of the new normalcy." According to Kotler, the critical factors that increase the level of business risks and that can cause turbulence in the new economy are chaotic.

The current global financial and economic crisis marks the first serious crisis of the globalization wave. It is also the final test of the neoliberal model of globalization. In other words, the failure of the globalization is the failure of its theoretical framework. This crisis, with its depth, scope and consequences, is a proof of the fundamental vulnerability of the model. It suggests the necessity of changing that model and substituting with some new model on which the global economy should have been based.

CHANGE, COMPETITIVENESS AND INNOVATION IN GLOBAL ECONOMY

Change in the current global economy may be seen through competition and competitiveness. The competition in global economy has been radically changed. It has totally new characteristics, different from the ones in pre-global economy. In order to describe the changes in the new competitive environment, D'Aveni coined the term hypercompetition (D'Aveni, 1994). Hypercompetition is a completely new model of competition, characterized by permanent and ongoing change, adaptation and creativity in the factors influencing competition. D'Aveni argues that sustainable competitive advantages are no longer possible. As V. Kotelnikov (Kotelnikov, 2011) truly states, 'In the new economy where everything is moving faster and it's only going to get faster, the new mantra is, "Do it more with less and do it faster."'

In terms of global market and hypercompetition, the need of scanning and analyzing strategic information and knowledge on competitors becomes *critical* for the business success. This need implementation of various methods, techniques and tools with the purpose of analyzing competition and its strategic application.

One of the crucial questions related to analysis is the question: *when to start the analysis*. This is in relation with the moment of change, which is, according to the author of the term, L. Fuld, "a time when a major event takes place." (Fuld, p. 362). Such event generates a great deal of information on a competitive company, and this is exactly the proper moment that analysts should recognize in order to start the analysis.

Considering the global business perspective, the real question is *how to determine the adequate methodology in the context of the real competitive situation*. In other words, the problem is how to and when to apply the proper tool, method or technique within the specific competitive situation. The most researchers argue for the principles: 'simpler – more better.' There are a plenty of known and less known methods and techniques used in analyzing competition.

The analysis should *rely on the vision and strategic way of thinking and not on the past and historic data*. Strategy means systemic view and applying long-term approach to the issues of the global economic chaos. In his seminal paper *What is Strategy?* (Porter, 1996). Porter differentiate between the tactical and narrow-scope view of operational effectiveness and strategy: “The root of the problem is the failure to distinguish between operational effectiveness and strategy. The quest for productivity, quality, and speed has spawned a remarkable number of management tools and techniques: total quality management, benchmarking, time-based competition, outsourcing, partnering, reengineering, change management. Although the resulting operational improvements have often been dramatic, any companies have been frustrated by their inability to translate those gains into sustainable profitability. And bit by bit, almost imperceptibly, management tools have taken the place of strategy. As managers push to improve on all fronts, they move farther away from viable competitive positions.”

Vadim Kotelnikov (Kotelnikov, 2012) claims that in this era of hypercompetitive global knowledge economy, business leaders may only take into consideration opportunities as a means of attaining business success and competitiveness.

In the context of turbulent, hypercompetitive global economy, innovation should be taken as a critical source of competitive advantage and competitiveness. Global Knowledge economy requires continuous innovation. Innovation is becoming the hallmark of the organization, which grew into an intelligent, innovative and learning organization.

Innovation is a historical category, so that the social treatment innovations changed over time. Innovation is the first time due to the center of the study of economics thanks to J. Schumpeter. Before Schumpeter, economists have treated innovation as a form of human behavior, as does the human response to exogenous external forces. Thus, the agricultural revolution interpreted as the result and consequences of hunger, innovation in the defense industry were caused by the threat of invasion, or a desire for conquest, while consumer demand and the threat of competition led innovation in the industry.

We must talk about innovation in this era of hyper-change. Innovation is the best response to the situation of chaos. There are various innovative-based theoretical replies to this hyper-complex and hypercompetitive global environment. Here are some of the main theoretical models of innovation:

- Incremental-Radical innovation dichotomy (Abernathy)
- Disruptive innovation model (Clayton Christensen)
- Business Concept innovation model (Gary Hamel)
- Democratized innovation model (E. Von Hippel), etc.

Christensen's disruptive innovation model, published in 1997, provides an explanation for the inability of well-managed, industry-leading companies to stay atop of their industry when confronted with new, ground breaking technological innovations.

Innovation, as well as the status of the organization, is to *open the organization to change*, successful change management and the successful acceptance of the changes. Innovation is characteristic of companies involved in the adoption of new ideas and quickly respond to impulses from the environment. Innovation organization is a necessary condition for the successful operation in order to achieve long-term business success, that is. profitability and competitiveness. Innovation is a key competitive organizations.

Innovative organization is characterized by orientation towards customers and market and reliance on technology as a resource for competitiveness, openness and orientation changes as a condition for the high degree of innovation companies. A key factor in the competitiveness of innovative enterprises are innovations that represent its strategic resource.

We conclude that a new innovation paradigm emerges. Changes due to the global innovation paradigm are:

- innovation become a key competitive advantage.
- innovations are less technologically. Technology, particularly information technology, it becomes available to everyone. It is no longer the issue invented a new technology, but to apply existing technology in a new and unique way.
- innovation are not the subject of several products and services, but the entire business concept.
- Innovation is no longer made "from above" for all employees engaged in the innovation process.
- Innovation does not bring improvement for radical change.
- Innovation process is increasingly include not only manufacturers but also the users.

CONCLUSION

The global economic crisis questions the old paradigm implied in the model of neoliberal economic view. Change in the current global economy may be seen through competition and competitiveness.

The new state of competition is called hypercompetition. A new approach should be found in the relationship between competitiveness and innovation. Innovation, as well as the status of the organization, is to *open the organization to change*, successful change management and the successful acceptance of the changes.

We conclude that in this current stage of the global economy, there is a vital role of innovation, which should be perceived as a main source and factor of attaining competitive advantage and competitiveness.

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KNOWLEDGE MANAGEMENT AND GLOBAL COMPETITION CHALLENGES

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ABSTRACT

The main factor underlying the new model of organization management is knowledge. The basic imperative of modern economy and crucial global competitive factor lay in continuous improvement of knowledge and work productivity. The application of modern management techniques is an essential precondition for the success of business in general.

Keywords: Knowledge, Competitiveness, Management, Business, Quality.

INTRODUCTION

Competitive conditions have changed, and in terms of elements that enable companies to successfully fight on the market. Quality is imperative, and it is based on the continuous improvement of business productivity. Quality is given by the management of the organization as a market concept, which creates conditions for achieving business excellence. Improving the quality of business operations is the basis for the improvement of other factors that affect the competitiveness of companies internationally. The success of the company is significantly associated with incorporating the concept of quality which enables competitive advantage. In addition to working on the implementation and development of the concept of quality, the company that wants to achieve business results based on the actions in the international arena, has to improve the knowledge of their employees, particularly executive management, as well as to apply modern management techniques.

Emerging conditions have shown that large corporations, burdened with unnecessary bureaucratic administration and management are losing the race against the smaller and enterprising Corporations, especially those that come from the newly industrialized countries of the world, where it is operated on the basis of lower costs.

Knowledge is becoming a product and corporate intellectual ownership is more valuable even than physical resources today. Modern organization must create knowledge but it must increase the value as well. The challenges which follow establishing, keeping and developing competitive abilities on the global market are much greater today than 20 years ago. The following reasons are considered to be crucial:

- New companies are mostly based on services,
- New companies are mostly from the field of knowledge economy,
- The change of techno-economic paradigm causes considerable changes,
- The number of allowed mistakes is far smaller than before,

- The new paradigm is, in great extent, in the phase of pre-standardization, which makes choosing the winners impossible (Reinert 2010).

The main problems that arise in the process of organizational management in the countries in transition are as follows: failure to adopt modern management logic, lack of understanding of the process of an integrated approach to organizational management, marketing misconception, inadequate treatment of investment in marketing, organizational structure problems, insufficient speed of adoption of new trends, methods and techniques in management. Domestic companies are still in the initial stage of implementation of modern management techniques and principles, not all of them, but only those who have successfully completed the process of transformation. The Western Balkan countries are an obvious example of how the cumulative effects of the global economic crisis and recession transitory negative impact to both, economy and the competitiveness of individual businesses. The way out of this situation lies in the improvement process driven.

NEW MANAGEMENT PARADIGM

Modern understanding of management is influenced by the global economic crisis in 2008. Years of appropriation of management techniques at the moment global crisis could not provide practical answers to the question of market survival. The problem lies in the fact that large corporations were unwieldy bureaucratic, burdened with unnecessary administration and turned only its own profits. This situation might not take long, and that did not happen to the global economic crisis, it would become a problem expressed in terms of the lack of competitiveness of companies from developed countries to the industrialized countries of the competition - only companies from industrialized countries during this crisis showed that the vitality. The problem of competition and the establishment of a new model of competitive advantage is essentially a problem that is only further demonstrated during the global economic crisis. New realities require new organizational and management skills. During a paradigm shift companies are changing and restructuring to make their lead for. Improving knowledge directly affects the productivity improvements and business, which affects the quality improvement business, which results in a better competitive ability.

Corporations are doing business in the global economic crisis. In times of crisis, maintaining stable financial flow is important. Cash is the most important - so it is well to keep cash and reduce costs. In the long term, it is necessary to preserve human resources in order to overcome the crisis. On the other hand, even before the crisis in 2008, one important part of the corporation coming from developed countries in the world had problems with competitiveness, especially in comparison to those corporations that come from Southeast Asia, primarily China. Thus, the problem is more systemic in nature and they are even more emphasized by the effects of the global economic crisis. Problems become more systematic. According to some beliefs, systemic problems require systemic solutions. Therefore, you cannot solve the crisis by releasing 20% of your employees - it resembles mote the liposuction (Adižes 2009, 78).

According to some beliefs (Atali 2010, 171), by 2020, to the two groups of companies will have been allocated. The first group of companies will be organized on the model of theater companies – they will gather and have already competence and capital together to fulfill a specific task, and their life expectancy will depend on the founder of the project. Most of them will disappear along with its founders and their employees will be paid temporary workers to perform the particular task. They will fall apart after they have carried out one piece - a product or several products.

Companies that would fall into the second category will be less frequent and permanently organized on the model of circus or film studies, or the name, project, or story. It will consist of more troops (temporary workers, who will constantly rotate each other) and their performances will run to where the market is located. The first of these quality companies that will be in every season other products shall be offered. These companies will be the company conglomerates which essentially belong to the first group of companies - corporate theater company. The main activity of these conglomerates will be the brand.

On the other hand, the main financiers of the future will not be the banks, but insurance companies. The crisis in 2008, showed shortsightedness of investment banks and inadequate behavior according to the requirements of the 21st century. Therefore in the future, the financial market and the market in general insurance companies will have primacy. Insurance companies will become majority owners of major conglomerates and companies from other groups, which are organized on the model of the circus, and film studios.

Even today the outlines of the second group of corporations can clearly be discerned - large conglomerates, which mostly come from the U.S. markets - AIG (insurance), Disney, Whirlpool, Pearson (Education), Wal-Mart, Eksnon, Microsoft, Boeing, Nike, Motorola, Coca-cars, and a few come from Europe - Nokia, Oreal, Nestle, Mercedes, etc.. Logically, most of the companies in this group in the future will come from China and India, Brazil, Mexico, Russia, etc. In the view of Attali (2010, p. 111), the two will dominate the industry - already dominate - the global economy - insurance and entertainment. On the one hand, to protect them against risk, rational market participants in the game will increasingly insist on insurance.

KNOWLEDGE MANAGEMENT AND DEVELOPMENT OF COMPETITIVE ABILITY OF SERBIAN COMPANIES

Most domestic companies are insufficiently competitive on the global market. Only a few local companies can successfully perform in the regional business environment. Global analysis of innovation and competitiveness points the embarrassing facts when it comes to companies from Serbia. The lack of business productivity and innovation of local companies comes not from technological aspects of the business, as much from a lack of productivity knowledge of local executives. This is true for most of the companies that come from countries in transition. According to the accepted opinion, (Đorđević, Čockalo and Bogetić, 2012, p. 197), the main problem is the lack of competitiveness of domestic firms, which occurs as a result of low productivity and lack of business application of new technology and knowledge.

Since the early 1980s domestic economy has had problems with improving quality and productivity. The productivity problem did not appear in domestic economy only in the time of transition but it was present before, as well. These problems were the result of inappropriate business performance which was not based on market principles. Certain products had unjustifiably high prices which were not competitive on the world market. Therefore, Serbian companies reduced export prices in order to gain competitiveness on the world market, while domestic customers had to pay this cost of unproductiveness through high prices. Old technology, poor quality, unattractive packaging and high prices are thus the main reasons for uncompetitive appearance of Serbian products on international market.

Technological equipment also represents a significant element of productivity rising. The average machine age in Serbia is about 30 years. Compared to the situation in the region, this represents the approximate 12-year obsolescence. Serbian economy is, technologically, 29.5 years behind European Union, which was confirmed on the representative sample of 154 small, medium and big companies within six economical branches with similar production programs. The comparison was carried out in textile, food-processing, pharmaceutical, machinery, chemical and building material industries. Austria was taken as a criterion because of its similar natural, social and demographical characteristics in relation to Serbia. The greatest obsolescence was noticed in textile companies (35 years), then in machine industry (34.5 years). Pharmaceutical companies were best ranked with 21 years' delay. Considering the regions, the equipment, tools and other production means are most obsolete in south Serbia (41 years) and the least in Backa (18.5 years' delay). In Belgrade the delay is 20.5 years. The most productive companies are those with the equipment and machines of the highest quality. These are pharmaceutical companies, some companies from the field of food processing and companies with foreign capital, which is totally 8.5 to 9% of the whole Serbian industry. Metal industry is in the worst situation, with 35 year- old- machines in average, and reject

of 36%, which is more than double compared to the average in EU countries. Even Croatia and Romania with the reject of 19 and 24% respectively are much better than Serbia.

According to research results about the need to apply modern management methods and techniques in the process of improvement of domestic companies, **methods and management techniques** to be applied in the domestic business of the organizations are:

- Database Management 18.4%,
- Quality Management System – 17,6%,
- Corporate Social Responsibility – 17,6%,
- Relationship Marketing- 16,8% and
- Benchmarking – 12, 6%, (Bešić et al., 2013).

Methods and techniques of management that are local leaders noted as necessary for the successful operation of the present research, **are based on knowledge**. New management paradigm on a global scale is based on the process of improving the productivity of knowledge. **Database management** ultimately comes down to the production and storage of information for management decisions and the information is harvested in motion. **Relationship marketing** includes the ultimately knowledge management. Marketing is a key tool that makes knowledge productive. **Benchmarking** technique involves learning from others' experiences, primarily those best. **Quality management system** in its essence involves the need for constant improvement in productivity of knowledge, primarily through quality education. **The concept of corporate social responsibility** involves learning about the needs and requirements of other stakeholders in the business environment.

The need for the implementation of these management techniques, according to the managers of local companies analyzed, substantially corresponds to generally accepted theoretical views on the restructuring of the business functions in the modern organization and provision of special strategic importance of the marketing function, and quality of research and development. The primary purpose of any business management functions, especially those functions that are associated with the enterprise strategy, consisting of information - good information enabling successful business action. Information itself has value, knowledge translates into market power. The quality management system is a fundamental tenet of building integrated management system - quality is the basis of competitiveness of any organization. The quality and productivity are interrelated - when improving quality, and improving the productivity. The modern corporation has to be responsive corporations. Benchmarking is essential for continuous analysis of the competitive position of organization.

CONCLUSION

Obsolete models of organizational management are replaced with new, more sophisticated models, which are adapted to modern market conditions. The future belongs to those business organizations that were the most resourceful, innovative and flexible. The global economic crisis has shown that these are mostly business organizations from newly industrialized countries such as China, India and Brazil.

Innovations, flexibility and productivity are guidelines for the future development in the field of competitiveness and organizational management. The very essence of the struggle for competitiveness lies in accepting changes. Knowledge is the main driving force of permanent productivity growth in the companies from these countries. Companies from transitional countries are faced with numerous problems – among them the most important are those related to improving knowledge and organization.

Domestic companies have to base the internationalization of business on the application of international experience, international standards and internationally accepted business practices. The process of internationalization of business has to start, but in the domestic market on the basis

of the fight with international competition. Therefore, it is necessary to apply those management techniques that **emphasize long-term commitment to competitiveness**.

Emerging business conditions, defined by joining human society into the information era, require such people who have to represent the successful synthesis of **knowledge, skills and attitude**. This three-dimensional approach was influenced by the modern way of doing business. The individual must satisfy a wider range of properties that can successfully respond to the task imposed by the company as an organization. In order to successfully operate their business, all employees, especially managers and marketing professionals, are required to **establish a series of relationships internal and external nature** in relation to the company as a business entity. They have to establish contacts and relationships within the company and in an environment that will be effective from the standpoint of business. Executive Education for the successful application of modern methods and techniques of management is the most important factor in the establishment of a new management model.

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Session B: ORGANIZATIONAL BEHAVIOR

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Session Editor's Preface

Organizational Behavior includes knowledge of anthropology, sociology, psychology, organizational theories, communication, management and human resources. The subject of organizational behavior is the study of human behavior, attitudes and performance in organizations. It is based on theoretical and scientific examination of human behavior in organizations at the level of individual processes, group and interpersonal relationships and organizational processes. Some of the main objectives in the study of organizational behavior are related to the acquisition of knowledge required to improve the efficiency and effectiveness of the organization and employee satisfaction.

Organizational behavior is a very current scientific field. This is understandable since organizational behavior has a large impact on many aspects of business. At the same time, this is a very complex area that continually opens up new opportunities, but also the needs for further scientific research. Scientific results are very applicable in practical conditions and may provide specific organizational and financial effects. In the framework of organizational behavior, the most studied are following organizational outcomes: organizational culture, leadership, job satisfaction, communication satisfaction, employee motivation, innovation, etc.

What follows is the review of papers published in Session B: Organizational behavior.

*The paper “**Personal characteristics of Slovenian managers in business negotiations**” refers to the fact that negotiations are an integral part of our life, both personal as well as at business level. The secret of successful negotiations is usually good preparation of negotiators. Negotiations do not begin when we meet opposite negotiator, but much earlier. Negotiations are also an integral part of the tasks performed by managers in companies responsible for selling products and services. The paper presents the results of the research carried out in Slovenia: negotiations in practice, negotiators, Slovenian managers, how to prepare for negotiations, how to negotiate, what negotiating tactics are used, what personal qualities are emphasized in the negotiations and, finally how to evaluate themselves as negotiators.*

*The paper titled “**Psychological contract as element of internal public relations**” presents an exploratory study, which aims to determine the characteristics of the relationship between students and faculty representatives (which have regular functional communication with students) in order to determine the existence / non-existence of psychological contract between faculty and students. The research has shown that the basic problems regarding implementation / acceptance of psychological contract are a product of deficiencies in communication, understanding and trust between the two sides between which psychological contract is concluded. The problems related to the realization / acceptance of psychological contract should be resolved in domain of internal public relations.*

*The paper “**Issues required to change in the organization of a media company**” points out the need for changes of digital technology and media convergence in the organization of media companies and the operation of management. The current ‘hard’ pyramidal and strongly hierarchical organizational structure of media companies provide management structures with security and power; however, it is conservative by nature and cannot be adjusted to the demands of converged media services. This paper proposes matrix-based and decentralized models of organizing the media companies that support the organizational autonomy of entrepreneurial creative teams.*

*The paper “**Moderating effect of company's ownership structure on relationship of organizational culture and job satisfaction**” represents results research of moderating effect of company's ownership structure on relationship of organizational structure (OS), according to Globe project, and job satisfaction (JS). The research included 256 middle managers who work in companies in Serbia. Of the total number, 134 managers work in state (public) companies and 122 managers work in private companies. The research results have showed that ownership structure of a company represents moderating relation between some dimensions of GLOBE organizational culture and aspects of job*

satisfaction and that it is a significant factor which determines job satisfaction of middle managers in the companies in Serbia.

The paper titled “**Research on desirable characteristics of leaders in the Serbian economy**” presents the results of the research of desirable traits of leaders in Serbian economy. The research was conducted by interviewing managers. The authors have chosen to explore the following desirable traits of leaders: determination, honesty, professionalism, objectivity, independence, resourcefulness, behavioral culture, enthusiasm, criticism and courage. The research was conducted depending on the level of management (top, upper and middle level) and depending on gender (men and women). Overall, the results showed that managers prefer determination and honesty as desirable traits of leaders.

The paper “**Research on undesirable characteristics of managers in Serbian economy**” presents the results of the research of undesirable traits of managers in Serbian economy. The research was conducted by interviewing managers. The authors have chosen to explore the following undesirable traits of managers: dishonesty, shallowness, indecisiveness, unprofessionalism, lack of objectivity, dependence, rashness, tendency to gossip, permissiveness and condescension. The research was conducted depending on the level of management (top, upper and middle level) and depending on gender (men and women). Generally, the results show that the least desirable traits of managers are: dishonesty, shallowness, indecisiveness and unprofessionalism.

The paper “**Educated and satisfied worker - foundation of modern and successful company**”, in the first place, suggests that modern business work and processes are technology intensive and they require educated and quality work force. Priority aim of human resource management today is to attract and keep those workers who can mostly contribute to successful and competitive company work with their knowledge and skills. This paper analyzes factors that determine quality level of workers contribution with the focus on job satisfaction. The paper presents the results of research on satisfaction level of workers and identifies the factors that contribute to professional satisfaction with the final aim to assess effects of job satisfaction on successful and competitive company work.

In the paper titled “**Codes of ethics in public relations**”, it has been emphasized that behavior of the company, its employees and executives must be in accordance with the principles of corporative responsibility which represents one of the top principles of modern business performance. Business decisions within the company influence both the company and the society as a whole and because of that, companies and other organizations are obliged to improve their positive influence and reduce negative activities. Also, the paper specifically emphasizes that the issue of business ethics is increasingly significant because it is directly linked to the principle of corporative responsibility. Public relations are also governed by the corresponding codes that oblige PR experts in their contacts with publicity, media and other professionals.

The papers in session Organizational behavior can be grouped into several thematic sections: organizational communication (negotiation, internal communication, the media, and public relations), job satisfaction and leadership. They mainly have a research component. This research component, along with very good theoretical basis and useful discussions of the results, sets the papers of this session to a high level in scientific terms. The papers are significant both for the scientific and professional community because they expand knowledge and provide guidance to managers in organizations for further action in certain areas of organizational behavior. From this arises the conclusion and recommendation to authors to continue their research and publish new scientific papers in journals and conferences on relevant topics. Considering quality of the presented papers, it can be expected that further work in this field will be very successful.

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PERSONAL CHARACTERISTICS OF SLOVENIAN MANAGERS IN BUSINESS NEGOTIATIONS

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ABSTRACT

Negotiations are an integral part of our life, both personal as well as at business level. The negotiations are old just as much as the human race and covering all human activities. They are the most complex forms of relationships between people, which represent a number of interdisciplinary knowledge and skills. The secret of successful negotiations is usually good prepared of the negotiators. Negotiations do not begin when we meet with opposite negotiator, but much earlier. Today, due to lack of time is often decided that negotiators are poorly prepared to negotiate. These negotiators are calculating that his unwillingness replaced during the negotiations, but experts believe that this is the biggest mistake made by the negotiators to do so. Negotiations are also an integral part of the tasks performed by managers in companies responsible for selling products and services. The purpose of this study was to find out the negotiations in practice, what the negotiators, the Slovenian managers how to prepare for negotiations, how to negotiate, what negotiating tactics used, what personal qualities emphasize in the negotiations and, and finally how to evaluate themselves as negotiators.

Keywords: Business negotiations, the negotiation process, negotiation tactics, negotiators characteristics, Slovenian negotiators

INTRODUCTION

Negotiation is a dialogue between two or more people or parties, intended to reach an understanding, resolve point of difference, or gain advantage in outcome of dialogue, to produce an agreement upon courses of action, to bargain for individual or collective advantage to craft outcomes to satisfy various interests of two people/parties involved in negotiation process. Negotiation is a process where each party involved in negotiating tries to gain an advantage for themselves by the end of the process. Negotiation is intended to aim at compromise (Ury, 1998).

In private life the constant negotiating roles not even aware. However, when negotiations are an integral part of our business functions, we are more systematic as, more precisely follow our objective to be achieved through negotiation by using various negotiation tactics and strategies.

The negotiator can be everyone. Every individual has specific negotiating skills, which can improve by constantly upgrading and with further education and training (Katz et al., 2008).

As people go through everyday life, they encounter various situations which they consciously recognize may be negotiable. Yet even with this conscious recognition, some of those people negotiate while others do not.

BUSINESS NEGOTIATIONS

Traditionally, negotiations were often expected to end up with one party winning and the other one losing. This is referred to as a zero-sum game based on a win-lose, all-or nothing proposition. In some labour-management disputes the results could even end up in a lose-lose situation, especially when either or both parties adopt extreme positions that lead up to a “take-it-or-leave-it” impasse and end up in costly, lengthy, and mutually dissatisfying settlements. The new approach makes a win-win outcome possible, especially when parties use a common set of principles and a common framework for effective negotiations.

Fisher and Ury (1983), foremost proponents of the principled negotiations strategy (or negotiation on the merits), propose four basic guidelines to observe in the process:

1. Personalities must be separate from the problem.
2. Interests must be the focus, not positions.
3. Options and alternatives must be considered before decisions are made.
4. Criteria and other objective standards must be the basis for evaluating claims.

On the first guideline, the human factor must be considered – that negotiators are human beings with emotions, values, beliefs and different backgrounds and viewpoints. Being human, all negotiators are unpredictable. If both parties sincerely desire to arrive at a workable agreement, they must be sensitive to and respectful of each other’s person. The point is not to defeat the other side as an enemy, or score points against him as in a debate. The main aim should always be up front, which is – to solve the problem or resolve the issue between them and thereby arrive at an agreement that is mutually satisfying and acceptable. The negotiations should end up without anyone “losing face”, feeling bitter and humiliated, or being personally aggrieved. If not, the process can develop into a personal confrontation, with each side forgetting the real issues and the main objective. The interpersonal relations between the parties will tend to become entangled with their discussions of the substantive points in the bargaining and the issue of personalities may come into play. Therefore, it is well to “separate the people from the problem (Gatchalian, 1998).

The negotiations are necessary; there must be at least a partial difference in the interests of both parties. Negotiations are useful for solving conflicts. This means that the two parties for a commodity that you want both sides, but it is not available in sufficient quantity for both. If there is no conflict negotiations are not necessary. (Kavčič, 1996).

By negotiator communicate with each other, exchange the necessary information and move from phase to phase. The stage is completed when you make it possible to pass to the next stage or if agree that negotiations have no more sense and completed the negotiations.

First, negotiators are trying to understand the needs of the other side and get as much information as it comes to negotiations and finally, when negotiators agree on certain items, signed an agreement (Fleming, 1998; Usunier, 2000).

Each negotiator decides to negotiate in order to meet their own interests and reach the goals (Donohue, 2004). Before the negotiators decide to negotiate, should think carefully whether the circumstances to negotiate good enough, because negotiation requires resources, time and engagement (Završnik, 2007).

EMPIRICAL FINDINGS

Characteristics of the sample

The main research instrument for empirical investigation was questionnaire. The questionnaire was sent via email to the 265 sales managers from different Slovenian companies and from different business activities. We sent 68 questionnaires to large companies, 83 to medium-sized and 114 to

small companies. During a four week period a total of 76 surveys were returned. The response rate was 28, 68%. We have received complete questionnaire from 32,35% of large companies, 40,96% of medium-sized companies and only 19,30% of small companies. From the total of 76 questionnaires completed by 58 men and only 18 by women, which means in % that 76,32% of the respondents were male and women only 23,68%.

The survey results

Many definitions say that a good negotiator always prepare for the negotiations, which must be planned in advance, defined and refined content.

The frequency of the preparations for the negotiations

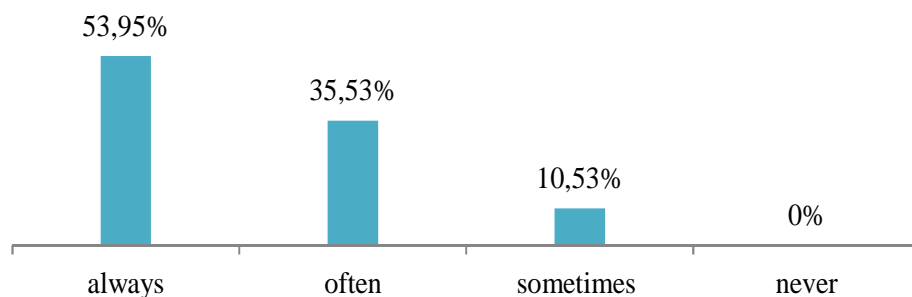


Figure 1: The frequency of the preparations for the negotiations

Planning negotiations weaken the impact of unpredictable factors, to assist in decision making, points out the bottlenecks to allow for coordinated work, encourages creative atmosphere, a solution to plan in advance.

Result analysis shows that only half (53,95%) of respondents always prepared to negotiate. It is often prepared by 35,53% respondents, 10,53% occasionally and never none, which certainly shows awareness of the importance of preparations for the negotiations. For successful negotiations are also important activities implemented by the participants.

Table 1: Activities to prepare for negotiations

Activities	Answers in %
Identification of the main goals	16,62
Consultation with colleagues	15,09
Collection of information on topic negotiations	12,79
Collection of information on negotiating partner	11,51
Collection of information about past negotiations with this partner	10,23
Determining negotiation strategies and tactics	7,67
Determine the minimum goals	6,91
Determine the alternative goals	6,65
Determining the place of negotiations	5,37
Determining the time of negotiations	4,86
Determine the negotiating team and negotiators competence	2,30

Identification of the main goals is with 16.62% the most common activity to prepare for negotiations, with 15.9% followed by consultation with colleagues.

The result shows that the consultation with colleagues and different information for the negotiators mean strong support in determining the main negotiating goals.

Each negotiator has good and bad characteristics, which affects the result of negotiations.

Table 2: Good negotiators characteristics

Good characteristics	Rank
Fairness	1
Reliability	2
Decisiveness	3
Persuasiveness	4
Patience	5
Honesty	6
Flexibility	7

Respondents ranked characteristics from 1 to 7, where 1 means the most important characteristic of a good negotiator and 7 the least important characteristics of a good negotiator.

For the most important characteristic of good negotiators, respondents determined honesty, reliability and determination. As the least good characteristic was defined flexibility.

Likewise, respondents evaluated the bad characteristics of negotiators.

Table 3: Bad negotiators characteristics

Bad characteristics	Rank
Lying	1
Arrogance	2
Misleading	3
Looking for strife	4
Dishonest	5
Indecision	6
Inflexibility	7

For the most important characteristic of bad negotiators respondents determined lying, arrogance and misleading. As the least bad characteristic was defined inflexibility.

Negotiators in the negotiations process using different tactics. There are the tools to implement negotiation strategies for achieving the negotiating goals.

Table 4: The most commonly used negotiation tactics

TACTICS	Answers in%
Slicing	47,37
Good Guy/Bad Guy	21,05
Setting the extreme requirements	11,84
No authority	10,53
Take it or leave it	6,58
Just one more thing	2,63
Blinding maneuver	0,00
Other tactics	0,00

Almost half of the respondents (47.37%), chosen as the most commonly used tactics “slicing” which means slice a larger deal up into a number of smaller complete deals and then to achieve a favourable outcome for each individual component.

In second place is tactics “good and bad guy”. One person acts in an aggressive and pushy way, making unreasonable demands and requiring compliance. The other person then acts in a kindly and friendly way, asking nicely -- and getting compliance.

The good guy (or gal, of course) may apologize for the bad guy, or plead for compliance because the bad guy is being horrible to the good guy too.

In third place is “setting the extreme requirements”, the fourth “no authority”, followed by tactics “take it or leave it »and “just one more thing”.

CONCLUSIONS

Negotiations are one of the most common and the most important activities of every individual and are an essential part of decision-making in personal and business life (Reardon, 2005). Their point is balancing of interests, different needs, desires and expectations of individuals to help achieve the goals that lead to an agreement with the opposite side.

Negotiations must take place within a collaborative environment for both sides that can be successful. Trust and cooperation (two basic negotiation values) must be the guiding principle in the negotiations, which is necessary to point out the ability of persuasion and the possibility of a conscious influence on change of attitudes and behaviour, which is reflected in the success of the negotiations.

Negotiations are also an integral part of the work carried out by the managers - in the companies responsible for selling products and services. There is an old rule which says that in the business do not get what you deserve but what you gain by negotiation. This indicates the importance of business negotiations.

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PSYCHOLOGICAL CONTRACT AS ELEMENT OF INTERNAL PUBLIC RELATIONS

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ABSTRACT

This paper presents an exploratory study, which aims to determine the characteristics of the relationship between students and faculty representatives (which have regular functional communication with students) in order to determine the existence / non-existence of psychological contract between faculty and students. The research is based on the belief that a healthy psychological contract, which motivates and satisfies both sides, is a motivating factor for business accomplishments and significant benefit to all participants in the process. Considering psychological contract in the context of internal public relations, this paper examines all the important elements that characterize the processes of communication within the inert public of organization (faculty). The research that is the subject of work was done on the sample of students in the third year of Engineering Management, Faculty of Technical Sciences in Novi Sad, of school year 2011/2012. Research has shown that the basic problems regarding implementation/acceptance of psychological contract are a product of deficiencies in communication, understanding and trust between the two sides between which the psychological contract is concluded. Resulting there from is that the problems related to the realization/acceptance of psychological contract should be resolved in domain of internal public relations.

Keywords: internal public relations, psychological contract, faculty, students.

INTERNAL PUBLIC RELATIONS

Internal communications, or comunicatios with internal public are part of public relations, whose roots are conected to Great Britain and USA. After a long (some would say multi Millennia) period in which people are viewed as a work force necessarily forced to work, control and discipline, in the late 19th century capital owners gradually begin to realize that the best results are achieved by providing better working conditions for employees, as F. W. Taylor rises to the level of a scientific approach, trough creating a "scientific management" (Taylor, 1911), which was at the time of its inception, gained an equal number of supporters and fierce opponents. This approach of securing most efficient methods, organization and work conditions, which V. I. Lening names „scientific swet drip of workers“ (Keršovani, 1960), marked the beginning of defining management as a science. Simultaneously it, however, marked the beginning of practice establishment which sees communication with employees and determination of planned relations with them, as one of best means for securing profit.

Trough analysis of public relation beginnings, Dover reasonably defines three (historical) periods in development of management communications. Thus he names the period from the late 19th century to the beginning of World War II, entertainment era, characterized by the dominance of light themes in communication with the workers (jokes, information on recreation of workers and news from their families, "newsletters published three B's - bowling, birthdays, and babies" (Dover, 1959). Basics for such acommunication with employees is fond in (desireable) attitude that all workers are a part of *family*, despite significant differences in position, rights, and salary amongst ovner, manager and employees. After entertainment era, there came (in the forties of last century) the *informing era*, initiated trough general severity of war conditions. This stage emphasizes the need (obligation) of

informing employees about the important elements related to the company and the job itself (the information about the change of time, date, payment of wages, official plans and successes of the company etc.). In this period, it became important for companies that employees get involved in the optimization of products, and to motivate them to (productively) communicate with customers. After this, in the fifties of twentieth century, begins *persuasion* era, which is characterized by Dover as a period of *asymmetrical twoway communication*, in which there is two side vertical communication, which is by content and volume disproportionated regarding direction. Almost thirty years after Dover, Grunt and Hunt add forth era – *era of oppened communication*, which is characterized by (real) symetry (Gruing, Hunt, 1984).

Bearing in mind that theories arise to explain the reality, it seems that this theory is just a good way to illustrate the path of practice development, which emerged as *communication with employees*, growing over time in *internal public relations*. The difference between these two terms is also a difference between the two practices, each of which has its base, not only in history but in contemporary reality. The practice of *communication with employees* is based on the need to, through a variety of strategies, tactics, content and the appropriate channels of communication, ensure optimal integration of employees in the organization, its processes and goals, so that organization achieves optimal results. In doing so, in theory, *employee communication* is defined as a planned use of communication actions in order to systematically influence the knowledge, attitudes and behavior of employees (Yeomans, 2006: 334).

On the other hand, the concept (and practice based on it) of *Internal Public Relations*, demands the adoption of a generally accepted definition of *public relations*, what is already there for decades. For a part of contemporary writers, public relations, represent a form of business communication that is focused on developing, maintaining and promoting good working relationships between companies and interest groups (stakeholders) that operate in its environment (Van der Meiden, 1993: 9). Others, however, insist on getting support for efforts organization does by encouraging the public to have understanding and to show good will toward the organization (Wilcox, et al., 2006: 44), while a number of authors talks about public relations as a special control function whose task is to identify, establish and foster mutually beneficial relationship between the organization and various public groups that may influence its success or failure (Katlip, et. al, 2006: 11). However, the most extensive contemporary debate about the concept of *public relations* is guided by the Public Relations Society of America (PRSA). In 2011/12, PRSA, the largest and most influential association of PR Manager (which does not fall in the most liberal) led an international effort to modernize the definition of public relations and replace a definition adopted in 1982 by the PRSA National Assembly. Under the "Public Relations Defined" banner, PRSA initiated a crowd sourcing campaign and public vote that produced the following definition: "Public relations are a strategic communication process that builds mutually beneficial relationships between organizations and their publics." (Smith 2013). This definition is the result of a compromise between the three definitions in the previous round of voting (for members) that had the highest number of votes: a) "Public relations is the management function of researching, communicating and collaborating with publics to build mutually beneficial relationships.", b) "Public relations is a strategic communication process that builds mutually beneficial relationships between organizations and their publics.", c) "Public relations is the strategic process of engagement between organizations and publics to achieve mutual understanding and realize goals" (PRSA, 2012). For the three-decade-long debate about the content of the term *Public Relations*, which culminated trough two years of intense debate organized in PRSA, probably the best illustration is the existence of very strong flows, both in science and in the field practice development, that attempted to trough acceptance (of the corresponding) definitions of *Public relations* legalize certain, specific way of understanding and implementation of public relations. The most important backbone of the discussion took place between the definition of *public relations* as a communication between an organization and its public, which aims to achieve, maintain and develop the *reputation of the organization* (the definition which is, among others, accepts the Serbian Society for public relations) and definition that would be based on Public Relations understood as *Mutually beneficial relationships between organization and its public*, which is insisted on by Sam Black and other contemporary authors of "open orientation" (Black, 2003).

Discussion on the acceptance of the modern definition of public relations was a mirror of debates about the nature, objectives and ethics of modern relations between the organization and its environment, or

the discussion of ethical, effective, humane and meaningful relationships between owners / managers and employees within the organization (Cameron et al., 2008).

The aforementioned discussion is very important to the topic of this paper, because the concept of psychological contract is based on the recognition of internal public relations as an important area of management, but is also a mass of significant relationships that are established between the owner / management and employees, on which depends success, and the very survival of modern organizations. It also means that the idea and practice of psychological contract as the basis for modern relationships between employers and employees, essentially was not possible before the establishment of modern understanding of relationships with the internal public, which is evidenced by the emergence of this concept and its historical development.

Bearing in mind all disclosed, the paper starts from the understanding of public relations, which is based on the Mexican Declaration from 1978, the PRSA definition from 2012 and Blacks (2003) understandings, and says that: "Public relations are a science, skill and practice of strategic communication process that builds mutually beneficial relationships between organization and its publics."

In accordance with that the *internal public relations* in this paper are considered as "a planned, targeted and strategically designed relations between the organization representatives and employees / members of organizations, which aim to satisfy the interests of both sides, to match and support success / development of the organization and its employees".

Public relations in area of high education

The paper is based on research conducted at institution of higher education, and it is necessary to explain the specificity of public relations in this type of organizations.

The key difference between the higher education and most other organizations, is reflected in the fact that a significant part of the external public is targeted public for academic institution, which wants to turn it into their own internal public (as is the case with political parties). Therefore, public relations of higher education organizations are somewhat specific, because the traditional methods of communication with the external public are most closely associated with the internal public relations, in which the students that were part of external public before enrolment are included in internal public after enrolment. This compound of internal and external public makes psychological contract between an individual (student) and the organization representatives becomes even more important than in other organizations, being at the same time at the practical, test from first moments after enrollment. This is the reason we have decided to conduct exploratory study, which is the subject of this paper through higher education, rather than for the classical (economic) organization, which has clearly separated external and internal public.

PSYCHOLOGICAL CONTRACT – BASIC CONCEPT

The psychological contract, in the broadest sense of the term, means the ratio of exchange between the employee and the employer, or the perception of both sides in the employment relationship - organization and individuals - on the obligations contained in that relationship (Herriot, Pemberton, 1995). It is a set of mutual expectations which the contracting parties are often unaware of, but they do exist (Levinson et al., 1962), the implicit contract between the individual and his organization, which states what is given and what is expected in return in this relationship (Kotter, 1973). It includes individual beliefs that are included in conditions of a reciprocal exchange agreement between the person and the other side (Rousseau, 1989, 1995), as well as responsibility of employers to fulfill its promises (Rousseau, Greller, 1994). Argyris (1960) used the term 'psychological work contract' to describe an embeddedness of the power of perception and the values held by both parties (organization and individual) to the employment relationship.

The concept of psychological contract has achieved great importance in the theory and practice of human resource management in the last seventy years. In an earlier work on the psychological contract

(Argyris 1960; Levinson, 1962; Kotter, 1973; Schein, 1965, 1978) emphasized the term *expectations*. Recent studies (Rousseau, 1989, 1995) are focused mainly on *promising nature* and individual *perceptions* of the psychological contract. In doing so, promises are defined as individual beliefs about the conditions of reciprocal exchange. In this sense, Robinson and Rousseau (1994) define the psychological contract as 'an individual's belief regarding the terms and conditions of a reciprocal exchange agreement between that focal person and another party ... and the belief that some form of promise has been made and that the terms and conditions of the contract have been accepted by both parties.' Thus, the psychological contract is characterized: by the contracted sides their beliefs and perceptions, implicitness, subjectivity and exchange. In terms of exchange it is necessary to define what is the subject of this exchange, i.e. what one party provides to another and how will the exchange be conducted.

However, the psychological contract is often violated or injured. Violation of psychological contract involves the perceived discrepancy between what was promised and what was provided in return, while under the "injury" is considered an emotional reaction to the perceived gap between perceived promises and actual state of affairs. Reactions to the breach of contract can occur in the form of reduced loyalty and organizational commitment and even in behavior opposite to organizational goals. Violation of promises made at the conclusion of the psychological contract are often made by two reasons, and those are deliberate *disregard* of contract and *discrepancy* between the agreed and what is applied in practice (Morrison & Robinson, 1997).

The psychological contract can be operationalized through different perspectives and expanded to other formalized relations of exchange, such as the relationship of teacher - student - organization (university). This relationship means 'the implicitly and tacitly held expectations of agreement & the contractual relationship between students and lecturers about the nature of their relationship and exchange in the process of education' (Charlton & Barrow Hornby-Atkinson, 2006). Researches of (Bordia, Hobman, Restubog, & Bordia, 2010; Charlton & Barrow Hornby-Atkinson, 2006; Nesbit & Burton, 2006; Alexitch, 2002; Brems, Baldwin, Davis, & Namyniuk 1994; confirmed the importance of of psychological contract for quality of learning and for implicit cognitive and behavioral expectations within the student perceptions.

Research on attitude of students towards psychological contract with the teachers and faculty where they study, whose results are presented in this paper shows that the psychological contract, which clearly formulates the nature of exchange and respect from both sides of the "contractual" relation, improve institutional climate, contributes to higher motivation and commitment of students, development of social competence and a sense of belonging to a academic community.

RESEARCH RESULTS AND DISCUSSION

The study was planned and conducted as exploratory, because it is: a) under-researched area of management, which requires an interdisciplinary approach, b) observing the of psychological contract as an important element of internal public relations, understood as a set of structured, consciously and systematically built relationships between owners / managers and employees in the organization, which aim to satisfy the interests of both sides. After this phase (which was completed in 2012) the preparation for fundamental research is conducted, based on the findings of the exploratory study whose findings we present in this paper.

The research was conducted on a sample of students from the Faculty of Technical Sciences in Novi Sad, which was selected because of the highest representation of various fields of study in Serbia (FTS has 88 accredited study programs at all levels, covering technical and technological, mathematical sciences, art and medical field - through interdisciplinary studies.

Subject/goal

The subject of the study was to determine the presence / absence of the elements of the psychological contract between students and faculty / faculty representatives, and to assess the influence of the

existence / non-existence of a clear psychological contract on students' motivation and their attitude towards work / study and the representatives of faculty.

Goal of the study was to determine the existence of psychological contract between faculty and students, and establishing the relation between the content of psychological contracts and relationships, behaviors and expectations of students from faculty as an institution, toward faculty representatives and toward the faculty and fulfillment of its own obligations in terms of learning / achieving a given goal.

Hypothesis

The basic premise from which we set out in this exploratory study was that the existence of psychological contract, the content / character and the degree of realized expectations, significantly influence the processes of organizational socialization, but also influence the extent and quality of involvement in the organization and the motivation for achievements and their realization.

Second important assumption which defined our study was that psychological contract should be viewed primarily in terms of relation with internal public, both because of its dominant content and because of its form, mean of creation / establishment, the basis on which it arises and how its implemented.

Sample

The research was conducted in the winter semester 2011/2012, on a sample of students of the third year of the Faculty of Technical Sciences in Novi Sad, Department of Engineering Management, which enrolled Faculty in 2009/2010. The sample included all students of this department, who are studying from the budget and on the day of the interview were present in class (136 out of 148 students). The structure of the sample had 59% of female and 41% male examinees.

Research method

The research was conducted by testing, using the techniques of interviewing, based on questionnaires which included questions in which the subjects are required to rate the quality or degree of presence of a attitude / claim. Students were interviewed at their workspace, for 30 minutes.

Research results

a) Expectations

More than one third the students could not clearly define the extent of their familiarity with the work of faculty representatives, (38%), a fifth claimed it was not entirely familiar with the modus operandi of the Faculty (21%), while 6% of the students were unaware of the modus operandi of faculty. Only 6% of the students were fully acquainted with the work of faculty representatives, while 26% of the students were well-informed. These data indicate relatively undefined, or inadequate, expectations of students, formed before enrolment. In addition, 64% of students claimed that the first information's about faculty were not received from faculty representatives (through the media, the Internet, "Open faculty days", etc), but from other sources, which indicates a possible cause of their poor awareness.

b) Awareness of psychological contract

Despite the initial lack of defined expectations from faculty, most students (56%) had a clear awareness that between students and faculty there is a healthy psychological contract, which is based on mutual understanding. However, at 32% of the students there was no awareness of this psychological contract, while 12% were insecure this regard. These data indicate that the university failed to achieve mutual understanding with 32% of students, within three years of their study. One reason for these results may be the lack of strong prior expectations of students regarding the manner of work at the university, although a significant portion of the undefined expectations had to be suppressed by subsequent experiences while studying.

On the other hand, a significant majority of students (88%) found that the existence of psychological contract, which is based on mutual understanding between students and faculty, increases student motivation, which in the context of the data presented regarding the achieved level of understanding speaks about disillusionment for about 20% of students who wanted to achieve mutual understanding with the university, and find that this has not been achieved.

The percentage of students who felt that the understanding between faculty and students is an important factor of student's motivation completely correlated with the percentage of students who believe that regular attendance on lectures and exercises are important to their success and the final outcome of their education.

One of the main obstacles for successful establishment of a healthy psychological contract between students and faculty can be negative attitude of students regarding "profitability" of work investment and relation of effort-achievement. Consequently, students' attitudes regarding three questions are especially significant: how much effort requires studying, whether student's success depends on the effort invested, as well as - what is the correlation between effort invested and enrollment on faculty. Most students felt that the program of study requires a lot of hard work and time to meet all student obligations (73%), while 82% believed that the success of students depends on the effort (only 3% students claimed that there does not exist correlation). In contrast to the correlation in the attitudes regarding these two issues, the survey results indicate a negative attitude toward the relationship between effort and enrollment: up to 15% of the students claimed that there is no expected relationship, 53% students thought that there is correlation, while only 12% students were firmly convinced that there is such correlation.

c) The relationship between students and teachers

Only 9% of the students considered that following statement is false "Engagement of students in lectures / exercises is accompanied by proper care of teachers," while 47% agreed with it and 29% had strongly agreed with the statement. On the other hand, only 9% students felt that the university fully met their expectations in terms of clarity of their lectures and corroboration of understandable and available literature, 47% confirmed that their expectations, 23% did not have a clear stance, while 15% claimed that their expectations on these features of lectures are not satisfied, or - not at all satisfied (6%). Most of the students had the impression that their teachers are available, that are available to them and that they can address them, but they admit that they themselves do not help teachers to understand their needs (lack of open two-way communication). In accordance with this is the students impression that the teachers do not pay attention to the expectations of students (more than half of students), which is the most negative attitude presented in research (18% of the students claimed that the teachers do not pay attention to their expectations, 47% could neither agree nor contradict mentioned opinion, while only 35% students felt that teachers pay attention to their expectations.

Defined expectations of students in relation to the university have been met for 53% of students, for 9% were completely filled, while for 15% students they were not met and 23% didn't have a clearly defined position. Nevertheless, 73% students said they feel like members of the faculty community, as opposed to 15% who did not feel that way.

CONCLUSIONS

Research has shown that the basic problems related to the realization / acceptance of psychological contract is a product of deficiencies in communication, understanding and trust between two sides, between students and faculty representatives. Resulting there from is the basic conclusion of the research that the problems (or - their significant part) regarding realization / acceptance of psychological contract could be resolved in domain of internal public relations. This finding directed us to further research and development of optimization models of communication in public relations in general, and especially - in dealing with internal PR, where is too often neglected that the party which is opposed the owner and management must not only be perceived as a "resource" because a it represents persons, from

whose motivation, satisfaction and readiness for engagement largely depends the fate of the organization.

The results suggest the existence of a healthy psychological contract between students and faculty, which most the students were aware of and support it, as it is based on mutual understanding. Accepting the reality of this psychological contract by the students was directly correlated with their perception of relation between effort and achievement, as well as the attitude of teachers towards the subject, the students need to understand the material and willingness of teachers to clarify it.

In terms of establishing a psychological contract between students and faculty (faculty representatives and faculty as an institution), our research points to several existing obstacles, whose removal would mean an increase of the percentage of satisfied, motivated and successful students.

In the first place, it the relationship of teachers towards students' expectations, because a significant percentage of the students claimed that teachers are not interested in their expectations, which is one of the biggest obstacles to establishing meaningful relationship of students and teachers as well as the students greater confidence in the reality of the psychological contract between them and faculty.

In the second place there was obstacle related to the early establishment/acceptance of psychological contract by the students, which is the result of lack of awareness the students on the methods of work on the faculty, which slows down/delays acquisition of awareness of the existence of psychological contract.

The third obstacle is composed of reduced confidence in university by students, because of method of entry, because the percentage of the students who said that between enrollment and the effort, exists clear correlation is less than the percentage of the students who were convinced that such a correlation does not exist.

Our initial assumption that psychological contract should be regarded as an element of internal public relations, was confirmed to the fullest extent possible, because all the obstacles in establishment/acceptance of the psychological contract were essentially the result of poorly designed or poorly implemented relationship with students as a target group of internal public . Using modern methods, strategies and tactics of optimization of internal communications, all ascertained obstacles could be removed relatively quickly. The only obstacle that is only partially dependent on the methods and techniques of internal communication is reduced confidence in the fairness of enrolling in faculty. In the framework of communication solutions, it would be necessary to enhance the frequency and channels of informing on the scoreboard and their colleagues, make it possible to verify the results of each student's enrollment both for themselves and for others. However, this problem should not be regarded only as a communicational, but the findings should be taken as a warning that the students, had some doubts, or at least had reduced confidence in the faculty, where it would be good to check reality of these assumptions.

As students perceive a very high value of understanding as an essential element of the psychological contract, it is clear that in the coming research we should further explore the other elements of the psychological contract, the consequences of its existence/non-existence, the role of psychological contract in different engagement and student achievements, as well as possible models for overcoming obstacles in creation/acceptance of the psychological contract.

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ISSUES REQUIRED TO CHANGE IN THE ORGANIZATION OF A MEDIA COMPANY

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ABSTRACT

The introduction of digital technology and media convergence imposes the need for changes both in the organization of media companies and the operation of management. The current 'hard' pyramidal and strongly hierarchical organizational structure of media companies provide management structures with security and power; however, it is conservative by nature and cannot be adjusted to the demands of converged media services. The classic top-down management model no longer suited to the multi-platform strategy of production and delivery of media contents. This paper proposes matrix-based and decentralized models of organizing the media companies that support the organizational autonomy of entrepreneurial creative teams.

Keywords: media, management, organization of media companies, 'hub and spokes model' matrix model

INTRODUCTION

Changes in the operation of mass media are reflected through the processes of distribution of products across media boundaries, media fragmentation, audience segmentation, globalization, conglomeration and digital convergence. Digital technology provides multiple opportunities for producing and transmitting media content and broadcasting the same information through different media, all these with fewer employees. Changes of technical nature are well underway and are moving towards full digitization, while other changes – those considering organization and management – are just initiated.

Technological changes were introduced in several stages. In the first, formative stage of media development, the program/content was selected based on the following two key factors: the possibility of signal flow and the limited number of available channels. In the second stage, the existence of satellite broadcasting and cable distribution allowed the multi-channel flow of information and a wider choice of channels and program offerings. Nowadays, in addition to distributing television and radio programs, telecommunication services (cable distribution systems), which have evolved into multi-service, broadband telecommunications networks provide a great variety of interactive services.

As a result of interlocking telephony, computer technology and electronic media technology (Hartley, 2002: 39), media convergence allows media platforms to be extended and media service markets to be expanded. Since all media platforms are based on a single technology – i.e. digital computers – the possibility of using multimedia content, as well as their reception at any time and at any place, is virtually unlimited. Such a technological environment provides audience/public with wide possibilities of accessing media content and participating in their selection or creation. Jakubowicz (2007) suggests the following basic features of the communication flow in multimedia environment:

- multimedia communication (based on text, image, sound, animation);
- interactivity (mutually variable sender/recipient role);
- pull technology – nonlinear communication and *on demand* access to content;
- asynchronous communication (content can be stored and wait for user's decision to access);

- individualization – personalization (the sender and receiver can communicate with the user's possibility of choice);
- portable devices and mobility (the ability to receive content in any place and at any time);
- disintermediation (elimination of intermediaries – media organizations – and the emergence of new formats, i.e. the Internet).

Trends and tendencies in the technological development of mass media influence the changes occurring in the field of communications, and imposing changes also to the operation of media management. Many media organizations have already responded to the digital convergence and accommodated to the multi-platform process of production and distribution of their content. The media already skillful in the online distribution of their content, were the first to experience the positive effects of digitization, particularly those of disintermediation, which allows bypassing the first source of information, which has so far the privilege to select, produce, distribute, market and finance the media content (for example, the artist can distribute his CD directly through the Web, and the like). However, as a result of the process of disintermediation, for most media, both print and electronic, there is a drop in the number of advertisers and audience (for example, the audience can listen to Internet radio stations, which is disastrous for local stations; movies can also be downloaded from the Internet, etc.). In addition, it can be predicted that the time is coming when the prevailing programs will be *on demand*: the viewer or the listener will be able to create his own program list, not only based on the shows that will be aired at some of the announced schedule, but the bulk of programs will be available in this way.

MEDIA MANAGEMENT: SELECTING THE BUSINESS STRATEGY

Are media organizations and their management prepared to major changes in the production and delivery of media content and new demands of the fragmented audience? Which business model would perform efficiently in the digital world, having in mind the fact that the multi-platform strategy of delivering media content is not merely a technical issue, but rather the issue of portfolio of media products and services delivered to the audience (Ratković Njegovan, Đurašković & Kostić, 2012), as well as the issue of their combinations. The question is also to what extent media management and the cost-effective use of media resources can be improved by the migration of media organizations towards the multi-platform based production and distribution (Lawson-Borders, 2010)?

In providing answers to this question media theorists are postulating their views on a variety of sources, summarized by Hersey, Blanchard and Johnson (2008; according to: Albarran, 2010) as being technical, human, conceptual, financial and marketing. As suggested by Mierzejewska (2010), the first theory is focused on strategic management and market adjustment, in order to determine why some media organizations are more successful than the others (Albarran, 2002; Compaine & Gomery, 2000; Greco, 1999; Picard, 2004). The second theory is focused on resources and assets at the organization's disposal (Barney & Hesterly, 1996). Advocates of structural contingency theory consider the relationships between organizational structure and performance outcomes, indicating the lack of a standard solution; organizations will be adopting structures which they consider to have the ability of increasing efficiency and optimizing financial performance in the unpredictable market conditions (Donaldson, 1996)

Recent research on management practice in media organizations have linked the issues related to the structure of media ownership and the ways works is being organized (Lacy & Blanchard, 2003; Picard & van Weezel, 2008), organizational culture (Küng, 2000), innovation management (Mierzejewski & Hollifield, 2006), leadership and change management (Küng, 2000; Perez-Sanchez-Latre & Taberner, 2003), and the individual responsibilities of management and the employees (Albarran, 2010).

The development of new media has undermined the old business models. Deuze (2007) predicts that with the exponential growth of media products and their ever-increasing impact on our life and cultural practice, media employees will be operating in new conditions. Research (Burson-Marsteller media survey, 2010; Ratković Njegovan & Šidanin, 2012) indicate crisis in media business: public media services are struggling with economic, financial and organizational crisis (with the incompetent management as the main cause), commercial media are losing their audience and advertisers, while the local media are increasingly shut-down, because they are unable to cope with all the problems they are faced with. The reasons for the crisis in the work of the mass media should not be sought only in the

general economic-financial crisis, but also in the sluggishness of media management to adjust organizationally to the new media environment. Therefore, the following part of this paper suggests some possible organizational models in media companies, focusing on the two prevailing models: a pyramid and network management of media companies.

ORGANIZING THE MEDIA COMPANY – FROM MEDIA THROUGH MULTIMEDIA STRUCTURE

Regarding their structure, media companies are generally complex organizations, with a heterogeneous and dispersed structure, a number of professions and functionally diverse management (Miletić, 2009: 41). Regarding their social role and business objectives, media companies can be oriented to profitability (i.e. lucrative goals) or social efficiency (i.e. non-lucrative goals).

The traditionally organized, media-oriented pyramidal structure of media companies is still the dominant business model consisting of rather autonomous organizational units (for example, radio and television, and the organizational units within), each with a separate top management, managements for each business unit, as well as the supporting administration. Each sector has its own facilities, production and human resources strictly related to the given organizational unit. This is a typical top-down organization and decision-making model (EBU, 2006). Figure 1 shows the organization of the public broadcasting service of Radio Television of Serbia (RTS) as an example of a pyramid structured organizations, while Figure 2 shows the hierarchical line-management structure for a typical broadcasting organization.

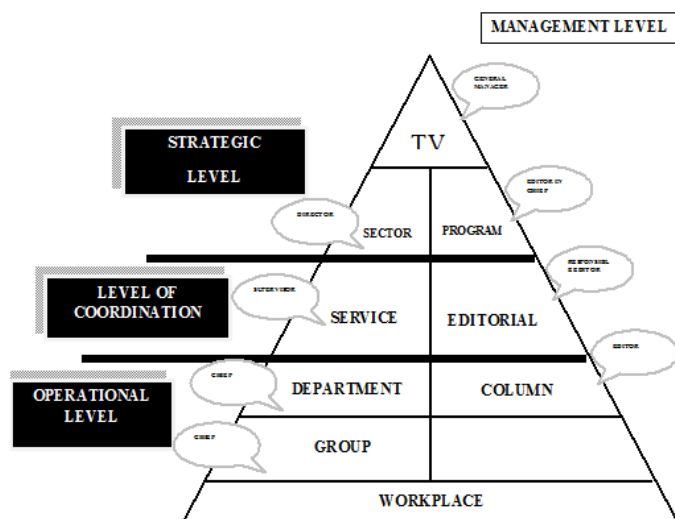


Figure 1: Macro-organizational scheme of Radio Television of Serbia

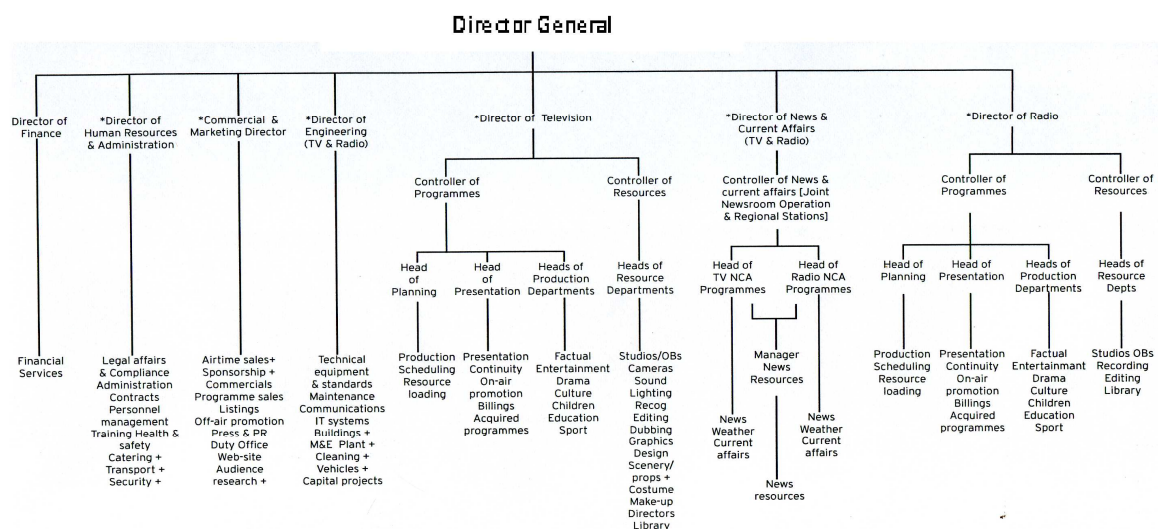


Figure 2: A line-management structure for a typical broadcasting organization (Prescott, 2009)

These schemes show four levels of management: *strategic level* (board of directors in public companies and joint-stock companies, or 'top' manager in commercial companies), *strategic and tactical level* (executive management, 'top' manager with the board of executives or only the board of executives, i.e. several assistants), *tactical level* (management: editors, producers, chief engineers, directors of services) and *operational level* (direction and supervision: editors of departments/sections, editions, publications, programs, department heads, etc.).

However, multimedia environment and convergence as a concept and process (Lawson-Borders, 2003: 94) require the program, technology and organization of media companies to be adjusted to operate as a multi-service provider. In this case, it is a functional multimedia oriented structure (EBU, 2009). The company itself is organized in relatively autonomous parts, and core functions are covered equally, for example, radio, television and multimedia. This means that the business orientation is still based on the division to organizational units or program channels, but it also includes the division to program genres and current projects backed by creative and innovative teams, mainly formed for the purpose of specific project tasks.¹ The media-oriented structure implies a more flexible organization that supports autonomy, innovation and creativity, but increases personal and corporate responsibility. These requirements suggest that the organization and management of modern media companies are moving in direction of decentralization, but also processes that allow different forms of business integration and mergers, specific to the media industry. As a possible decentralized management solution suitable for companies engaged in the collection, production and dissemination of information usually the 'hub and spokes' model of organization is usually proposed, from which the matrix management model logically follows.

'HUB AND SPOKES' AND MATRIX MODEL MANAGEMENT

The exponentially occurring technological changes in the communications field, the integration of old and new media, changes in the audience behavior resulting from possibilities offered by the electronic environment, are all the reasons for changes in the way labor is organized and media companies managed. In fact, it is about the innovation management. Rogers (1995) believes that they are unfolding through five innovative processes: agenda-setting, matching, redefining/restructuring, clarifying, and routinizing.

In the process of adaptation to the 'new media situation' (Moe & Syvertsen 2007), media companies are increasingly oriented towards the subordinational-functional 'hub and spokes' network model of organization. This model is based on the conventional line management approach, but it is focused on smaller and independent entrepreneurial units that have the autonomy to be linked about current projects, as well as to operate independently with the environment (Figure 3). The 'hub and spokes model' has a Strong Corporate Centre, covering usually finances, administration, human resources, marketing and commercial services, as well as the press service (Prescott, 2009). Work efficiency depends on the links within the company, rather than the hierarchy and established procedures; 'vertical' relations are mitigated, i.e. there is no hierarchy in sense of strict subordination, because management unfolds in the horizontal plane. The focus is on the task and the results, instead of procedure rules, as it is the case in pyramidal organizations.

In a broadcasting organization, for example, the radio and the television broadcast have their independent, autonomous segments, in addition to those listed as parts of the centrally managed segment. Television gets its own independent broadcasting, planning and promotion departments, as well as a completely independent production and resources department. Equally independent departments were provided also for the radio. What remains common are the news and engineering department. The disadvantage of this concept is the creation of unnecessary bureaucracy that supports

¹ For example, news companies are reengineered based on two models of convergence: the integrated and the intermediate model of management. In organizational terms, the *Blic* newspaper is the first integrated redaction in the region (2010), which was formed by the merger of *Blic* daily, the free daily of *24 hours*, the Internet editions of *Blic online* and *Woman online*, with further orientation towards the parallel development of print and Internet editions.

the entire system. For a moment, one could get the impression that the commercial and marketing functions could remain independent units, but their position in this model is defined by an important segment of management, i.e. brand management. This is critical segment for commercial success, and therefore, must be tightly coordinated for the overall system.

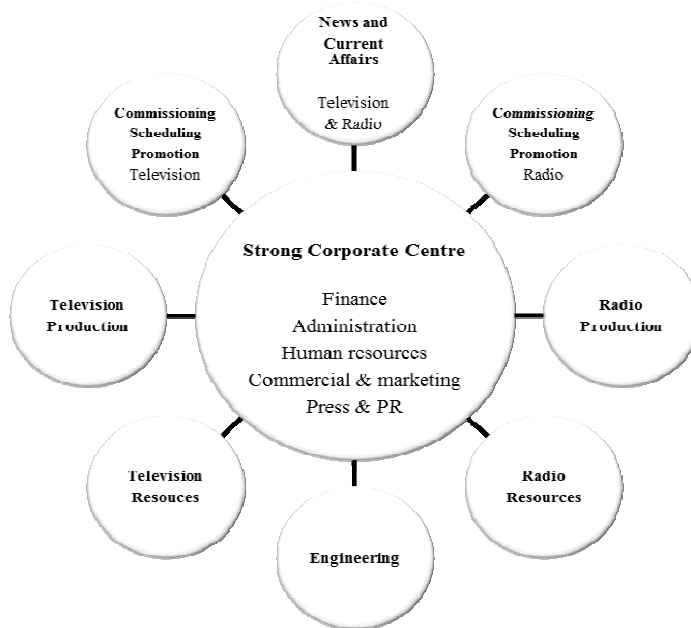


Figure 3: The 'hub-and-spokes' model

The 'hub and spokes' model allows freedom to managers in the process of creating their own business methods and approaches, which usually results in positive outcomes in a competitive environment. In the case of media organizations this means creating opportunities for a more flexible business approach, establishing a good business climate, as well as conditions for finding faster solutions and responses to the demands of competition.

The matrix organizational structure is increasingly applied as a possible solution for organizing the highly complex organizations as the media companies. It is a highly decentralized model in which the role of a functional management is that to 'service' the activities of project teams. Matrix management is actually a dynamic process, which primarily deals with relationships, influences and expertise. In this sense, Bartlett and Ghoshal (1990) suggest that matrix management is not a structure; it is a frame of mind.

This is a highly flexible and cost effective principle, and it is increasingly applied by media companies. It neither depends on the number of employees, nor the number of facilities, given that the company fails to have its own production capacity. Each media project/product is viewed as a separate task, which is realized by involving specific profiles of media experts and other necessary resources (Figure 4). Matrix management allows the production team and assets involved to match the task, as shown in Figure 5. Management is actually unfolding at the intersection of lines. Control is exercised through the control of resources (Presscot, 2009: 36-37).

This management system also has its advantages and disadvantages, differentiating it from other models. According to Larson and Gobe (1987: 5-6), its greatest advantages are the efficient use of resources, project integration and improved information flow, while its disadvantages include power struggles, heightened conflict and slow reaction time.

CONCLUSION

Technological change in the operation of mass media are accelerated by the growing use of digital technology, which enables new ways of production and delivery of media content and sophisticated multimedia, interactivity, multi-channel service, on-demand services, and the availability of various options for improving the quality of picture and sound. The proliferation of digital and online channels

makes media consumption extremely heterogeneous, while the audience becomes increasingly fragmented, which is one of the reasons for this decrease in advertising based revenues. The multimedia context and new communication structures, like blogs and participatory media, are creating opportunities for using the media simultaneously and continuously through different channels, or to be individually involved in the communication process.

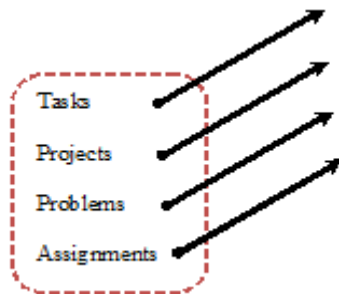


Figure 4: Matrix management model (the focus is on task)

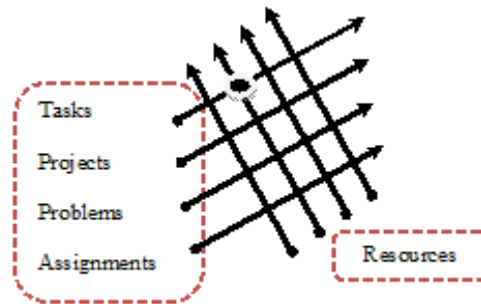


Figure 5: Matrix management model (the place where the management process actually unfolds)

Technological changes have seriously undermined the traditional media in terms of their operation, organization and management, as well as the relationship with the audience. In the search for effective business models for media companies, some authors are focused on strategic management, some on the available assets, some on successful leaders, while there are also opinions that a single best model cannot be identified, because each organization has its own way of adapting to technological changes and market demands.

Regardless of whether the chosen is based on pyramidal, hub and spoke or matrix management, any media company should be able to produce the optimum content using its available production and human resources, not deviating from its main goal – to be a leader in the media scene. In addition, one should always start with the fact that technology cannot create high-quality media content, nor the effective business models in the future will have to trip the new media mouse traps, as humorously said Lawson-Borders (2010). This can only be accomplished by the creative and motivated people working in media, with the support of management that supports professional development and facilitates the changes in their work roles; contributes to the creation of the organizational climate in which personal goals coincide with the goals of the organization; develops sensibility for innovations inherent to media industry, as well as their diffusion; to focus on new-product development in the media; investigates and supports the needs of customers and respects their responses to new media technologies.

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MODERATING EFFECT OF COMPANY'S OWNERSHIP STRUCTURE ON RELATIONSHIP OF ORGANIZATIONAL CULTURE AND JOB SATISFACTION

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Abstract

This paper represents results research of moderating effect of company's ownership structure on relationship of organizational structure (OS), according to Globe project, and job satisfaction(JS). The research included 256 middle managers who work in public (134) and 122 managers who work in private companies in Serbia. Managers are given directions in starting appropriate activities oriented towards changes in organizational culture in their companies through explanation of relationship of OC and JS in order to improve organizational results.

Keywords: organizational culture, job satisfaction, ownership structure of companies.

INTRODUCTION

Numerous researchers devoted to definition and influence of organizational culture on organizations emphasize this influence (Kluckhohn and Strodtbeck, 1961; Hofstede, 1980, 2001; Trompenaars and Hampden-Turner, 1997; House et al., 2004). In the last two decades there have been great political and economic changes in many East European countries, among which is Serbia as well. Wars, economic blockade, one of the biggest hyper-inflations in the world (Hanke and Krus, 2012, p. 12), bombing by NATO forces, political, economic and social changes, transition, privatization, all of them have left great consequences in Serbia but it has not determined yet how these factors influenced organizational culture.

According to Mikl-Horke (2004) diffusion of modern organizational structure and management practice is more limited in companies previously owned by the state even in fast developing societies (CEE countries), especially when ownership is in hands of insiders or the state. Alas and Vadi (2004) think that in transitional countries the transfer of market economy knowledge is very slow because of institutional and cultural tensions and conflicts. The results of their research indicate that it is easier to change technology and structures than culturally incorporated practice in transitional countries.

ORGANIZATIONAL CULTURE AND JOB SATISFACTION

Organizational culture

Organizational culture is determined by organization's dominating values (Deal and Kennedy, 1982; Lauzen and Dozier, 1994) accepted by majority of employees (Wallack, 1983), as well as common norms and beliefs of organization's members (Kroeber and Kluckhohn, 1952; Schein, 1985, 1990; Kotter, 1992, 1996; Conner, 1992; Cummings and Worley, 2005). It is in a certain sense a philosophy that determines organizational policy towards internal and external surroundings (Pascale and Athos, 1981).

Organizational culture influences all aspects of business and life in a company. It is linked to numerous organizational results (House et al. 2004), and one of them is job satisfaction. Connecting individual

aims of employees to aims of the organization and reliance on responsibility of employees are the factors of organizational culture successfulness (Morgan, 1977). Organizational culture is also one of significant factors of employees' satisfaction (Moynihan and Pandey, 2007).

Job satisfaction

Job satisfaction is related to general attitude of individuals to their job. Affective dimension of job satisfaction is defined as satisfying or positive emotional state which results from estimation of a job or work experience (Locke, 1976: 1302-1304). Although job satisfaction is more an attitude than behaviour many managers expect results because satisfied workers will come to work more regularly and stay in the company longer. (Robins and Coulter, 2005). Employees' job satisfaction influences their mental health, longevity, emotional life as a whole (Locke, 1976: 1311; Sempene et al., 2002). Job dissatisfaction can significantly influence behaviour of employees which results in absence from work, complaints and termination of employment. It can be concluded that job satisfaction in certain extent represents an indicator of employees' perception about organizational culture of their company (Sempene et al., 2002). Spector (1997) says that job satisfaction is no doubt most researched variable in Industrial and Organizational Psychology.

A great number of researchers examine the relationship of job satisfaction and organizational culture (Judge et al., 2001; Sempene et al., 2002; Moynihan and Pandey, 2007; Spector, 1997; Meyer et al., 2002, Lund, 2003; Silverthorne, 2004; Fargher et al., 2008; Amos and Weathington, 2008; Bellou, 2010).

On the grounds of the mentioned above the following hypothesis is derived:

H1: Company's ownership structure has moderating effect on relationship of dimensions of organizational culture and job satisfaction in Serbian companies.

RESEARCH METHODOLOGY

Respondents and data collecting

The research lasted for 5 months and it was carried out from 1st January to 1st June, 2011. During this period collecting of questionnaires was carried out through interviewing respondents. Responses were got from 256 middle managers from 131 companies and the sample was chosen to provide both state and private companies(134 employees in state and 122 in private companies). The research was carried out in companies in Serbia, no matter the branch of industry, but in companies with more than 50 employees. Namely, in the companies with a small number of employees there are only a few managers on the same level and the owner is not a supervisor to managers in a classical sense, in other words, owners do not have previous experience in management and are not fully involved in management process. All respondents in the sample have Bachelor or Master degree and according to sex, 136 are male and 120 female. Out of the total number of respondents, 183 work in domestic companies and 73 in foreign companies. Considering middle managers, 134 are employed in public and 122 in foreign companies in Serbia.

Research instruments

In the research was used the instrument of Globe project, precisely the first part of Alfa questionnaire which includes the questions related to organizational culture, the state "as it is" and it is consisted of 34 questions. Respondents marked the values on the scale from 1 to 7 and the filled-in questionnaires were processed according to Globe Syntax. The instrument measures 9 organizational and national dimensions and the dimensions are: avoiding uncertainty, orientation to the future, power distance, institutional collectivism, orientation to people, orientation to performances, collectivism within the group, gender equality, assertiveness (House et al. 1999, 2002, 2004).

Questionnaire for measuring job satisfaction was applied for measuring job satisfaction. The questionnaire JS is consisted of 36 items which are valued from 1 to 6 and 9 scales which estimate attitudes of employees about the job and its aspects: salary, promotion, supervision, benefits, rewards,

operation procedures, co-workers, the nature of job, communication (Spector, 1985). Significance of each of these scales is different in some extent and the result is in different importance in cases of evaluation of total job satisfaction (Spector, 1997).

Data analysis

Data has been processed in accordance to applied instruments for measuring dimensions of organizational culture and job satisfaction. Internal consistency of scales was confirmed. Descriptive statistics and correlation analysis of the relationship of organizational culture and job satisfaction were used and then the relationship of organizational culture and job satisfaction was observed with moderator "ownership structure of the company". In order to determine the connection between dimensions of Globe organizational culture, job satisfaction and ownership structure in Serbian companies we used hierarchical and regression analysis (Milin and Hadzic 2011) and Chow test (Chow, 1960) with the aim to examine moderating influence of ownership structure on regression between JS (as dependent variable) and OC (as independent variable), whereas $i, j=1, 2, 3, 4, 5, 6, 7, 8, 9$.

RESEARCH RESULTS

In the Table 1. The results of Descriptive analysis are presented (mean values and standard deviations) for dimensions of the state of organizational culture "as it is" and job satisfaction dimension. A short name of dimensions which will be used in further discussion is also given in the Table. The values skewness and kurtosis presented in the Table point at normal distribution of score for all scales. Table 2. presents Pearson's coefficients of correlation between OC and JS for J(public) and P (private) companies in Serbia, for every $i, j=1, 2, 3, 4, 5, 6, 7, 8, 9$. In private companies in Serbia correlation between organizational culture and job satisfaction is more significant. JS4 has more significant relation in private than in state companies in correlation with OC4, OC5, OC6, OC7. OC8 has more significant correlation with JS3, JS5 and JS9 in state companies, and in foreign companies in Serbia correlation is not statistically significant. Correlations of dimensions of organizational culture OC7 and job satisfaction dimension JS1, JS2, JS4, JS8, JS9 are significant. Correlations of dimension organizational culture OC6 with dimensions job satisfaction JS1, JS2, JS4, JS5 are also significant. Chow test results for differences of regression coefficients for regression between OC_i and JS for sub-samples public and private companies are presented in Table 3. The results of hierarchical regression analysis are presented in Table 4., and the results of R square and F changes which are statistically significant and support H(1, OC, JS) regressions for sub-samples J (public) and P (private) companies.

CONCLUSION

The research results have showed that ownership structure of a company represents moderating relation between some dimensions of GLOBE organizational culture and aspects of job satisfaction and that it is a significant factor which determines job satisfaction of middle managers in the companies in Serbia. On the grounds of these results leaders in public and private companies in Serbia can change organizational culture in comparison with current and desirable level which appears in sub-samples and increase the level of job satisfaction of employees in this way.

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Table 1: Descriptive statistics for the relation between dimensions of organizational culture and job satisfaction in the companies in Serbia

	Short name	Mean	SD	Skewness		Kurtosis	
				Stat.	Std. Error	Stat.	Std. Error
Uncertainty Avoidance	OC1	3.8006	1.34038	.107	.163	-.013	.324
Future Oriented	OC2	4.3080	1.63478	-.213	.163	-.814	.324
Power Distance	OC3	4.7946	1.42911	-.264	.163	-.660	.324
Collectivism 1	OC4	3.8199	1.35587	-.008	.163	-.510	.324
Humane Orientation	OC5	4.2232	1.41515	-.088	.163	-.490	.324
Performance Orientation	OC6	3.9408	1.36935	-.001	.163	-.632	.324
Collectivism 2	OC7	4.5634	1.18553	-.177	.163	-.264	.324
Gender Egalitarianism	OC8	2.9301	1.20891	.294	.163	-.103	.324
Assertiveness	OC9	3.7656	1.09026	-.074	.163	1.166	.324
Pay	JS1	2.9107	1.32451	.343	.163	-.809	.324
Promotion	JS2	3.3304	1.18838	-.009	.163	-.229	.324
Supervision	JS3	3.6641	1.29293	-.030	.163	-.705	.324
Fringe Benefits	JS4	2.9989	1.25291	.361	.163	-.545	.324
Contingent Rewards	JS5	3.1529	1.35047	.447	.163	-.522	.324
Operating Procedures	JS6	3.1830	1.04199	.233	.163	.620	.324
Coworkers	JS7	4.3571	1.13777	-.562	.163	.217	.324
Nature of Work	JS8	4.4900	1.23553	-.874	.163	.374	.324
Communication	JS9	3.9699	1.31775	-.185	.163	-.832	.324

Table 2: Relation between OC and JS in J and P sub-samples

Ownership structure	JS1		JS2		JS3		JS4		JS5		JS6		JS7		JS8		JS9	
	J	P	J	P	J	P	J	P	J	P	J	P	J	P	J	P	J	P
OC1	.405**	.236**	.262**	.245**	.223*	.281**	.253*	.185*	.211*	.181*	-.048	.137	.198*	.135	.268**	.030	.362**	.316**
OC2	.484**	.512**	.345**	.498**	.386**	.430**	.347**	.448**	.336**	.547**	-.148	-.245**	.389**	.432**	.366**	.260**	.515**	.509**
OC3	-.352**	-.427**	-.294**	-.404**	-.317**	-.360**	-.257**	-.306**	-.309**	-.425**	.172	.168	-.249**	-.253**	-.214*	-.213*	-.414**	-.420**
OC4	.310**	.349**	.295**	.325**	.123	.267**	.091	.320**	.316**	.384**	.006	-.062	.261**	.258**	.193	.125	.224*	.285**
OC5	.401**	.497**	.387**	.459**	.351**	.382**	.157	.451**	.347**	.519**	-.140	-.139	.475**	.508**	.327**	.373**	.476**	.468**
OC6	.502**	.682**	.438**	.629**	.403**	.568**	.237*	.588**	.468**	.692**	-.093	-.204*	.397**	.476**	.318**	.400**	.504**	.634**
OC7	.405**	.665**	.378**	.563**	.325**	.584**	.320**	.574**	.324**	.668**	-.136	-.244**	.372**	.548**	.362**	.485**	.449**	.684**
OC8	.106	.001	.057	.012	.273**	-.018	.131	.103	.274**	.009	-.112	-.130	-.019	.018	.154	-.045	.266**	.040
OC9	.049	-.047	-.020	.086	.026	-.028	-.109	-.052	-.162	-.040	-.058	-.035	-.192	-.015	-.051	-.009	-.087	-.089

**p<0.01; *p<0.05

Table 3: Chow test results for sub-samples J and P

Ownership structure		JS1	JS2	JS3	JS4	JS5	JS6	JS7	JS8	JS9
OC1	RS	349.187	290.545	347.576	331.766	385.462	241.785	280.199	334.531	334.040
	RSJ	130.213	130.380	171.357	148.386	137.586	116.823	114.724	127.071	133.453
	RSP	209.390	154.524	176.207	180.873	233.850	120.622	164.506	202.072	181.155
	F	3.556	2.495	0.004	0.959	4.758	2.303	0.437	2.063	7.782
OC2	RS	289.195	254.064	309.406	291.286	316.944	231.658	238.349	307.593	281.244
	RSJ	119.151	123.341	153.423	139.387	127.767	114.539	101.376	118.575	112.863
	RSP	163.524	123.679	155.881	149.693	169.395	115.547	136.269	188.541	149.045
	F	2.906	3.593	0.042	0.962	8.388	0.861	0.373	0.196	9.302
OC3	RS	325.609	271.861	328.747	319.679	343.271	234.347	269.386	324.096	314.795
	RSJ	136.387	127.924	162.119	148.027	130.304	113.621	112.013	130.575	127.286
	RSP	181.393	137.564	166.542	169.701	198.091	119.430	156.804	193.116	165.758
	F	3.104	3.025	0.033	0.774	5.708	0.701	0.267	0.158	9.352
OC4	RS	339.291	277.980	356.286	329.660	343.210	241.399	267.738	331.409	349.100
	RSJ	140.746	127.779	177.563	157.217	129.608	117.089	111.273	131.767	145.877
	RSP	194.714	147.083	177.667	168.145	206.044	122.441	156.424	199.072	184.906
	F	1.439	1.429	0.375	1.664	2.837	0.983	0.019	0.217	6.977
OC5	RS	304.345	253.795	321.569	310.717	317.821	236.711	216.818	296.447	295.973
	RSJ	130.629	119.018	158.113	154.607	126.684	114.812	92.531	122.212	118.831
	RSP	166.990	129.822	163.305	149.166	176.665	120.526	124.525	174.052	157.088
	F	2.848	2.509	0.059	2.880	6.011	0.735	-0.138	0.078	9.158
OC6	RS	238.134	214.302	282.675	279.941	246.865	234.998	230.866	293.798	243.934
	RSJ	116.470	113.087	150.999	149.630	112.425	116.080	100.616	123.054	114.602
	RSP	118.671	99.341	129.551	122.605	126.030	117.806	129.647	169.946	120.344
	F	1.604	1.112	0.954	3.567	4.444	0.599	0.330	0.343	4.820
OC7	RS	270.553	242.219	290.700	274.255	292.845	232.661	222.859	275.428	261.387
	RSJ	130.219	119.975	161.293	142.270	128.863	114.922	102.895	118.971	122.568
	RSP	123.804	112.250	125.932	125.576	133.837	115.592	117.224	154.602	107.173
	F	8.199	5.423	1.524	3.015	14.459	1.174	1.568	0.854	17.356
OC8	RS	389.517	313.997	368.297	344.415	399.465	237.890	288.621	339.902	377.079
	RSJ	153.934	139.542	166.840	155.800	133.204	115.629	119.377	133.602	142.738
	RSP	221.763	164.376	191.206	185.306	241.733	120.853	167.151	201.847	200.925
	F	4.635	4.179	3.607	1.222	8.243	0.750	0.920	1.673	12.252
OC9	RS	391.138	314.399	372.766	348.132	403.866	241.693	286.800	340.201	384.259
	RSJ	155.320	139.931	180.170	156.634	140.240	116.697	115.011	136.510	152.411
	RSP	221.276	163.179	191.125	186.782	241.360	122.768	167.532	202.239	199.677
	F	4.865	4.693	0.499	1.730	7.352	1.172	1.898	0.540	11.513

Table 4: Hierarchical regression analysis for ownership structure of company (R square i F changes)

Independent	Dependent	R square	F change
OC1	JS1	.132	2.259
	JS8	.033	3.303
OC2	JS5	.269	6.255
OC4	JS4	.071	2.298
OC5	JS4	.132	3.918
	JS5	.254	2.374
OC6	JS1	.399	2.302
	JS4	.222	6.226
	JS5	.414	5.530
OC7	JS1	.351	4.469
	JS4	.235	2.613
	JS5	.354	10.135
OC8	JS9	.407	2.904
	JS3	.040	5.885
	JS5	.078	3.821
OC8	JS9	.113	3.384

RESEARCH ON DESIRABLE CHARACTERISTICS OF LEADERS IN THE SERBIAN ECONOMY

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ABSTRACT

This paper investigates which characteristics of the analyzed leaders are considered desirable, and what is the difference between man and women leaders in companies in Serbia. Although the characteristics of leaders surveyed throughout the 20th Century, a good overview of this approach can be found in two papers written by Stogdil (Stogdil 1948, 1974). In the first paper of Stogdil a group of important traits were established that were influenced by the fact that individuals in different groups become leaders. His results showed that the average individual who found himself in the leadership role is different than the average member of the group on the following attributes: intelligence, speed, ingenuity, responsibility, initiative, perseverance, confidence and sociability. In this paper, we have chosen the following desirable qualities: determination, honesty, professionalism, objectivity, independence, resourcefulness, culture of behavior, criticism, enthusiasm and courage. The paper will first analyze the desirable traits of leaders which, in the opinion of the surveyed managers supposed to have all leaders.

Keywords: desirable characteristics, leaders, Serbian economy.

INTRODUCTION

According to (Bryman, 1992) in the second half of the twentieth century the interest on leadership has risen as a set of features that explain how traits influence leadership. Based on the research of the characteristics of the leaders (Lord, DeVader and Alliger, 1986) led to the conclusion that the personal characteristics are largely associated with representations of individuals on leadership. Kirkpatrick and Locke (Kirkpatrick and Locke, 1991) went even further and suggest that effective leaders are actually a special type of people on several key aspects. The new interest in the approach to leadership as a set of properties, many researchers provide new arguments to emphasize charismatic visionary leader look more Bass, 1990, Bennis and Nanus, 1985, Nadler and Tusman, 1989, Zaleznik, 1977, Sajfert, M., Adzic S., Cvijanovic, J., 2012). This approach to leadership is present. First they established qualities of big men, then the impact of circumstances on leadership. Nowadays the key role of leader traits and effective leadership is emphasized.

Kirkpatrick and Locke (1991) in their work about the importance of leadership traits say: "it is unequivocally clear that leaders are not like other people." Based on the qualitative analysis they assumed that the leaders are different from those that are not based on six traits: energy, desire to lead, honesty and integrity, self-confidence, cognitive ability and knowledge of the business.

DESIRABLE FEATURES OF MANAGERS AND LEVELS

An interesting issue is whether the performance of managerial work at different levels of management, and specific experience and knowledge gained through this, affect the perception and evaluation of the importance of certain characteristics that should managers have. Table 1 shows the results.

Table 1: Ranking of the desirable characteristics and management level

Desirable characteristics	Management level					
	Top level		Upper middle level		Middle level	
	%	rank	%	rank	%	rank
Honesty	62	1	68	2	61	4
Determination	60	2	83	1	65	2
Professionalism	52	3	62	3/4	71	1
Objectivity	42	4	62	3/4	63	3
Enthusiasm	31	5	20	8/9	35	8
Personal culture	30	6	44	6/7	40	7
Autonomy	27	7	51	5	45	6
Resourcefulness	25	8	44	6/7	48	5
Criticism	22	9	20	8/9	22	10
Courage	19	10	17	10	25	9

As it can be seen from Table 1, the managers of the highest levels of management as the most desirable feature treat "honesty", afterwards "determination", "professionalism", "objectivity" and "enthusiasm". The least important features, in their opinion, are "courageous" and "criticism," in which there is a consensus of all management levels.

Upper-middle-level managers prioritize, "determination", while "enthusiasm" is considered less important feature and "autonomy" is in the fifth place. For mid-level managers the most important feature is "professionalism", followed by "determination", while "honesty" is less important for them than the higher levels of management, and it is put it fourth place. In contrast to the higher levels of management they value more "resourcefulness" and is placed in category of five most desirable features. While "enthusiasm", like for middle-level managers, is less important feature, putting it at the bottom of the order of importance and desirability.

Globally the data in Table 1 shows that the five most desirable characteristics for managers of the highest levels of management are four desirable characteristics for upper middle and middle level managers. This can mean, regardless of which level of management is concerned, all the managers, as a rule price the same value. Of course their order of preferences is different. Thus we see that with the reduction of the management "honesty" is becoming less and less desirable characteristics. This can mean that "honesty" is more tempted at the highest management level, while this is not the case in the middle or lower management levels. It is possible to interpret, that for managers at the middle management level, "honesty" in itself implies, and there is no need to emphasize it.

When it comes to the fifth place of importance of desirable traits, the interviewed managers give completely different answers. For some it's "enthusiasm" for other "independence" and "resourcefulness".

DESIRABLE FEATURES OF MANAGERS AND MANAGERS GENDER

Previous findings and the results of this study justify the assumption that gender of managers influences the perception and assessment of the desirability and importance of the characteristics that managers must have, to do their job successfully. Data to validate this hypothesis is shown in Table 2.

Table 2: The order of priority of desired characteristics and gender of Managers

Desirable characteristics	Gender of managers			
	Men		Women	
	%	rank	%	rank
Determination	71	1	92	1
Honesty	66	2	59	3/4
Objectivity	56	3/4	59	3/4
Professionalism	56	3/4	75	2
Autonomy	40	5	54	5
Resourcefulness	36	6	49	6/7
Personal culture	35	7	49	6/7
Enthusiasm	28	8	23	9
Courage	20	9	16	10
Criticism	19	10	28	8
Note: characteristics are listed in order of importance for men				

The manifested differences between men and women managers in the selection of the five most wanted features that managers must have, were less than expected and statistically insignificant. Table 2 shows that for women managers "professionalism" is much more important than for their male colleagues, who value more "honesty", while other differences are insignificant.

As already commented on, women managers are not different from their male counterparts in terms of choice of the five most wanted features that managers must possess. Differences between them are only in the order of "desirability".

Similar to the managers of middle management, women managers, "honesty" set between third and fourth place in order of importance, unlike their male counterparts who placed this characteristic in second place. This here could mean that women managers at lower levels of management, in which "honesty", is perhaps, less "threatened", simply implies, so they do not attach any significant attention to the top 5 of desirable characteristics of managers.

So, as it can be seen in Figure 2, women managers some for them desirable characteristics value much more and stress out than their male counterparts. Women managers strongly emphasize "determination" and "professionalism", while other characteristics give almost the same meaning. That is not by accident. It is well known that women in many situations, including business are much more decisive than male managers. The same goes for their "professionalism", perhaps because there are significantly less women managers than men, so these women who are managers are the best managers.

FEATURES THAT THE ANALYZED MANAGERS HAVE AND MANAGERS GENDER

As far observed differences in the preferences of individual characteristics of managers, depending on the gender of managers, the question arise whether there are some differences in the evaluation of the importance of personal characteristics of the studied managers.

From the data in Table 2 we can see that women managers generally do not differ from their male counterparts when it comes to choosing the five most valued things about the managers. Of the five most desirable characteristics for managers, their female colleagues have chosen only four, of course, with a different order of importance. For women as for men managers the desirable property is that they are "people who can be trusted" (second rank) and "great understanding of the work" (fourth rank). While for the men managers "ability to make decisions in different situations" is the most desirable feature, women managers put this characteristic of the importance in 3rd place. The reverse situation between men and women managers is when it comes to feature "full

commitment to work", which is most important for women, and the most desirable characteristics they possess, and for men it is the third place of importance.

While the male managers "give freedom to decide associates" fifth most important characteristics of managers, for women are equally, "understanding of associates" and "ability to motivate staff."

While for the male managers, as already mentioned, the most important feature is their "ability to make decisions in different situations," women managers in the first place of importance placed "total dedication". Although the women probably would not be expected to emphasize as their most important feature, there is a number of reasons.

CONCLUSION

The result of this study also showed that one does not become a leader on the grounds that he possesses certain qualities, but these qualities must be relevant to the situation in which leaders operate. Leaders in one situation may not necessarily be leaders in another. The results showed that leadership is not a passive state, but rather the result of a continuous relationship between the leader and other members of the group. This work marked the beginning of a new approach to leadership studies that have focused on the desirable qualities of leadership.

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RESEARCH ON UNDESIRABLE CHARACTERISTICS OF MANAGERS IN SERBIAN ECONOMY

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ABSTRACT

The idea of this paper is to review the whole issue about the impact and characteristics of managers on change management in construction companies; their numerical presentation and preparation of a model that delivers results with a certain accuracy. This research has highlighted some problems that arise in the process of construction companies with a focus on solving specific practical problems. The information about the state of the industry on the planned industrial development incentives for the year 2013 with projections for 2014 and 2015 the Serbian government, under the goal of creating an economy based on knowledge and innovation, said that the main factors of competitiveness in the global economic development, knowledge and innovation are the new ways of managing.

Keywords: undesirable characteristics, managers, Serbian economy.

INTRODUCTION

The question of the personal characteristics of successful managers is present as explicit and implicit problem throughout the development of managerial theory and practice. Theodore Levitt (Levitt, T., 1974). Said: "The knowledge about personal characteristics is related to the obvious fact that, despite all the knowledge and desire not everyone can be a successful manager. There is a growing argument that there are inherent qualities managers associated with the personality of a manager. "

Research shows that people have different cognitive styles, ie. specific ways of addressing the problem and data, decision-making and same. Some studies show that job satisfaction is related to the characteristics of persons, or her personality, and also with the effects of pro-social behavior and such. According to (Bass, BM, Stogdills, 1981). "An increased number of authors consider that the personality traits of the followers of managers, successful from unsuccessful managers and high-level managers of those low levels." Some though, (Kets de Vries, M.F.R, Miller, D., 1986). claim: "Based on the research, suggest that the personality of top managers can influence the strategy and organizational culture, as well as the organizational structure." It is shown that the need for achievement of the director, with the size of the organization is most closely associated with structural variables, whereas some traditional variables, such as, for example, technology and uncertainty of the environment, had little impact. These and other findings refer to the great importance of psychological factors, especially personality (crown) managers, the wider organizational behavior, and not only on the performance of managers. It can be easily concluded

that the most demanding professions have their own kind of "real materials", ie. personality characteristics that contribute to success.

UNDESIRABLE CHARACTERISTICS OF MANAGERS AND LEVELS

In addition to the desirable and important features for managers there are those that managers are not supposed to have, or that are objectionable to the successful conduct of managerial work and the success of managers. In Table 1 are shown the characteristics that the analyzed managers believe are the least desirable for managers.

Table 1: Undesirable characteristics of managers and management level

Undesirable characteristics	Management Level					
	Highest		Upper middle		Middle	
	%	rank	%	rank	%	rank
Dishonesty	60	1/2	66	1/2	67	3
Shallowness	60	1/2	63	3	75	1
Not professional	52	3	66	1/2	60	5
Hesitancy	47	4	59	4	72	2
Non Objectivity	36	5/6	47	5	62	4
Rashness	36	5/6	37	7	39	7
The tendency to gossip	34	7	18	10	21	8
Not independent	16	8/9	44	6	52	6
Uncritical	16	8/9	23	8	11	9/10
Appeasement	11	10	14	11	11	9/10
Permissiveness	8	11	20	9	8	11

Note: undesirable characteristics are listed in order of desirability for top-level managers

Table 1 shows us that the managers of the highest levels of management think that the undesirable characteristics of managers are "dishonesty" and "shallowness" upper-middle-managers "dishonesty" and "non professionalism", while middle managers in the first place have "shallowness" and "hesitancy". They generally emphasize the undesirability of some more features than the top-level managers. Global view of Table 1 reveals that the top five most important unwanted manager characteristics are in the top five at every level of management. This means that all managers, regardless of where the managerial level is, see undesirable equal managerial characteristics, however, the managers of various levels of management attach different rank.

Table 2 Undesirable qualities of managers and gender

Undesirable characteristics	Gender of managers			
	Man		Women	
	%	rank	%	rank
Dishonesty	63	1	65	4
Shallowness	58	2	81	1
Hesitancy	56	3	69	3
Not professional	55	4	74	2
Non Objectivity	46	5	50	5
Not independent	36	6/7	46	6
Rashness	37	6/7	36	7
The tendency to gossip	24	8	19	9/10
Uncritical	17	9/10	22	8
Permissiveness	17	9/10	8	11
Appeasement	10	11	19	9/10

Note: The characteristics are listed in order of desirability for male managers

When it comes to negative and undesirable traits of managers, there are some differences in how the managers of different genders are considered for properties. The results are presented in Table 2. For male managers the least desirable trait of managers is "dishonesty", while for women it is "shallowness." Women managers see as an undesirable feature "non professionalism", while equally undesirable are "Hesitancy" and "Dishonesty", although women, especially the "Hesitancy" over stress (71% women vs. 58% men).

Again, it turned out, as many times before, that women did not differ from their male counterparts when it comes to choosing the five most unwanted managers trait. The differences between them are only in the order of "undesirability". Women, like men, two of five most unwanted traits (indecision and lack of objectivity), gave the same rank (3 and 5), and the other three least desirable characteristics of a manager have different rank in male and female. The biggest difference between "dishonesty", where men have the highest rank, that is, the first place by being unwanted, and women's only the 4th place.

FEATURES OF ANALYZED MANAGERS AT MANAGEMENT LEVELS

How managers of different levels of management perceive their main features and how that differs shows Table 3. For top managers and middle managers the most important personal characteristics that are considered are "people who can be trusted," while senior middle level managers consider their most important "decision-making ability in a variety of situations."

Surprising is that a characteristic "response to the challenges of the environment" between the 5th and 6th place of importance for managers at the middle level management, and is only at 8th place for the highest level of management. One would expect, at best, a reverse order of importance because it is the top management who is most willing to respond to the challenges of the environment.

There is almost complete agreement among managers of all levels of management, who are least desirable characteristics. These are "personal charisma", which is the last on the list of desirable characteristics of managers at all levels. Slightly less desirable characteristic is "always say what you mean," which is on the 9th and 10th place on desirability.

One of the questions that were included in this study, asked the managers to list, in order of importance, the five most important traits that characterize managers. The most important feature, most of the analyzed managers (52%) believes that "people who can be trusted." The following is the decision-making ability in a variety of situations (47%).

Table 3: Order of importance of personal characteristics of managers and management level

Personal characteristics	Management level					
	Highest		High medium		Medium	
	%	rank	%	rank	%	rank
A person who can be trusted	52	1	64	2	75	1
Ability to make decisions in different situations	47	2	70	1	65	3
Ability to motivate associates	44	3/4	38	6/7	24	8
Full commitment to work	44	3/4	59	3	70	2
Perfect understanding of work	37	5/6	47	4	57	4
Giving freedom to associates in decision making	37	5/6	46	5	29	7
The ability to find the best associates	29	7	19	10	18	9
Responding to the challenges of the environment	26	8	29	8	52	5/6
Understanding associates	19	9	38	6/7	52	5/6
Always says what he thinks	11	10	23	9	16	10
Personal charisma	6	11	13	11	6	11

Note: Characteristics are listed in order of importance to the highest level

CONCLUSION

Illustration of the differences in perceptions of the most important qualities that characterize men and women managers has more than five traits, as here, the difference slightly larger and do not relate to the order of five essential characteristics, but male and female managers differ in what features are classified into five major. Again, it turned out, as many times before, that women did not differ from their male counterparts when it comes to choosing the five most unwanted trait managers. The differences between them are only in the order of "undesirability".

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EDUCATED AND SATISFIED WORKER- FOUNDATION OF MODERN AND SUCCESSFUL COMPANY

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ABSTRACT

Modern business work and processes are technology intensive and they require educated and quality work force. Priority aim of human resource management today is to attract and keep those workers who can mostly contribute to successful and competitive company work with their knowledge and skills. This paper analyzes factors that determine quality level of workers contribution with the focus on job satisfaction. Job satisfaction is complex attitude encompassing assumptions about work, believes, quality assessments. Following effects are results of job satisfaction: 1) productivity rise, 2) workers are more devoted to their obligations and tasks and 3) they are less absent from their work. Recent research results show that on job satisfaction influence factors such as: gender, age, education level, working experience, working conditions, salaries, working time and promotion. The aim of empirical examination in this paper is to assess the satisfaction level of workers in the sample and to identify factors that contribute to professional satisfaction with the final aim to assess effects of job satisfaction on successful and competitive company work.

Keywords: human resource, job satisfaction, competitive advantage, education, working skills.

INTRODUCTION

Job satisfaction refers to the general attitude of an individual in relation to his work. It can be defined as "the cognitive, affective and evaluative responses of an individual to his job." (Greenberg, B., Baron, R. A., page 157) Job satisfaction is complex attitude encompassing certain assumptions and beliefs about work (cognitive component), feelings towards work (affective component) and evaluation of work (evaluative component). Job satisfaction is one of the most researched topics in the field of human behavior in organizations. It is considered that a satisfied employee is a productive employee, and that the success of an organization cannot be achieved with dissatisfied employees.

THEORETICAL BASES OF JOB SATISFACTION RESEARCH

Theoretical bases of job satisfaction can be found in Locke's theory of value (Greenberg, B., Baron, R. A., page 161-162). According to this theory, job satisfaction exists in the extent to which people are satisfied with the outcome of the job itself. The more an individual benefits from the outcome, the more he will be satisfied. Not only does the size of a reward affect job satisfaction, but the received reward as well. According to this theory, employees with low wages need not be unsatisfied if their salary is not the most important factor in job satisfaction. Anticipating job satisfaction of an individual, we must take into account not only the satisfaction of certain aspects of a job in which an individual is engaged in, but also his expectations from this job. Discrepancy

or deviation from the expected satisfaction regarding certain aspects of a job affect the overall job satisfaction but not the amount of satisfaction itself. Locke's theory draws attention to another important phenomenon. People have a tendency to associate the amount of satisfaction with certain aspects of a job with the amount of discrepancy between expectations and satisfaction. In those aspects where the discrepancy between expectations and satisfaction is high, the absolute amount of satisfaction tends to decline. Studies have shown that employees were most dissatisfied with those aspects of a job where there was greatest discrepancy and vice versa.

The theory of value is important because it emphasizes the aspects of a job that need to be changed so that people are more satisfied with it. It emphasizes the fact that these issues may not be the same for all people, but it can be any aspect of a job where people perceive serious discrepancy. Emphasizing values, Locke's theory suggests that job satisfaction depends on various factors that can be grouped into two categories: organizational and personal factors of job satisfaction (Robbins, S., 2003). Organizational factors of job satisfaction are job itself, the reward system, pleasant working conditions, colleagues, organizational structure. Personal factors of job satisfaction are: balance between personal interests and work, work experience and age, position and status, overall life satisfaction.

EDUCATED AND SATISFIED WORKER

In contemporary global business conditions, companies are faced with increasing competition and demand for flexibility and continuous business improvement. In such business environment, modern companies must acknowledge the fact that technological and business capital depends on human capital - working skills, education, relevant experience, and career development. Also, the educational level of the work force is directly correlated with the ability to assess the factors that determine job satisfaction of employees and their good performance.

Depending on the company strategies towards human resource potential, the consequences of contemporary work techniques may be reasonable in relation to downsizing, retraining of those that are made redundant, employing new personnel compatible with the demands of new technology and similar, or negative - resistance, non-cooperation and dissatisfaction.

The acceptance period of the contemporary business and technological changes in the company, and the reactions to it must be accompanied by adequate management, to ensure that personnel motivation and its productivity are not significantly affected, reduced or compromised. A significant issue in relation to this is certainly the issue of education because flexibility and adaptability are becoming major determinants of an organization, and of the work force.

Regarding the fact that many jobs are disappearing, and for the new ones different skills and knowledge's are required, the company must take this into account and must make plans within its personnel policy and it has to fit the activities of education of existing personnel as well as to provide activities of scholarships for those personnel that may become scarce. Unfortunately, there are few companies that can simultaneously develop plans for their human capital and work on plans that predict changes in the types of jobs, the required workforce and education of the existing workforce, and to set aside enough money for so-called permanent education of the personnel, who will be able to meet the challenges of new technology.

In addition to adequate education policy at all levels of a company, education and training system in the country is of great importance. Whether the employees can acquire new knowledge in accordance with the development of modern management techniques or the fact how educated young employees who have just finished their schools are depends on the school system and education in the country. The quality of the education system of the country and the efficiency of labor market institutions that will quickly divert and re-qualify their workers, largely determines the impact of new technologies and management practices in the human resources of the country (Vidas-Bubanja, M., 2005). The answer, of course, lies in the education system of the country. Germany, for example, is known for its intensive training of young workers during their high school education, while Sweden has developed a system of training of unemployed workers, on the basis of social programs to seek new jobs for laid-off workers.

Education and training is becoming an integral part of every job. The following axioms in the field of human resources management in the 21st century are considered (Vidas-Bujanja, M., 2007):

- continuing education is essential and mandatory for employees and employers;
- information technology affects all jobs - no one is safe, nor can its impact be ignored;
- change is normative;
- work is highly interdependent in terms of business, in terms of communication and transport in different areas of activity;
- there is no standard way on the career ladder and progress.

These transformations of the workforce usually do not follow the requirements of technology at its own pace, so there is a resistance, or transfer to other companies and other countries. How much is knowledge becoming an important factor of development is best shown in the examples of companies which change its structure and policy towards continuous learning and continuous improvement in order to be successful. Knowledge management is becoming a primary concern. Companies that want to remain competitive not only provide training and learning at all levels, but often organize activities for their own universities.

EMPIRICAL STUDY OF JOB SATISFACTION IN SERBIA

At a time when Serbia is undergoing a period characterized by economic instability and high unemployment, the survey of job satisfaction in local companies represents a challenge which should enable the determination of the factors that have a critical influence on satisfaction and on the productivity of the local workforce as well. The study of job satisfaction is part of a larger study concerning the effects of organizational behavior on organizational commitment (Lekić, S., pages 171-186). The aim of the research was to assess the job satisfaction of workers included in the sample, and to identify the factors that contribute to professional satisfaction with the ultimate aim of reviewing the effect of employee's satisfaction on the success and competitiveness of business.

The study included: two public companies (PUC "Beograd put" and The Public Company of PTT Communications "Srbija"), a higher education institution (Belgrade Business School-Higher Education Institution for Applied Studies) owned by the State according to its structure of property, and several small private companies that have not been segmented, but due to the limited space in the paper tagged as "Other companies". Of the total number of respondents (N492), PUC "Beograd put" (hereinafter referred to as Beograd put) had 219 participants (44.51%), the Public Company of PTT Communications "Srbija" (hereinafter referred to as PC of PTT) 141 (28.66%), Belgrade Business School-Higher Education Institution for Applied Studies (herein referred to as Belgrade Business School) 54 (10.98%) while in the group of other companies the sample included 78 employees (15.85%).

To measure job satisfaction, an adapted questionnaire of job satisfaction was used (Gregson, pages 747-750). Measuring job satisfaction was carried out using the model for measuring satisfaction of the employees at the level of the company which is based on the examined (measured) dimensions of employee's satisfaction as follows: c1 – satisfaction with earnings, c2 - satisfaction with the cooperation with closest associates, c3 - Satisfaction with the possibility of advancement in the hierarchy, c4 - satisfaction with the system of rewarding stimulus, c5 - satisfaction with cooperation and relations with superiors, and c6 – satisfaction with job contents. The point is to find the average relative score in the survey regarding the particular dimensions of the overall satisfaction of the employees.

In this part of the study measuring of parameters of satisfaction by applying the analysis of variance and regression was used (Christensen, 1996). In assessing the satisfaction of certain parameters in the study the following Likert scale with five possible answers is used: 1 - very dissatisfied, 2 - unsatisfied, 3 - satisfied, 4 - fairly satisfied, 5 - very satisfied.

Employees' satisfaction is evaluated on the basis of the six different sizes (c_{ji}) and the coefficient of satisfaction of individual employee receives as:

$$SZ_i = \frac{(c_{1i} + c_{2i} + c_{3i} + c_{4i} + c_{5i} + c_{6i})}{6} \quad (1)$$

where: $i=1, \dots, n$; while n stands for the total number of employees.

This coefficient shows the average value of employee's satisfaction based on the evaluated (rated) six dimensions. For the analysis of satisfaction of employees at the company's level as a whole, the average value of these dimensions of satisfaction are taken, on the basis of which the coefficient of employees' satisfaction in the whole company is provided as:

$$SZ = \frac{(c_1 + c_2 + c_3 + c_4 + c_5 + c_6)}{6} \quad (2)$$

while:

$$c_j = \frac{\sum_{i=1}^n c_{ij}}{n}, (j=1, \dots, 6) \quad (3)$$

Based on these relations the matrix of employees from different companies is made, in other words, their evaluation from individual dimensions of satisfaction. Then the average evaluation of total job satisfaction for the whole sample is determined, as well as for the individual companies included in this research.

Total job satisfaction is shown in Table 1.

Table 1: Total job satisfaction

Company	c ₁	c ₂	c ₃	c ₄	c ₅	c ₆	SZ
PC "Beograd put"	2,91	3,23	2,82	2,78	3,05	3,09	2,98
PC "PTT"	2,27	3,29	2,53	2,26	3,30	3,05	2,78
Belgrade Business School	3,83	3,78	3,65	3,56	4,02	3,85	3,78
Other Companies	2,88	3,32	2,80	2,40	3,35	3,31	3,01
Whole sample	2,82	3,32	2,82	2,66	3,28	3,19	3,02

By using the covariance matrix of different parameters of job satisfaction, correlation coefficients of evaluation of various parameters were calculated. Covariance matrices of evaluations from different satisfaction parameters are given in Table 2.

Table 2: Covariance matrices of evaluations from different parameters of job satisfaction

	c ₁	c ₂	c ₃	c ₄	c ₅	c ₆
c ₁	1,154	0,490	0,692	0,777	0,565	0,518
c ₂	0,490	0,894	0,503	0,509	0,592	0,496
c ₃	0,692	0,503	1,053	0,839	0,588	0,553
c ₄	0,777	0,509	0,839	1,197	0,658	0,565
c ₅	0,565	0,592	0,588	0,658	1,025	0,607
c ₆	0,518	0,496	0,553	0,565	0,607	0,856

Table 3: Coefficient matrices of correlation of various parameters of job satisfaction

	c ₁	c ₂	c ₃	c ₄	c ₅	c ₆
c ₁	1,000					
c ₂	0,483	1,000				
c ₃	0,628	0,518	1,000			
c ₄	0,661	0,493	0,747	1,000		
c ₅	0,520	0,618	0,566	0,594	1,000	
c ₆	0,521	0,567	0,582	0,558	0,647	1,000

In the entire sample of examinees the strongest positive correlations between satisfaction with the progress in the hierarchy and satisfaction by rewarding stimulus (correlation coefficient, $\rho = 0.747$) is observed. The weakest mutual relationship is observed between income satisfaction and satisfaction with the cooperation with the associates ($\rho = 0.483$). After determining the mutual relationship of evaluations of various parameters of satisfaction for the entire sample and for individual companies

included in the research (given in appendix), the interrelationships of the individual parameters of satisfaction and overall satisfaction using the same methodology are explored.

Table 4: Covariance matrices of evaluations from the parameters of individual satisfaction and overall satisfaction

	Entire sample	PC "Beograd put"	PC "PTT"	Belgrade Business school	Other Companies
c ₁	0,699	0,530	0,531	0,596	0,793
c ₂	0,581	0,498	0,507	0,646	0,638
c ₃	0,705	0,576	0,508	0,676	0,883
c ₄	0,758	0,642	0,510	0,699	0,938
c ₅	0,672	0,586	0,505	0,661	0,821
c ₆	0,599	0,469	0,480	0,665	0,717

Table 5: Coefficient matrix of correlation of the individual parameters and overall satisfaction (SZ)

	Entire sample	PC Beograd put	PC PTT	Belgrade Business school	Other Companies
c ₁	0,796	0,797	0,738	0,725	0,818
c ₂	0,751	0,792	0,750	0,747	0,700
c ₃	0,840	0,851	0,764	0,776	0,865
c ₄	0,847	0,893	0,779	0,809	0,818
c ₅	0,812	0,852	0,751	0,794	0,848
c ₆	0,792	0,804	0,723	0,830	0,789

RESEARCH GOALS

Often the need of importance of building employees' satisfaction is emphasized, because it is assumed that the mood is essential to the functioning of the organization. Employees' satisfaction has three main effects- satisfaction and productivity; absence from work; fluctuations (Robbins, S., Coulter, M., p. 345).

Dissatisfied workers have several ways to voice their discontent and dissatisfaction. Employees' responses to job dissatisfaction can be classified according to two dimensions: active - passive reaction and constructive - destructive one (Robbins, S. 2003). In this way, we obtain four types of employees' reactions to job dissatisfaction which deals with:

1. *Abandonment* – active-destructive responses, leaving the company due to dissatisfaction;
2. *Neglect* - passively letting the situation to get worse, increasing absence, reducing effort, increasing write-offs;
3. *Protest* – active-constructive efforts to remove the causes of discontent;
4. *Loyalty* - passive, constructive wait for things to improve.

Results of the research of companies in Serbia. By the analysis of Table 5 the following correlations are observed:

- Average evaluation of satisfaction with earnings is strongest correlated with overall job satisfaction in the small private companies, and the weakest correlated in Belgrade Business School. This result is explained by the fact that small businesses that are privately owned rated the factor of satisfaction as very low (basic needs are not met), while those who are employed in Belgrade Business School rated this factor with a high mark. For this reason, the management of small private PC companies should pay more attention to the factor of satisfaction with earnings as the primary determinants of overall satisfaction.
- Average evaluation of satisfaction with the cooperation with the associates is strongest correlated with overall job satisfaction in PC „Beograd put“ , where the factor of job satisfaction was rated as the lowest of all surveyed companies, and the management of the company should work on communication and relationships with subordinates. The weakest correlations are observed in the group of small businesses, where employees, due to flatter

- hierarchical structure, provide better communication and closer relationships with co-workers.
- The strongest correlation of average evaluation of satisfaction with the possibility of advancement in the hierarchy with an overall satisfaction is observed in the group of small private companies, and the lowest in „ PTT“. In other words, the management of small private companies could pay greater attention to creating conditions of progress on the vertical hierarchy for the internally employed.
 - Average evaluation of overall satisfaction with the system of rewarding stimulus is most closely correlated with overall satisfaction in PC „Beograd put“, while the weakest correlation was observed in „PTT“.
 - Average evaluation of satisfaction with the cooperation with superiors is most closely correlated with overall satisfaction in PC „Beograd put“, while the weakest correlation was observed in „PTT“. For this reason, company „Beograd put“ should, in order to increase the overall satisfaction of employees, improve the system of relations between employees and superiors.
 - Average evaluation of satisfaction with job content is most closely correlated with overall satisfaction in Belgrade Business School, while the weakest correlation was observed in „ PTT“. For this reason, the management of Belgrade Business School needed to clearly define and improve the content of work in order to increase the overall satisfaction of employees.

CONCLUSION

Job satisfaction is a very important parameter, whose influence on the productivity and quality of work is dominant. This complex phenomenon involves attitudes about work that affect not only the motivation, but also the career, health and relationships with co-workers. Numerous studies have shown that job satisfaction depends not only on the nature of the work, but also on the expectations of the individual in relation to work. Generalizing carries a certain amount of risk with regard to the fact that there are various subjective factors and expectations in a variety of professions relevant to job satisfaction.

Job satisfaction of employees in the companies included in the sample has a large impact on the quality, effectiveness and operational efficiency. Besides the importance of customers and service users, professional satisfaction of respondents is directly related to the absence from work, interpersonal relationships and work organization. In large number of countries regularly research on job satisfaction are conducted. Based on the data collected it is possible to identify gaps in work organization. Employees covered by the sample are faced with an increased risk of job dissatisfaction. Studies have shown that job satisfaction usually affects the following factors: gender, age, level of education, work experience, working conditions, wages, working hours and promotions.

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CODES OF ETHICS IN PUBLIC RELATIONS

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ABSTRACT

Modern society cannot be imagined without public relations nowadays because of the influence of democratic processes. Societies are getting more open and transparent in all segments. The interests of certain segments of publicity are multilayered and differentiated so it is important for companies to organize two-way-system of communication in order to create more positive picture about the company and to harmonize the interests of publicity and the company. However, behaviour of the company, its employees and executives must be in accordance with the principles of corporative responsibility which represents one of the top principles of modern business performance. Business decisions within the company influence both the company and the society as a whole and because of that companies and other organizations are obliged to improve their positive influence and reduce negative activities. Therefore, the issue of business ethics is increasingly significant because it is directly linked to the principle of corporative responsibility. Public relations are also governed by the corresponding codes that oblige PR experts in their contacts with publicity, media and other professionals.

Keywords: public relations, business ethics, codes of ethics

INTRODUCTION

Public relations represent a specific type of business activity and communication of a company with its internal and external publicity. The necessity of creating a favourable picture about the company and eliminating misunderstandings and problems in communication between publicity and the company in this fast process of exchanging information among people, has imposed the need for organization of special services dealing with these activities. Although the term "public relations" appeared in USA in 1920s it is not the notion related only to modern society. Certain forms of activities which represent the essence of this notion we could find in the ancient time as well. However, development of professional public relations could be traced from the beginning of 20th century when big corporations in USA started to develop this activity.

There are numerous definitions of public relations in theory. They are sometimes very different in volume and content. According to the definition of Institute for public relations (IPRA), public relations represent versatile, planned and constant effort to make and keep successful understanding between organization and publicity (Milisavljević, 2001). According to (Vračar, 1997), PR is a communication activity of a company with its external and internal publicity. He adds that in current development phase of market economies we can hardly find a company which can neglect reactions of publicity related to its activities which leads to full professionalism of this kind of communication.

According to (Vračar, 1997), vertical communication with employees as well as horizontal one should enable involvement of employees in all types of activities within the company which makes conditions for creating positive atmosphere among them and which is reflected in the business results. Such a behaviour makes a foundation for building the concept of corporate culture and positive picture of a company in public. Black (2003) states that true and regular communication between management and employees represents precondition for harmonious atmosphere at work

and gives 7 conditions that should be fulfilled in order to create ideal relations. They are: complete and true two-way information, trust, healthy and safe conditions, sincere and fair pay, permanency of work without conflicts, satisfaction and pride in the company and belief in its future.

BUSINESS ETHICS AND PUBLIC RELATIONS

Every company should respect certain moral norms of behaviour when performing business activities. These norms were especially developed after Industrial revolution along with development of forms and ways of production. According to (Đorđević, Andjić, 2004), business moral is consisted of principles and norms of human behaviour in the sphere of business activities performance in organizations. Business ethics studies implementation of personal norms on activities and aims of companies. In every society there are general rules of behaviour such as customs, rules and regulations which represent forms of social behaviour. According to (George, 2003), corporations are morally responsible for their activities to wider publicity or a society in general. It means that they have moral obligation not to hurt those influenced by their activities. Corporative moral responsibility originates from obeying moral requirements. However, although moral obligations are sometimes correctly identified with social ones – because they have to be established by moral society - there is a question about which society can be considered more or less moral since social and legal requirements considerably differ from society to society.

Business customs were firstly developed in the field of commerce which has always had a special significance for development of human society. The first traces of business customs and rules were found in ancient times but only after great geographic discoveries and development of commerce they became important. After Industrial revolution a great number of commercial rules was codified on national level. Nowadays, the greatest part of business behaviour is arranged by national laws and international contracts. In the last 50 years, as a result of globalization in all segments (from economy via technology and communication to culture) business ethics has got global character. Accordingly, business rules of behaviour that are not codified on national level are defined and codified on international level. On the other hand, customers are becoming increasingly informed and educated in global economy thanks to fast development of Information and Communication technologies. In most developed countries legislation whose objective is preventing degradation and destruction of the environment and natural resources is being developed. . All of this influences the activities of business organizations and development of their consciousness and responsibility towards society in general.

Company's management has the greatest responsibility for improving quality of business in accordance with the principle of corporative responsibility. Making business decisions, among the rest, leads to facing ethical dilemma. Reactions in these situations depend on personal characteristics of executives and on characteristics of corporative culture. Modern executives must have knowledge, skills and attitude in order to satisfy successfully tasks imposed by modern organizations. Besides, sense for team work, multidisciplinary education, creativity, inventiveness, flexible behaviour and offensive behaviour are desirable personal characteristics of executives.

Ethical issue in public relations is only a part of much wider issue which includes business ethics and ethical behaviour in modern world. Black (2003) considers business ethics the most important issue of all professionals who deal with public relations and represent their employers and clients trying to provide public support for their organizations. Moral behaviour of an organization determines everything what this organization does and not only what it says. Ethical values are connected to culture of every organization. Corporative culture can encourage or inhibit members of corporation and it includes its atmosphere, values and practice.

CODES OF ETHICS IN PUBLIC RELATIONS

Modern business means respecting generally accepted norms of behaviour which are, in great extent, formalized and transferred into written rules or codes of behaviour. In this way, certain business decisions, activities or individual behaviour can be estimated from the view of business ethics. Codex represents a collection of written rules which are obeyed by certain professions (for example, codex of professional ethics of marketing experts, accountants, bankers, public relations experts, etc.) or individuals performing certain business activities. According to some opinions ethical codes should encourage certain way of thinking and models of relations which will lead to desirable behaviour. Basic advantages of ethical codes are reflected in the following: they explain what is ethical behaviour, encourage thinking about ethical issues, define the limits of acceptable and unacceptable behaviour, enable employees to reject doing unethical activities, provide mechanisms of transferring executives' philosophy in the field of ethical behaviour, make conditions for simpler acceptance of basic ethical principles by employees, etc.

Lisbon code was officially adopted in General assembly CERP in Lisbon, on 16th April 1978 and it was changed on 13th May 1989. It is consisted of three sections. In the first section criteria and norms for professional qualifications of experts are adopted. Article 1 of this code says that every professional member of national association will be taken for PR expert obliged by this code.

Section II numbers general professional obligations of its members. According to articles within this section, PR experts are obliged to respect the principles from Universal Declaration on Human Rights, that they will respect freedom of expression and press, especially the right of individuals to be informed. While doing it they will take care not to impair personal dignity and integrity and they will do that in accordance to public interests. PR expert must show honesty, intellectual integrity and loyalty and is obliged not to give information for which he knows or believes to be false or deceptive. According to this, all PR activities can be easily identified and information must not serve as deception of third parties. Article 5 of this section obliges PR experts to adhere to national codes of professional behaviour and the law in force in any country in which he performs his profession and to refrain from achieving personal publicity.

In the third section of Lisbon code Special professional obligations towards clients or employers, obligations towards publicity and media, towards colleagues and profession are specified. In accordance to obligations towards clients and employers, PR professional will not represent employers and clients whose interests are contradicted and mutually competitive; they must respect professional confidentiality, can accept fees for their service only in the form of salary or fees which do not go beyond the framework determined by their professional results. Principles of this code oblige PR professionals not to take activities which may cause serious violation of professional conduct, so they must inform a client or employer if such violation occurs and insist on respecting the principles no matter the possible consequences on their future cooperation.

Obligations of PR towards publicity and media mean that PR preprofessionals will take care of the right of publicity to be informed, by giving as much information as professional confidentiality permits. By doing this they will respect the rights and independence of news media, they will not misguide publicity and will give information free of charge or any hidden compensation for their use.

Article 17 which regulates Obligations towards colleagues PR professionals prevents unfair competition with colleagues and making any damage to their job or reputation. Finally, Articles 18 and 19 regulate relations of PR professionals towards profession. These articles obligate professionals to avoid acts which could make damage to reputation of their profession. Here is especially emphasized obligation of loyalty towards national association, its efficient work and reputation. Every PR professional is responsible for reputation of the profession. Beside personal respect of the Code, PR professionals must inform wide publicity about this Code, make reports to

appropriate disciplinary bodies related to any violation of the Code and take measures within their power to enable realization of decisions.

Another important document which reflects the role of ethical principles in public relations is Code of professional standards of PR society of America. It is officially adopted at the Assembly of PRSA in 1954 and revised in 1959, 1963, 1977 and 1983. Comparing this Code with Lisbon Code we can notice a great number of similar and the same norms. In Declaration of principles is said that the members of PRSA base their professional principles on basic ethical values and dignity of personality, considering that human rights respect, freedom of expression and press are essential assumptions for performing PR practice. Professional conduct, respecting truth, accuracy, justice, responsibility towards publicity as well as permanent personal and professional improvement are necessary characteristics of PR experts. Code of professional standards for PR practice numbers principles which regulate professional conduct of PRSA members, and which include behaviour towards clients, employers and the whole publicity, protection of confidential information, prohibition of doing jobs that involve corruption, deliberate spreading of false and incomplete information, misuse of licence, endangering of professional reputation or field of work of other members. Code of PRSA by its compulsory principles for PR professionals represents a collection of norms which have greater importance than loyalty towards any institution or an individual and if certain activities are in contradiction with the principles of this Code, every member of PRSA must break the relations with that party.

Beside these codes, International association for public relations expect from its members to obey Athens Code, too. It is a Code on ethics and morals based on United Nations Charter on Human Rights.

CONCLUSION

Codes of business conduct in public relations represent written norms and principles of conduct which PR professionals should obey in their professional life. These codes, whether they are adopted on national or international level, regulate behaviour of PR professionals towards their profession, their colleagues, employers or clients and towards media. Since these codes are based on norms of business ethics their role is to prevent possible irregularities in the work of PR experts and to help in increasing reputation of the profession. Basic principles which are incorporated in UN Charter on human rights such as respecting human rights and dignity, freedom of expression and press, the rights to be informed, in the same time represent the essence of code of professional conduct in PR practice. By repecting these codes a desirable ambience is created for achieving positive influence of public relations on the surroundings and in this way the basic objective of PR activities is realized – creating mutual understanding and eliminating misunderstandings between the company and publicity.

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Session C: RESEARCH AND DEVELOPMENT MANAGEMENT

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Session Editor's Preface

Opening the economy causes the necessity to face up with competition on the international market. As regards to international competitiveness, it is also referred to a wider notion – competitive capacity, which is evaluation of development potential of a country or enterprise and it does not only refer to real perspective but rather to subjective one, i.e. concerning quality, organization and management and ability of the subject to assume effective development strategy. At the same time, at present, factors which are to a large extent non-material determine competitive capacity of the country. Therefore, many factors shape country's competitive capacity which, apart from system conditions, is dependent on the factors connected with broadly defined human capital and innovation as well as entrepreneurship.

Accordingly, it can be said that the following aspects are decisive as regards to international competitive capacity of domestic economy: human resources including skills, resources and effectiveness of using natural resources, physical capital, and it also depends on the level of development and effectiveness of using technical knowledge, efficiency of social and economic system including economic policy. Indices of international competitiveness (competitive capacity) consist of the ones concerning economic development of the country, inter alia, GDP growth rate and also synthetic indices might be distinguished.

Four papers in this session are dealing with the issue of regional development:

- *Three papers in this issue deal with it, giving it a specific geographic designation. They are related to the problems of regional development in Russia. These papers are: “**Regional scientific-educational complexes of Russia: Trends and contradictions of development**”, “**Promising directions and tools of Russian regions' innovative development**” and “**Formation of the tax system with regional differences as an element of tax policy strategy in the Russian Federation**”. In the first paper the problem of the development of the regional scientific-educational complexes are being discussed. Research methods allowing to reduce tendencies and contradictions of the development of different regions of the country are offered. In the process of cluster analyses set groups of regions varying according to the main parameters characterizing scientific-educational complexes and their interconnection with the real sector of economy are revealed. The directions of the state influence on the scientific and educational spheres of each set of the regions are suggested. In the second paper the authors studied the dynamics of Russian regions' innovative development, analysed theoretical researches of Russian scientists and practical experience of strategies' and tools' implementation. In the article authors make the suggestions for Russian regions to implement strategies and tools corresponding with the level and nature of their innovation development. The third paper deals with the strategic issues of tax policy in the Russian Federation. The main focus is formation of the tax system structure from a regional perspective. The classification of regions in terms of economic and social development by clustering and identification of regional differences in the structure of tax revenues are made. The article includes basic recommendations aimed at improving the current tax policy in the Russian Federation. The proposed scheme for analysis of regional differences in taxes can also be used in other countries.*
- *The paper entitled “**The role of logistics in regional changes**” deals with the challenges of development of Nagykanizsa, a city in the south-west of Hungary and the near regions. Nagykanizsa's place in the socio-economic trends and opportunities for entrepreneurs' initiative is based on geographical location, because it is close to three borders and five capitals in 250km surrounding.*

Two papers from this session deal with similar themes - competitiveness. The first paper, entitled **“Opportunities to improve national competitiveness through developing human capital illustrated on the example of Hungary”**, has for the subject competitive national economy. This paper examines the data of the Global Talent Index Report in relation to the Global Competitiveness Index, focusing on how talent measures contribute to the overall competitiveness measure and how improvements in these indicators could enhance the overall competitiveness performance. The analysis was based on a similarity analysis method referred as component-based object comparison for objectivity (COCO). Based on the output of the analysis a simulation was performed to assess the minimum level of intervention by component to improve the overall competitiveness score. The process is illustrated on the example of Hungary, showing its potential advancement in the ranking among the EU member states and its Central European peer group. As a result, the priority areas identified to improve national competitiveness through developing human capital in Hungary. The second paper examines the economic competitiveness of the region. Paper entitled **“Competitiveness indicators of the Western Balkan Countries: A comparative analysis”**, analyzes different methodologies that effect a better comprehension of the competitiveness of certain countries. International institutions, including the World Economic Forum, World Bank, European Bank for Reconstruction and Development and Heritage Foundation enable analysis of factors that represent the national competitiveness performance. Relevant national competitiveness indicators are identified and used to construct national rankings for the Western Balkan Countries. The results indicate significant changes in their relative rankings from these previous studies, and provide important and useful information to policy/decision makers.

Knowledge becomes a product, and corporate intellectual property is today worth more than physical resources. Modern organizations must create not only knowledge, but it must also increase value. Human capital is the most expensive of all the factors in any company that works; business knowledge emphasizes human and social component. The issue of education and knowledge management deals with the thesis entitled **“The importance and role of education in society”**. Education is one of the important, special and complex segments. A number of concepts, approaches and definitions of education can be divided into two groups. For some, a modern education contributes to the achievement of social life and it is a basic social process of man’s maintenance and the progress of humankind, and the continuity of culture. For others, modern education is the key factor of economic development and the knowledge on which depend all other social processes.

“Complex systems in a new framework: The concept of envolution” – is a paper presenting a new concept of envolution (as the evolution/involution feedback) is proposed as an interpretative framework, integrating negative and positive feedback and explaining a variety of phenomena we are facing in our increasingly interdependent world. The interactions of their components often lead to large-scale and unpredictable results. An important example of a complex system is ecosystem. Globalization is another one. It involves two basic and contrary processes: integration and fragmentation/localization. This counterintuitive, nonlinear feature of globalization requires a new interpretative model. The fact, that the actual economic models did not predict the financial crisis due to their linearity and to rational expectations, has shown that policy models and quantitative tools are too antiquated for the task. This is where a complexity-based model can become useful to explain the cycles of non-equilibrium, instability, and structural changes.

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THE ROLE OF LOGISTICS IN REGIONAL CHANGES

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ABSTRACT

Nagykanizsa and the surrounding region faced many local and global challenges in the past. The political and economic regime was followed by a significant decline: the beer factory and a glass factory closed, the oil industry activity declined and recently the biggest employer is the General Electric Inc who is seeking further opportunities. However, the conditions of the town and its surrounding are not bad, as there are three country borders in 30 and 70km distance and there are five capitals in 250km. The construction of the M9 highway is a medium-term plan and the connection with the national railway network (Budapest, Pécs, Szombathely) means a further advantage. The national highway (M7) and the other highways in the neighboring countries provide a good base for the development of transport links. The city has recognized the importance of strategy, therefore, launched a project strategy conception that includes 4 elements, one of them is to make the city a logistics center. The South Zala Logistics Cluster was formed in order to bring the region's entrepreneurs in this field together. A new warehouse was handed over in the Sormás industrial park near Nagykanizsa, that provides the enlargement of logistics services in the region. The entry of Croatia into the EU, improves the transport of goods as well as the free movement of services in logistics. The seaports in Croatia (Rijeka, Split) can gain important role, on the other hand to reach Koper in Slovenia by rail will be also easier this way. The question is that how the region will be able to benefit from this.

Keywords: logistics center, urban development, regional role.

INTRODUCTION

Relation towards logistics is always a key issue for settlements. From one hand logistics centers might have promotional effects but from the other hand there can be numerous drawback effects like environmental and social issues.

Town Nagykanizsa faced with this dilemma when a new highway was completed nearby. It is easy to for the forwarders to avoid the traffic in the city, but those who spent certain time and some money in the city before are lost for the local business. This case is not alone. There are studies in the literature which deal with logistics centers at settlement. (Özdemir 2010, Hall 2008, Altshuler - Luberoff 2003,) (This topic is not the filed of the also well studied city logistics.)

Muñuzuri et al (2005) gives a deep overview of the urban logistics improvement. They present solutions that can be implemented by local administrations in order to improve freight deliveries in urban environments. Solutions are classified into those related to public infrastructure, land use management, access conditions, traffic management, enforcement and promotion. There are several aspect and methods for choosing location like fuzzy approach. (Oum – Park, 2004)

RESEARCH METHODS

The city's population decreased steadily in recent years while the unemployment-ness consistently high.

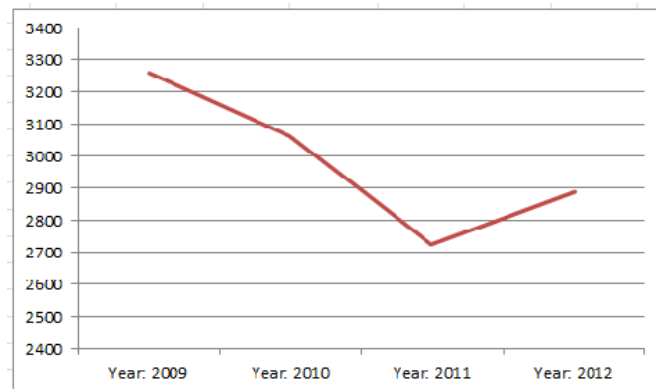


Figure 1: Unemployment of Nagykanizsa

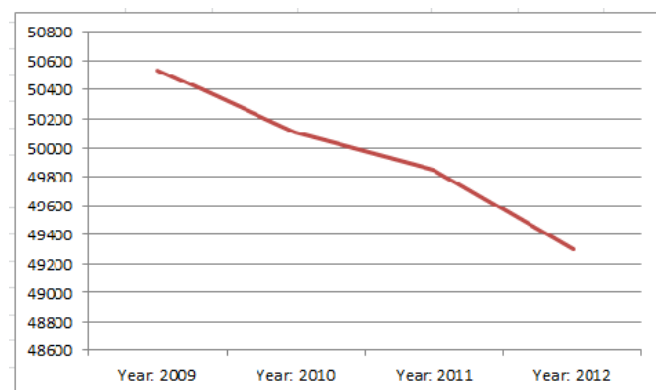


Figure 2: Population of Nagykanizsa

Completion of the survey served two purposes:

- understand the potential partners (logistics service providers and logistics claimants) in relation to Nagykanizsa ideas;
- draw attention to Nagykanizsa.

During the research the following methods has been used:

- Editing a questionnaire, and professional interviewers visited the companies
- Transfer of information about Nagykanizsa;
- Publications to publish Nagykanizsa.

The questionnaire is the main groups of questions:

- The identification of business information;
- The undertaking of general information (age, profile, property relations, size);
- The general information on the economic activities of enterprises (of our products, the provision of logistics services and use of earlier, related sets of regional structure);
- Information related to the business relationship of logistics (transport and the type of goods could be transported, and applied modes of transportation, vehicles, cargo dealing TOS-related requirements, the number of journeys)
- To provide or take the desired range of logistics services;
- An open question as ideas for future developments in relation to the expected.

FINDINGS

It is important to emphasize that Nagykanizsa 120,000-strong population of the region's leader, is a small region on each strand Nagykanizsa, Nagykanizsa's economy and its development is not within the boundaries of the separate-might-go. so the concept of development should be considered when developing a specific area of it, too. The industrial location in terms of determining the potential Sormási Industrial Park area and Nagykanizsa development. Available in 40 hectares of public utilities-rule you. Separately examined the business and Nagykanizsa Industrial Park - existing or pos-mate - the relationship. Here in the land, infrastructure, manpower, additional information regarding expectations were interviewed.

Table 1: The following core services, which provides logistical, would provide, and will use the Nagykanizsa would take

Basic Services	To allow	Would Allow	Have resort to	Would have resort to
Basic:				
Storage				
Transportation-basic methods				
Transportation-combinated methods				
Passenger transport				
Complex:				
Distribution				
Gathering				
Supply				
Product support				
Supplementary services				
Custom services				
Weichle repair				
Car/truck wash				
Break-down service				
Fuel station				
Technical expertise				
Security services				
Other Services				
Bank services				
Accodomation services				
Selfservice restaurants				
Other food services				
Other workplace services				
Other limited services				
Ingridents and hygenie monitoring services				
Human health care				
Animal health care				
Internet access and services				
Education services				
Translating,rendering				
Post services				
Other unnamed services				
Retail services				

Transportation methods

The companies surveyed all use modes of transport by road, rail, however, only a small number of transport. The interviews need for the occasion arose for rail transport or air transport. In the former case, the industrial and logistics park in the siding is completely built; it is not accessible to everyone. While the air transport mode in terms of where the Sármellék airport may have a role.

In road transport, it would be worthwhile to examine the possibility of collective transport, as the studied enterprises, currently 61.05% of the permitted use of 3.5 tons gross combined vehicle weight smaller vehicles, which often is not utilized, and significant cost-increasing factor. The survey results from the processing of both established enquirer companies, so you should deal with the logistics development. In doing so, while taking into account the needs of the facilities.

The range of potential settlers prepared to determine the Nagykanizsa Industrial Park and Logistic Centre SWOT analysis.

Table 2: SWOT Analysis of Nagykanizsa

Strenght	Weakness
<ul style="list-style-type: none"> - Dominant companies - Dominant Industries - Staff - Profit - Technology 	<ul style="list-style-type: none"> - Products - Services - Markets - Technology
Opportunities	Threats
<ul style="list-style-type: none"> - Products - Services - Staff 	<ul style="list-style-type: none"> - Markets - Staff - Profit - Technology

Nagykanizsa potential investors in two main groups can be divided into:

- **First The Far Eastern companies:** mainly Chinese, Korean, Indian, Japanese companies think of the smaller countries are not excluded either. There are two possible directions. One is logistical, the other in a generation.
- **Second The Western European** small and medium sized companies who produce to the EU market and their production due to the favorable conditions of production moved from Eastern Europe.

PROPOSITION

Nagykanizsa northeast outskirts of the aspects highlighted in some properties, which are those areas where a potential industrial, commercial or service irányait park development be considered. The existing industrial park Garay Street 135 ha. area of only 25 ha. municipal, sellable space.

The goal required a large, continuous (10 to 30 hectares or more) land development, local ownership of their place of purchase.

Nagykanizsa unemployment is high, so the numbers employed in determining the area of the city.

The city's reputation improved, the M7 has enhanced communication options. The former - a strategic project, and the results of the current city marketing projects has recovered. Another multi-language references are publications and video materials. The exact directions of development planning and transport links are not currently available forecasts sufficiently secure. Therefore, appropriate scenarios to think about while the forecasts are more precise, perhaps influencing the decision-makers.

Concrete recommendations for improvements to be implemented:

- 1) More accessible of highway
- 2) The development of public transport.
- 3) Truck Parking (k) design..
- 4) Railway siding currently connect only into the area of General Electics, this extension is required.
- 5) Combiterminal development of container land for extensive disclosure.
- 6) The start-up incubator switched on the economy.
- 7) Opened up to entrepreneurs across the border in Croatia.
- 8) The application monitoring options, use.
- 9) It should be close to Croatian border cells of other advantages.

CONCLUSIONS

Nagykanizsa situation - as in other cities in the region is changing. consruction of the M7 of a new situation to some extent, positive and negative effects, respectively, together.

The town next to the traffic increased, it is possible to divorce the logistics center. This important effort:

- Development of transport links, easy access to the M7,
- make better use of the industrial park, new areas of involvement,
- providing a more favorable economic environment.

A further breakthrough in certain areas we want to achieve and implement the Re-ros password to Nagykanizsa - including through logistics - become the gates of regions.

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PROMISING DIRECTIONS AND TOOLS OF RUSSIAN REGIONS' INNOVATIVE DEVELOPMENT

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ABSTRACT

The idea of the innovative development in Russia is relatively new. In fact it is just started to form at the beginning of the XXI century. One could find it out from different official documents of regional authorities that regulate the socio-economic development processes. It is also showed in theoretical and practical studies of regional leaders. It is remarkable that the regional authorities pay attention to the innovative development only when it has become the major socio-economic problem of the country's development. So one could see that at the moment there are no regional strategies and instruments that fit the level of innovative development of different regions. The authors studied the dynamics of Russian regions' innovative development, analysed theoretical researches of Russian scientists and practical experience of strategies' and tools' implementation. In the article authors make the suggestions for Russian regions to implement strategies and tools corresponding with the level and nature of their innovation development.

Keywords: region, innovative development, strategies, development instruments.

COMPARATIVE ANALYSIS

The analysis shows us that at the early 2000s different regional authorities had different views on the necessity of the regional innovative development. For convenience one could define three different points of view:

- the weak view of the innovative development necessity;
- clear view of the problem without attempts to work out the innovative development tools;
- the attempts to influence on the regional innovative development.

At the moment the necessity of the innovative development one could see in a tiny group of Russian regions, which were rather developed in socio-economic and innovation spheres. The recommended tools consist of communication tools, marketing, PR, innovation projecting. In some regions the creation of industrial parks and business incubators was started. But the innovative development strategies were not worked out or even formulated.

But since the middle of the first decade of the 2000s the attitude to the problem was cardinally changed. The innovative development has become the key factor of theoretical researches and regional strategic planning. Many of the socio-economic processes including the wide ones have been being examined from the position of their influence on the regional innovative development.

D. Doykhen (2004) was one of the first Russian scientists who proposed the comprehensive and differential approach to the regional innovation management. The author proposed measures of the regional innovation processes' government regulation. He recommended the indirect control measures to the federal government and the direct ones to the regional and local government. Among the indirect ones were: favourable tax treatment, active popularization of the R&D, maintenance of the

rules of play in the intellectual property and investments sphere. Among the direct measures author defined the direct financing of the innovation projects and the innovation infrastructure development (Doykhen, 2004). It is remarkable that Doykhen divided all Russian regions on three different groups by the types of the leading innovation processes – “generators, translators and adapters”. By the author Moscow, Saint-Petersburg and a number of the largest cities of the Volga, Ural and Western Siberia regions are “generators”. Other Russian regions and cities play roles of “translators and adapters”. Also author presented activity directions which are typical to the regions with high innovation potential: the presence of the regional legislative acts in the sphere of the innovation business support; creation and development of the innovation infrastructure objects such as R&D centres, innovation investment structures (venture funds), R&D coordination councils; the creation of the retraining system in the innovation sphere and the small-scale science enterprises services; data gathering and analysis in an effort to form regional databases of the priority and high-effective innovation technologies; regional innovation monitoring; holding of the international activities of the innovation character. As the result of the foreign experience analysis Doykhen defined the innovation activity clusters as a base of regional innovative development and the development of the country as a whole.

A. Kostrov (2010) noted that small- and middle-scale innovation enterprises play great role in the regional innovative development. As one of the major innovative development instruments author named the creation of special government organisations which provide governmental innovation support policy. In Moscow such organisations provided for financial, property, educational and consulting support of small-scale innovation enterprises in the context of the City innovation system creation target program of 2008-2010.

In Moscow special attention is paid to PPP; place small-scale innovation enterprises in the industrial parks (“Strogino”, “zelenograd”), consulting in property, financial and managerial support sphere; analytical support of business and business ideas. As a whole the government innovation support tools of Moscow – the leading region (we could name Moscow a region) in socio-economic and innovative development, are broad. And that is reasonable, because Moscow has developed innovation, financial, material and intellectual resources potential. And one could mention that government support of small-scale innovation enterprises is carrying out regardless of kind of business.

I. Marinets (2011) analysed Stavropol Territory’s innovative development management experience and found out different directions of innovation policy:

- progressive structural reorganisation (1);
- the reveal of the branch problems’ which need innovative development (2);
- the forming of the regional target programs for the innovation activities subjects’ support (3);
- different activities in the sphere of innovation programs and projects realisation (4);
- the innovation infrastructure creation and development (5);
- the domestic innovative production on the world market support (6);
- the coordination of the research, educational, financial institutions’ and business activities (7) (Marinets, I., 2011).

We need to mention the widespread methodological mistake, which often take place in different regional strategies and programs – different phenomena mixed with each other. So one could see in the example above that 5 and 6 – directions, 1, 2 and 7 – tasks, 3 and 4 – tools. That is why we could mention the principle of methodological identity of strategy planning as one of the basic principles of innovative development management.

I. Antonenko (2011) paid attention on such innovative development management tools as industrial parks and innovation-technological centres (Antonenko, I., 2011). Author mentioned the activity of Don’s, Taganrog’s and other Rostov region’s industrial parks’ activities in the sphere of consulting, marketing and education, support in the innovation projecting of the new small-scale enter-

prises. Author also marked out that only Taganrog industrial park lead the projects to the final stage of serial production. So one could see an incomplete usage of the innovation infrastructure even in well-developed Rostov region.

In accordance with the conception of the long-term target program of Krasnodar Territory “The Regional Innovation System Development of Krasnodar Territory at 2011-2014” the Regional innovation system (RIS) should be focused on the two strategic problems’ solution: the rise of living standards and the outgoing development potential creation (Shevchenko et al., 2011). Authors mentioned low level of concrete economic adoptions as the limitation of Krasnodar’s RIS. In our opinion the RIS has a weakness in its basis – all strategic tasks have political nature, not a socio-economic one. The positive side of the Program is its transparency at the stage of its development. Also it was brought up for discussion in business and scientific communities to found out its strengths and weaknesses.

We have to mention the interesting experience of leading regions. So Tatarstan Republic set ambitious but realistic goals (Pavlova, E., 2011). First of all besides the rise of living standards the necessity of technological development and the competitive products production was declared. In the second place in the system of goals the unity of the economic growth processes and institutional changes proclaimed. Thirdly the general goal of production complex transformation was formulated. In the forth all goals had full tools support. We should mention that the Tatarstan Republic’s innovation infrastructure is rather developed. There are almost every kind of industrial parks and financial development institutions (technology towns, technology parks, industrial parks, business incubators, venture funds, etc.).

E. Pavlova (2011) mentioned a proactive development of innovation infrastructure versus needs of truly innovative enterprises, so the infrastructure is not always used as intended. The author noted, in particular, that the share of the innovative projects in the portfolio of financial institutions is about 5%, and the area of the industrial parks are leased to businesses that are indirectly related to innovation sphere. We mentioned an incomplete usage of innovative infrastructure in the other developed region - Rostov region. Therefore, this is not a flaw of individual regional authorities. It is a fairly common phenomenon, which means that the innovation infrastructure in isolation from the other set of measures that are adequate to the innovative development in the region could not provide not only innovative development, but even its own effective use for the intended purpose.

D. Sultanova (2011) believes that the financial-industrial groups (FIGs) are the basis of economic growth of the Tatarstan Republic. Their operation provides income not only from industrial enterprises in the region, but from the other regions’ branches. In this regard, the author considers the most beneficial for the creation of the financial markets on the regions’ territories (Sultanova, D., 2011). The author refers on the experience of cities such as Munich, London, Tokyo, Bern, New York, Moscow, St. Petersburg. In our opinion, author cited bad examples – most of mentioned cities are national and even international capitals that have evolved over a long period. It is unlikely that the regions of Russia, apart from Moscow, can claim to be the world's financial centres.

SUMMARY

The middle of the first decade of the 2000s was a turning point in the formation of the ideas of innovative development of the country and its regions. On the positive trends in the development of innovative tools and development of the regions should be noted.

1. In the advanced regions. First of all - in Moscow, was developed tools to support small business innovation - financial, institutional, consulting, organisational.
2. Started to develop new institutions to support business innovation: venture capital funds, technology parks, innovation and technology centres, industrial parks, etc.
3. Sufficiently clear strategies, directions, facilities, management tools justification in the most developed regions of the country.

4. Declared the need for public-private partnership in the management of innovation development of the regions and institutions began to develop PPPs.

As disadvantages of the modern practice of the regional innovative development should be noted.

1. Copying strategies and tools of developed regions by lagging regions.
2. Lack of methodological unity of strategising innovative development in most regions, the lack of a clear strategy type sound, mixing the goals, objectives, tools, directions and management objects.
3. Low level of efficiency of the innovation infrastructure facilities even in the most developed regions of the country.
4. Pronounced imbalance between the declarations of the general plan and forward-looking planning and performance of innovation development in most regions.
5. Low level of government funding for research and dissemination, unable to achieve the critical level of exposure to the regional system, developing the traditional, and therefore the inertia track.

We have a number of studies in which we made proposals for a strategies of innovative development in the regions, in fact, focused on the use of existing innovative potential. The innovation potential analysis results showed that the Russian regions can be divided into five differing groups that remain stable in changing economic conditions (Treshchevskiy, D., Risin, I., 2011; Treshchevskiy, D., 2012).

RECOMENDATIONS

The mechanism of regional innovative development should be based on a common basis and features of specific administrative and territorial entities, specifying the types of appropriate strategies. Invariant directions of innovative development of Russian regions:

- *In the economic sphere - the intensification of demand from all economic activity in innovative products and services, expanding economic ties with foreign partners;*
- *In the institutional field - translation rents formed at the national level from the corporate sector to the household sector.*

Instruments increased demand include:

- *Tax breaks and subsidies to the purchasing of innovative products;*
- *The introduction of mandatory standards for the use of innovative products in the state order on the federal and regional levels;*
- *Promotion of domestic innovative products among the population;*
- *Providing subsidies to the population on the acquisition of high technology products and services produced domestically.*

Tools to expand trade with foreign partners: a series of organizational and financial measures to encourage domestic enterprises to exit the international factor markets, products and services.

Institutional development of management tools include:

- *The development of the regulatory framework, eliminating rent-seeking economic entities;*
- *Development of the regulatory framework, which predetermines work of economic and administrative bodies to "long" rules.*

In addition to the invariant action for the management of innovative development of the regions, it is advisable to use specific, necessary for the implementation of specific strategies.

For Moscow the necessary adjustment of the strategy - the transition from the actual concentration of the research and educational potential to the strategy of inter-regional convergence.

The basic direction - development of interregional relations of scientific, research and educational systems of the capital with the relevant industrial, scientific, industrial, research and development associations, and educational institutions in other regions.

Technical tools and organizational and economic content is available in full volume. Institutionally, the need to rethink the federal and regional authorities and the management of Moscow's role - from its vision as one of the world's cities and the core of the Moscow metropolitan area - to the positioning as a system driver of innovative development of the country.

For the group of "leading regions" should be the formation of an integrated strategy of innovative development based on their own production and implementation of existing innovations.

The key areas of the strategy should be adopted to create innovative clusters, combining production, scientific research and educational structures.

For the performance strategy as appropriate:

- *In technical and technological terms - the development of the complex innovation-oriented industrial parks, industrial parks;*
- *In terms of organization - the creation of large nonprofit organizations with national and international business organizations, regional bodies of power and administration, coordination of the activities of participants in the cluster;*
- *In financial terms - the implementation of large by international standards, innovative projects within established clusters.*

For the group of regions "of active developers" should be using the strategy of producing innovation. The direction of the strategy should be adopted:

- *Massive investments in human resources are used or planned for use in science and technology;*
- *Development of the diffusion of innovation;*
- *Horizontal and vertical spillovers capital.*

The instruments are suitable strategy:

- *In technical and technological terms - market-oriented industrial parks;*
- *In terms of organization - the integration of the main agents of the complete cycle of innovation - universities, businesses, academic institutions, representatives of the consumer sector, the creation of centers of scientific information, accumulating intellectual property right on a commercial and institutional frameworks;*
- *In terms of information - the inclusion of indicators of innovation development in the documents governing the strategic activities of regional bodies of power and administration.*

For the "active producers" should be a strategy of broad innovation (wide imitation).

The main lines of the strategy:

- *Strengthening and expanding cooperation between the regional production structures;*
- *The development of relations with foreign and from other regions of production and R & D organizations, investment institutions.*

As part of the necessary tools:

- *In technical and technological terms - the creation of engineering and consulting centers to a wide range of scientific and technical services, development and implementation of innovative projects in the manufacturing, engineering production support, assistance to businesses in the drafting process maps and business plans, the introduction of quality management systems; investment-oriented parks, providing connection of regional production and other structures with potential foreign investors;*

- *In terms of organization - the creation of power and control units responsible for the complex scientific, technical, industrial, educational development of the region;*
- *In terms of information - the creation of information infrastructure, including the subordinate authorities and management, allowing developers, investors, industrial companies to obtain information about each other.*

For “passive” regions the most appropriate strategy is a point of innovation (dot imitation).

Key areas of the strategy are:

- *The formation of points of growth in the regions on the basis of those companies or their complexes, which are the most developed in the region;*
- *Increase susceptibility innovative administrative bodies, businesses, the public areas;*
- *The vertical integration of the enterprises of traditional industries, the creation of industry and sector clusters;*
- *Horizontal and vertical integration with business organizations from other regions;*
- *To attract foreign investors.*

Toolkit implementation of the strategy:

- *Finance - Corporate R & D tax incentives for businesses that they actually perform;*
- *Organization - creating divisions in government bodies responsible for the complete production, innovation, educational development, the creation of information-analytical centers with the participation of government and administration, and from other regions of foreign businesses and business associations at the federal level;*
- *Information - providing the broadest possible information on potential points of growth in the industries and municipalities of the region in public sources.*

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REGIONAL SCIENTIFIC-EDUCATIONAL COMPLEXES OF RUSSIA: TRENDS AND CONTRADICTIONS OF DEVELOPMENT

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ABSTRACT

In the paper the problems of the development of the regional scientific-educational complexes are being discussed. Research methods allowing to reduce tendencies and contradictions of the development of different regions of the country are offered. In the process of cluster analyses set groups of regions varying according to the main parameters characterizing scientific-educational complexes and their interconnection with the real sector of economy are revealed. The directions of the state influence on the scientific and educational spheres of each set of the regions are suggested.

Keywords: Region, Scientific-Educational Complex, Cluster.

INTRODUCTION

The efficiency of the management scientific-educational processes in the country is in a considerable degree dependent on the regional conditions, in which the relations between High School, scientific institutes, enterprises of the real and financial sectors of the economy are formed. The consideration of the regional specifications for Russia – vast and differentiated according to various social-economic and institutional parameters is rather constituent for the formation of the efficient system of management of the scientific-educational system of the country.

For the formation of the management system of the social-economic development of administrative-territorial units an adequate estimation of the conditions of science and educations in every particular region and also of the processes linked to them in the real sector of the economy. While working out the management mechanism it is necessary to take into account the major characteristics of the social – economic processes, usual for the groups of regions. To get theoretically and practically meaningful results, characterizing the condition of the system given, a theoretically-methodical approach, providing the complexity of the estimation of the main parameters of the scientific-educational space of the regions and their real sector of the economy has been worked out by us.

METHODS OF RESEARCH

In the process of research twelve indicators, characterizing scientific-educational and real sector of the regional economy, presented in the official statistics (Regions of Russia (2011)), have been differentiated by us (Table 1). Calculation has been done on 80 regions of the country.

Table 1: The indicators of the development of the scientific–educational complex and the real sector of the economy of the regions

Indicators	Names of the indicators
Var 1	Number of educational institutions of high professional education (units)
Var 2	Number of students in institutions of high professional education (thousands of people)
Var3	Enrollment of students to institutions of high professional education (thousands of people)
Var4	Number of students in institutions of higherprofessionaleducation on 10 000 people of population
Var5	Number of organizations performing scientific research and projects (units)
Var6	Number of personnel, involved in scientific research and projects (people)
Var7	Number of researchers with graduate degrees (people)
Var8	Internal coston scientific researches and projects (thousands of rubles)
Var9	Number of created advanced producing technologies (units)
Var10	Number of utilized advanced producing technologies (units)
Var11	Long term assets (millions of rubles)
Var12	Average annual number of employed (thousands of people)

Presented in Table 1 list of indicators defines the state of different subsystems of regions. The indicators of Var1 – Var10 characterize the state of the scientific – educational sector in the regions. At the same time Var10 characterizes “going out” of the scientific – educational system, “entering” the real sector of the economy and, consequently, interestedness of the scientific – educational system into industry, sphere of production. Var11 and Var 12 characterize the potential of the production sector of the regions and they were used by us at the second and third stages of analysis. While choosing the indicators we arise from the fact that the long term assets and the number of the people, employed in the economy, characterize the main factors of the production, traditional for the real sector of economy. The more detailed presentation of the indicators of the scientific – educational sector in comparison with the generalized data, characterizing the real sector of the economy, is connected with the necessity to estimate its state namely and to offer measures aimed at the development of the positive effects and evening out of the intersystem contradictions.

One of the substantial demands for the formation of the empirical data is the choice of the time interval of the analysis. There is no united approach to the choice of the interval at present. Treshchevskiy, Eitingon, Shchedrov(2010) consider it being necessary for the estimation of the development of the regions to use the duration of one phase of the economic cycle. In the practical calculations the authors used the interval of years 2000 – 2007 (Treshchevskiy and Shchedrov, 2011). We presume that for the estimation of development of the science and education, minimally necessary is the interval of 8-10 years, which guarantees to a person getting of a higher education and his involvement into the reproducing system of the region as a researcher or a specialist. Such a prolonged period inevitably covers different stages of economic cycle and definitely influences on the results of the measurements. In this case two approaches may be used: the continuous measurements of the indicators within the whole period or measurements at some definite time points. We consider the last one to be more preferable. In this connection we performed measurements at the following points: going out of the system crisis of 1990-s (2000), the end of the raising (2007), going out of the financial crisis (2010). So the analysis has been performed on the 11 years time interval. As tools of formation of homogeneous groups of regions a cluster analysis as a way of grouping of multidimensional objects, suggested by Aldenderfer, Blashfield (1989), Mandel (1988) and other scientists, has been used by us.

Clusterization of the regions was performed in three stages by k-means method. At the first stage the clusters are formed by taking into account the indicators of Var1 – Var10. The condition of clusters, received at this given stage, characterizes the level of the system unity of the scientific – educational complex of the regions in statistic and dynamic aspects. Different lagging behind of the region from the leader according to the indicators shall be regarded by us as violation of the system unity of the regional economy. The increase or decrease of differences in dynamics means

correspondingly strengthening or weakening of intersystem or internal contradictions. Taking into account impossibility of the accurate quantitative estimation of the abovementioned contradictions, we confined ourselves to qualitative estimation:

- there are or there are not any contradictions in the development of the subsystems of a scientific – educational complex of the regions;
- the contradictions are of an intersystem or internal nature;
- the contradictions increase or level off;
- the dynamics of the increasing contradictions may be of a progressive character (the meanings of the better parameters become worse); a regressive character (the meanings of the worse –become better);
- the dynamics of the leveling off contradictions is progressive, if the meanings of the worse parameters increase; it is regressive if the meanings of the better ones decrease; it is progressive – regressive if there is a counter motion of the meanings of the better and worse indicators.

Ranging of the regions has been performed according to the sum of the average meanings of the indicators, on the basis of which the clusters are formed, the best cluster was given range “A”, all the rest take the worst positions in the following sequence – “B”, “C,” “D”, “E”.

For a broader analysis of the scientific – educational potential we used the second variant of the clusterization, which includes three most important reproducible resources – long term assets, the number of the people, employed in the economy and the scientific – educational potential (the sum of the standardized meanings, characterizing the scientific – educational work).

The third variant of clusterization was performed with taking into account all 12 indicators, characterizing the scientific – educational and real sector of the economy of the region.

CONDITION OF REGIONAL SCIENTIFIC–EDUCATIONAL SYSTEMS OF RUSSIA

Cluster analysis showed that stable enough during the whole of analyzed period 3 clusters stand out (“A”, “B”, “C”), created by the regions, leading in the scientific – educational sphere. All in all there are 15 of such regions. The rest regions of Russia do not create stable clusters. Clusters “D” and “E”, standing out at the definite time point, collapse at other points, the condition of the regions in the clusters changes not only with the time, but also with different ways of clusterization.

Rather favorable from the point of view of economic state of affairs in the country 2010 showed rather interesting results. Flattening of the general state of clusters on the set of indicators took place. But it affected, to the utmost, the regions, dragging behind, the detailed analysis of which is not presented in the article under review. The state of leading clusters did not change greatly (Table 2).

Table 2: Scientific – educational clusters in 2010

Indicators	Cluster A	Cluster B	Cluster C
Var1	1,000000	0,159515	0,071642
Var2	1,000000	0,207452	0,117148
Var3	1,000000	0,223467	0,131258
Var4	1,000000	0,519041	0,464227
Var5	1,000000	0,261698	0,072638
Var6	1,000000	0,233546	0,043482
Var7	1,000000	0,127926	0,021994
Var8	1,000000	0,216287	0,030369
Var9	1,000000	0,343902	0,072195
Var10	1,000000	0,551334	0,239355
Sum	10,000000	2,844168	1,264308

In the composition and state of clusters in 2010 rather essential changes took place.

Cluster “A” at the first stage of analysis is, as before, presented by one region – Moscow. According to all the indicators the cluster got the highest possible result – 1,0. The worsening of the situation in the use of advanced technologies within the period of favorable economic state of affairs (2007) was quickly liquidated during the post crisis period. The second and the third stages of analysis (Figure 1) showed the stability of cluster and demonstrated the tendencies, exposed at the first stage.

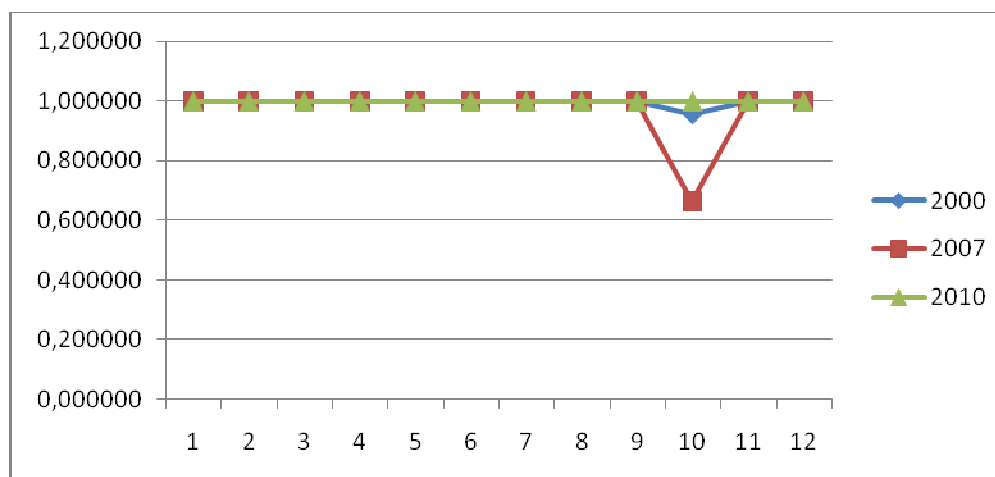


Figure 1: Dynamics of indicators of cluster “A (Var1 – Var12)

So the stable position, demonstrated by the capital at all the stages of the analysis, may be considered as the effect of system unity of its scientific – educational complex. This does not mean, that further development is not needed, but it is possible on the basis of any subsystem of the scientific – educational complex of the capital.

Cluster “B” at the first stage was comprised of the regions fully stood out in 2007 into a nucleus: Moscow, Nizhniy Novgorod, Sverdlovsk regions, St. Petersburg. The cluster betters its strongest positions-the meanings of the indicators: “Number of students in institutions of higher professional education on 10 000 people of population” (Var4); “Number of the advanced production technologies used” (Var10) reached 0,5 – 0,55. Somewhat worse has become the meaning of the indicator “Number of the created advanced production technologies”(Var9). The position of the number of researchers with scientific degrees (Var7) remained relatively weak and in fact unchanged.

At the same time one may speak of the existence of the contradiction, caused by the differences in the choice of population, orientated on medium-term (receiving of higher education) and long-term (entering the social group of researchers) perspectives. The phenomenon of time dependence on the social choice, opened by Brennan and Buchanan (2005), is being realized. In this case this dependence is determined likely by absence of assurance of the population in the favorable perspective of the development of scientific-educational complex of cluster “B”.

The second and the third stages of the analysis showed the stability of the composition of the cluster and the presence of the tendencies, revealed at the first stage (Figure 2).

On the whole the results of the analysis still show the presence of the misbalance inside the scientific – educational complex of cluster “B” regions. The growth of misbalance has a progressive character, as it is defined by the rise of the meanings of the biggest ones, relative stability of the smallest preserved. In other words, in the given regions the effect of growth of the positive changes in the scientific – educational complex, the inertianess of the weak positions preserved.

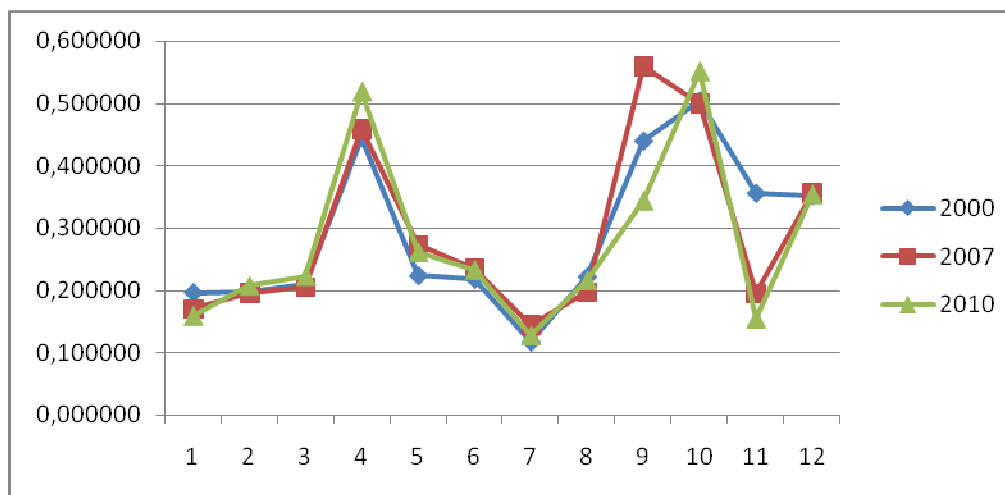


Figure 2: Dynamics of the indicators of cluster "B" (Var1 – Var12)

According to the results of the first stage of analysis cluster "C" in 2010 shortened its composition. Distinctly stood out the nucleus of the cluster of 10 regions: republics of Tatarstan, Bashkortostan; districts of Voronezh, Rostov, Samara, Saratov, Tyumen, Chelyabinsk, Novosibirsk, Omsk. It is also possible to fix the appearance of a "cloud", outskirts comprised of 7 regions: republic of Udmurtia; Perm, Krasnoyarsk, Khabarovsk Territories; Tomsk, Kaluga, Tula districts. In these regions cluster peculiarities spread at the lower level. Relatively strong position during the whole period analyzed, the cluster takes on the index "number of the students of higher education vocational institutions on every 10 000 people of population; in 2010 the position of the cluster according to the number of the advanced production technologies, worsening in 2007, was reconstructed.

The low level remained during the whole period on the indicators: "Number of the higher education vocational institutions" (Var1); "Number of the staff employed in scientific research and projects" (Var6); "Number of the researchers with scientific degrees" (Var7); "Internal cost on the scientific research and projects" (Var8); "Number of the created advanced production technologies" (Var9).

The second and the third stages of the analysis confirmed the results, received at the first stage (Figure 3).

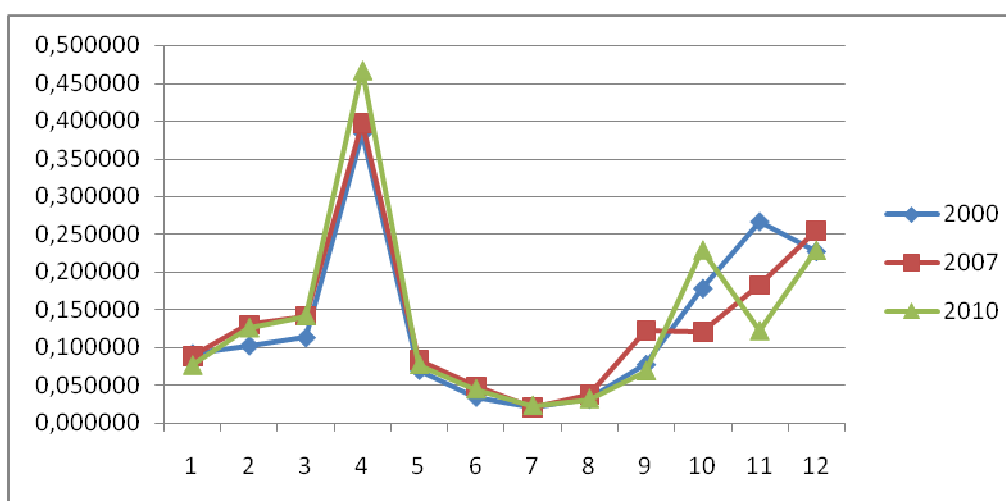


Figure 3: Dynamics of the indicators of cluster "C" (Var1 – Var12)

So, pointed out in 2000 contradictions in the development of scientific – educational complex of cluster "C" regions are reproduced during a long period of time and they are broadening. The

broadening has a progressive character, since it is caused by the bettering of the indicators, defining the range of the gaps.

CONCLUSIONS AND RECOMMENDATIONS

In the composition of Russia's regions vividly stands out Moscow, comprising a separate cluster, profoundly leaving behind the rest of the regions of the country and receiving maximum possible result on the parameters characterizing the state of scientific-educational complex. The problem is a very big gap between Moscow and other regions, which may be interpreted as an exhibition of contradictory effect of system localization of scientific-educational activity in the country. To avoid further differentiation of the regions of the country according to the main parameters of social-economic development, it is necessary to guarantee cooperation of scientific, educational institutions of the capital with regional scientific-educational complexes by means of the state regulations.

The second according to the development level cluster is comprised of four regions: Moscow, Nizhniy Novgorod, Sverdlovsk regions and St.Petersburg. The strongest and improving position of the cluster is a high concentration of the student contingent. The cooperation of scientific-educational complex with real sector of economy has improved. Relatively weakly is expressed the professional growth of researchers and teachers which reveals the rise of internal misbalance of the cluster. In other words most noticeable is the worsening of the results of the state regulations of scientific-educational indicators in the sphere of the rise of qualification of researchers and teachers in the high school, and also efficiency of their activities. In this connection there is the necessity of differentiation of payment to employees of the scientific-educational sphere, depending on their qualification and quantitative results of the activity.

Medium according to the development level scientific-educational cluster is comprised of 10 regions: Tatarstan, Bashkortostan; Voronezh, Samara, Saratov, Tyumen, Chelyabinsk, Novosibirsk, Omsk regions. Relatively strong position the cluster takes according to the quantity and dynamics of student contingent. Noticeably low is the presence of qualified staff in the student contingent and the real sector of economy and also that of developed and put into practice innovations. For the cluster considerable institutional contradictions of internal and intersystem nature are characteristic. Regulation of scientific – educational activity in the regions should be directed to the increase of researchers and high school teachers' contingent, interconnecting of scientific research, educational activity with real sector of economy.

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FORMATION OF THE TAX SYSTEM WITH REGIONAL DIFFERENCES AS AN ELEMENT OF TAX POLICY STRATEGY IN THE RUSSIAN FEDERATION

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ABSTRACT

The article deals with the strategic issues of tax policy in the Russian Federation. The main focus is formation of the tax system structure from a regional perspective. The classification of regions in terms of economic and social development by clustering and identification of regional differences in the structure of tax revenues are made. The article includes basic recommendations aimed at improved of current tax policy in the Russian Federation. The proposed scheme for analysis of regional differences in taxes can also be used in other countries.

Keywords: Taxes, Tax system, Fiscal policy, Regions, Socio-economic development, Clustering

INTRODUCTION

Tax Reform in the Russian Federation is designed to reduce the tax burden on taxpayers, to simplify the tax system, to align taxation conditions and improve the quality of administration. It is based on rejection of inefficient tax benefits and taxes that have negative influence on economic activity, reducing payroll taxes and the overall size of contributions to social non-budgetary funds, the reduction in tax rates. With the introduction of the new Tax Code in Russia tax system was simplified. However, a number of unresolved issues still remain. These include, in particular, the speed and unpredictability of changes in tax legislation.

In 2011, on behalf of the Government of the Russian Federation it was launched a project on the development of a new version of Russia's Development Strategy up to 2020, which have identified the following issues of the current stage of tax relation development:

- High budget's dependence on oil and gas revenues;
- Growth of the tax burden on labor, the increasing trend to "tax evasion", expansion of the "informal" economy;
- Low quality features of the tax system (lack of neutrality, fairness and efficiency of taxation);
- Disadvantages of tax administration, the use of it as a tool of competitive and political pressure;
- Low level of taxation powers of regional and local authorities, the high centralization of tax revenues;
- The unequal distribution of the tax base and tax revenues around the country, etc.

Reform of the tax system has led to significant changes in the tax authorities between the federal center and the regions. This was not to the advantage of the regions. The proportion of taxes, fees and regular payments for use of natural resources paid to the consolidated budgets of the RF regions decreased significantly (from 85.7% to 2.3%). Now the value of added tax (VAT) is fully credited to the federal budget. At the same time, the share of corporate profit tax and excise taxes received by the regional budgets and local budgets, increased from 63.8 to 85.6% and from 22.6 to

69.5% respectively, which indicates an increase of financial independence of the regions (see Figure 1). Tax revenues constitute a considerable part in the revenue side of the federal and regional budgets. Thus, in 2011, the share of tax revenues is 53% in the structure of the federal budget and 69%—in consolidated regional budgets. Compared with 1998, the weight of taxes in the budget structure fell down – the share of tax revenues was 78% and 77.5% of the total revenues of the respective budgets.

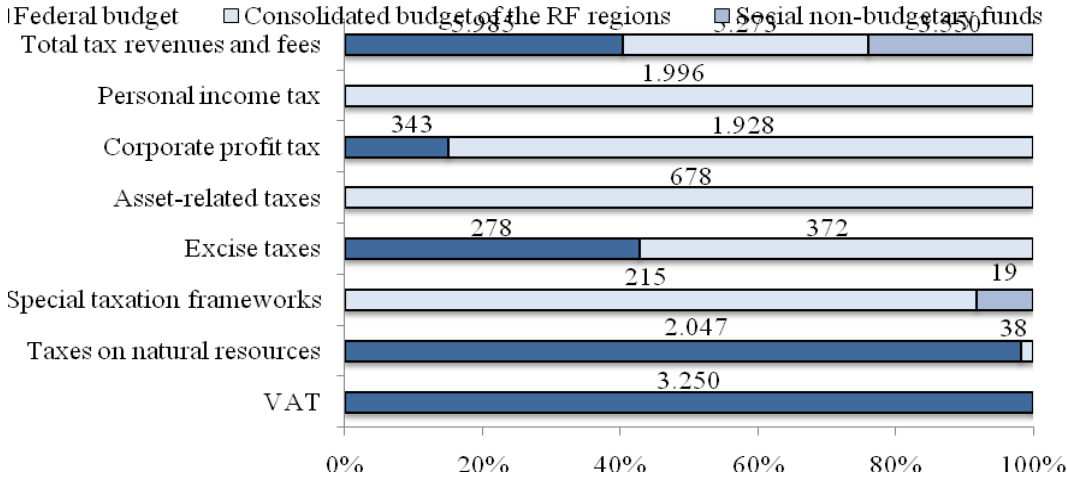


Figure 1: Distribution of tax revenues at the levels of the RF budgets in 2011, bln RUB
 Source: The Federal Tax Service of the RF, The Treasury of Russia.

However, the composition of tax revenues in 1998 included taxes on international trade and foreign economic operations. If customs tariffs were included in the calculation, which are now considered under "Income from foreign trade", their combined share with fees and taxes would rise up to 85% of the federal budget and up to 79% of the consolidated budget of the Russian Federation. In Figures 2 and 3 the changes in the structure of budget revenues for 2008 – 2011 are shown.

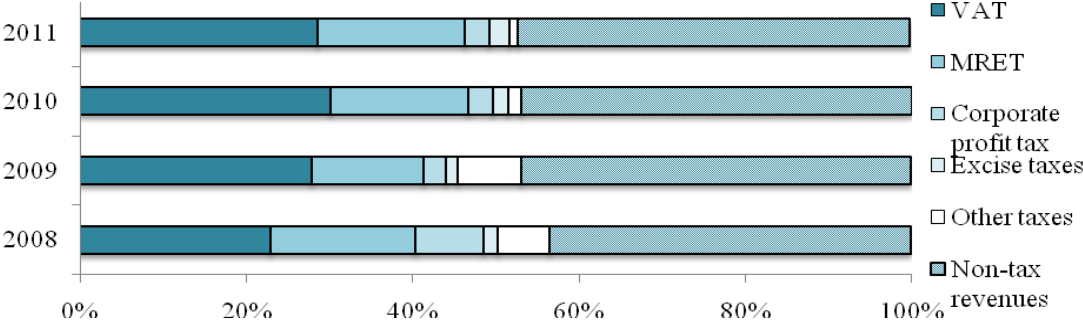


Figure 2: Structure of the federal budget of the Russian Federation for 2008 – 2011
 Source: Report on the implementation of the Federal Budget

In forming the tax revenues of the federal budget of Russia VAT and the tax on mineral resource extraction (MRET) are dominated. The role of other taxes are not that significant (the main reasons – lower rates, increased statutory transfers to regional budgets). For the consolidated budget of the RF regions personal income and corporate profit taxes are of the most importance. In 2011, their part in the structure of income is almost equal (26% and 25% respectively), but when the budget of the particular region of the Russian Federation is under research these values may vary.

Modern realities of socio-economic life of the country are connected with the strong regional differentiation in terms of socio-economic development. These differences are due, first of all, to the natural climatic, industrial, economic and socio-demographic conditions, and secondly, to the different starting positions of the regions and the effectiveness of regional policy. Public policy, in

which basis for the region's financial and economic rules, is based on a rigid centralization, proved to be ineffective. In our opinion, this does not mean that there is an absolute individualism for regional governments in choosing the tools of social and economic policy, however, the data set of tools should be limited by law.

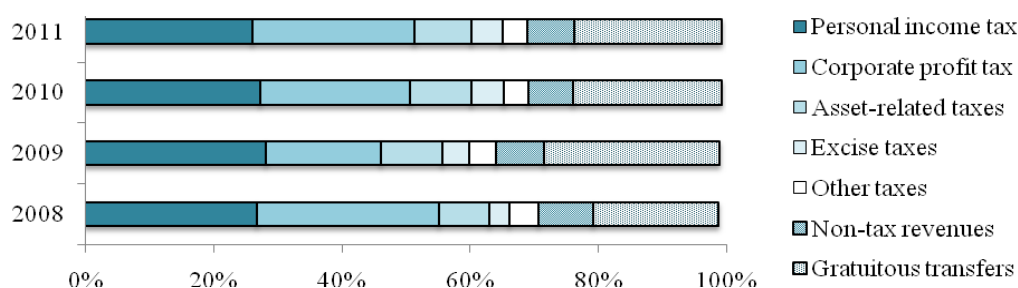


Figure 3: Structure of the Consolidated Budget of the RF regions for 2008 – 2011
Source: Reports on the implementation of the Consolidated Budgets of the RF regions

Various financial opportunities of the regions in the implementation of social and economic policy will require the development of fiscal policy that takes into account this feature. Fairly common problem for regional and local authorities is a situation where the transfer of new budget authority to a lower level is not supported by appropriate funding. Lack of funding is one of the main reasons for not implementing the activities contained in the program of socio-economic development of the regions.

Success in achieving balanced regional budgets and creating the financial basis for the implementation of strategies for social and economic development depends on the system of relations and the optimal allocation of taxes between the various levels of government. Because of the high frequency and unpredictability of changes in tax and budget legislation we should take into account a significant dependence of the region from the federal government. This fact creates additional constraints in the construction and development of independent decisions of strategic importance.

METHOD OF "ANALYZING THE STRUCTURE OF THE TAX SYSTEM FROM A REGIONAL PERSPECTIVE"

In order to analyze the structure of the tax system from a regional perspective we have determined the following sequence:

1. 1 - Groupings of regions in terms of socio-economic development;
2. 2 - Construction of the structure of regions tax revenues to the budget system (the calculation is for the full amount of revenues, including revenues to the federal budget and non-budgetary funds);
3. 3 - Groupings of regions in terms of amount and proportion for certain types of tax revenues;
4. 4 - Determination of the relationship between the socio-economic development of the region, the amount and the structure of tax revenues.

For regions classification in terms of socio-economic development it has been used clustering method (K-Means). With the help of statistical package Statistica 6.0 six clusters were formed by two groups of indicators.

Analysis of the first group of indicators allows to estimate the position of the region in terms of gross value added and economic growth depends on two factors – the amount of capital investments and the number of people employed in the economy (technological progress and human capital are not taken into account). The second group includes indicators of living standards, such as: per capita gross regional product (GRP), average per capita incomes (PCI), the ratio between

per capita incomes and the subsistence minimum, characterizing the purchasing power of PCI, the proportion of people with incomes below the subsistence minimum (who live in absolute poverty).

INTERPRETATION OF THE RESULTS OF ANALYSIS FOR REGIONS OF RUSSIA

The selected indicators are also one of the utmost importance in terms of broadening the tax potential of the region in the long term. The results of our research are shown in Tables 1 and 2.

Table 1: Groupings of the RF regions in terms of the economy size

Cluster	GRP, bln RUR	Employed, mln people	Investment, bln RUR	The regions of the Russian Federation in one cluster
1	10 000	6,5	850	Moscow
2	3700	2,5 – 3,0	1 300	Tyumen Oblast
	2 000		300 – 400	St. Petersburg; Moscow Oblast
3	1 000 – 2 000	1,5 – 2,5	300 – 700	4 regions, including: the Republic of Tatarstan; Krasnodar and Krasnoyarsk Krai; Sverdlovsk Oblast
4	500 – 1 000	under 2,0	100 – 300	15 regions, including: Nizhny Novgorod, Rostov, Sakhalin and Belgorod Oblasts
5	200 – 500	under 2,0	50 – 200	22 regions, including: the Sakha (Yakutia) Republic; the Komi Republic, Voronezh, Lipetsk, Yaroslavl, Kaluga and Omsk Oblasts, Stavropol Krai, the Republic of Dagestan
6	25 – 200	under 1,0	under 70	34 regions, including: Kursk, Bryansk, Ivanovo and Ryazan Oblasts; Zabaykalsky Krai; the Republic of Karelia; the Tyva Republic

Source: Author's calculations, clustering performed on 79 regions of the Russian Federation.

As economic growth creates a foundation for the growth of living standards, the overall picture that characterizes the composition of the clusters must be the same for the two groups of indicators. However, as the results of our research shows, the high level of investments and GRP do not always provide the region a leading position in living standards among the regions of the Russian Federation.

Table 2: Groupings of the RF regions in terms of the standards of living

Cluster	GRP per capita, thnd RUR	PCI, thnd RUR	The purchasing power of PCI, %	The poverty rate, %	The regions of the Russian Federation in a cluster
1	500 – 1 200	30 – 50	350 – 600	5 – 15	3 regions, including: Moscow; Sakhalin Oblast; Chukotka Autonomous Okrug
2	300 – 500	20 – 30	400 – 600	5 – 15	6 regions, including: St. Petersburg; Belgorod, Moscow and Tyumen Oblasts; the Republic of Tatarstan
3	300 – 500	15 – 30	300 – 500	10 – 20	6 regions, including: the Komi Republic; Leningrad and Murmansk Oblasts; Krasnoyarsk Krai; The Sakha (Yakutia) Republic; Kamchatka Krai
4	200 – 300	15 – 25	300 – 500	10 – 20	23 regions, including: Krasnodar Krai; Kaluga, Lipetsk, Sverdlovsk, Yaroslavl and Nizhny Novgorod Oblasts
5	100 – 200	10 – 20	300 – 500	10 – 20	19 regions, including: Bryansk, Voronezh, Kursk and Rostov Oblasts; the Republic of Dagestan; Stavropol Krai
6	100 – 200	10 – 20	200 – 300	15 – 30	22 regions, including: Ivanovo, Ryazan and Arkhangelsk Oblasts; Zabaykalsky Krai; the Tyva Republic; the Jewish Autonomous Oblast

Source: Author's calculations.

At the second stage there was analyzed the amount and the structure of taxes paid to the budget system from the territory of the RF regions. The results of the classification of regions in according to the structure of tax revenues are shown in Tables 3 and 4.

Table 3: Groupings of the RF regions in terms of the share of corporate profit tax, personal income tax and insurance payments in the total amount of tax revenues (including insurance premiums) into the budget system

The share in the total tax revenues, %	Corporate profit tax	Personal income tax	Insurance premiums (ex. unified social tax)
from 40 to 60%	Chukotka Autonomous Okrug	no	32 regions, including: Tyumen and Voronezh Oblast; Zabaykalsky Krai
from 30 to 40%	no	the Jewish Autonomous Oblast	34 regions, including: Moscow and Belgorod Oblasts
from 20 to 30%	10 regions, including: Moscow; Tyumen, Sakhalin and Belgorod Oblasts	20 regions, including: Kamchatka Krai; the Tyva Republic; Zabaykalsky Krai	13 regions, including: Moscow; Sakhalin Oblast
from 10 to 20%	48 regions, including: Moscow and Voronezh Oblasts	55 regions, including: Moscow; Moscow Oblast	no
from 5 to 10%	19 regions, including: Zabaykalsky Krai; Ivanovo Oblast	3 regions, including: Tyumen, Tomsk and Orenburg Oblasts	no
less than 5%	the Tyva Republic	no	no

Source: Author's calculations.

It was expected to find a positive relationship between GRP and the revenues of corporate profit tax. The highest revenues are recorded in the federal cities – Moscow and St. Petersburg, as well as in Moscow and Tyumen Oblasts. Right behind them there are located the regions of clusters 3 and 4. Similar growth with increasing GRP is observed for other taxes, except for taxes on natural resources. Regions with a high volume of tax revenues, fees and regular payments for use of natural resources are the regions of the Russian Federation with a significant share of mining in the economy (the Republic of Tatarstan, Orenburg Oblast, the Republic of Komi, Sakhalin Oblast, the Sakha (Yakutia) Republic, etc.).

Regions with a high share of corporate profit tax in the structure of tax revenues, as a rule, are characterized by a large amount of GRP, a high proportion of the working population and the growth of investment activity. Thus, the region's transition from one cluster to another occurs on the background of strengthening the role of the corporate profit tax, collected into the budget system from the territory of the RF region, in the formation of budget revenues. Because of a strong positive relationship between GRP and budget revenues, we can make a conclusion that a higher volume of revenues of the consolidated budget is provided (all other things being equal) by strengthening the role of corporate profit tax. In respect of personal income tax there is an opposite situation – the regions with a low volume of GRP and revenues, as well as the high dependence on the federal budget, are dominated generally among the regions with the highest proportion of personal income tax in the total tax revenues.

Low level of region economic development leads to lower standards of living. At the same time the role of taxes on personal income increases in the structure of tax revenues. A further increase of the tax burden on the population (due to an increase in tax rates, while maintaining the existing degree of progression) will not lead to positive results, because of the fact that the greatest burden will be held by the poorest segments of the population and expansion of shadow economy. In respect of indirect taxes such dependence is not there – the share of indirect taxes in the total tax revenues inside the cluster varies greatly (see Table 4). Thus, under the current structure of the tax system it is obvious that one of the main features of increasing region's financial independence is to

strengthen the role of corporate profit tax in the formation of budget revenues and to strengthen its tax base.

Table 4: Groupings of the RF regions in terms of the share of indirect, asset-related taxes and taxes on natural resources in the total amount of tax revenues (including insurance premiums) into the budget system

The share in the total tax revenues, %	Indirect taxes	Asset-related taxes	Taxes, fees and regular payments for use of natural resources
from 40 to 60%	Kaliningrad Oblast	no	Orenburg Oblast
from 30 to 40%	5 regions, including: Kaluga, Ryazan, Yaroslavl, Leningrad and Omsk Oblasts	no	5 regions, including: the Komi Republic; the Republic of Tatarstan; Sakhalin Oblast
from 20 to 30%	18 regions, including: Moscow and Moscow Oblast	no	Perm Krai
from 10 to 20%	37 regions, including: the Republic of Komi; Belgorod and Voronezh Oblasts; the Republic of Tatarstan	Lipetsk and Astrakhan Oblasts	6 regions, including: Krasnoyarsk Krai; the Republic of Sakha (Yakutia); Chukotka
from 5 to 10%	14 regions, including: Kamchatka and Krasnoyarsk Krai	53 regions, including: Belgorod, Voronezh and Ivanovo Oblasts	6 regions, including: Astrakhan, Volgograd and Tyumen Oblasts
less than 5%	8 regions, including: Lipetsk, Tyumen and Sakhalin Oblasts; Chukotka	24 regions, including: Moscow; the Republic of Tatarstan; Sakhalin and Tyumen Oblasts	60 regions, including: Moscow; Belgorod, Voronezh and Lipetsk Oblasts

Source: Author's calculations.

A high dependence of tax revenues on a single source increases the tax risks of the country itself. It threatens a sharp decline in tax revenues during the economic recession and a withdrawal of funding of social and economic development programs. Corporate profit tax is one of the most risky types of tax revenues, as the financial result of any company is very variable and sensitive to changes in economic conditions. In our opinion, the strategy of fiscal policy should be aimed at building a diversified structure of the tax system, including at least two elements. The first element consists of tax revenues with a high degree of correlation with economic growth. The second element is more stable and resistant to economic shocks.

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OPPORTUNITIES TO IMPROVE NATIONAL COMPETITIVENESS THROUGH DEVELOPING HUMAN CAPITAL ILLUSTRATED ON THE EXAMPLE OF HUNGARY

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ABSTRACT

Due to the economic downturn there is an increased need for companies and economies to perform more effectively and gain a sustainable competitive advantage. One of the sources of competitive edge is human capital. This study examines the data of the Global Talent Index Report in relation to the Global Competitiveness Index, focusing on how talent measures contribute to the overall competitiveness measure and how improvements in these indicators could enhance the overall competitiveness performance. The analysis was based on a similarity analysis method referred as component-based object comparison for objectivity (COCO). Based on the output of the analysis a simulation was performed to assess the minimum level of intervention by component to improve the overall competitiveness score. The process is illustrated on the example of Hungary, showing its potential advancement in the ranking among the EU member states and its Central European peer group. As a result, the priority areas identified to improve national competitiveness through developing human capital in Hungary.

Keywords: competitiveness, human capital, similarity analysis, Hungary.

COMPETITIVENESS IN CONTEXT

Models of competitiveness originally were developed to measure the performance potential of companies. The models which describe the competitiveness of nations stem from these (Csath, 2010). There are several definitions and approaches, one of the most quoted one is the so called “diamond model” created (and later developed further) by Porter (1990), where the conditions of the competitiveness is beyond the firm strategy and structure, but also certain conditions need to be there in the operating environment, such as appropriate demand, basic infrastructure and related supporting industries. Government policies should facilitate the effective operation of these conditions. This model could be interpreted both at micro and macro level.

The European Commission approaches competitiveness from the perspective of increasing level of wealth of the population at the lowest possible level of unemployment (UNU-MERIT, 2011). In this definition low unemployment level becomes a criteria for competitiveness. Porter, however, argues that the ultimate purpose is not the creation of workplaces but establishing fundamentals which act as a catalyst to competitiveness of the economy, and as a consequence, this will lead to the creation of sustainable workplaces (Snowdon - Stonehouse, 2006). The Competitiveness Research Centre of the International Institute for Management Development (IMD) conducts and publishes regular competitiveness studies. They define competitiveness as “a set of institutions, policies, and factors that determine the level of productivity of a country” (IMD, 2011). This definition focuses on productivity as an outcome and gives particular importance to available factors, such as policies, institutional background and available resources. Another approach to define competitiveness set out in the World Competitiveness Report (Schwab, 2013) takes a broader view: „how nations and enterprises manage the totality of their competencies to achieve increased prosperity”. The outcome here is not the economic productivity, but the prosperity of the nation, and it does not name any particular element on the input side, but refers to the total

competencies the nations have. Measuring competitiveness of countries is a complex task. There are a number of approaches to construct competitiveness measures. These are based on different methodologies and assumptions, but there are similarities in the key steps of their process: 1. identifying (and grouping) a number of indicators believed to have an impact on competitiveness, 2. collecting data for these indicators (statistical data or specific survey data), 3. creating an overall score for each country and 4. ranking the countries based on the scores. Because of the different methodologies and indicators it is difficult to compare the results of various reports, therefore the most cited data from each report is the final rank of the countries, which could be compared to the rank in other reports, for example, within a set of identified competitors. Whilst the single score serves the purpose of comparison, the drivers of competitiveness need to be analyzed separately.

HUMAN CAPITAL AND COMPETITIVENESS

Similarly to competitiveness, there is a wide range of definitions of human capital. Another similarity is that the concept also started to be developed in the context of companies before it was extended to a macro level. The introduction of the term “human capital” is attributed to the Nobel-prize winning economist, Theodore Schultz, who researched underdeveloped countries. He claimed that the welfare of poor people depends on knowledge more than on any other (physical) resources. He referred to this qualitative economic factor as human capital (Fitz-enz, 2000).

All resources apart from human resource are passive, they need human intervention to make them producing economic value. The stock markets recognize the impact of human knowledge. Tech companies often have a market value worth many times of their book value (Fitz-enz, 2000). There are successful efforts to link the quality of human resource to the profitability of companies by various studies carried out by global consulting firms, such as PwC Saratoga or Watson Wyatt. The latter published a book on the findings on how a variety of common human resources practices contribute to the value of the company. They analyzed the people practices of a sample of 750 publicly traded companies, and based on this, they defined the human capital index (HCI) for each company. They found a significant correlation between the HCI and the total shareholder return (TSR). They also found using longitudinal data that HCI predicts TSR much better than TSR predicts HCI (Pfau - Kay, 2002).

Whilst leading companies see human capital as a distinct source of competitive edge and align their practices accordingly, this is less obvious at the level of national economies. People related systems and policies such as education (compulsory or higher levels), healthcare, social benefits or labor regulations often handled in isolation, being dependent on strict budget constraints and serving political value choices of ruling governments, the link between these factors and the economic performance and ultimately the standard of living of nations is not transparent. Even in some global competitiveness reports the people aspect remain more indirectly or narrowly addressed. For example in the IMD World Competitiveness Yearbook there are several aspects measured which are directly or indirectly related to human capital (such as employment level, labor regulations, labor market, management practices, attitudes and values or education), but these are spread across the various groups of variables (IMD, 2011). The EU Innovation Scoreboard (which is positioned as an innovation report but in its structure is similar to other competitiveness reports) dedicates a set of measures to human capital, however these are narrowly composed, and include only a ratio of the population in certain age groups completing various levels of education based on statistical data of the member states (UNU-MERIT, 2011).

The Global Competitiveness Report issued annually by the World Economic Forum structures its data based on factors most important in driving competitiveness (basic requirements, efficiency enhancers and innovation & sophistication). According to their methodology, these categories have different importance (weight) for economies in different stages of development (factor driven, efficiency driven and innovation driven economies, and the transition phases between these stages). Within these 3 major sections they define 12 pillars, each of them are built up from a variety of 111 indicators (Schwab, K. (2012).

The Global Talent Index Report is prepared by the Economist Intelligence Unit (and published by Heidrick & Struggles, a global executive search and HR consulting firm) is similar in its methodology

and structure to the overall competitiveness reports, but it only focuses on the human capital. It creates a global talent index (GTI) based on the availability and quality of human capital in 60 analyzed countries. Their data is also hierarchically structured: the index is calculated from 7 components, each composed from 2 to 8 of the 30 indicators. The source of data is either statistics or data collected by their own survey. The components of the index are **demographics** (age and growth of the population), **compulsory education** (duration and efficiency of the education), **university education** (enrolment rates and expenditures), **quality of labor force** (technical, language and managerial abilities of the workforce), **talent environment** (conditions contributing to retain talent), **openness** (flow of international trade, FDI and foreign talent) and **proclivity to attract talent** (income levels and growth of available jobs). Most of the indicators could be related to an indicator in the Global Competitiveness Index, therefore, for the purpose of the analysis, I consider the indicators of the Global Talent Index to be relevant to competitiveness.

PURPOSE OF THE RESEARCH

Having available data for both human capital (GTI and its components) and competitiveness (GCI) the intention was to understand the relationship between these two factors, and gain some insights how the development of the human capital influences the competitiveness of an economy. Specific objectives were in particular:

- to identify the human resource related factors which contribute most to the country's competitiveness index (GCI)
- to quantify the sensitivity of the GCI to various human capital related factors
- to find the areas of strengths and improvement opportunities of Hungary through human capital development, which would improve the country's position in the GCI ranking.

ANALYSIS PROCESS

I took the ranking of the components of the Global Talent Index (GTI) of 60 countries as the human capital related data set, and analyzed its relation to the GCI (which is available for 144 countries, all 60 of the GTI countries included). The data considered to be sufficient both in terms of size (60 countries) and depth (7 variables) for the selected method. The data collection period of the two reports were similar, most data from both reports referred to 2011 (EIU, 2011 and Schwab, 2012).

A similarity analysis technique, **component-based object comparison for objectivity** (COCO) method was applied (Bánkuti - Pitlik, 2010). This method investigates the connection between independent variables (attributes) and the dependent variable (result variable) via an algorithm based on linear programming. The analysis results the following outputs: a staircase function with parameters on the solution where the sum of squares of the distances between the actual and estimated values are at the minimum. In other words, based on similarities of the analyzed countries the algorithm builds up the GCI estimates for each country from the GTI components' ranking, assuming there are no other factors impacting the competitiveness. Obviously there are other important factors in competitiveness, however, this assumption allows to investigate the impact of the human capital factor on competitiveness in isolation from other influencing forces, leading to a better understanding on how the various components influence competitiveness. Based on the estimated values of the model a simulation may also be performed to find the degree of the improvement in each components which would lead to improvement in the position in overall competitiveness ranking. I illustrate this simulation in case of Hungary. To perform the analysis I used the free online analysis tool for COCO, made available as the courtesy of the online journal called Medium on Internet for Agricultural Applied Informatics in Hungary, accessible on the following URL: http://miau.gau.hu/myx-free/coco/beker_std.php.

The independent variables (attributes) were the ranking of the 7 talent index components and the dependent variable the GCI. The value of the GCI ranges between 1 and 7 by definition. For the purpose of the COCO calculation the GCI values were transformed for technical reasons with the following formula: $\text{Transformed GCI} = \text{GCI} \cdot 1000 + 1000$. The values of the staircase function and the estimates are therefore corresponding with the transformed GCI values, and in the final step of the simulation these were converted back to the original GCI range. The staircase values are shown in Table-1. If the stair values of all objects were the same in any given variable it would mean that improvement in that

variable would not impact the result variable (GCI) at all, in other words, the variable is redundant from the standpoint of the result variable. There was no such variable in my analysis, this means that all of the included attributes influence the level of competitiveness to some degree. Where the stair values are identical for several objects in a row it means that within that range of identical stair values changes will have no impact on the estimate of the result variable. In order to achieve tangible impact, the improvement in the given variable should aim for the level of the object with the next highest stair value as a minimum. In Table-1 the values in the framed cells refer to Hungary's current rank in the given component. The highlighted cells show the value which need to be achieved in order to have a measurable improvement in Hungary's competitiveness.

Based on this logic a simulation could be performed to estimate how one stair value change in each variables would impact the competitiveness index. A more meaningful interpretation of the data could be gained through the comparison to Hungary's more relevant competitive environment, such as the European Union of which it is a member of (27 EU member states), and also its closer geographical region, 7 Central European (CE) countries which are also members of the EU (Bulgaria, Czech Republic, Hungary, Poland, Romania, and Slovakia, Slovenia). I illustrate the simulation process on the example of the compulsory education variable, on which Hungary is ranked 18th of 60 countries. Table-1 shows the corresponding stair value, 924. The related score 77.4 on this component in the Global Talent Report. In order to improve competitiveness through this variable, its rank should be improved at least to the next highest stair value, which is the country on the 17th place (Canada, with a score of 77.5). This appears to be a realistic target which could be achieved by improving the indicators within this component: increase the spending to education (both in % of GDP and spending per pupil as a % of GDP per capita), increase secondary school enrolment, increase the expected years of schooling, or improve the pupil:teacher ratio. Some of these changes could be made quickly (e.g. increase spend and/or the number of teachers). Achieving this target would mean a 0.1 theoretical improvement in terms of GCI score, increasing it from 4.3 to 4.4 – resulting a move forward 9 places (from 60th to 51th) in the Global Competitiveness Index ranking, assuming all other factors are unchanged (Table-2). Although, according to the 2011 data, compulsory education is a relative strength of Hungary compared to other variables, improvement still may be recommended due to its high impact and the realistic targets for improvement. The next component worth to consider for change is the talent environment, where the changes could take longer, because cultural change is also required to achieve improvement in most indicators within this component (protection of property, wage and labor regulations, meritocratic remuneration). In addition, it includes the R&D spend as % of GDP, which currently below the EU average. The third important component is demographics, which could be influenced only very indirectly and on longer term, achieving quick improvement on this area is unlikely. The quality of labor force is also a feasible change with only one step improvement, however, the GCI is less sensitive to this variable, and only half of the impact could be achieved than with the previous factors. In case of the university education the next stair value is far away, in order to achieve a measurable change in the competitiveness, the country should reach the level of the second ranking country from the current 25th position. The situation even more difficult in the case of proclivity to attracting talent, where the 5th place should be reached from the 55th. This means that further development of these factors require resources out of proportion to improve competitiveness. What is important in these factors, however, is the protection of the current position, because decline in stair value is a few steps away, reaching that level would hit the overall competitiveness score. The case of openness is slightly different: the next higher stair value is only 5 steps away, however, Hungary is in an advantageous position already, the first in the ranking had to be matched in order to improve GCI, and the sensitivity on this change is lower (0.5). Therefore investment of resources would not necessarily pay off in the improvement of competitiveness.

CONCLUSIONS

My analysis of secondary data confirmed that components of the global talent index influence the overall competitiveness of a country. The sensitivity of the competitiveness to the components vary.

Table 1: Staircase values by attributes

Stairs	Demographics	Compulsory education	University education	Quality of labour force	Talent environment	Openness	Proclivity to attracting talent
S1	1148.7	1023.9	299.7	324.6	3246.4	1373.5	349.6
S2	1048.8	1023.9	299.7	324.6	3246.4	1323.5	349.6
S3	1048.8	1023.9	249.7	324.6	3246.4	1323.5	199.8
S4	1048.8	1023.9	249.7	324.6	3246.4	1323.5	199.8
S5	1048.8	1023.9	249.7	324.6	3246.4	1323.5	199.8
S6	1048.8	1023.9	249.7	324.6	3246.4	1323.5	99.9
S7	1048.8	1023.9	249.7	324.6	3246.4	1323.5	99.9
S8	774.1	1023.9	249.7	324.6	3246.4	1323.5	99.9
S9	774.1	1023.9	249.7	324.6	3246.4	1323.5	99.9
S10	774.1	1023.9	249.7	324.6	3246.4	1323.5	99.9
S11	774.1	1023.9	249.7	274.7	3196.5	1323.5	99.9
S12	774.1	1023.9	249.7	274.7	3196.5	1323.5	99.9
S13	774.1	1023.9	249.7	174.8	3196.5	1323.5	99.9
S14	599.3	1023.9	249.7	174.8	3196.5	1323.5	99.9
S15	599.3	1023.9	249.7	174.8	3196.5	1223.6	99.9
S16	599.3	1023.9	249.7	174.8	3196.5	1223.6	99.9
S17	449.5	1023.9	249.7	174.8	3196.5	1223.6	99.9
S18	449.5	924	249.7	174.8	3196.5	1223.6	99.9
S19	449.5	924	249.7	174.8	3196.5	1223.6	99.9
S20	449.5	924	249.7	174.8	3196.5	1223.6	99.9
S21	274.7	924	249.7	124.9	3196.5	1223.6	99.9
S22	274.7	924	249.7	124.9	3196.5	1223.6	99.9
S23	274.7	924	249.7	124.9	2796.9	1223.6	99.9
S24	274.7	924	249.7	124.9	2796.9	1223.6	99.9
S25	274.7	924	249.7	99.9	2697	1223.6	99.9
S26	274.7	924	249.7	99.9	2697	1223.6	99.9
S27	274.7	924	249.7	99.9	2697	1223.6	99.9
S28	274.7	924	249.7	99.9	2697	1223.6	99.9
S29	274.7	924	249.7	99.9	2697	1223.6	99.9
S30	274.7	924	249.7	99.9	2697	1223.6	99.9
S31	274.7	924	149.8	49.9	2697	1223.6	99.9
S32	274.7	924	149.8	0	2697	1223.6	99.9
S33	274.7	924	149.8	0	2697	1223.6	99.9
S34	274.7	924	149.8	0	2697	1223.6	99.9
S35	274.7	924	149.8	0	2697	1223.6	99.9
S36	274.7	924	149.8	0	2697	1223.6	99.9
S37	274.7	924	149.8	0	2597.1	1223.6	99.9
S38	274.7	924	149.8	0	2597.1	1223.6	99.9
S39	274.7	924	149.8	0	2597.1	1223.6	99.9
S40	274.7	924	149.8	0	2597.1	1223.6	99.9
S41	274.7	924	149.8	0	2597.1	1223.6	99.9
S42	274.7	924	99.9	0	2597.1	1223.6	99.9
S43	149.8	924	0	0	2597.1	1223.6	99.9
S44	124.9	924	0	0	2597.1	1223.6	99.9
S45	124.9	924	0	0	2597.1	1223.6	99.9
S46	124.9	924	0	0	2597.1	1223.6	99.9
S47	99.9	924	0	0	2597.1	1223.6	99.9
S48	99.9	924	0	0	2597.1	1223.6	99.9
S49	99.9	924	0	0	2597.1	1223.6	99.9
S50	99.9	924	0	0	2472.3	1223.6	99.9
S51	99.9	924	0	0	2472.3	1223.6	99.9
S52	99.9	724.2	0	0	2472.3	1223.6	99.9
S53	99.9	374.6	0	0	2472.3	1223.6	99.9
S54	99.9	99.9	0	0	2472.3	1223.6	99.9
S55	99.9	99.9	0	0	2472.3	1223.6	99.9
S56	0	99.9	0	0	2472.3	1223.6	99.9
S57	0	99.9	0	0	2222.5	1223.6	0
S58	0	99.9	0	0	2222.5	1223.6	0
S59	0	0	0	0	2222.5	1223.6	0
S60	0	0	0	0	1398.5	1223.6	0

Source: Author's own analysis based on data of the Economist Intelligence Unit and the World Economic Forum

Table 2: Calculated improvement in Hungary's GCI score and rank by improving GTI components based on the output of te COCO analysis

GTI component	Steps to next higher stair value	GCI improvement opportunity	Cumulated improvement in GCI score	GCI score	Rank in total GCI sample	Rank in EU	Rank in CE
					144 countries	27 countries	7 countries
				4.3*	60*	20*	3*
Compulsory education	1	0.1	0.1	4.4	51	17	3
Talent environment	2	0.1	0.2	4.5	40	14	1
Demographics	1	0.1	0.3	4.6	37	12	1
Proclivity to attracting talent	50	0.1	0.4	4.7	31	12	1
University education	23	0.05	0.45	4.75	30	12	1
Quality of labour force	1	0.05	0.5	4.8	30	12	1
Openness	5	0.05	0.55	4.85	29	12	1

* Actual values based on the Global Competitiveness Report 2012-2013.

Source: Author's own analysis based on data of the Economist Intelligence Unit and the World Economic Forum

Based on the analysis of the GTI components, Hungary's position among the 7 CE countries is average, in the EU comparison the country shows relative weakness in 5 out of the 7 components of the talent index. Hungary's relative strengths are in the openness and the compulsory education. Relative weaknesses of the country are in its demographics and the proclivity to attracting talent (both in EU and regional comparison).

The results of the analysis with the COCO method suggest that in order to improve Hungary's competitiveness through the development of human capital the most impactful component would be the compulsory education. Achieving the next level in this component could result a step ahead by 9 places in the rank of 144 countries, and by 3 places within the EU 27 countries. Improvement on the talent environment and demographics would also make a positive impact on the competitive position of Hungary, however, changes in these areas take longer time and require changes in attitudes, too. Improvement of additional components would require more effort and resource with diminishing improvement in the country's position in competitiveness. On the other hand, protecting the current position is important especially on the demographics, university education and proclivity to attracting talent, because reaching the next lower stair value would lead to a strong negative impact on the competitiveness.

Although the limitations of the research is recognized (secondary data from two different sources were analyzed and the assumptions for the quantification of the impact of improvements are theoretical), I am confident that the analysis is robust enough to highlight the connection between the aspects of human capital and competitiveness, and to identify the areas where resources need to be focused in order to achieve positive changes in competitiveness through the development of human capital.

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COMPETITIVENESS INDICATORS OF THE WESTERN BALKAN COUNTRIES: A COMPARATIVE ANALYSIS

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ABSTRACT

In modern conditions for a large number of countries, the need for realization of business activities in the international market is becoming a key determinant of economic growth. Therefore, analyses of competitiveness indicators are very important, based on which the success of company and industry business activities can be presented, by comparing the macroeconomic (institutions, infrastructure, macroeconomic stability, market sophistication) and microeconomic factors (sophistication of company operations and strategies, quality of national business environment, state of cluster development). The aim of this paper is to analyze the different methodologies that effect a better comprehension of the competitiveness of certain countries. Respected international institutions, including the World Economic Forum, World Bank, European Bank for Reconstruction and Development and Heritage Foundation enable analysis of factors that represent the national competitiveness performance. Relevant national competitiveness indicators are identified and used to construct national rankings for the Western Balkan Countries. The results indicate significant changes in their relative rankings from these previous studies, and provide important and useful information to policy/decision makers.

Keywords: competitiveness indicators, Western Balkan Countries, comparative analysis.

INTRODUCTION

In recent years, competitiveness of countries has been a topic that receives a growing attention among policy/decision makers worldwide. Competitiveness is the aggregate expression of global characteristics – micro, meso and macro – that are specific for economy of each country. The models that are used for measuring the competitiveness of different countries are based on this definition. The main problems are posed by comparisons and evaluations of national characteristics. The most sophisticated models for measuring countries' competitiveness are those developed by the World Economic Forum, the World Bank, European Bank for Reconstruction and Development and Heritage Foundation. In order to implement a comparative analysis of reliable competitiveness indicators, it is very important that the concept of competitiveness is well understood. Competitiveness indices can contribute to the identification of standards between countries if the competitiveness analysis is reliable. The country rankings contribute economic policy makers to evaluate and improve competitiveness results.

COMPETITIVENESS INDICATORS: AN OVERVIEW OF DIFFERENT METHODOLOGIES

Competitiveness indicators developed by the World Economic Forum, World Bank, European Bank for Reconstruction and Development and Heritage Foundation make it possible to analyze factors that best represent the economic performance and competitive strengths and weaknesses of analyzed countries, as well as the correlations of rankings based on various surveys and the consistency of their results.

The World Economic Forum Competitiveness Indicators

The World Economic Forum (WEF) publishes annually the Global Competitiveness Report, which assesses, by means of quantitative and qualitative data, the capacity of the world's 144 largest economies to achieve sustained economic growth. National competitiveness is defined by the World Economic Forum (2011) as a set of factors, policies and institutions that determine the level of a country's economic prosperity and productivity, with productivity increase being linked to better use of available factors and resources. The WEF bases its competitiveness analysis on the Global Competitiveness Index (GCI), which includes both microeconomic and macroeconomic bases of national competitiveness. The GCI starts from the premise that competitiveness is a complex phenomenon, influenced by many factors, which are grouped into 12 pillars of competitiveness (institutions, infrastructure, macroeconomic stability, health and primary education, higher education and training, goods market efficiency, labour market efficiency, financial market efficiency, technological readiness, market size, business sophistication and innovation), organized into three stages of economy (factor-driven, efficiency-driven and innovation-driven).

Table 1: Components of the Global Competitiveness Index

Group of key factors	12 Pillars
Key for Factor-driven economies	1) Institutions 2) Infrastructure 3) Macroeconomic stability 4) Health and primary education
Key for Efficiency-driven economies	5) Higher education and training 6) Goods market efficiency 7) Labour market efficiency 8) Financial market sophistication 9) Technological readiness 10) Market size
Key for Innovation-driven economies	11) Business sophistication 12) Innovation

Source: The Global Competitiveness Report (2011-2012), WEF.

The significance of individual groups of competitiveness pillars depends on the stage of country development, while for middle developed countries (including Western Balkan Countries), besides the basic factors, efficiency factors are of great importance. According to The Global Competitiveness Report for 2012, Montenegro was ranked 72th out of 144 countries, followed by Macedonia in 80st place, Croatia in 81st place, Bosnia and Herzegovina in 88th place, Albania in 89th place and Serbia in 95th place.

The World Bank Competitiveness Indicators

The World Bank database of competitiveness indicators is a collection of indicators that assess economic performance and the environment for competitive business development in 185 countries. The database allows the user to obtain a quick snapshot of the state of the business environment for a country and to make international comparisons. The rankings can help policy-makers design and evaluate national competitive performance. They can also help investors to allocate resources between countries and researchers to analyse economic performance. The value of a competitiveness index depends on the rigour of the underlying analytical framework and the methodology for making the rankings. The Doing Business index analyzes indicator values by areas: 1) Starting a business (legal procedures for starting a business, average time necessary to complete procedures, costs, paid-in minimum capital); 2) Dealing with construction permits (number of all procedures for legal construction, average time spent on procedure, procedure costs); 3) Employing workers (difficulty of hiring index, rigidity of hours index, difficulty of redundancy index, redundancy cost); 4) Registering property (legal procedures for property

transfer, time necessary to complete procedures, costs), 5) Getting credit (strength of legal rights index, depth of credit information index, public registry coverage, private bureau coverage); 6) Protecting investors (extent of director liability index, ease of shareholder suits index, extent of disclosure index), 7) Paying taxes (company tax payments per year, time necessary to comply, total tax rate); 8) Trading across borders (necessary documents to export and import, time necessary to perform all necessary export and import procedures, costs of all export and import procedures); 9) Enforcing contracts (contract enforcement procedures, procedure completion time, costs); 10) Closing a business (time and costs of bankruptcy procedures, recovery rate). According to the report for the Ease of Doing Business for 2012, Macedonia was ranked 23th out of 185 countries, followed by Montenegro in 51st place, Croatia in 84th place, Albania in 85th place, Serbia in 86th place and Bosnia and Herzegovina in 126th place.

The Heritage Foundation Index of Economic Freedom

The Index of Economic Freedom represents an average of ten individual freedoms: business freedom, trade freedom, monetary freedom, government spending, fiscal freedom, property rights, investment freedom, financial freedom, freedom from corruption and labor freedom. According to the methodology that encompasses measurements of the degree of freedom in ten relevant fields among 185 economies for 2012, Serbia is ranked 98th, with a result of 58,0 among 184 analyzed countries, which ranks it among “mostly free countries.” Serbia ranks below Macedonia, which is 43 th, Montenegro at number 72 and Croatia at 83. Only Bosnia and Herzegovina is ranked worse, at number 104.

European Bank for Reconstruction and Development

The EBRD has been analyzing and summing up transition countries’ structural and institutional reforms and improvement in their macroeconomic performances. Each year, the EBRD’s transition report presents each country’s position on its transitional road. Nine transition indicators encompass four main elements of a market economy: enterprises (large-scale privatization, small-scale privatization and governance and enterprise restructuring), markets and trade (price liberalization, trade and foreign exchange system and competition policy), financial institutions (banking reform and interest rate liberalization and securities markets and non-bank financial institutions) and infrastructure (overall infrastructure reform). The EBRD report publishes indicators that show a country’s transition progress, and allows comparison across countries. Indicators range between 1 and 4+, where 1 represents small or non-existent changes in transition, while 4+ represents the standards of developed market countries. The EBRD considers that Western Balkan countries has progressed significantly in the direction of regional and European integrations during the past several years, and that this has occurred thanks to the strengthening of the financial sector and trade liberalization.

COMPARATIVE ANALYSIS OF THE WESTERN BALKAN COUNTRIES' COMPETITIVENESS

A comparative analysis of indicators of Western Balkan countries competitiveness is based on a comparison of results obtained by the application of different methodologies, the valorization of their advantages and shortcomings and the determined statistical correlation between certain countries’ positions regarding different competitiveness surveys and statistical indicators. On the basis of the said methodological approaches of different international institutions, a comparative analysis of competitiveness indicators was performed, on the basis of an analysis of secondary data and Spearman’s correlation coefficient. The analysis highlights the factors that influence deviations in B&H’s competitiveness rankings as compared to that of other countries in transition: Albania, Montenegro, Croatia, Macedonia, Serbia and former successful transition countries Estonia, Czech Republic, Lithuania, Slovenia. In the analysis shown in Table 2, which compares the rankings of B&H and selected countries from the region according to different competitiveness surveys for

2012, the best ranked countries are the ex transition countries (Estonia, Czech Republic, Lithuania and Slovenia). Compared to them, B&H, Serbia, Croatia and Albania are the worst ranked.

Table 2: Comparison of the rankings of Western Balkan countries and the former successful transition countries according to different competitiveness surveys for 2012.

	Rank GCI 2012	Rank DB 2012	Rank HF 2012	Rank EBRD 2012	Average rank – Competitiveness	Standard deviation
Albania	9	8	5	5	8	2,061553
B&H	8	10	10	6	9	1,914854
Montenegro	5	5	7	8	7	1,500000
Croatia	7	7	8	1	6	3,201562
Macedonia	6	1	4	7	5	2,645751
Serbia	10	9	9	9	10	0,500000
Estonia	1	2	1	2	1	0,577350
Czech Republic	2	6	3	-	3	2,081666
Lithuania	3	3	2	3	2	0,500000
Slovenia	4	4	6	4	4	1,000000

Source: Calculated on the basis of data published by the World Economic Forum, World Bank, Heritage Foundation and the European Bank for Reconstruction and Development.

In the analysis presented in the table 2, which compares the ranks of Bosnia and Herzegovina with the ranks of selected countries in the region, according to various studies on competitiveness in 2012, the best-ranked countries are former transition countries (Estonia, Czech Republic, Lithuania and Slovenia). Compared to them, Bosnia, Serbia and Albania are the worst ranked countries. Based on the standard deviation, we can see that the greatest discrepancies present in cases Croatian, Macedonian and Albanian, mostly in relation to the competitiveness rankings according to EBRD. In the case of B&H ranks competitiveness by different institutions varies from 5 to 9 places, as evidenced by the relatively high standard deviation. To illustrate the relationship among research and "hard" statistical data, see Table 3.

Table 3: Comparison of the rankings of Western Balkan countries and the former successful transition countries according to key macroeconomic indicators for 2012.

	Rank GDP PPP per capita 2012	Rank FDI 2012	Rank EXPORT 2012	Average rank – Macroeconomic Indicators	Standard deviation
Albania	10	4	9	8	3,214550
B&H	9	10	7	10	1,527525
Montenegro	6	6	10	7	2,309401
Croatia	5	8	5	6	1,732051
Macedonia	7	9	8	9	1,000000
Serbia	8	3	6	5	2,516611
Estonia	3	2	4	3	1,000000
Czech Republic	2	1	1	1	0,577350
Lithuania	4	7	3	4	2,081666
Slovenia	1	5	2	2	2,081666

Source: Calculated on the basis of data published by the World Bank 2012 .

It analyzes the statistical indicators comparing ranks B&H and selected countries in the region according to certain macroeconomic indicators for 2012, which include GDP rankings, inflow of foreign direct investment and the share of exports in GDP for 2012. Except Albania, significant differences in rank are presented in the case of Serbia, Montenegro, Bosnia and Herzegovina, Lithuania and Slovenia. In the case of these countries, macroeconomic indicators suggest that the expected level of competitiveness, with the exception of Serbia, almost identical to the competitiveness index, prepared on the basis of various indicators according to the specific

methodologies. Further analysis will show the significance of the characteristics of the perception of research studies, which are largely used to construct the index of competitiveness of various international organizations, for the determination of a relatively poor position of B&H towards certain aspects of competitiveness. The interdependence of rankings according to different studies and hard statistical indicators is shown in Table 4, as represented by Spearman's rank correlation coefficient. The data was processed via the SPSS statistical software package.

Table 4: Spearman's correlation coefficient for analyzed indicators for the presented countries

		GCI	DB	HF	EBRD	GDP PPP pc	FDI	EXPORT
GCI	Correlation Coefficient	1,000	,709*	,782**	,624	,842**	,345	,612
	Sig. (2-tailed)	.	,022	,008	,054	,002	,328	,060
	N	10	10	10	10	10	10	10
DB	Correlation Coefficient	,709*	1,000	,770**	,200	,552	,030	,212
	Sig. (2-tailed)	,022	.	,009	,580	,098	,934	,556
	N	10	10	10	10	10	10	10
HF	Correlation Coefficient	,782**	,770**	1,000	,515	,515	,430	,406
	Sig. (2-tailed)	,008	,009	.	,128	,128	,214	,244
	N	10	10	10	10	10	10	10
EBRD	Correlation Coefficient	,624	,200	,515	1,000	,636*	,285	,721*
	Sig. (2-tailed)	,054	,580	,128	.	,048	,425	,019
	N	10	10	10	10	10	10	10
GDP PPP pc	Correlation Coefficient	,842**	,552	,515	,636*	1,000	,382	,818**
	Sig. (2-tailed)	,002	,098	,128	,048	.	,276	,004
	N	10	10	10	10	10	10	10
FDI	Correlation Coefficient	,345	,030	,430	,285	,382	1,000	,406
	Sig. (2-tailed)	,328	,934	,214	,425	,276	.	,244
	N	10	10	10	10	10	10	10
EXPORT	Correlation Coefficient	,612	,212	,406	,721*	,818**	,406	1,000
	Sig. (2-tailed)	,060	,556	,244	,019	,004	,244	.
	N	10	10	10	10	10	10	10

* Correlations significant at the 0.05 level.

** Correlations significant at the 0.01 level.

Source: Author's own calculations.

Several conclusions can be drawn from the analysis of Spearman's rank correlation coefficient for the presented countries' analyzed indicators: Spearman's rank correlation coefficient shows that:

- The interdependence of rankings from different surveys is statistically significant for all indicator pairs.
- Rank interdependence is especially pronounced between macroeconomic indicators of GDP and the GCI, with a correlation coefficient of 0,842, which represents a very strong positive correlation between these indicators.
- There is also a positive stronger correlation between the HF index and GCI, with a correlation coefficient of 0,782.
- There is a statistically significant relationship between the index HF and DB indicators expressed through a strong positive correlation (0,770).
- Also, there exists a positive strong correlation between macroeconomic indicators, GDP and Export with a correlation coefficient of 0,818.
- The level of correlation between the rankings based on FDI flows and different indicators of competitiveness is meaningless.

CONCLUSION

The creation of a highly competitive economy is a complex and continuing task for each country that wishes to develop and, in that context, the role of the state in creating an environment that will stimulate competitiveness is very important. The comparative analysis of competitiveness

indicators has suggested a variety of starting points to tackle the shortcomings and constraints to future economic growth in Western Balkan (WB) countries. Competitive position of WB countries is evaluated from the perspective of different methodologies. Concluding remarks with high certainty point to the conclusion that methodology of the World Economic Forum captures the progress in transition economies in the most reliable way. Despite the different methods and data sources used for calculating the analysed indices, it may be said that the improving economic situation of WB countries is gradually becoming reflected not only in indicators of the microeconomic and macroeconomic environment, but also in summary of comparative indices evaluating countries' competitiveness. Therefore, for Western Balkan Countries, it is necessary to perform more active comparisons with the best practices of former successful transition countries and to be oriented towards raising the level of company innovation and productivity, as well as recognizing the potential and the development of one's own competitive strengths.

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COMPLEX SYSTEMS IN A NEW FRAMEWORK: THE CONCEPT OF ENVOLUTION

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ABSTRACT

Complex systems include global climate change, ozone depletion, economic crises, etc. The interactions of their components often lead to large-scale and unpredictable results. An important example of a complex system is an ecosystem. Globalization is another one. It involves two basic and contrary processes: integration and fragmentation/localization. This counterintuitive, nonlinear feature of globalization requires a new interpretative model. for crisis management The fact that the actual economic models did not predict the financial crisis due to their linearity and to rational expectations, has shown that policy models and quantitative tools are too antiquated for the task. This is where a complexity-based model can become useful. to explain the cycles of non-equilibrium, instability, and structural change. A paradigm shift is needed toward the idea of meta complexity (Edgar Morin). Consequently, in this paper a new concept of *envolution* (as the evolution/involution feedback) is proposed as an interpretative framework, integrating negative and positive feedback and explaining a variety of phenomena we are facing in our increasingly interdependent world.

Key words: Complex Systems, Second Order Cybernetics, Crisis Management, Envolution

INTRODUCTION

The ecological crisis was the first postmodern crisis which made visible the limits of the dominating economic and technological paradigm. The global financial and economic crisis is making those limits even more visible. What is wrong with the current paradigm? It has underplayed the reality of the limits, and it has been blind to the conditioned, interrelated nature of the economic and technological development. This feature has been explained by the so called principle of the interconnectedness, or interplay between different constitutive aspects of the physical world. This principle, discovered as a result of leading achievements in modern physics, has led to the development of information and cybernetic disciplines. Designated as the crux of the modern worldview, it has nevertheless been reduced to its kernel and emptied of much of its content.

THE EQUILIBRIUM PARADIGM

Most first-degree system theory relied on the centrality of the equilibrium paradigm, a view which has been rejected in the meantime as a preconceived idea. Generally, the common denominator of all these processes has been subsequently labeled by the interdependence paradigm, the cybernetic loop, and the concept of *autopoiesis*. If we try to isolate what is the characteristic feature of all these paradigms (except the concept of *autopoiesis*), we will soon end up with a common residue: their static nature. The second feature is their presumed objectivity, that is, their unwinding in the absence, or the subject. As far as the concept of *autopoiesis* is concerned, although we can detect a strong dynamic connotation, it shares the objectivistic pattern exemplified in the cybernetic paradigm. As a matter of fact it is based on the understanding of the auto-regulation mechanism. What distinguishes the latter from the previous paradigms is the fact that it was borrowed from biology, and consequently, it applies to the human sciences as well. Precisely, it constitutes a

central piece of Luhmann's theory of auto-regulation in the legal realm. As a matter of fact, the main point of this theory lies in the premise of an objectified process.

One seemingly peculiar, but within the overall framework strictly logical, axiom of Luhmann's theory is the human being's position outside any social system, initially developed by Parsons. Consisting of "pure communicative actions" (a reference to Jürgen Habermas) any social system requires human consciousnesses (personal or psychological systems) as an obviously necessary, but nevertheless environmental resource. In Luhmann's terms, human beings are neither part of society nor of any specific systems, just as they are not part of a conversation. Luhmann himself once said concisely that he was "not interested in people". That is not to say that people were not a matter for Luhmann, but rather, the communicative actions of people are constituted (but not defined) by society, and society is constituted (but not defined) by the communicative actions of people: society is people's environment, and people are society's environment. Thus, sociology can explain how persons can change society - the influence of the environment (the people) onto the system (the society), the so-called "*structural coupling*". "Structural coupling...is the process through which structurally determined transformations in each of two or more systemic unities induces (for each) a trajectory of reciprocally-triggered change. This makes structural coupling one of the most critical constructs in autopoietic theory", (Maturana, 2002).

SECOND ORDER CYBERNETICS

A second-order cybernetic recognizes the fact, previously unacknowledged, that the observer and the system observed cannot be separated and that working with an organism or social system, implies recognition of that system as an agent in its own right. Second order cybernetics introduced therefore the observer in the process, since quantum mechanics has taught us, that the result of observations always depends on their interaction of the observer with a cybernetic system. After the second order cybernetics, there are proposals for "third" and "fourth" order cybernetics. The third one would include the "observed observer", as far as the observer's point of view (mental models) determine the observed aspects of reality; and the fourth one interacts with "mental states", especially when financial markets are concerned, since the aspirations and expectations of individuals (their "sentiments", as Adam Smith rightly recognized) constitute the complexity of economic models.

One of the first theories to be based on the premise that the bounds of the ecosystem are internal and structural, is summed up in the metaphor of the Spaceship Earth, which originated in the 1960s. This metaphor contributed to the understanding of the essence of a profoundly altered world we live in, and in addition, to the deepening of the awareness that a new global approach is necessary in order to solve the problems of the post-industrial era. The concept of the Earth as a spaceship represents one of the first articulated theories stemming from the assumption that natural resources are indivisible and limited. It also takes into account the fact that the conditions of life on our planet are non-renewable, and the process of their degradation irreversible. The main thrust of these theories has grown out of contemporary scientific research on entropy.

The emergence of a new type of complexity and the reached level of environmental imbalance and global pollution represent par excellence expressions of retroactive processes. Essentially, these processes reflect the complexity, which is a part of a radical change of the structure of our world. Thinned ozone layer and global pollution are examples of these extreme global phenomena, which have resulted from environmental imbalance. They consist in the non-apparent but continuously adaptive processes of the environment to the adverse and stretching conditions to which it is exposed through pollution. Though invisible, they become apparent in the aftermath, when it is generally too late to repair the damage.

"Synergy is not a peripheral phenomenon associated only with drug interactions or corporate mergers. Though it often travels in disguise, synergy can be found in the subject-matter of most, if not all, of the academic disciplines. In physics, it is associated with the behaviour of atoms and

subatomic particles, as well as with superconductivity, synchronous light emissions (lasers) and such esoteric molecular phenomena as scale effects", (Croning, 1996).

NON-LINEAR MODELS

The most universal features of complex systems are: interdependence and interactions of numerous elements, non-linearity, hierarchical structure, unpredictability, self-organization etc. Complexity is also characterized by a multitude of other ideas such as bifurcations, co-evolution, chaos and edge of chaos, emerging properties, far-from-equilibrium-states, fractals, instability, irreducibility, self-organized criticality, sensitivity to initial conditions (so called "butterfly effect") and spontaneous self-organization. Positive feedback loops are self-reinforcing and amplify growth, leading to erosion and collapse of the system. Ultimately, when unchecked, a system will destroy itself. Negative feedback loops, on the other hand, are self-correcting, but they depend on the ability to detect leverage points.

The fact that we are today affected with an ecological crisis confirms the synergy paradigm, that is, the interaction between economic growth and environmental degradation. Phase transitions are a "form of synergy that is a special case of threshold phenomena. Phase transitions are abrupt changes of state, or of functional properties, that occur in many physical and dynamical systems; they are co-operative effects", (Croning, 1996).

The failure to predict outcomes in the risk management of environmental problems, for example has led scientists to adapt their tools to the new instances of the synergy hypothesis. As a matter of fact, Industrial gases called hydro fluorocarbons (HFCs), which are powerful greenhouse gases, are used as alternatives to certain ozone-depleting substances. This creates the risk that the potential benefit to climate from the phase-out of ozone-depleting substances could be cancelled out or reversed. The findings of the synergy between ozone layer depletion and climatic change are changing the way we perceive risk management in the area of protection of environment. What is at stake could be expressed in one crucial insight: the risk that the potential benefit to climate from the phasing-out of ozone-depleting substances could be cancelled out or reversed.

We propose herewith the concept of *envolution* as a new framework for analysis of complex processes of fluctuations and double retroaction. The crucial importance of this view of the *envolution* of complex events stems from new insights in the dynamics of complexity, i.e. that the equilibrium, far from being a dominant characteristic of complex systems is a faze, or product of fluctuations.

"Which events will regress, and which are likely to affect the whole system? ...We believe that models inspired by the concept of "order through fluctuations" will help us with these questions and even permit us in some circumstances to give a more precise formulation to the complex interplay between individual and collective aspects of behavior. From the physicist's point of view, this involves a distinction between states of the system in which all individual initiative is doomed to insignificance on the one hand, and on the other, bifurcation regions in which an individual, an idea, or a new behavior can upset the global state [...] Thus we are led to conclude that the same nonlinearities may produce an order out of the chaos of elementary processes and still, under different circumstances, be responsible for the destruction of this same order, eventually producing a new coherence beyond another bifurcation", (Prigogine & Stengers, 1984).

CRISIS MANAGEMENT

Financial crisis has shown similar fluctuations and nonlinearities. The failure to detect a positive feedback loop against a self-regulating presumption was due to the highly counterintuitive character of the leverage point (according to Forrester, complex systems are counterintuitive) The Reliance on mathematical models derived from equilibrium systems (linear models) that consider markets and economies as inherently stable, downplaying uncertainty, as well as the increasingly

interconnected global financial system were the main causes of the failure to predict the timing of the recent economic crisis. It has been stressed in a series of analyses that greater attention should be focused on developing and exploring non-linear models. This fact was confirmed by experts from the European Central Bank. As they have assessed recently "there is still ample room for researching indicators that precede complex economic crises such as the recent one, which originated in developed economies and spread all over the world." (Babecký et al., 2012).

"...The financial crisis has also pointed to weaknesses in the macroeconomic models which support our projections. In particular, criticism has been directed at state-of-the-art dynamic stochastic general equilibrium (DSGE) models..." (Kenny & Morgan, 2011).

Indeed, far-reaching changes brought about by the processes of growing complexity, clearly corroborate the fact that a boundary of the ecosystem is not something that could be overcome by future technological methods, which would include an environmental component or protection. It could neither be overcome by the so-called softer technologies, which would replace outdated technology. Although they do not pollute the environment, or rather, they pollute it less, the new technologies proved to create long lasting and very serious, adverse consequences to the human health in a great number of cases. Therefore, the limit to environmental pollution is rather structural. It displays itself as an entropy of sorts - activity of a repressed and unacknowledged wholeness of the ecosystem. Contrary to the linear movement of evolutionary processes, the degradation of the ecosystem is characterized by adverse, unpredictable processes, analogous to processes of bifurcation and expansion of growing complexity. With that, the bound is getting wider each day by geometric progression, corresponding to the technological development. This process is strongly interconnected with the continuous increase of complexity involving a new type of *endo-eco-causality* (Morin) as the scope of globalization widens.

As Forrester has shown, a counterintuitive posture is crucial in the field of complex system research. "The field of system dynamics now can explain how such contrary results happen. Fundamental reasons cause people to misjudge behaviour of social systems. Orderly processes in creating human judgment and intuition lead people to wrong decisions when faced with complex and highly interacting systems", (Forrester, 1971). Counterintuitive means contrary to what seems intuitively right or correct. Since the system often "evolves" contrary to what we have expected we are bound to adopt a new and non trivial approach. Evolution, as a matter of fact is not a simple idea, as Edgar Morin used to say. It involves the idea of "simultaneous degradation and construction, dispersion and concentration" (Morin, 1977). The utter reliance on self-regulation and equilibrium has led to inaccurate predictions.

In other words, it is necessary to introduce the idea of retroactivity, synergy and *envolution* in the modeling of crisis management tools. The concept of *envolution* integrates all the features of a complex dynamic system - constant change, coupling, feedback, non-linearity, history dependence, self-organization. As an example of the increasing awareness of the complexity of modeling requiring particular attention to uncertainty, there is wide agreement on the importance of running alternative tools of risk management as far as future financial crises are concerned: "In order to better understand risks, greater consideration needs to be given to the factors that might drive alternative scenarios as well as their likelihood", (Morin, 1977).

"More generally, it should be required that models and tools are able to provide measures of uncertainty along with their point forecasts. Moreover, consistent with the suite of models approach, it may not be appropriate to rely on a single measure of uncertainty from any specific tool. Indeed, as with point forecasts, there may be significant gains from combining the information on forecast uncertainty from competing density forecasts. However, further efforts are needed to explore alternative ways to optimally combine competing models or expert assessments of uncertainty", (Morrin, 1977).

Consequently, the financial and economic crisis and climate change seem to be crucially interconnected in many ways, although in this paper we are focusing on one side of the coin which shows in both areas a need for further improvement of models suited to resolve the urgent, complex and intertwined issues we are confronted with.

"Since the unforeseen onset of the global "financial crisis, the limitations of the mainstream models that have been used by economists to assess the impacts of climate change policies have been widely recognized. The pre crisis view of the market economy as a basically stable system is being replaced by more realistic dynamic models in which the evolution of the economy is determined by the strategies of many competing actors pursuing conflicting goals. These new economic models incorporate the key processes — multi-actor strategies, potential instabilities and government policies — that are needed as building blocks for modelling a controlled transition from a fossil-fuel-based to a decarbonized global economy", (Hasselmann, 2010.).

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THE IMPORTANCE AND ROLE OF EDUCATION IN SOCIETY

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ABSTRACT

Education is one of the important, special and complex segments. A number of concepts, approaches and definitions of education can be divided into two groups. For some, a modern education contributes to the achievement of social life and it is a basic social process of man's maintenance and the progress of humankind, and the continuity of culture. For others, modern education is the key factor of economic development and the knowledge of which depend on all other social processes.

Keywords: education, society, development, progress.

INTRODUCTION

Education is a continuous process that aims to transfer knowledge and skills, and develop skills necessary for participation in social processes, and functioning within the human community. At different stages of development of human society, different types of skills and knowledge are favored. However, it is certain that individuals and groups, who have disposed favored with knowledge and skills, held an important, privileged position within the narrower and wider communities. The traditional definition of education are based upon the belief of education as the systematic acquisition of scientific knowledge about nature, society and human thinking and mastery of skills and work habits that develop and shape the specific personality traits and adopt a view of the world. More modern understanding of education assumes the institutional education system of acquiring knowledge and training people to acquire knowledge, skills and habits they need. Education as a development resource should provide, the education system and educational content that is in it realization of the main objectives related to personality development, the preservation of man's natural environment and create awareness about the global problems of the contemporary modern world and education of mankind. In today's world, education follows the changes made to its development. Thus, education in the 21st century will be directed towards the acquisition of knowledge, as it becomes an important factor of social development and will have a decisive value for the individual and for civilization.

THE HISTORY OF EDUCATION AND SCHOOLING

Knowledge and skills are always passed on from generation to generation, and it is important to note that the tendency to preservation and promotion of a knowledge management as well as challenging them and creating new, always has been a part of the educational process. Knowledge and skills acquired initially were based solely on experience, and were passed orally, so the

education process was of informal character. In the distant past, people's knowledge was passed from generation to generation and was jealously guarded. The first forms of schools and education have appeared in ancient Greece, in Sparta and Athens. The Spartans were tightly organized and in constant war preparedness, so the Spartan training aimed at preparing troops to be always ready to fight the enemy.

Unlike Sparta, Athens recognized the need of nurturing the soul and body in general and they set the ethical rules for coping with life. They actually crystallize the spirit of the time that has emerged through natural development of human society. Through all the activities of the ancient society, a strong need to collect acquired, but scattered knowledge into a common framework can be seen. It should be based on traditional education, not just the European system of values, but values around the known world at that time. This would contribute to faster and better development of knowledge of themselves and society as a whole. Numerous schools of pre-Socratic period discussed the physiological phenomena through the dialog method combined with art and physical culture, or through an ascetic monastic character of the school organization.

Education in the Middle Ages is primarily oriented to the practical needs. Although there were people who loved knowledge for its own sake, they were rare and often felt the need to seek excuses for their intellectual curiosity. The main goal was that every person has the knowledge necessary to perform his job. Other skills are worthless, and they could be dangerous. Medieval education can be described only in academic institutions such as schools and universities, as represented by the nobles and the homes where the young nobles acquired knightly education. Producing a young knight in the formal education marked the end of education was the proof that he can take its place in society. Throughout the Middle Ages book knowledge in Western Europe, with the exception of Italy, was mainly restricted to those who belonged to the priestly ranks. To 12th century, literate laity was extremely small. After the 1100th year, their number is constantly increasing. Many rulers and nobles know how to read, while reading and writing must have been widespread through merchants. However, one should not exaggerate the extent of literacy. All the nobles and most retailers have catered to the officials who led their conversation and reading their letters that they received. There were hardly any truly educated laity (Baruning, 1909).

The creators of Slavic books were two educated Greeks from Salonika, Constantine (in monasticism Cyril) and Methodius. The activity of Cyril and Methodius and their students, regardless of the place and country where it developed, had a general Slavic character. The general Slavic is the most important achievements of their work: Slavic alphabet, Glagolitic, and somewhat later, Cyrillic, the first literary Slavic language, called Old Church Slavonic in science, and literature created on it (Deretić, 1987).

EDUCATION AS AN ENGINE OF SOCIETY

Each national economy and its long-term growth depend almost entirely on the quality of their human resources. In this case, the use of these resources and invest in their quality is the primary factor in development. Modern national education policy in developed countries is based on a concept developed in recent decades in international organizations dealing with educational policy (UNESCO, OECD, ILO, Council of Europe, European Commission) and they recommend it their members in implementing the national education reform. These are the concepts of lifelong learning and the concept of a learning society.

The concept of lifelong learning and human resource development of a harmonized system includes various forms of learning at all stages of life. These are: organized learning (education and training) that can be formal (school) and informal and unorganized or informal learning. Since it has to be learned all life, but one cannot go to school the whole life, learning in adulthood is usually not done in school than in non-school organizations, or where a grown man works and lives.

So the company, the more developed, becomes a learning society. The modern education system consists of a network of school-related organizations and non-school partnership. The school is no longer the only educational institution and the development of human resources of a country cannot be reduced to reform of the school system. In developed countries, the system of human resource development includes education and youth and adults and non-formal adult education, and more and more consideration is given to the Information and self learning. Education is now considered a condition of survival and development of modern societies. Those who survive are the easiest to adapt and adopt the first newspaper.

KNOWLEDGE AND EDUCATION

Knowledge is capital and the most important human resource, and by the necessity of holding the information (knowledge) in order to survive in a constantly changing environment of today's society, it is often called knowledge society. There is an educated man in its spotlight. It is necessary to define some terms that are used as synonyms for knowledge:

- Learning is the process of acquiring skills and knowledge, resulting in a relatively permanent change in behavior.
- Training-means acquiring new knowledge and practical skills necessary for the operation, management, management of the organization, according to accepted rules, regulations and standards. Training leads to changes in skills.
- Training-an exercise in acquired practical knowledge and skills.
- Developing knowledge-is related to the acquisition of new knowledge, skills and abilities that enable an individual to undertake complex tasks, preparing it for the future and the demands to come. The development leads to changes in attitudes and values.
- Education-acquisition means constant innovation and broader knowledge in the applied scientific disciplines and business practices (Petković, 2005).

KNOWLEDGE AS INTELLECTUAL CAPITAL 21ST CENTURY

According to research by Stanford University (USA), total of human knowledge created until 1900. was doubled till 1950. Since then, the whole of human knowledge doubles every 5-8 years. This fascinating information, except being interesting, has some unforeseen implications on our daily lives-personal and business. At the private plan's this "explosion" of knowledge has the result that countries and individuals who are of newly-acquired knowledge, are disposed to a great potential for continued strong growth in living standards, quality of life and wealth in general. In business life of individuals, organizations, states and the observed world as a whole, these vast, rapid, and daily changes affect the way in every respect, and significantly alter the previous way of life. At the beginning of the 21st century we are faced with the enormous changes:

- life, society and economy become more complex,
- time-we live in is unpredictable,
- nature is radically changing jobs,
- more business-disappearing due to technological change,
- the past-may be less support and guidance for the future.

It is already difficult to predict what knowledge and skills will be needed and requested for the next 10 years. In most professions knowledge is doubling every few years, which means that knowledge of each one of us needs to be doubled every 2 -3 years just to "keep up" with the changes, and those who did not will inevitably fall behind! Society in which knowledge is valued as a resource, where invest in education and science, which has developed information infrastructure and where individuality, creativity, organization and ability of individuals are highly valued is named an innovative society (Stefanović,2005).

EDUCATION FOR ECONOMIC DEVELOPMENT

In developed countries, the main development resource is human capital, and its quality determines the education and training. Education and training should contribute to sustainable national development and the continuous development of individuals. Therefore, the developed countries regard education and human resource development a national priority and implement those strategies of development of education and training that contribute most to economic, social and cultural development of society and the personal development of its members. For these reasons the new direction for education and human resource e not only affect the education of children and youth, but also non-formal and informal education. It is estimated that those countries whose development policy is not based on the concept of lifelong learning are doomed to economic and political marginalization.

The main objectives of the future of education are:

- preparation of young people in their personal life to gain a realistic picture of themselves, which will be implemented in personal, social and common conditions,
- preparation of young people for life in a democratic society, which includes information on rights, fundamental freedoms, duties and responsibilities of citizens,
- preparation of young people for work, which should provide a broad view of work and theoretical insight into the nature and forms of work
- preparation of young people for cultural life, finding resources for personal enrichment and involvement in the spiritual, cultural and historical heritage and so far preparation for life in a multicultural world.

Thus, education in the 21st century will be directed towards the acquisition of knowledge, as it becomes an important factor of social development and will have a decisive value for the individual and for civilization. Education will be important for perception and understanding of global changes in modern society, particularly regarding the problems associated with harmonizing economic development with environmental laws, in terms of science and technology, in terms of preserving cultural identity and sovereignty of their nation states, in terms of globalization of economic life and political domination of most developed countries, as well as in terms of democratization of social relations.

THE PROJECTED FUTURE OF EDUCATION

The process of knowledge acquisition and transfer of knowledge is inevitably accompanied by the development of society. Specifically, the pre-industrial period of development of society, traditional values, knowledge and practical skills were passed down from generation to generation. During the period of industrial development, not all needed knowledge could be more learned in the family. Because of that, the process of transferring knowledge turned into mass education. In the period of automation, machines more and more successfully solve many routine tasks, and man better and better do the intellectual and creative activities. In addition, the machines perform physical flow of materials and people dealing with the flow of information and knowledge. However, in automated manufacturing systems of tomorrow, not machines or people will no longer be tied to the factory or office, nor people will live in big industrial cities of today. In fact, they will be deployed around the world, close to one another in order to be linked in very sensitive communications, and your job will be done in the immediate social groups in their homes.

We also need to know and what titles would be needed, what family relationships will dominate , which relationships will prevail. There is a need to look, what would be a moral or ethical problem and what technology will be developed, and what will be the organizational structure to fit. All this, as well as determine other intellectual and psychological skills and knowledge to the people of tomorrow will be needed to successfully track the rapid social development. Thus, man's future depends on its education. Consideration of possible projection of the development, changes in education in the future will refer to the change of organizational structure of the education system,

the improvement of curriculum and the promotion of orientation directed towards the future. The current classical teaching will not be able to meet the needs that anticipate changes in the future. This lecture will disappear and they will replace many of the other newer methods of education based on experience, recreation, fun and work.

As a new approach to education that inevitably follows the changes in the society of tomorrow are expected, futurists legitimately raise the question of whether the educational process will be placed in appropriate institutions as it provides a much higher intellectual level of the world population and a much higher level of general education and culture. Thus, in these circumstances, the parents will assume the role of teachers, about what was already thought in many developed countries. Also, it talks about education opportunities through observation and participation in many important social events, and talk about life-long education and distance learning, but it is slowly becoming a reality. In accordance with such visions, as a possible new forms of education in the future some are mentioned: home education, mobile education, lifelong learning and virtual education and distance education.

The changes brought by the new time changes that are associated with transience, diversity and newspapers certainly suggest the need for new knowledge. Knowledge in the future will fast get old, so it will be necessary to take into account the efficiency of learning. In this regard, it will be very important to learn how to learn, how to forget learned how to learn again. This education will receive a new dimension.

IMPROVEMENT OF EDUCATION IN SERBIA

Serbia needs the education system that is compact, and flexible. Compact means that it is fully in line with the development strategy, and flexible, easily adaptable to the market. The reform process must be continuous, consistent, clear, precise and oriented towards the needs and interests of citizens of Serbia. In understanding this concept of education, as a part of the development of human resources of a country is an individual, his future, employment, personal and professional life. To make one a good educational system, it needs to be compatible with the chosen development strategy that is able to quickly respond to trends in the labor market.

This means that when a development strategy is chosen incorrectly or if the labor market permanently emits false signals, the system of education can be effective. To avoid this conceptual error it is necessary to harmonize the development of education strategy with the planned general social and economic trends and developments. Restructuring the economy towards the service industry and the development of other segments of industry and agriculture in particular has to respect policy and education and to build in that direction further development of the education system. In the education sector in Serbia, which includes preschool, elementary, middle and high education is just over 1.3 million students and about 110,000 employees. This means that the field of education covers almost a third of the active population in the Republic, or just over 20% of the total population.

This means that nearly 3 million people aged over 15 has a minimum life and job skills. One of the big problems with education that will be met in the coming years is demographic decline and reduction of the number of children, which means fewer students in schools. Last years, decreasing number of students enrolled the first grade of elementary schools and many middle is already facing the problem of fewer students. In the context of technological development of society and the changed relationship and structure of the economy and especially in the context of the different roles of the citizen as an individual, the role of education must become significantly different. Future teachers will have much more autonomy to be innovative and creative, to have a range of abilities to transfer knowledge and skills of students in coping with new or unforeseen circumstances. Therefore, education and training of teachers and educators are becoming a key requirement of the overall development and education (Tanasijević, 2006).

Another major area and priority of education is reform education in order to meet the needs of the labor market. In understanding the concept of education as a source of human resource, the need for qualified and skilled labor is becoming very important factor. One of the biggest challenges of the Serbian economy and society is to reduce the total number of unemployed. Be sure that the education system cannot resolve this issue, but it certainly can and must be directly related to employment policy in Serbia. Modernization of the State and its orientation towards modernism technologies must influence the innovation goals of education and the convergence of the developed countries. Therefore, the aims of modern vocational education in our country have to be oriented towards the strengthening of expertise and greater flexibility in overcoming the changing demands in the world of work and in society as well as the acquisition of key skills so that young people are ready for new professional challenges and can be included in the overall modernization of society. Realizing that our society is moving towards the learning society, it is necessary to develop readiness and training in young for further education. In order to achieve the necessary social and economic changes, Serbia has to restructure its human capital, supply it with new knowledge, skills and values, attitudes and behavior. This means that education is the basis of socio-economic transformation of Serbia. What is more, there is a question of further development of the education system and its strategic basis in relation to the development of society and economy.

CONSLUSION

Man finds, creates, enlarges, improves, apply and transfer knowledge to others. Therefore, knowledge is the mediator between the individual and society. Educated man is a part of society and should be the center of successful development of a knowledge society. It is very important to enable the individual to control personal development. Taking responsibility for our own development, we are responsible for the development of society. Understanding and respecting the individual characteristics of man plays an important role in the learning process, but the learning opportunities offered in the community should have the benefit of the whole community. In terms of all previous determinations, and taking into account all previous approaches to education, modern education is, from a sociological point of view, defined as a social process where knowledge is acquired, from the standpoint of its importance to civilization and it changes global view of the need for a developed personality, which is the main determinant of knowledge as a development resource. In this context, education will be important for perception and understanding of global changes in modern society, particularly regarding the problems associated with harmonizing economic development with environmental laws in terms of science and technology, in terms of preserving cultural identity and sovereignty of nation states, in their globalization of economic life, economic and political domination of most developed countries, as well as in terms of democratization of social relations.

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Session D: MARKETING MANAGEMENT

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Session Editor's Preface

Modern business conditions require new approaches to the study of marketing. Companies that want to be successful in the time ahead, need continual market analysis, competition and questioning the marketing methods. Marketing is changing conceptually and organizationally. Outdated models of organizational management are replaced by new, more sophisticated models, which are adapted to modern market conditions. New realities require new organizational and management skills. Therefore it is necessary for companies to apply those control techniques that emphasize long-term commitment to competitiveness, such as the analysis of customer satisfaction, customer relationship management, corporate social responsibility, social marketing, etc.

*The paper entitled “**Aspects of application of CRM in SMEs - a review of scholar literature**”, analyzes the process of marketing in SMEs, especially from the aspect of application of the concept of CRM and the benefits that can SMEs have. The paper gives overview of specific management process within the group of SMEs, analyzes the reasons for the application of CRM in small and medium-sized enterprises, as well as strategic options for the implementation of the CRM concept.*

*In the paper entitled “**Traditional Versus Internet Marketing - the impact on consumer behavior**” the authors try to give a response to the question through comparing traditional and internet marketing, as well as through research into consumer attitudes and opinions. The aim of this research consists of reaching the answer to the question of how consumers react to new, interactive media, as well as which form of communication (offline or online) they have more confidence in when making decisions about purchases.*

*The next paper titled “**Marketing in catering industry, hotel service and tourism**”, addresses the issue of the application of modern methods and techniques of marketing in hotel business. Market Research in this area focuses on user services, and quality assurance business is the basic element of competitiveness in this industry.*

*“**Innovations in function of marketing channels development**” is a paper that focuses on the impact of innovation in the domain of marketing channels. This paper has an aim to emphasize the importance of implementing innovations not only in the process of production but also in other processes that are essential for doing business at the market, and for achieving growth and development of companies marketing channels. This was also confirmed by an example of a success of a retail company in international market, accomplished through an innovative approach to the customers.*

*The paper, entitled “**Project of implementation of customer relationship management strategy into company**” presented the results of the successful application of customer relationship management concept into company by using Microsoft Project. The goal of the paper is presenting and analysis of implementation of the CRM project into the company business activities. CRM (Customer Relationship Management) methodology is a concept that takes initiative in marketing sectors of different types of companies with the goal of better adapting the company to the changes at the market and satisfying the demands of customers.*

*The paper titled “**Quality Management concept and competitiveness of Serbian companies**” shows the situation in the area of global competitiveness and the role of modern methods and techniques of marketing in establishing the ability of being competitive at the global market. The authors give an overview about the competitiveness of domestic enterprises, especially from the aspect of application of the concept of quality management.*

The work, entitled “A.I.D.A. as the model of marketing management” describes the method of marketing management known as AIDA. When running a business in today's global market, every marketing manager must know the methods of marketing. A method proved to be very effective is the AIDA marketing model. The paper is presenting and describing how the AIDA method works and how it functions.

The paper entitled “Quality in function to achieve customer satisfaction - presentation of research results for retail facilities” presents the results of a research on companies' retail facilities in places where PerSu has its own stores. One of the goals for PerSu is to see where it is in relation to its competitors, and how many customers are satisfied with their quality of service. Considering that satisfied customers are crucial for a successful business, it is necessary to constantly conduct researches about their satisfaction with current services and expectations.

The papers covered in the session Marketing Management successfully deal with the problem of application of contemporary methods and techniques of marketing in terms of market globalization.

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MARKETING IN CATERING INDUSTRY, HOTEL SERVICE AND TOURISM

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ABSTRACT

In the hotel industry are considered to be marketing and selling the same thing so it is not surprising that the retail sector is one of the most striking of the hotel. Managers to ensure sales to potential clients and seeing them having fun at the hotel's restaurant or bar. Therefore, the sales function is very noticeable, while most do promotional activities marketing function goes on behind closed doors. In many hospitality mixed with the advertising and marketing of improving sales. It is not uncommon to hear that the restaurant bosses say they "do not believe in marketing," when in fact they want to say they are disappointed with the performance of their advertising. Selling and advertising are in fact only two marketing functions that are often not the most important. Advertising and sales are the components of the promotional element of the marketing mix. Other elements of the marketing mix includes product, price and distribution. Marketing also includes research, planning and information sectors. This mix of the four elements required by marketing experts to determine the product and its characteristics determine the price, decide how to distribute the product and choosing methods to promote their products.

Keywords: marketing, sale, produkt, cost, distribution.

INTRODUCTION

In today's industry, catering, hospitality and tourism clients come from anywhere in the world and has the position of king or queen. That he does not grant the title of hereditary rights, but because the client can improve or destroy your career, the foundation of decisions taken by the purchase. As a manager of global management, marketing will greatly assist in his own career and contribute to the success of the company they manage. The travel industry is the largest global industry and is by nature the most international. The World Tourism Organization (WTO) states that the number of people on international voyages will pass one billion Do 2015. year, with earnings of more than 1.5 trillion dollars, France in 2002, she was the most visited tourist destination, ahead of Spain and the United States, but other countries also want a piece of the pie in the travel industry and are committed to their faith. This can be achieved by the current leaders of excel in marketing. Experienced travelers know that many hotels in Hong Kong, Singapore and Thailand, with its offer of products and services already surpass most European and North American hotels. Thirty years ago, Dubai was nothing other than a stream, Sheikh palace and reputation capital of smuggling in the Arabian Gulf. Today, Dubai boasts 272 hotels and 30,000 rooms, 30 shopping centers and nearly 5 million visitors a year.

Today, marketing is not just a business function: it is a philosophy, a way of thinking and a way of structuring the business and way of thinking. Marketing is much more than a new advertising campaign. The task of marketing is to provide real value to targeted clients, encourage them to purchase and meet the needs of consumers. The task of marketing is to never deceive a client or jeopardize the reputation of the campaign. Marketing deals with customers more than any other business function. Value creation and customer satisfaction is at the core of marketing industry catering, hospitality and tourism. Many factors contribute to the success of the business. However, today's successful campaigns have one thing in common at all levels are strongly focused on customer and completely handed over to marketing. Accor has become one of the largest hotel chains due to their ability to anticipate and meet the needs of its guests, give real attention to detail, McDonald's has grown into the world's largest restaurant chain by its guests with quality, service, cleanliness and value. These and other successful catering and hotel management companies know that if they take care of customers, market share and profits come from themselves. As a manager, you have to motivate their employees to create superior value for your customers, and you are sure to achieve customer satisfaction at a profit.

FOCUSING ON CLIENTS IS MAIN GOAL CATERING INDUSTRY, HOTEL SERVICE AND TOURISM

Concentration on the client is the purpose of this campaign is to create and keep a happy, profitable customers. Customers are attracted and retained by it to their needs. Not only to return the same cruise, are hotel, rent-a-car campaign or restaurant, but others saying about their satisfaction in a positive way. Many managers in the hospitality and hotel industry are asking, "What is the gain?" Some managers in the hospitality and hotel industry to behave as if today the most important profits and customer satisfaction as it comes after that. This attitude after some time campaigning in failure, because it finds fewer customers who are willing to repeat purchase among customers are more and more often negative opinions. Successful managers know that the profits should be taken as a result of good business, and not the only purpose of the campaign. When your campaign meets your customers, they will pay for the product adaptable prices. The appropriate price includes tax campaign. Managers who are constantly trying to achieve the maximum short-term profits and understate the client and campaign.

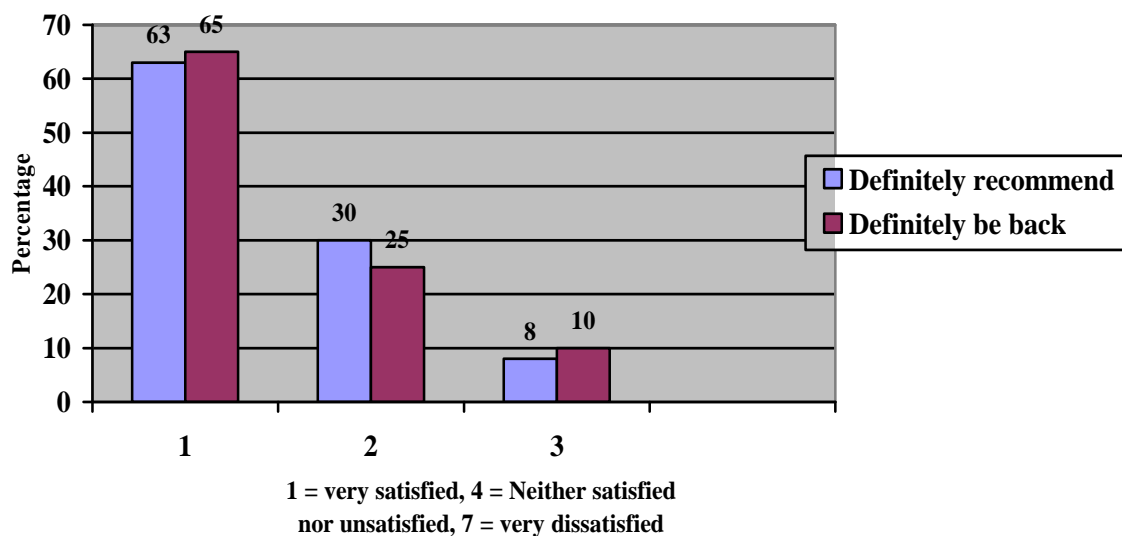
Consider the example of sitting: the client enters the restaurant before closing where he greeted with, "What do you want?" A little surprised, the client respond to something he ate. Cranky vote him out of the restaurant is closed. Then said he, pointing to a sign on the door that says that the restaurant is open until 21 h. "Yes, but while I clean up and prepare the food will be nine, which means we're closed." The client went to another restaurant a block away and never to return to the first restaurant. What really happened at the scene of the restaurant is that the guest worker once I served just before closing because of which remained at work till 22:30. Instead of her administration thanked the customer and serve you stayed longer, reprimanded her for overtime hours. Management wanted to reduce the cost of overtime. The reaction of workers was to close restaurant to 21 h regardless of the cost. Now they are in government happy - just do not realize they are losing customers and profits in the future. Much of the behavior of employees towards customers is a result of management philosophy. An alternative approach to management is that the client is in the first place and that employees are rewarded because they serve you well clients. If marketers make a good job of discovering customer needs, developing a good product, pricing, distribution and promotion of the product, the result will be attractive products and satisfied customers. This does not mean that selling and promotion are important, but they are part of a broader marketing mix, a set of marketing tools that work together to produce a satisfied customer. The only way to make a sale and promotion of the results will be the first to define the objectives and customer needs, and then make a simple and easily accessible package value. We can see that the meeting is not yet enough, because only when guests leave very satisfied there is the likelihood that they will return. As a manager, your goal is for all guests leave very satisfied.

Guest after guest services are carried out from 1 to 7: And 1 (very satisfied), 2 (satisfied), 3 (neither satisfied nor dissatisfied), 4 (dissatisfied) and 5,6,7 (very dissatisfied).

Grade 1, 2 and 3 all show satisfaction ratings 1 and 2 are better than grade 3, which is (neither satisfied nor dissatisfied), although grade 3 "positive" result on a scale of 7 points will be some guests who

comes to you the grade 3 to return to your hotel again. With grades 5, 6 and 7 guests certainly will not go back to your hotel and certainly will not recommend it.

When a company is considering initiating a change in the price, it must consider the reactions of customers and competitors. Customers' perceptions of change in price affects their reactions. Reactions competitors start out from the established policy of the fresh reaction or analysis of any situation in the market after the price adjustments of other competitors. The company that initiates change in price must anticipate the likely reactions of suppliers, intermediaries and governments. The company faces a price change initiated by the competitor must try to understand the proceedings competitor and probable durability and performance of those changes. When faced with a competitor's price change, the company may wait and not take anything to lower their own costs, increase the perceived quality, improve quality and raise the price, or launch a new product.



Even the 3 always "positive" result is not a scale of 7 points, some guests will return to the award of this assessment

Figure 1: Guest reviews following implementation services

MARKETING CONCEPTS IN INDUSTRY CATERING, HOSPITALITY AND TOURISM

Hospitality and hotel industry is one of the world's largest industry. Marketing is becoming more and more important place in the restaurant sector in the hospitality and hotel industry. The entry of corporate giants in the market catering and hospitality industry into a family of companies in which individuals are typically owned restaurants and hotels in the industry, which is dominated by chains. These chains operate in a highly competitive environment where they need aggressive marketing skills in order to win customers. Hotel management industry is undergoing consolidation with companies like Accor, Cendant, Marriott and Starwood hotel chains that buy and manage a variety of brands within an organization. Professional marketing knowledge of these large companies has created a competitive marketing environment. In response to an increasing pressure of competition, hotel chains are increasingly relying on the expertise of a marketing director. In many hotel chains position of Marketing Director at becoming an alternative career path to general manager. Marketing is a philosophy needed by all managers. As the marketing director of a full-time deal with the issues of marketing, all others must be addressed by at least half-time. Marketing is a social and managerial process by which individuals and groups are getting what they need and want through creating and exchanging products and value with others.

- **Needs** - The most basic concept underlying marketing are human needs. The human need is a state of felt deprivation. When a need is not satisfied, there is a gap. Unmet person will make one of the following two things: look for an item that will satisfy the needs or try to reduce the need.

People in industrial societies are trying to find or come up with items that match their needs. People in poor societies try to reduce the desire of what is available.

- **Wishes** - Another basic concept of marketing are human desires and human needs, which form when they take shape culture and personality of the individual. Desires are a way for people to express their needs to others. As society develops, the desires of its member's increases. As people become more vulnerable to things that ignite their interest and desire, producers try to provide more products and services that will satisfy their desires.



Figure 2: Marketing concepts focused on customer service

- **Wanted** - People have almost unlimited desires but limited resources. Choose products that bring the most satisfaction for the money you can make. When you support the buying power, wants become demand. Detailed understanding of the needs, wants and demands of clients provides important information for the development of marketing strategies.
- **Products** - Product is anything that can be offered to satisfy a need or desire. The concept of the product is not restricted to physical objects. Anything that can meet the need may be called the product. Consumers decide which events they want to experience, want to visit a tourist destination, in which you will be staying in hotels, which will feed the restaurants. For all of these consumer products. One of the most interesting areas of marketing planning and product development. Clients travel industry is constantly looking for new products. Today "heritage tourism" have gained in importance.
- **Quality** - **Quality** has a direct impact on the success of a product or service. It is therefore directly related to the satisfaction and value for the customer. In the narrowest sense, quality can be defined as "the absence of errors", however, most companies are focused on customers and go beyond the narrow definition of quality. Instead, define quality in relation to customer satisfaction. For most of the top quality of the company based on customer requirements has become a way of business. American Society for Quality Control defines quality as the totality of features and characteristics of the products or services that support their ability to meet the needs of the client.
- **The value for the customer** - the customer value is the difference between the benefits that the client receives from the possession and / or use of the product and the cost of purchase of the product.

Costs can be monetary and non-monetary. One of the largest non-monetary costs to clients the hospitality is the time. (Luxury hotels in Hong Kong do not expect guests to managers waiting in line to sign up at the front desk. Instead, they were taken to a room where they were waiting for hot tea. Their applications filled hostess.) Customer satisfaction - Customer satisfaction depends on was perceived

product efficiency in delivering value relative to the consumer's expectations. Customer expectations based on the past experience of shopping, the opinions of friends and market information. If the product does not meet the client's expectations, he is unhappy. If the success of the product is in line with expectations, the customer is satisfied. If performance exceeds expectations, the customer is delighted.

Smart companies aim to delight the customer by promise only what they cannot meet, then you more than you promised. Marketing experts have to be careful to set the correct height expectations. If expectations set too low, it may satisfy those who buy, but it will not attract new customers. If you raise expectations too high, buyers will not be disappointed. Customers are very satisfied repeat purchase are less sensitive to price, customers will remain for a long time and others speak positively about the company and its products.

In addition to these marketing concepts targeted to the client in order to explain this definition of marketing, we must consider the following basic concepts of marketing: exchange, transactions, relationships and markets.

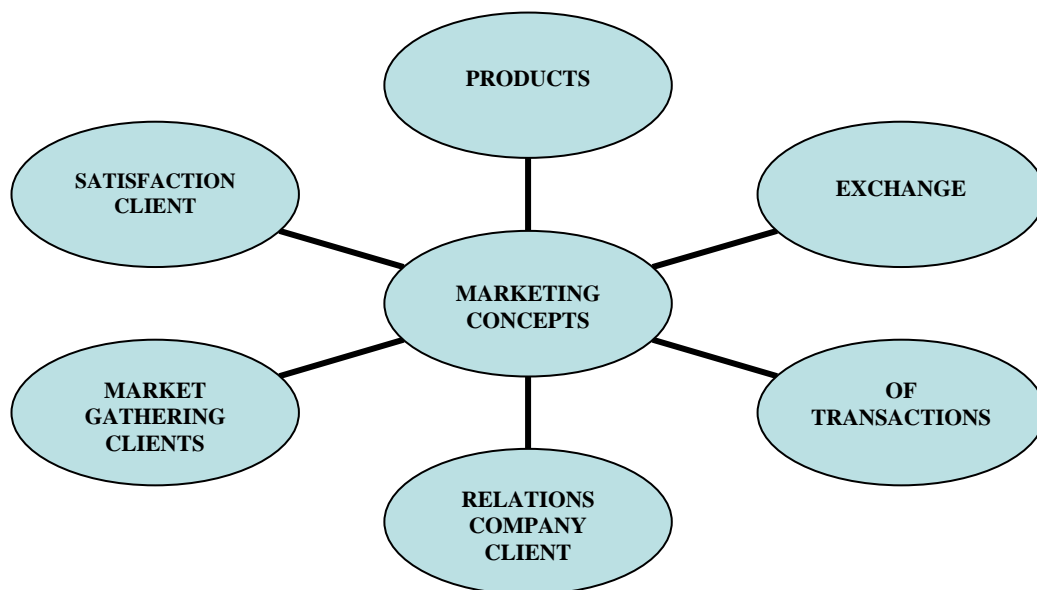


Figure 3: Basic marketing concepts

- **Exchange** - Exchange is the act of obtaining a desired object from someone by offering him something else in return. The exchange is just one of several ways that people can get the desired object. Market exchange occurs when people decide to satisfy needs and wants through exchange. While the exchange of basic marketing concepts, the transaction is a unit of marketing.
- **Transaction** - The transaction consists of the exchange of values between the two sides. Transaction marketing is part of a broader concept of relationship marketing. The smart marketers are working to build relationships with valued customers, distributors, dealers and suppliers.
- **Relations** - Marketing is increasingly turning to the situation of trying to maximize profits in each transaction according to the situation of the relationship with customers and other parties trying to bring the maximum mutual benefit. The working assumption is this: build a good relationship and profitable transactions will follow. The importance of relationship marketing will undoubtedly increase in the future. Most companies reveals that generate higher return on funds invested in winning over existing customers to re-purchase it from money spent on attracting new customers. Capitalize on the benefits arising from the opportunity to sell more stuff to existing customers. More and more companies creating strategic partnerships for the necessary skilled relationship marketing.
- **Market** - The concept of transactions leads us to the concept of the market. The market is a collection of current and potential customers who could perform the transaction with the seller. Market size depends on the number of people who show their mutual need, with money or other

resources of interest to others and are willing to offer these resources in exchange for what they want.

CONCEPT OF OPERATIONS ON WHICH ORGANIZATIONS CONDUCT MARKETING ACTIVITIES

The concept of markets finally brings us to the concept of marketing. Marketing means working with markets in order to achieve the exchange in order to meet the needs and desires of their customers. Thus we return to our definition of marketing as a human activity directed at satisfying needs and wants through exchange processes. There are five concepts under which organizations conduct their marketing activities: the concept of production, product concept, selling concept, marketing concept and the concept of social marketing.

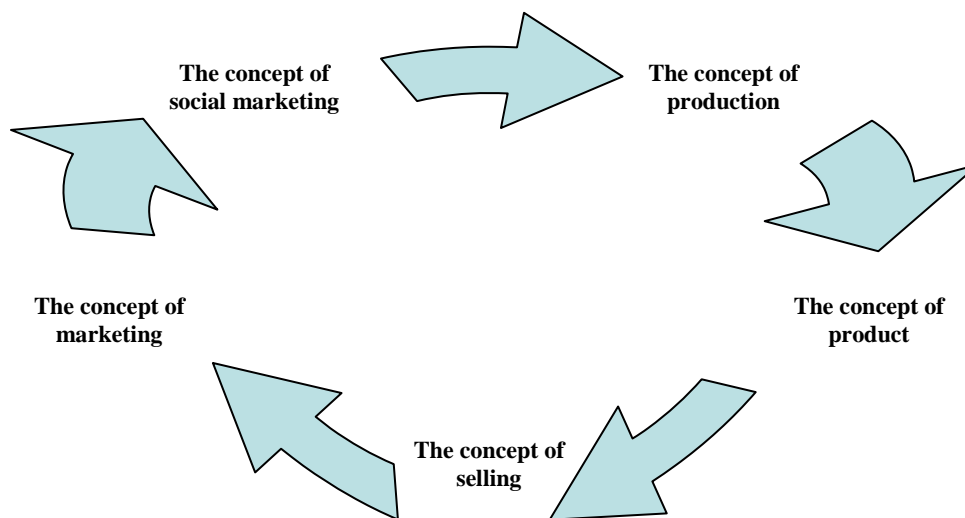


Figure 4: Conceptions by which organizations conduct marketing activities

- **The concept of production** is one of the oldest philosophy of water vendors. Production concept holds that consumers will be more inclined to products that are available and highly favorable to the government and, therefore, should focus on the admissibility of production and distribution. The problem with the concept of production is that the government can concentrate so much on the principles of production and forget client. (The restaurant is filled only up to a third of capacity, and yet, all the guests are forced to sit in the same section of the restaurant, creating unnecessary density and customer dissatisfaction. This is usually done to facilitate cleaning or to allow waiters to serve the company, and they do not have a lot of walking. Often work in accordance with union work rules that are often in conflict with the needs of clients).
- **The concept of the product** and the concept of production is directed inward. The concept of holding a product that consumers are inclined to existing products and dosage forms, and administrative work is to develop good versions of these products. This understanding ignores the fact that consumers are trying to meet the needs of those you can turn a completely different product to better meet those needs. (Old Gurman was a chain of restaurants specializing in an excellent roast ribs. Were very successful and quickly spread by opening more restaurants. Administration has focused on how to improve the product and at lower costs. Unfortunately, many customers do not want to eat prime rib roast every time you go to a restaurant. Want chicken, seafood and pasta. Gourmet Restaurant Old focused on the product rather than on marketing and is no longer good business and has closed half of its restaurants).
- **The concept of selling** holds that consumers will not buy enough of the product if it does not invest in large sales and promotional efforts. The goal is to make every possible sale, and do not care about the satisfaction after the completion of the sale or the earnings it brings. Selling the concept does not create a long-term relationship with the customer as the focus is on how the company decides what is, and not to create a product that will meet the needs of the market. (Restaurants often when they begin to advertise sales begin to decline,

and before that they have not analyzed why sales declines. Do not try to change your product to adapt to a changing market. Implement aggressive sales techniques by imposing stronger products to customers through advertising and publishing various coupons for discounts. Eventually these companies fail because their product no longer meets the needs of the market).

- **The concept of marketing** is a newer business philosophy, and the hotel and catering industry and tourism has rapidly accepted. Many companies have embraced the concept of marketing. We know the hotels, the Four Seasons, Accor and McDonalds fully pursue this concept. Marketing concept holds that achieving organizational goals depends on determining the needs and wants of target markets and delivering the desired satisfaction more effectively and in a more acceptable manner than its competitors. (Some restaurants organize special sections for single restaurant with round tables which pot Prominent singles want to sit together. Prices these restaurants guests' singles and developed a profitable segment. However there are still many restaurants that offer below-average service to people who eat lunch alone.)
- **The concept of social marketing** is the latest marketing concepts. The concept of social marketing holds that the organization should determine the needs, wants and interests of target markets and deliver the desired satisfaction more appropriate and effective than competitors in a way that maintains or improves the well-being of consumers and society. (The social pressure is already felt in the marketing of cigarettes and spirits. Chains are arranged hotel floors for smoking and non-smoking rooms in their restaurants. Restaurants and their associations have designed training programs on how to responsibly serve alcohol. Cocktail party might become a thing of the past.) Industry hospitality, catering and tourism cannot ignore the continuing need for social approval. There are few industries that have a greater need to recognize and accept the concept of an active social marketing. (Costa Rica has created a strong eco-tourism industry thanks to its reserves rainforests thus proved that social marketing and market success can be compatible.)
- **Marketing Management** is defined as the analysis, planning, implementation and monitoring of programs designed to create, build and maintain beneficial exchanges with target buyers to achieve organizational goals. Exchange processes involving work. Sellers must search for buyers, determine their needs, devise attractive products, promote them and deliver them, and determine the price. Activities such as product development, research, communication, pricing and service are the main marketing activities. Although usually think of marketing as something which deal with vendors of products and services, customers are also holders of marketing activities. Consumers concerned with marketing when looking for goods they need at prices that are acceptable to them.

CONCLUSION

Marketing operates within a dynamic global environment. Each new decade requires marketing managers to rethink their marketing goals and practices. Rapid changes can quickly make obsolete strategies that have brought success yesterday. As a spotted big marketing thinker Peter Drucker, the formula companies to win in the last decade, probably over the next decade to be the cause of their destruction. Although marketing is a relatively new industry catering, hospitality and tourism, a common feature of many successful leaders in the industry is their successful application of basic marketing principles, the focus on the guests to meet their desires (external marketing) and satisfying employees serving guests (internal marketing). Advertise with its moves towards a client has become everybody's business, and your path to success. Peter Drucker wrote: "Marketing encompasses the entire business. It is the whole business prospection from the viewpoint of the end result, that is, from the perspective of the client. "

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ASPECTS OF APPLICATION OF CRM IN SMEs A Review of Scholar Literature

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ABSTRACT

Small firm marketing has unique characteristics that differentiate it from that of large organisations. CRM is a useful tool for SMEs to manage and nurture customer relationship which help organization to maximize their business potential but there are still many SMEs tend to shy away from CRM. This paper presents the key research in the application of CRM in SMEs.

Key words: SMEs, implementation of CRM, scholar literature.

INTRODUCTION

The time of the passive customer is history. Empowered, vocal, and knowledgeable, these customers are more engaged than ever before, and are setting the tone, pace and direction that companies must go. Companies must begin to collaborate with and engage the customer, but need to be respectful, and therefore must also deliberately decide on the proper response to each interaction with her. This will require greater internal collaboration with finance, operations, innovation, and other departments within the company.

CRM is a useful tool for SMEs to manage and nurture customer relationship which help organization to maximize their business potential but there are still many SMEs tend to shy away from CRM. Customers' demands are important and need to be fulfilled but customer relationships are more important in retaining existing customers, (Nykamp, 2001). Many SMEs not willing to adopt CRM system in their organization due to various reasons and this could be a big loss towards these organizations. CRM not only will help an organization to retain existing customers but also will help the organization to expand their customer base and become more competitive in this challenging economy.

MARKETING IN SMEs

Marketing is regarded as relevant to both large and small organisations and basic marketing principles are seen to apply to both of them (Reynolds, 2002). At the same time it is recognised that small firm marketing has unique characteristics that differentiate it from that of large organisations (Gilmore et al., 2001; Fillis, 2002). Small firm marketing has been characterised by attributes such as haphazard, informal, loose, unstructured and spontaneous, that compared to "textbook" marketing seem to have somewhat negative connotations. In addition, small firms appear to have

specific weaknesses with regard to pricing, planning, training and forecasting (McCartan-Quinn and Carson, 2003). On the other hand, it is argued that a great part of marketing in SMEs is driven by innovation. Moreover, small firms are seen to operate close to their customers, to be flexible and to respond quickly to the changing needs of customers. Some SMEs place strong emphasis on customer care, concern for employees' welfare and reliance on intuition and awareness of the environment in their marketing (Blankson et al., 2006). The special characteristics of small firm marketing are considered to result from various limitations. According to the literature, marketing functions in SMEs are seen to be hindered by poor cash flow, lack of marketing expertise, business size, tactical and strategic customer-led problems (O'Dwyer et al., 2009), narrow customer base, over-reliance on the owner-manager's marketing competency (Stokes, 2000), limited resources relating to finance and time and limited impact in the marketplace (Gilmore et al., 2001). With limited resources added to the day-to-day pressures of the business operations, marketing may seem to be peripheral and an unnecessary luxury in small firms.

The small business owner-manager is a generalist who has to have a vision of where the business is going and at the same time to take care of the operational details carried out in the firm. It is argued that marketing in small firms is related to the owner-manager's attitudes to, experience of and expertise in marketing because these are essentially those of the firm itself (McCartan-Quinn and Carson 2003). The marketing practices adopted in a small firm are also greatly influenced by the owner-manager's decision-making and inherent skills and abilities (O'Dwyer et al., 2009). Furthermore, owner-managers may define marketing as quite narrowly relating only to selling and promoting, but the actual marketing done may still cover a wide range of marketing practices (Stokes, 2000). Owner-managers spend considerable time and resources on marketing, but they may call it by another name. The need for marketing is recognised, but often an ad hoc, reactive approach is adopted and, for example, the traditional way of looking at marketing with the 4P's is not given much attention (McPherson, 2007). There are specific variables and influences according to which marketing is formulated in a way that maximises benefit for a SME.

There are four approaches that try to explain the role of marketing in small firms. These approaches are 1) the stages/growth model, 2) the management style model, 3) the management function model and 4) the contingency model (Table 1). Siu and Kirby (1998) criticised that although each of these approaches contributes something to the research of marketing, they still fail to give a comprehensive picture of marketing in small firms. They argued that there is a lack of empirical evidence of the marketing practices carried out in small firms. In this study, not one approach but features of several of them are adopted.

Table 1: Four approaches to marketing to small businesses (Siu and Kirby, 1998).

Marketing approach	Description	Critique
Stages/growth model	- describes the development of a firm through several stages	- low predictive power - limited value as a framework for detailed analysis and planning
Management style approach	- marketing behaviour is related to the motivation, belief, attitude and objectives of owner-managers	- ignores e.g. organizational structure, owner-manager's marketing decision process and behaviour
Management function approach	- acknowledges marketing as an important function and essential concept for small firm growth, survival and strategic development	- too much or too little emphasis is put on the limitations and constraints of small firms when applying disciplinary foundation of marketing
Contingency approach	- tries to find balance between the limitations of small firms and marketing as a discipline	- variables are not clearly defined, are arbitrarily selected or cannot be measured effectively - is an outcome model, not a process model

So, how success measures are affected by e.g. owner-manager's objectives and motivation and how this in turn impacts on decision-making (cf. management style approach)? With regard to the examination of marketing practices and market orientation, features of the management function approach are adopted. Finally, in accordance with the contingency approach a balance is sought between the limitations of small firms and marketing as a discipline when the development of marketing theory is discussed with reference to SMEs.

Sashittal and Jassawalla (2001) found in their study that implementing marketing in small firms consists of day-to-day improvisations and adaptations in marketing strategy and activities. According to them, the nature and extent of marketing improvisations and adaptations determine the level of market orientation, growth and strategic effectiveness. They argued that marketing planning and implementation interact strongly and this shapes the market behaviours of SMEs and affects the strategic outcomes.

SMEs CRM SYSTEM IMPLEMENTATION ISSUES

Many SMEs tend to shy away from CRM, which will restrict the organizations' business growth and reduce the profits earned. There are few reasons SMEs shy away from CRM. Ramaseshan and Chia (2008) stated that many small businesses do not adopt CRM in their organizations due to the cost of hardware and software. Normally, before implementing a new technology, the organizations will evaluate the benefits they will gain and make sure it commensurate with the cost spends in implementing the system. This factor must take into consideration when adopting CRM because huge investment is needed in maintaining customer database. Some organizations face failure in implementing CRM system and results in CRM to collapse. A report of Gartner group stated that about 55% of all CRM projects fail and these failures 20% affect long-standing relationships, (Mello, 2002). This is because they have less understanding about CRM technologies and do not know how a particular CRM approach should be cost-effectively implemented.

For small businesses, mostly the owners and employees have limited technical knowledge or expertise and resources when it comes to implementing new technology in the organization. Lack of knowledge of Information Technology (IT) would led many organization tend to postpone the implementation of the new innovation and may even influence the mindset of the owners that IT would not have any use to their organization. Insufficient resources will also cause CRM to fail midway as the cost for maintaining CRM system is reduced. These factors can be avoided by employing experts in this field and provide sufficient resources for a successful CRM system. Perceived relative advantage of IT is the factor for IT implementation in SMEs. This is because by implementing new innovation, it will help to reduce the turnaround time, provide better customer service, reduced unnecessary costs, etc which benefits the organizations.

Rogers (1995) and Ramaseshan (1997) stressed that top management support is the most important factor in creating a supportive condition and providing adequate resources for implementation of a new innovation. With the support of the higher management, CRM can be successfully implemented because funds used to maintain customer database, software and hardware are sufficient and employees will be given sufficient training to comprehend and deal with the complex system.

In this challenging economy, the adoption of new innovation is essential as competition and tough rival increases, (Porter, 1990). By adopting CRM in an organization, it will help to create competitive advantage as businesses operation changes and able to outperform rival and get new businesses, (Ramaseshan, 2008). Marinescu et al. (2007) pointed out that many board-level managers not dare to take the risk in adopting CRM in their organization because they do not know how and where to get started with this system and technology option also become one of the factor that the firms must consider when adopting new innovation. Boardlevel managers should be clear of the form of CRM that suit their business so that the percentage of failure in implementing CRM system can be minimize.

Ramaseshan and Chia (2008) found out that top management support emerged as the most important factor influencing adoption of CRM in SMEs followed by relative advantages. Other factors such as competitive pressure, government support, cost effectiveness and IT knowledge were found to be minor

factors influencing adoption of CRM. All these factors must take into consideration when adopting CRM system in organization because every single factor will affect the implementation of CRM and cause major loss towards organization.

IMPLEMENTATION BENEFITS

In this competitive market, customer is the most important property in an organization. It is not surprising that CRM is increasingly used by the organizations to support different type of their customer. SMEs can try to adopt the CRM programs to satisfy the customer's requirements in order to build up a long-term relationship. It is belief that the CRM implementation can optimize organization's profitability and revenue by satisfy the customer's need and wants. Therefore, the customer's satisfaction is the main objective for SMEs to grow and extend their business in the future.

An organization should understand about their customer's requirement before can start to build a relationship with the customers. Any organization should understand how well it really knows its customer, which data are available to be used in the organization management, how different parts of organization consider their customers, and which possibilities are important for organization especially SMEs to extend their business. According to Chen and Popovich (2003) and Zablah et al. (2004), CRM implementation allows customers' information sharing throughout the organization. It provides the ability for the organization to define different customer groups that will be served in different ways. For example, the top tier customers enable to receive individualized and personalized services from contact personnel while the later tiers customers are encouraged to interact with the enterprise through self-service channel. By having the customer's information, CRM implementation allows the organization to focus its time and resources on its most profitable customers.

In order to success in the competitive market, scholars have long suggested that a customer-centred is a powerful strategy for organization like SMEs to hit their business target. According to Boulding et al. (2005), an organization either a big company or SMEs need to in constant touch with their customers in order to build up a long-term relationship. In this case, SMEs adopts the CRM program realizes that customer relationships are the important assets that need to be protected in order to increase future business. Additional work was done by Coltman (2006) to determine a successful CRM program should include the combination of technical, human and business capabilities. This complete CRM implementation can drive a portfolio of the CRM processes that include all the aspects in the transaction such as cross-selling, up-selling, marketing and fulfilment, customer service and support, field service operations and retention management. Thus, the CRM implementation is necessary to integrate customer content, customer contact information, and end-to-end business processes throughout the organization.

Once when the organization acquires the customers and is able to have them lastingly forever. This implies that the customer will become more loyal and making good use of the services of the organization. According to Darajeh and Tahajod (2010), customer's satisfaction became one of the most important principles for the organization management to improved customer loyalty leading to repeat business in the future. An organization can adopt CRM implementation to predict future customers' behavior that will be measured and analyzed under a broad range of circumstances in order to understand those customer patterns and preferences. So, the CRM implementation can be used to plan, schedule and control the presales and post-sales activities in SMEs.

CRM IMPLEMENTATION OPTIONS

There are already a lot of CRM system implementations everywhere, especially in large companies. SMEs now have the luxury of choosing the best and most appropriate CRM system for themselves, since there are now so many options available for them to do so. SMEs with a proper Information Technology (IT) team can try to develop their own CRM system from scratch themselves to better suit their business needs, provided the skills and expertise to do so are available. Open source CRM systems are also easily available now, and SMEs just have to get one suitable for them, study and implement it in their business operations. Besides, there are a lot of CRM vendors providing a wide range of CRM system applications for different kinds of uses. The

problem lies in how should an SME choose the right CRM system to implement, which we will address in the later sections.

There are a lot of existing works discussing on the methods of implementing CRM system in SMEs. Parvatiyar and Sheth (2001) stated that a front-line information system sharing related customers' information across the whole organization is essential for a good CRM implementation, therefore the use of relational databases, data mining and data warehousing tools are important for CRM systems; and involvement of all relevant users such as the marketing, sales and finance department in the implementation efforts are important as well. They proposed a CRM framework that builds on other types of relationship development process models. It first identifies the purpose of the CRM system; then selects the people related to the appropriate CRM programs, including customers and finally develops and implements the CRM program. Defining the purpose of the CRM system helps to identify the CRM functions to be performed and also makes the task of identifying and selecting the people related to the CRM program easier. Next, SMEs can start to identify the departments that will be involved in the CRM programs and also which customers they would like to focus their CRM effort on. Finally after everything is decided, then the CRM program can start to be developed. However, the framework seems to be a tad too general and lack of some details such as the skills and resources consideration.

Kim (2004) addressed the issue by proposing a process model for a successful Information Systems (IS) development (which can also be applied to CRM systems). The proposed CRM system development framework can be divided into five parts, namely organizational commitment to the CRM project, project management techniques, strategy and process factors, technology available to use and consequences of implementation. The proposed frameworks might not suit all SMEs, as some of them are really small and might not have the technical expertise or resources to do so. The good news is that it is not always necessary to develop a CRM system, given the many options available now.

Adebanjo (2008) stated that there is no definite way to implement a CRM system. Every CRM system is different and the success of the CRM system depends on the need of the company and how the company implements it. The former revealed results of the cross-industry benchmarking project conducted that 120 companies has participated in and came up with some critical success factors for CRM projects; some of them are selecting the right way to implement CRM system according to CRM focus; for example purchasing from a vendor or develop an in-house CRM system, starting with operational CRM and improve later with analytical and collaborative CRM, top management's involvement, project progress are 'intime' and 'in-budget', involvement of all relevant users in early stages to communicate on CRM goals and make sure CRM is used on management level as well. The latter did a comparative study of three case studies of different approaches to e-CRM implementation by three SMEs and the result showed that although all three SMEs adopt CRM in different ways; the first bought a basic and inexpensive offthe- shelf CRM application, the second developed a CRM system themselves while the third purchased a CRM application and personalized it according to their own needs; all of them gained benefits from the CRM system and it can be considered as a success, to different extents. However, all three of their systems have their own constraints; the ability to maintain, modify or integrate with other systems is some of the problems that could occur.

CONCLUSION

Although CRM system is a good tool in enhancing customer relationship, there are still many SMEs tend to shy away from implementing CRM due to the reasons mentioned. This is a big loss for those SMEs because CRM system can help an organization enhance its customers' relationship and this will increase company's profits and become more competitive. Top management support and cost of software and hardware considered as important reasons influencing implementation of CRM because only with supportive condition and adequate funds can maintain CRM system and make use of CRM system effectively. Other factors such as limited technical knowledge or

expertise and resources, perceived relative advantage of IT, competitive pressure and unclear about CRM system also cause SMEs not adopting CRM in their organization. All these factors need to be taken into consideration when adopting CRM system because by adopting new technology would affect the organization's process structure and organization will sustain major loss if anything happens. Owners and the employees of the organization have to be careful of the CRM system adoption so that they can implement it in useful and effective way.

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QUALITY MANGEMENT CONCEPT AND COMPETITIVENESS OF SERBIAN COMPANIES

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ABSTRACT

Serbian economy has experienced problems with productivity for a long time. It was the result of inappropriate way of business performance which was not based on market principles. Certain products had unjustifiably high prices which were not competitive on the world market. Technological equipment also represents a significant element of productivity rising. If Serbian companies want to achieve competitive advantage on the global market, they should change the way of thinking and adopt modern world achievements in the field of organization management. In this paper the authors analyse the aspects of business excellence positioning them in relation with improving quality of company's business and achieving sustainable competitiveness of national economy.

Keywords: Competitiveness, Productivity, Quality, Management, Business Excellence.

INTRODUCTION

Global economy requires from companies which participate in the market competition to invest significant efforts directed towards creation of new business strategies. New business conditions require implementation of new business models. World economic crisis from 2008 emphasized the necessity of creating new models of business. Ohmae (2007) thinks that global economy is based on the world in which the absence of boundaries is not a dream or a possibility, but a reality. Global economy has its own dynamics and logics because it is not a theory any more but a reality, in fact. The stress is on knowledge because success and a very survival depend on the ability to accept new attitudes and relations with the world.

Beside their structure, enterprises have to change the aim of their business as well. In a long term view a customer is in focus of organization's attention as well as different interest groups from the surroundings whose requirements have to be noticed and satisfied. Quality and productivity represent the elements for establishing global competitive position. Knowledge becomes a product and corporative intellectual property is nowadays more valuable than physical resources.

NATIONAL COMPETITIVE CAPACITY AND GLOBAL ECONOMY

Opening the economy causes the necessity to face up competition on the international market. Specialist literature provides various definitions concerning competitiveness of national economies, (Porter, 1990; Thompson, 2003, 2004). As regards to international competitiveness, it is also referred to a wider notion – competitive capacity, which is evaluation of development potential of a country or enterprise and it does not only refer to real perspective but rather to subjective one, i.e. concerning quality, organization and management and ability of the subject to assume effective development strategy. At the same time, at present, factors which are to a large extent non-material

determine competitive capacity of the country. Therefore, many factors shape country's competitive capacity, which apart from system conditions is dependent on the factors connected with broadly defined human capital and innovation as well as entrepreneurship.

Accordingly, it can be said that the following aspects are decisive as regards international competitive capacity of domestic economy, (Kefela, 2010; Yu and Wang, 2010): human resources including skills, resources and effectiveness of using natural resources, physical capital, and it also depends on the level of development and effectiveness of using technical knowledge, efficiency of social and economic system including economic policy. Indices of international competitiveness (competitive capacity) consist of the ones concerning economic development of the country, inter alia, GDP growth rate and also synthetic indices might be distinguished.

Market globalization, rise of newly industrialized countries and particularly the effects of World economic crisis have established new competitive relations on the world market. The World economic crisis has influenced the change in behaviour of enterprises considering their competitive ability maintenance. Majority of applied measures was reduced to cost reduction in the function of keeping productivity level and making strategic partnerships, but the question of price competitiveness has become the focus again although it was neglected for some time. New business conditions ask for new comprehension of competitiveness. Transitional countries are also hit by economic crisis especially considering withdrawing quality investors or freezing current investments.

The current moment of global economy is characterized by slow but secure rise of enterprises from newly industrialized countries such as China, India, Brazil, South American countries, etc. Enterprises from these countries are becoming global competitors. Their competitive ability is based on lower costs of business particularly because of lower labor costs but also for their openness towards foreign investments and acceptance of most modern methods and techniques of management. The main stimulus in these economies is increased domestic consumption. Although during 2011 and 2012 there was a partial slowdown of economic growth in these countries, especially in China, these countries will have a significant role in global economy in the near future. It is still obvious that two Asian cities, Shanghai and Mumbai, economic centers and megapolises, will be two most developed cities in the world about 2030.

New business conditions require adjustment of business entities and building organizational structure based on these new postulates. This is especially important for enterprises from transitional countries - the final aim of building a new organization is that it becomes extremely flexible and innovative, in other words, that it becomes able to satisfy more and more demanding requirements of customers in shorter period of time and also to make competitive advantage which involves emotional component as well. Quality, product differentiation and integrated marketing communication represent a key element for making a successful trade mark with stable market position. Quality is becoming a primary development aim materialized through achieving business excellence and top class of products and services.

Based on the available data about competitiveness for 2012 shown in Table 1, it can be noticed that among the first ten most competitive countries in the world are dominating North European countries (Finland, Sweden, Netherlands, Germany and Great Britain) as well as the Pacific region countries (Singapore, Hong-Kong, Japan). Switzerland has retained the first place while USA fell two places and this trend will probably continue. According to the list of World Economic Forum for 2012, China takes 29th place comparing to its 26th place in 2011. On the other hand, Singapore, Hong-Kong and Taiwan (13th place) are under Chinese market influence (technological and investment connection of these markets). Brazil takes 48th place (53rd in 2011), India is 59th (56th in 2011), Russia is 67th (66th in 2011).

On the other hand, some authors talk about redefinition of global strategy (Table 2), considering the change of competitive relations and longlasting influence of the World economic crisis on business. Redefinition of global strategy is the process consisting of five steps:

1. Revision of realization,
2. Analysis of industry and competitiveness,

3. Analysis of differences – CAGE form of distance (CAGE – cultural, administrative, geographic, economic, in other words, analysis of cultural, administrative, geographic and economic factors which determine mutual difference among the markets),
4. Development of strategic options AAA (Adapttion, Agregation, Arbitration),
5. Estimation – ADDING score list of values, (Ghemawat, 2010).

Table 1 Ranking of the first 10 countries in the world according to their competitiveness in 2012 (The Global Competitiveness Report 2012-2013)

Country	Place 2012-2013	Place 2011-2012
Switzerland	1	1
Singapore	2	2
Finland	3	4
Sweden	4	3
Holland	5	7
Germany	6	6
USA	7	5
Great Britain	8	10
Hong Kong	9	11
Japan	10	9

Table 2 Instruments of global strategy, (Ghemawat, 2010)

ADAPTATION – ADAPTATION TO DIFFERENCES	AGREGATION – OVERCOMING DIFFERENCES	ARBITRATION – USING DIFFERENCES
Variation	Regions	Cultural
Focus	Other grouping of countries	Administrative
Relocation	Grouping other than according to countries	Geographic
Design	Business or product	Economic
Innovation	Global client	
	Industries of clients	
	Channel	

Every top manager of a company which has an ambition to make value overborder should be able to conclude which of three A will be base for overborder competitive advantage of the company. General advice in relation to AAA strategies is to determine firmly merely one of A strategies and then on the grounds of it to search the next one, but paying attention not to neglect implementation of triple strategy.

Although competitiveness and innovation is present in every debate on regional development policies, South East Europe is rarely associated with those two terms, (Will, 2006). However, the cooperation area is undergoing fundamental changes in economic and production patterns after the 1990 changes. Some regions, especially capital cities are adapting well to the new challenges, others are trying to re-orientate themselves to find the right strategies for catching the opportunities of the global market. The EU has developed various forms of cooperation with the nearby countries, which are not non-EU countries. Experience acquired during successive enlargements shows that integration process will be still deepening since a large extent of political borders constitutes a barrier for further enlargement of membership rather than geographical ones. Integration processes will influence competitive capacity of the country, causing implications for domestic economies through structural adjustments which take place, (Stajano, 2009; Muldur et al., 2006). All the same, a long period of integration with the EU might be a positive factor for these economies of South-Eastern European Regions; it might be favourable for their economic growth and influence their competitive capacity. The necessity of strengthened regional cooperation, which could constitute an element of stabilization in this area, gives the possibility of settling the existing common problems, (European Commission, 2012).

Significant indicator of developed competitiveness of national economies in modern global framework represents the establishment of Sustainable Development Strategy (SDP). In South-

Eastern European countries there has been a rapid emergence of SDP since 2007 as part of the development of the National Strategy for Sustainable Development (NSSD) — in particular in Croatia, Serbia, Macedonia and Montenegro, (United Nations Economic Commission for Europe, 2012). The NSSDs of Croatia and Serbia include indicators for sustainable consumption and production.

SERBIAN COMPANIES – QMS AND COMPETITIVENESS

The companies coming from transitional countries in general, and Serbia among them, have problems with quality of their business and production productivity. Inherited inefficient production system, as well as transitional recession common for all countries in transition, influence these companies and may be blamed for their insufficient competitive capacity. Serbian companies have been uncompetitive on international market for a long period of time. Low productivity and insufficient investment in achieving business quality are the main reasons for poor competitiveness of domestic companies. This insufficient competitive ability has become more visible upon appearing the world economic crisis. The problem is especially obvious in the companies dominated by autochthonous private capital. The reason for relatively small number of Serbian companies that implemented quality system can be found in difficult financial situation of domestic economy and the implementation of QMS asks for considerable business efforts on the side of companies. What concerns most is the fact that almost all big companies have already implemented QMS. On the other hand, the majority of all companies in Serbia are made from SMEs (90%).

According to the list of World Economic Forum for 2012, Serbia took 95th place out of 144 analyzed countries. Since Serbia took 95th place in 2011 and 96th in 2010 it is obvious that there is no progress in competitiveness. It is interesting that Serbia found itself between Argentina (94th place) and Greece (96th place). Table 3 shows the ranking of ex-Yugoslav countries in the last five years, according to WEF, (The Global Competitiveness Report 2012-2013).

Table 3: Ranking of West Balkan countries according to their competitiveness in the period 2008-2012

Country	Place in 2008	Place in 2009	Place in 2010	Place in 2011	Place in 2012
Slovenia	42	37	45	57	56
Montenegro	65	62	48	60	72
Croatia	61	72	77	76	81
Macedonia	89	84	79	79	80
Serbia	85	93	96	95	95
BH	108	109	102	100	88

Considering the countries from near surroundings, Hungary takes 60th place, Bulgaria 62nd, Romania 78th, Albania 89th place. It is obvious that the effects of the World economic crisis have influenced the fall of competitiveness in all countries from the region. Taking into account the fact that Bosnia and Herzegovina improved its position on the list we can conclude that Serbian economy is the most uncompetitive in the region of West Balkans as well as in South East Europe.

According to the business conditions list made by Forbes journal, Serbia takes 93rd position out of 134 countries and the fall comparing to the last year is significant (81st place) – Table 4.

Old technology, poor quality, unattractive packaging and high prices are the main reasons for uncompetitiveness of Serbian products. Least competitive is manufacturing industry, metal industry and electronics, in which for years there has been no technological reconstruction. Business people think that it is necessary to make customs and tax exemptions, reduction of administrative levies as well as prices for electrical energy, gas and fuels in order to increase competitiveness. It is also necessary to rise the level of technological facilities because the average age of machines in Serbia

is 30 years. Comparing to the region it is a delay of 12 years, (Đorđević, Čočkalo and Bogetić, 2011).

Table 4: Position of Serbia according to individual criteria defining business conditions (Forbes, 2011)

Criterion	Rank
Monetary freedom	118
Innovations	114
Property right	106
Tax burden	100
Trade freedom	90
Technology	67
Corruption	66
Investors protection	59
Personal freedom	42

New business conditions demand a new approach to business performance of domestic companies. Old fashioned methods and techniques of management have to be abandoned and modern empirical and practical achievements applied along with permanent education of executives and other employees. A special attention should be paid to building a new organization.

In order to achieve market success a company should have competitive advantage in the form of lower costs and/product differentiation, a strategy of long term ensuring of high quality products and services and permanent innovations. Companies should take efforts in order to satisfy requirements of more and more educated and informed customers.

The research results (it dealt with the analysis of attitudes of young people related to their involvement in entrepreneurial process as well as with their comprehension about success of business practice in domestic companies) represent opinions of future experts and executives. The research has been carrying out for three years in a row (2010-2012) on the territory of Republic of Serbia in 16 towns and municipalities – Beograd, Bačka Palanka, Novi Sad, Subotica, Požarevac, Kragujevac, Šabac, Kraljevo, Čačak, Ivanjica, Sremska Mitrovica, Paraćin, Zrenjanin, Alibunar, Niš and Jagodina, during November and December. The survey is carried out by questionnaire. The population is built on students from four universities and business schools. It includes almost 2000 students directed towards business and management. The average age of examinees is about 22 years. Around 38% men and 62% women participate in the sample. The research from 2012 was the most extensive and it involved 755 students. Considering evaluation of competitive ability of domestic companies, 45.7% of examinees think that competitiveness of domestic companies does not satisfy the requirements of international market, 45.17% of them think that it only partially satisfy these requirements while 5.56% of examinees think that domestic companies satisfy conditions for achieving competitiveness on international market and only 3.58% of them think that it satisfies these conditions in a great deal. Considering the degree of innovations of domestic companies the majority of examinees, 46.5% of them think that domestic companies partially fulfill this factor of competitiveness, 36.95% of examinees think that domestic companies do not satisfy this factor, 7.68% think that domestic companies are innovative, while only 8.87% of the examined consider domestic companies very innovative. The examinees consider the following elements for development of competitive ability of domestic companies most necessary: standardization of business quality (18.67%), implementation of modern methods and techniques of management (17.72%), investment in development of national brands (12.32%) and buying modern equipment and technology (11.48%).

CONCLUSION

Poor productivity always results in bad competitive ability. In long term, competitiveness cannot be increased by financial support to industry but by increasing productivity. The main problem of

domestic companies is uncompetitiveness. Domestic companies cannot count on success on international market without implementation of new knowledge and new technologies. Competitors of Serbian companies, both on domestic and international market, are not only companies from developed EU countries but the companies from newly industrialized countries such as China India, Brazil, Mexico, Turkey, etc. The main factor of their success is optimization between prices and quality of products based on permanent productivity improvement.

On the bases of the presented research results it can be concluded that the students oriented towards business and management are aware of the fact that standardization of quality of business and implementation of modern methods and techniques of management represent strategic framework for establishing competitive ability of domestic companies and that competitive ability and level of innovations in domestic companies are on very low level.

Business performance of domestic companies have to be based on implementation of management techniques which support competitiveness, innovations and flexibility as well as on urgent improvement of knowledge of their employees, especially their executives. It is also necessary that our companies free themselves of the old way of thinking limited by domestic market. Global economy involves insecurity. On the other hand it offers enormous possibilities to organizations and individuals who are brave enough to adjust to it. Globalization represents the only way for all transitional countries but it must be insisted on development of industrial production. Newly industrialized countries have worked on development of industrial production and offer of their industrial products on the global market.

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TRADITIONAL VERSUS INTERNET MARKETING - THE IMPACT ON CONSUMER BEHAVIOR

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ABSTRACT:

Running a business in an environment that changes from day to day, companies are forced to change business strategies and practices to which they are accustomed. For this reason, in order to win over customers and potential customers, as well as build long term relationships with them, companies pay more attention to the use of interactive media. Internet has opened global market that knows no geographical or time limits, and at the same time provided a two-way communication with the ability to target specific consumer groups and the promotion of "one on one." On the other hand, classic marketing with its traditional media is so present in the lives of consumers that it begs the question whether Internet marketing will be able to threaten traditional forms of marketing communication with customers. The paper will try to give a response to the question through comparing traditional and internet marketing, as well as through research into consumer attitudes and opinions. The aim of this research consists of reaching the answer to the question of how consumers react to new, interactive media, as well as which form of communication (offline or online) do they have more confidence when making decisions about purchases.

Keywords: internet marketing, classic marketing, consumer, offline and online communication

INTRODUCTION

Operating in an environment that changes on a daily basis, companies are forced to change the way business, strategies and practices to which they are accustomed. For this reason, in order to attract customers and potential customers and build long-term relationships with them, enterprises pay more and more attention to the introduction of internet marketing strategy that allows them to communicate with customers 24 hours a day, 7 days a week.

Some time ago, the entire marketing had a direct form - vendors had been facing consumers directly - face to face. This technique was later replaced by mass marketing, where organizations developed a standard message and sent it to millions of consumers through mass media - newspapers, magazines, radio and television. They did not need to know the names of customers or anything specific about them, except that they had certain needs that could be met by the products of the organization.

Internet marketing has opened up space for practical interactive type marketing activities, directed towards consumers not as a group of similar individuals but towards consumers as individuals. In addition, the essential features of marketing concept remain the same in this case: creating value for consumers, achieving competitive or special advantages and directing and focusing goals, resources and company efforts towards achieving the highest possible level of customer satisfaction and loyalty. Specificity or a new qualitative factor, introduced primarily by internet marketing into marketing context, is interactivity – direct or indirect contact with consumers and potential consumers.

MARKETING CONCEPT – THE RELATIONSHIP BETWEEN TRADITIONAL AND INTERNET MARKETING

A lot has been written and discussed regarding marketing, especially in the first part of the twentieth century, but there is no universal opinion on the origin of marketing theory. However, the general consensus is that marketing began to take shape of a concept during the 1950s and 1960s on the mass markets of consumer goods in the United States.

Traditional marketing originates from developed market of consumer goods. Competition of multiple manufacturers is assumed, as well as a fully competitive distribution system and developed media through which manufacturers influence a large number of small unidentified customers. Through marketing mix instruments (4P) manufacturers strive to meet the needs of users and thus make a profit. Concepts, methods and models of traditional marketing are verified in practice by a number of companies in developed markets, primarily North American and Western European (www.scribd.com/doc/52339968/komparativna-analiza-tradicionalnog-i-tehnologijskog-marketinga, retrieved on March 15th, 2013).

Original architects of the traditional marketing concept were authors such as Levitt, Borden, McCarthy and Kotler. They helped the creation of marketing mix or management approach to marketing, as an alternative to production and sales concepts, stressing that the success of companies in the market depends on identifying and meeting the needs of the customer. Therefore, the basis of traditional marketing are marketing instruments, known in literature and practice as *marketing mix*. In 1960, McCarthy defined four basic marketing mix instruments (4P) - product, price, promotion and distribution (place), which still represent a widely accepted concept.

Although most of the marketing studies, papers and analysis refer precisely to the area of traditional marketing, contemporary trends in the domain of technology indicate a remarkable growth and expansion of activities based on the use of possibilities and potential of internet marketing worldwide. Internet marketing affects traditional marketing in two ways. First, it increases efficiency in traditional marketing functions. Second, the technology of e-marketing transforms many marketing strategies. The transformation results in new business model that add customer value and/or increase company profitability (Strauss et al., 2001). So, internet marketing represents one of the most significant phenomena in marketing theory and practice, through which companies have the ability to access customers worldwide. In addition, Internet marketing has many similarities as well as differences in comparison with conventional (traditional) marketing. Its goals and goals of traditional marketing are building relationships with customers, so that the companies could, through offering superior products and services, as well as continued communication with customers, obtain the highest possible profit. However, Internet marketing is largely different from traditional marketing. The dynamic development of information technology, e-commerce, but most of all, changes in the characteristics of consumers, their habits, needs and requirements have indicated the basic differences between these two marketing concepts.

The primary task of traditional approach to marketing mix is to conquer consumers, rather than to keep the existing ones. Mass promotion and publicity campaigns were aimed towards selling as many products as possible to as many customers as possible. On the other hand, the concept of Internet marketing focuses on customer retention, rather than simply conquering consumers. Importance is given to the value of life-long commitment to a company rather than the values of a single sale. (Novčić et al., 2009). Accordingly, orientation towards customers means meeting their needs and desires through two-way communication, personalisation of company offer and building long-term, partner relationships with consumers.

According to one approach, the comparison of traditional and online marketing starts with features shown in the following table.

Table 1: Comparison of traditional and online marketing (Vukmirović et al.)

Traditional marketing	Online marketing
Mass marketing	1 : 1 marketing
Mass advertising	Individually addressable medium
Push strategy	Pull strategy
Broadcasting	Pointcasting

Therefore, the assumption of traditional (mass) marketing is the existence of a mass market. The customer is reached through mass media (television, radio, newspapers, magazines, etc). On the other hand, Internet marketing is aimed at the individuals, i.e. mass of individuals in relation to the mass of the market. Specifically, companies have been viewing consumers as a mass product that can be substituted. Online access changes this, so the customer becomes a "value". They are not typical customers, but customers who have built their own style, are more sophisticated, more informed and have significant discretionary income. They are not supporters of traditional promotions and promotional messages, which is a one-way communication: the communicator provides information, trying to convince and persuade consumers to buy the advertised product or service, whereas the arguments which he uses are more emotional and less rational (Pokrajac, 2009).

Table 2: Characteristics of certain activities in the concept of traditional (offline) and Internet (online) marketing (Jović, 1999)

	Traditional marketing	Internet marketing
Segmentation	<ul style="list-style-type: none"> • Segments are formed on the basis of demographic / psychographic characteristics of existing or potential customers • Individuals with similar profiles are treated as identical 	<ul style="list-style-type: none"> • Information about the current behavior is used in order to identify consumers • Statistical models for accessing and processing of individual cases according to the criteria of purchasing power and value attitudes are used
Propaganda	<ul style="list-style-type: none"> • Communication is based on an "average" or "typical" member of the target group 	<ul style="list-style-type: none"> • Communication (promotion) is individualized and based on detailed information about the customer
Promotion techniques	<ul style="list-style-type: none"> • Use of mass media or use of geographical criteria 	<ul style="list-style-type: none"> • Customization based on previous behavior of individuals
Prices	<ul style="list-style-type: none"> • Determination of different price levels depends on the sensitivity of customers 	<ul style="list-style-type: none"> • Price differentiation based on individual sensitivity, is offered on an individual basis
Sales management	<ul style="list-style-type: none"> • Information about customers are formed by field staff, used for their own goals 	<ul style="list-style-type: none"> • Sales staff have access to information about customers (customer files), which can be used only to achieve company goals
Distribution channels	<ul style="list-style-type: none"> • Depending on the intermediaries network; otherwise, direct sale is used 	<ul style="list-style-type: none"> • Direct connection with customers • Long-term connections with customers, establishing partnerships (customer relationships)
New product	<ul style="list-style-type: none"> • R & D is carried out within the technological / production system of the company 	<ul style="list-style-type: none"> • New products / services are developed based on customer preferences and connection with the company • Serving loyal customers of the company through incorporation of other companies' products
Monitoring	<ul style="list-style-type: none"> • Focusing on monitoring of market share, sales volume and profit on a periodic basis 	<ul style="list-style-type: none"> • Key focus on retaining customers, costs of providing new and securing long term supply of existing customers • Monitoring activities are a continuous process

In the last 15 years, the Internet has become one of the most important communication media between businesses and consumers. Although a large part of promotional campaigns is still done via traditional marketing media such as television, newspapers, magazines etc, the Internet takes an increasingly important role in the positioning and continued strengthening of a brand. Personalization technology can help companies to understand the needs of their customers and to direct their marketing campaigns towards precisely defined market segments, achieving high response rates (Deitel et al., 2001). So, through dynamic dialogue, e – marketing can identify, anticipate and satisfy customer needs efficiently (Smith et al., 2002).

On the other hand, the changes occurring with the consumers are also a consequence of the increasing importance of Internet marketing. The specificity of modern consumers is sophistication that is manifested in the fact that they have more initiative when deciding what and how they want to buy something. In traditional marketing, consumers are passive in the creation of information, so the communicator selects from a variety of information. If there are any questions, the answers come in a few weeks, and it is possible that they never even arrive. In contrast to this situation, in the online approach before deciding to purchase, consumers seek through a large quantity of information provided on the Internet, i.e. the World Wide Web. Consumers search through deals and information that are available to them, evaluate bids, consult and exchange experiences with other consumers and users, and make their decision by designing (creating) »their own« product (Salai et al., 2008). In this way, companies are trying to adapt to individual consumers by providing them with personalized content.

RESEARCH RESULTS

In order to obtain the answer to the question whether internet marketing will be able to undermine the traditional forms of communication with consumers, as well as consumer attitudes about the new, interactive media, as a form of communication (offline or online) in which they have more confidence in making purchasing decisions, a research has been conducted in Novi Sad and Zrenjanin. The survey was conducted in January - February 2013, and included 200 respondents, out of whom 52% were female and 48% male. Also, all the age groups were included, due to the fact that their views on specific issues may vary significantly. The research results will be displayed below.

When asked what type of marketing communication is the most acceptable for consumer products (Figure 1), consumers put television in the first place (48%), followed by promotion via the Internet (34%) and advertisements in newspapers and magazines (18%), while none of the respondents chose radio promotion. However, this is not surprising, given the fact that some of the research suggest that consumers spend about 25 hours a week watching television, so therefore television is still a dominant medium in sending promotional messages. On the other hand, it is important to note that the population of young people chose promotion through the Internet as the most acceptable way of communication with companies and marketers, which is not surprising if one takes into account the expansion of social networks, the easy availability of information, unlimited offers of online games and the like, whereas the average time spent on the Internet is 3,6 hours per day, or 28 hours per week.

The growth of importance of the Internet in communicating with customers and promoting products and services is supported by the fact that 85% of respondents use the Internet as a tool for finding certain information. Also, the majority of respondents (78%) use the Internet several times a day which raises the possibility that marketers through this medium have access to a broad mass of consumers, 24 hours a day, 7 days a week. On the other hand, a small number of respondents use the Internet a few times a week (7%) or use it rarely (2%) and it is mainly the elderly, whereas young respondents argued that the pace of commitments and mutual communication lead up to the required daily use of the Internet. (Figure 2)

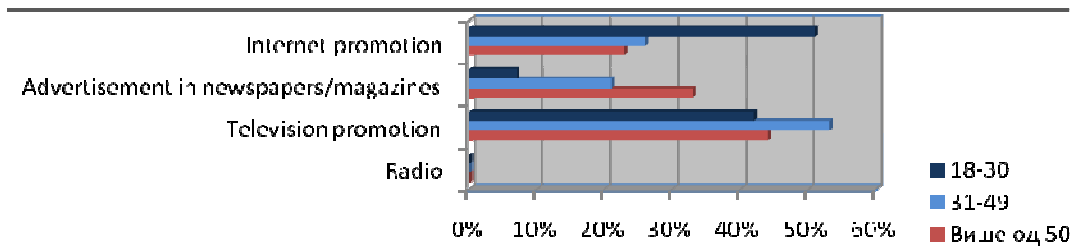


Figure 1: Which type of promotion is, in your opinion, the most acceptable for consumer products?

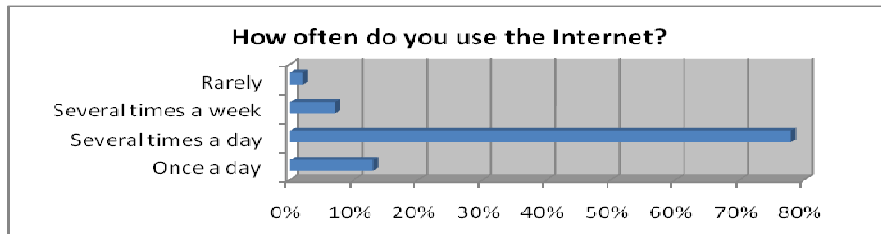


Figure 2

However, despite these data, underdeveloped online sales and poor use of cards in online shopping are still the main limiting factors for the development of the Internet business and marketing on the web market in Serbia. This is corroborated by the fact that over 60% of consumers has never bought products on the Internet (Figure 3), while those who buy online do it quite rarely, usually once a year (21%), once in half a year (14%) or once in three months (19%), as can be seen in the graph below (Figure 4).

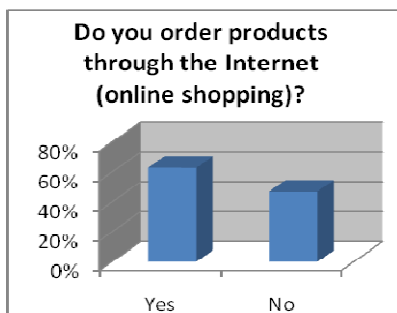


Figure 3

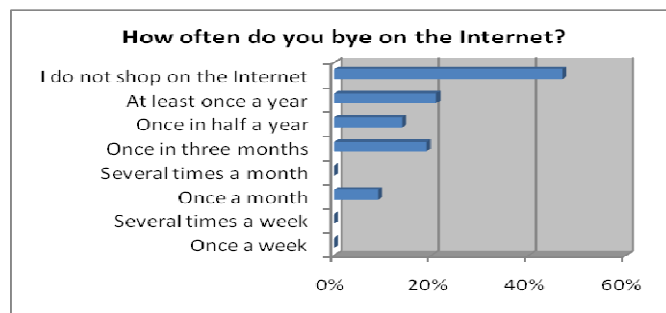


Figure 4

Although online shopping in the local market is still far behind developed countries, consumers are largely using the Internet as a means of locating specific information. Products and services which consumers are most interested in are: music and films, software and software accessories, electronic equipment, travel arrangements, cars, books, magazines, newspapers, household utensils, pharmaceutical products, sports equipment, clothes and footwear, food etc.

When it comes to problems that consumers face on the Internet, what they dislike the most is privacy threats and use of personal data without their knowledge (44%), the uncertainty of payment (23%), overcrowding with promotional messages (22%), and inability to find the desired data and information (11%) (Figure 5).

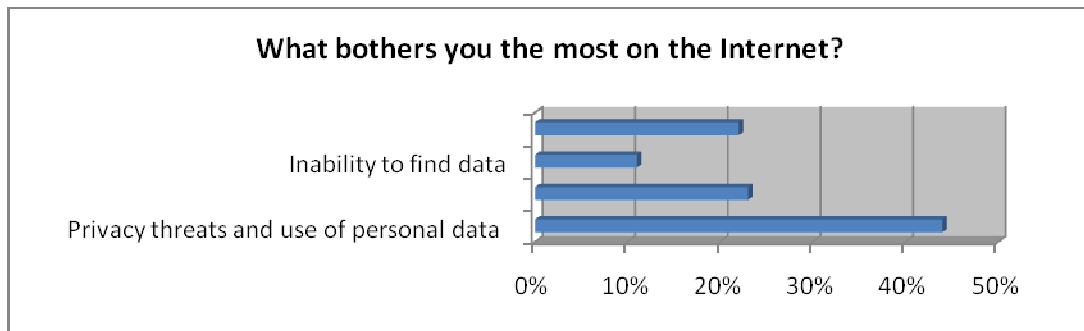


Figure 5

Based on these results, we can conclude that the low level of confidence in Internet marketing and shopping through this medium is the consequence of numerous problems faced by consumers, and that enterprises should dedicate themselves to minimizing these problems if they want to retain existing and attract new customers in the long run. Also it is definite that plenty of time will pass until solutions are found for challenges faced by Internet marketing, but as the understanding of new technology and experiences in its use improve, a rise will occur in the number of users of Internet marketing and also the level of its acceptance in communicating with customers.

CONCLUSION

Current trends in the field of technology have led to many changes in the way companies do their business, and therefore in the domain of marketing. However, regardless of the dynamics of changes, traditional marketing that characterizes both communicating with all existing and potential customers will not disappear, but it is clear that it will never be able to guess the personal interests and individual needs and preferences of individuals as consumers.

In today's competitive environment, companies that want to survive in the market must build a flexible approach to the market, establish and maintain continuous communication and long term relationships with customers. Therefore, there is a need for new approaches in order to retain existing and conquer new customers, ensure their satisfaction and build loyalty. It is the development and growing use of Internet marketing and new technologies that led to a change in relationships with customers that operates on an interactive basis to create a more flexible, responsive and long-term relationship with target market segments. At the same time, personalization and mass customization enable manufacturers to, with respect to each customer, create products according to their needs. In this way internet marketing is becoming the marketing of relationship based on partnership and dialogue between companies and their customers in order to identify their needs and find a solution with mutual satisfaction.

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INNOVATIONS IN FUNCTION OF MARKETING CHANNELS DEVELOPMENT

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ABSTRACT

Increase in customer's needs and demands combined with the increasing number of competitors in the market has led to the uncertainty of company's success in the market. In order to provide development and growth, companies have to provide goods and services to their customers more efficiently than the competition and on that basis achieve the competitive advantage. One of the essential elements of gathering the competitive advantage and of delivering increased value to the customers is implementation of innovative activities. Regarding that, in marketing channels one of the most appreciable ways to increase the value to the customers is to ease the buying process and to decrease customer's time that is required for purchasing. This paper has aim to emphasize the importance of implementing innovations in not only the process of production but also in other processes that are essential for doing business in the market, and for achieving growth and development of marketing channels companies. This will also be confirmed by an example of the success of a retail company in international market accomplished through an innovative approach to the customers.

Key words: innovations, marketing channels, competitive advantage, retail.

INTRODUCTION

Business relationships today in modern economies are much different comparing to those that were dominant in the past. Increased number of companies which are competing with similar or the same goal to satisfy their customer's needs in more efficient manner than competition has led to enhanced need for capturing the competitive advantage. Similar trend has also occurred in the segment of marketing channels, especially for the retail and wholesale companies. Competitive advantage has proven to be the very base for companies' success or becoming destined to failure in the market, in the case without it. As the author Porter says, competitive advantage in its essence comes from the value that the company is capable to achieve for its customers. Besides that it is also important for costs of such value to be under the gained revenue for the company (Porter, 1998). Therefore, conclusion could be drawn out that the competitive advantage could be gained by providing goods and services with the similar quality cheaper than the competition or by providing unique benefits for the customers for premium price.

One of the most valuable benefits that could be provided to customers within marketing channels is time saving, and also facilitation of the procurement process (Fernie et al., 2003). Development of new technologies has the major role in that process, but at the most implementation of innovation processes. In the majority of cases innovations are seen from the technical point of view, through improvement of product's functionality and its technical solutions. Nevertheless, innovations do not have to be of technical nature, and as a matter of fact they even do not need to be materialized at all (Drucker, 1985). Innovations can comprehend improvements in decision making processes, managing processes, production, organization procedures, etc.

Innovations are result of meaningful organized and systematic work, and of search for changes. By innovating companies can rationalize processes that are part of different activities. In accordance

with that, innovations allow satisfying unsatisfied or incompletely satisfied needs of customers. First to notice the possibility of organizing the processes of creation and producing innovations through systematic work was Edison, who at the time formed research laboratory for making discoveries (Momirski, 1986). About the success of this approach testify numerous scientific-research institutions throughout the world.

Today, marketing channels represent one of the sectors that largely contribute to the gross domestic product (GDP) of countries (Fernie et al., 2003). Changes that are happening in this sector affect the process of enlargement of companies that are in retail and wholesale market, which for a result has disappearing of small ones. In order to survive in such circumstances and to achieve growth and development these companies are forced to satisfy its customers way better than the competition and to provide enhanced value to customers. One of the most successful approaches is constant implementation of innovation processes while doing business and entrepreneurial sight on the situation.

The aim of this paper is to point out the necessity of implementing innovation processes in marketing channel companies, and to illustrate on an example direct influence of innovations on growth and development of a retail company.

INNOVATIONS, DEFINITION AND INFLUENCE

Innovations represent the essential power of company`s development and indirectly of the whole society. Etymologically word innovation is derived from Latin word *innovatio*, which stands for new discovery which upgrades a currently utilized method. Definition by Paul Trott points out that innovation is process of transformation of the idea into the practical use (Lajović et al., 2010). Christopher Freeman gives somewhat different definition in accordance with different activities and processes in companies. This author says that innovations include technical design, production, management and commercial activities (Lajović et al., 2010).

According to author Zelenović, innovation principle combined with principle of constant improvement of working processes represents the basis of securing the effectiveness of the company and its sustainability on the virtual market at the given time and surrounding conditions (Zelenović, 2011). From those definitions it can be seen that the role of every innovation is to create changes in technology and processes of work, for it is the only way to take out the stagnating processes from the balance and to induce their development and progress. Hence, constant upgrade of working processes requires continuous effort on improvement of the quality, productivity and usage of available management tools in the business.

As author Drucker states, resources doesn`t exist. They are developed by innovations. Resources evolve only when humans find appropriate use for elements in the nature and incorporate them with economic value (Drucker, 1985). In order to achieve this it is necessary to provide capable management and useful technologies for appropriate innovative process. However, the organized, systematic work is one more necessity in the creation of innovations, which is composed of four elements: questioning, observing, networking and experimenting (Dyer et al., 2011). This is due to the fact that throughout history only small number of innovations has emerged only as a result of an ingenious idea of its authors based on their contemplative work. Same attitude confirms author Zelenović, by saying that the experiences demonstrate that the conversion of innovation into serious market program happens with the proportion of 1:1000 cases (Zelenović, 2011).

For success of innovations, it is often required that companies have to discard some old habits and established working processes. Author Vlašić states in his work that company`s readiness on cannibalization of existing technologies and working processes is crucial for innovation`s success (Vlašić, no date). According to the same author it is possible to identify two approaches in developing innovations. First is linear model, which starts with an idea, after which are conducted marketing researches and finally there is a realization phase of creating the innovation. This model

is so called „Push model“. The second one is chain model, which starts on the market in search for new needs and after the conducted marketing research there is a phase of developing and testing the innovation. This model is so called „Demand pull model“ (Vlašić, no date).

Based on previously said, it could be concluded that markets create and push companies on constant changes in which the process of innovation can provide its maximal qualities and provide companies with the competitive advantage.

MARKETING CHANNELS, CHARACTERISTICS AND POSIBILITIES FOR INNOVATING

Marketing channels are important link in supply chain of products from moment of production to the end users and customers. Their role is direct or indirect, which depends of whether they are the independent subjects which mediate sales between producers and customers in the market, or they are a part of producer`s organization with assignment to sell products to the customers. Economical effect of marketing channels is also significant because they usually ease the selling of products and enhance business for companies that are not capable of supplying the customers themselves. Authors Lovreta, Končar and Petković assign three functions to the trade within marketing channels. Those are interpersonal function, interspatial function and inter-temporal function (Lovreta et al., 2006).

In order to develop, subjects in marketing channels such as retailers or wholesalers, have constant need to meet their customer`s needs. Author Christopher Field has identified some new characteristics of those customers. They don`t support traditional stereotypes anymore, they are better informed, feel increased uncertainty of the future, and what is most important they have less time for procurement of the products (Fernie et al., 2003). Exactly these characteristics made sector of marketing channels one of the most dynamic sectors in the market. According to authors Meyer and Schwager customer experience is internal and subjective response that customers have to any contact with a company (Rose et al., 2012). It is important here to emphasize the fact that today contact with customers is not anymore limited to the exact place of sale. Practically it is possible to purchase the products from any place and at any time if customers are provided with the internet connection. With the aim to create adequate customer experience it is necessary to find out what are the values that customers share and what would, through an innovative approach, contribute to the increase of their satisfaction. Hence it is important to conduct planned research activities on the market in order to get valuable information that could enable efficient implementation of innovations.

One segment that requires attention in marketing channels is logistics. Without organized logistic activities it would be impossible to provide services to customers such as home delivery or internet purchase, or even worse companies could struggle to supply their own stores with products they sell. Logistics is one of the elements that enhances innovative approaches to customers and enables for company to gain competitive advantage. Possibilities are enormous for marketing channels to grow by implementing innovative solutions. Today are even more present all advantages that are given with the application of the new technologies and the usage of internet. With those elements companies are on the right path to gain customer`s loyalty.

APLYING INNOVATIONS, EXAMPLE OF RETAIL COMPANY TESCO

Tesco is one of the world largest retail companies which runs business in 12 markets and has more than 500.000 employees. In its market expansion Tesco`s management has decided to enter a South Korean market in 1999. Since then the company has emerged to second largest retailer in the market but with no perspective to become number one, because of smaller number of stores compared with the market leader. Due to the specific market conditions some adaptations had to be made. One of those was name change from Tesco to “Home plus”.

In order to achieve further growth and to become market leader Tesco`s management set a goal to find the innovative solution which would increase the sales without opening new stores. After the conducted market research, gathered information and results were the following. Koreans are second most hard working people in the world, and what is more important, going into the shopping of daily necessities is a dreadful task for them. Hence, problems were in the lack of time for shopping and in the bad attitude of the customers.

Marketers in the company made an innovative solution. If the customers are not willing to go to the store, then the stores should be brought to them. That would ease the buying process and make happier and more loyal customers. In order to achieve the goal, marketers made virtual stores. At the beginning they were placed in the subway stations and later on in some other places where many people were during their working day. In subway stations vivid pictures that represented shelves with the products were placed on the walls and were almost exact imitation of the real store`s merchandising (this is shown in figure 1). The only difference was that actually there were no products. Under picture of every product was printed a QR code by which the purchase could be made through the internet. In order to use QR code customers had to scan it from the wall picture with their smart phones, after which they could make orders via internet connection. There was no fear that some customers will be left out of possibility to buy in this way, because the vast majority was already in the possession of smart phones with an internet connection. One of the major tasks that had to be executed by the “Home plus” was delivery of the products on time and in place specified by the customers.

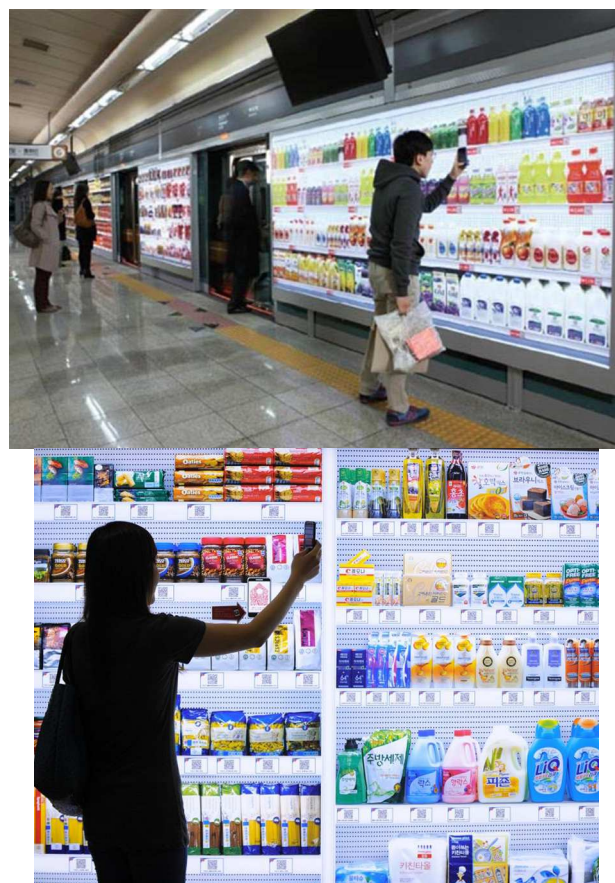


Figure 1: Home plus subway virtual store.

The results of innovative approach were the following. Customers could buy the products whenever they wanted, and basically from any place without the need to go to the real store. Efficacy of purchasing was increased for the customers because they had more leisure time to spend with their families or on their favorite activities after working hours. Also the wasted time

spent in the public transport was reduced because now it could be used for the shopping of daily goods. After the campaign, on-line sales were increased by 130% from November 2010 until the January 2011, and “Home plus” became number one retailer on the virtual e-market. Furthermore, the main goal was almost achieved because company is now very close second on the South Korean market and is heading towards the leading position. For this campaign company won the “Golden Lion”, significant award at the Cannes International Festival of Creativity.

CONCLUSION

Increase in customer`s needs and demands combined with the increasing number of competitors in the market have led to the uncertainty of company`s success in the market. In order to provide development and growth, companies have to provide goods and services to their customers more efficiently than the competition and on that basis achieve the competitive advantage.

As it is shown in this paper one of the essential elements of gathering the competitive advantage and of delivering increased value to the customers is implementation of innovative activities. In marketing channels one of the most appreciable ways to increase the value to the customers is to ease the buying process and to decrease customer`s time that is required for purchasing.

By the example of “Home plus” in this paper it is shown how implementation of innovative solutions can be successful for the retail company. Based on innovations, “Home plus” has achieved its goals to grow in the market without opening new stores. As the conclusion, it can be derived that without innovative activities marketing channels companies have little or no prospects for accomplishing the growth and development in the market.

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PROJECT OF IMPLEMENTATION OF CUSTOMER RELATIONSHIP MANAGEMENT STRATEGY INTO COMPANY

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ABSTRACT

In the paper there will be presented the results of the successful application of customer relationship management concept into company by using Microsoft Project. The goal of the paper is presenting and analysis of implementation of CRM project into the company business activities. CRM (Customer Relationship Management) methodology is the concept that takes initiative in marketing sectors of companies of different types with the goal of better adapting the company to the changes at the market and better satisfying the demands of customers. The goal of the paper is also proving the effectiveness of software Microsoft Project with all its tools for successful realization of business issues in the fields of customer relationship management and marketing.

Key words: project management, customer relationship management

INTRODUCTION

The essence of modern marketing and successful business lies in satisfying customer's needs in a better way than competitive companies do. That makes customer relationship management one of the most important processes in today's market and can lead companies to desired long-term results. CRM business strategy is based on the use of information and communication technologies in order to give the companies wide, reliable and integrated view of their customers, by using techniques and processes for gathering information to help estimate different strategic options. Implementation of CRM strategy is based on precisely defined procedures and modern technologies, with professional and educated staff capable to manage those procedures. In order to successfully implement CRM strategy into company, there should be knowledge and skills of CRM project management. In the paper there is the explanation of all CRM project phases and the project flow.

CRM PROJECT MANAGEMENT

Most of industrial consultants say implementation of CRM software is the art, as well as the science. In science, consistent efforts can predict and repeat the results of predetermined actions and events. However, in art we model the best performance based on different variables and different conditions at the same time. The delivery is unpredictable because we often change towards new ideas, information and human resources during the process. Selection of projects of company' CRM software should follow strategic approach and process in order to increase the

probability of successful outcome. The following phases of software selection prove the approach that many consultancies are using.

Phase I: Planning

Beginning phase of planning should start with clear goals. Plans of project quality begin with the proven methodologies of implementation and the best practices of project management. For instance, assignments of project plan should not be shorter than 4 or longer than 20 hours (if yes, then they should be consolidated with other assignments or segmented on more assignments, respectively). All activities should identify assignment goals should be based on the efforts, not time; they should be allocated to certain resources and drive to the goals. With this minimum criteria for project planning, plan can be made, resource allocation should be made, as well as the identification of capacity limitation, creation of the structure of work preview (Work Breakdown Structures - WBS) and supervision of critical paths. Microsoft project is the most popular tool for project planning and it is suitable for most implementations of CRM software. When doing the project management or planning, it is recommend to consult the Project Management Institute – PMI as the source of good methodology of project planning, correctly determined processes and best practices.

Phase II: CRM software design and Conference Room Pilot

A Conference Room Pilot (CRP) is systematic approach that makes the real prototypes of suggested operations of information system, that learns how to work and maximize business potential before the beginning of project. CRPs usually begin with the introduction CRM training software course. In general, CRP is used to test and evaluate business model of company with new system of business software. Results of CRP show the confirmation or note the irregularities when detailed check-up of design is needed before the full implementation.

Phase III: CRM training for software users

Project team members will enable CRM training of software application in the phase of design and conference room pilot. Following the basic training for project team and complete testing of application during the CRP phase, trainer will provide additional training for CRM software end-users, such as individual or group lecturers. Courses for training of users are different than the previous ones of project team, with the accent of everyday user activities which do not exclude settings, configuration or process alternatives that CRM system enables. This enables users to focus on assignments that are directly involved with them and leave the configuration and alternatives of business processes to the project team. Experience clearly shows that keeping the users is the most difficult goal. Therefore, it is advised that training for users should be prepared before launching the new system. Management is providing the necessary possibilities for those individuals that have the training that should be efficient and productive. Training of users is often done by the individual trainings.

Phase IV: Implementation of CRM software

When staff for implementation support is ready, final risk analysis are taken and tools for evaluation of readiness confirm that operations work, the company is ready for launching the CRM project. There are few prepositions for achieving success on realization of projects:

- Launching event of the project is right time for keeping operations under control. When system is ready, the whole project team, including executive sponsor, should supervise the users to make sure that project is successful and available for user demands. Periodically one should stay linked to facilities for help at the time of beginning phase of project realization.
- It is convenient to have additional staff of software vendor or consultants. When trained staff is available for users at beginning phase of setting up the system, it is valuable investment.
- When users have questions or problems, they demand fast answer and the help facilities that

can provide the feedback. This will confirm the user information resources and provide correct and complete help materials.

Phase V: Evolution of CRM software

Successful CRM software systems enable continual improvement of product cycle that optimizes the system of business software. Application of CRM business software should be developed together with the company. It is desirable to perform periodic post-implementation check-ups and system checks at least twice per year to determine how CRM application improved specific business processes and project goals, as well as analyzing technical and functional application use. Objective measuring can be used to create business system of bigger effectiveness and better customer satisfaction.

IMPLEMENTATION OF CRM PROJECT – ACTIVITIES’ SPECIFICATION

There is the choice of activities and their schedule into different phases and sub-phases of project. Detailed description of project assignments, their duration and resources should be determined in order to successfully finish the project. For specification of activities there is the option *Gantt Chart*, button *Task*. Selection of activities in phases and sub-phases is done by the use of buttons *Indent left* and *Indent right*. For linking the assignments there is the button *Information* available at the button *Task*. There is the couple of options for linking the assignments, and the most often used is the *finish-to-start* (previous activity must be finished so that the next one could begin) and *start-to-start* (simultant beginning of different activities).

Task Name	Work	Duration	Start	Finish	Details
[-] Plan of implementation	1.480 hrs	90 days	Thu 1.3.12	Mon 9.7.12	Work
CRM engineer	720 hrs		Thu 1.3.12	Mon 9.7.12	Work
[-] Planning of CRM proje	80 hrs	10 days	Thu 1.3.12	Wed 14.3.12	Work
Project leader	0 hrs		Thu 1.3.12	Thu 1.3.12	Work
[-] Project team buildi	16 hrs	2 days	Thu 1.3.12	Fri 2.3.12	Work
Project leader	16 hrs		Thu 1.3.12	Fri 2.3.12	Work
[-] Determing project g	16 hrs	2 days	Mon 5.3.12	Tue 6.3.12	Work
Project leader	16 hrs		Mon 5.3.12	Tue 6.3.12	Work
[-] Determing detailed	16 hrs	2 days	Wed 7.3.12	Thu 8.3.12	Work
Consultant	16 hrs		Wed 7.3.12	Thu 8.3.12	Work
[-] Business process re	24 hrs	3 days	Fri 9.3.12	Tue 13.3.12	Work
System analyst	24 hrs		Fri 9.3.12	Tue 13.3.12	Work
[-] Software customiza	8 hrs	1 day	Wed 14.3.12	Wed 14.3.12	Work

Figure 1: Overview of project activities by software MS Project 2010

Gantt Chart

At work surface of *MS Project* at the left there is the list of activities. At the right there is the Gantt chart of work assignments’ flow. Visual presentation of Gantt chart is significantly important because it presents in detail in what phase is the project, which resources are allocated for certain project phase, as well as the mode of their realization (Figure 2).

The choice of project resources

Each project demands specific resources that should be used. Resources can be material or non-material. Material resources are equipment, money, etc. Non-material resources are people, the most important factor that determines the success in modern business. In software *Microsoft project* resources are set at *Resource* button. Certain data should be entered, such as the name, type (material, human, etc.), the amount of material or number of experts, as well as the work price, that can be hourly or overtime. For each project time duration, resources and price should be specified. (Figure 3)

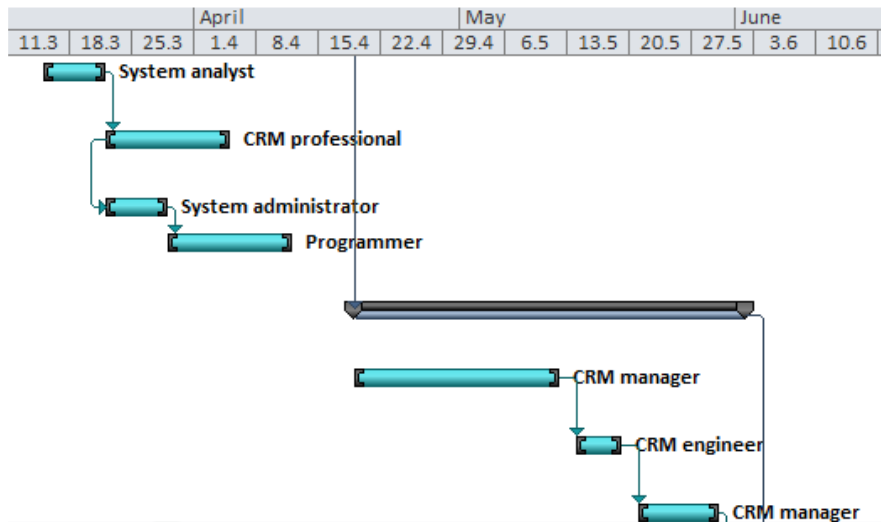


Figure 2: Gantt chart of CRM project

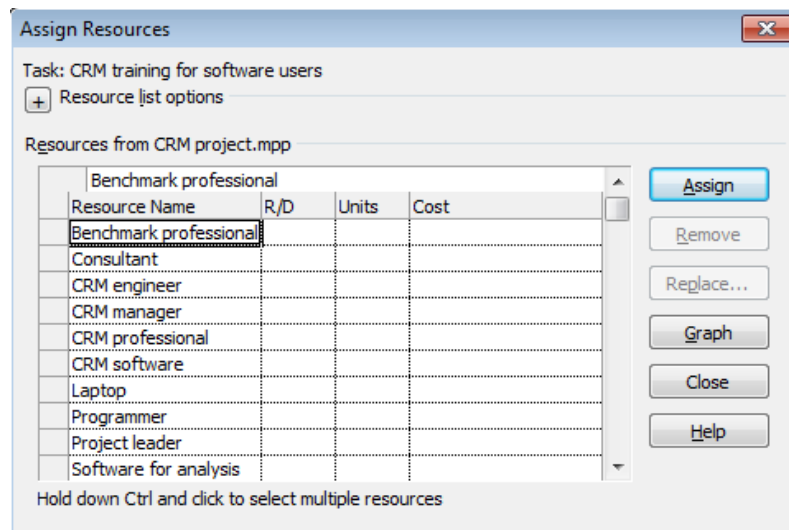


Figure 3: Resources used for project implementation of CRM software

Network Diagram

Network diagram is different overview of work assignments flow. The method of network planning has been used, that is the time analysis by PERT method. There are calculations of possibility of realization of certain activities, based on the project timeline. Three scenarios are predetermined: optimistic, pessimistic and the most realistic timeline of activity realization. Project activities are presented on unique way. There is the legend with explanations of parts of diagram. (Figure 4)

CREATING THE REPORTS

Creating the reports is the final phase of realization of the whole project or its phases. There is a big number of reports, visual or numbered, that provide realistic overview of project at consistent and professional mode. (Figure 5)

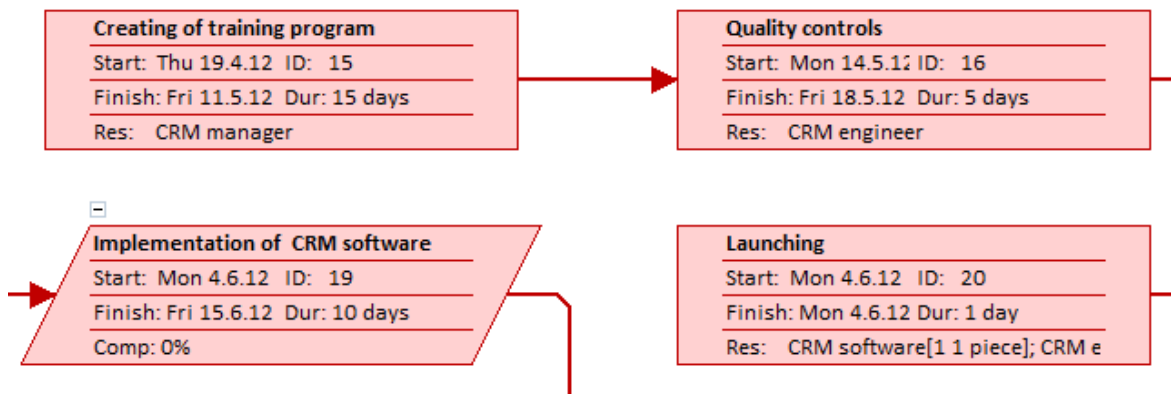


Figure 4: Network diagram of project implementation of CRM software



Figure 5: Dialog box for creating reports

CONCLUSION

Application of CRM project software described in this paper implies the recommendation of the use of Microsoft Project software and project management concept into company business processes. Customer relationship management (CRM) projects have big significance for increasing the market share of companies because they are focused on customers that results of increasing the sale of products or services. Moreover, there is the increased efficiency of influence of CRM project for company businesses. It is recommend the continuation of the research of potential possibilities of MS Project software with its application in different fields. Training and improvement of managers' competences is necessary, with the aim of finding the optimal mode of realization of different kinds of projects. Creativity and innovative thinking of project managers as decision-makers is of crucial importance for successful realization of projects. Based on the extensive research and analysis of software MS Project 2010 it has been concluded that this software is the most convenient way of overview of project realization. MS Projects tools are convenient for application in different fields of business: marketing, production, IT, HR sector, etc. Project managers are very seek at labor market, therefore it is recommended to get the expertise of the project management concept in order to acquire the competitiveness.

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A.I.D.A. AS THE MODEL OF MARKETING MANAGEMENT

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ABSTRACT

The following text describes the method of marketing management known as A.I.D.A. Running a business in today's global market, every marketing manager must know the methods of marketing to make the most of their goods qualify. The method proved to be very effective is the A.I.D.A. marketing model. The paper was presented and described how the A.I.D.A. method works and how does it function. It is also described the history of this model and further development of the same.

Keywords: marketing, market, product, promotion, A.I.D.A. model.

INTRODUCTION

Marketing is a strategic, business function that creates value by stimulating, encouraging and meets the needs of the consumer. This is achieved by building the brand, developing relationships, commitment to innovation, creating a good relationship with customers, (Đorđević & Čočkalović, 2004). Bearing in mind orientation towards customers marketing leads to a return on investment, meeting the needs of shareholders, the public key, and affects positive change and sustainable business in the future.

People involved in sales through marketing are usually oriented to only one component of marketing, but marketing is a much broader area than one approach. The focus is on the segment of the marketing mix 4P in this paper, promotions - presentation offer. When you want to sell goods to potential customers, very important is their interest in the product. In marketing, a product is usually advertising as a secondary product in relation to the products of the primary market. Marketing managers are typically used as a form of advertising media presentations. You can promote the product in person or in a totally different way. What is the point of using promotions as part of the marketing mix is the placement and sale of products on the market. Model of promotion and marketing of products that are proven to be very effective is known as model A.I.D.A.

A.I.D.A. is an abbreviation of the 4 English word: A – Attention, I – Interest, D – Desire, A – Action. All four of these words are very important for marketing manager who has the intention of placing products on the market and sell them. Given the contemporary market trends, it is very difficult to create position and sell the product. For this reason it is very important that marketing managers use the correct and effective methods. Going forward, it is explained the reason why A.I.D.A. model has proven highly effective. It also describes the origin and history of this model, as well as the sphere in which the model is applicable.

PROMOTION AS PART OF THE 4P MARKETING MIX

Although marketing is commonly thought of as only consisting of promoting a product or service through advertising and publicity, there is actually much more to it. Marketing is the process of

establishing a product, pricing it, promoting the product and placing it for sale, as a way to make profits for the company. These items are called the *Four-Ps* or the marketing mix. Although, it is an easy way to remember the parts of marketing, it misses out on the three phases of marketing.

Questions you may have include:

- Why is promotion often emphasized?
- What are the Four-P?

Most think only of promotion

The general public normally thinks of marketing as promotion, advertising, branding and publicity of products or services. They often lump those items together as promotion. What they do not realize is that there are other factors that a business must consider as part of delivering their products or services to the market and selling them.

Four-P

Marketing can be classified into four categories, called the *Four-Ps*:

- Product
- Price
- Promotion
- Place

These activities are also called the *marketing mix*. They are the variables that marketing managers can control in order to satisfy customers in the target market. Using four words starting in "P" is an easy way to remember the items (Đorđević & Bešić, 2004).

Product marketing

The product part of the marketing mix concerns determining what products or services customers want and establishing specifications for those items. Considerations include functionality, appearance and quality of the product, as well as packaging, warranty and support.

Pricing marketing

Setting a competitive price for a product or service is an important part of marketing. That price may be based on the marketing strategy of whether to give the impression of quality or to appeal to the price-conscious buyers. Supply and demand also affects pricing. Pricing includes not only the list price, but also discounts, financing and leasing options.

Promotion marketing

The promotion part of the marketing mix concerns communicating and selling to potential customers. This includes advertising, sales promotion, publicity and personal selling (Đorđević & Bešić, 2006). It refers to the various methods of promoting the product, brand or company, as well as the message and media to be used. Advertising and promotion costs can be a large part of the product price. Analysis should be performed to determine the actual value of the promotion in getting new customers.

Place marketing

Place is the location or channel where the sale can be made. This may include geographic location and market segment. Sometimes this "P" stands for placement or distribution, which refers to how the product or service gets to the customer. Distribution includes market coverage, channel member selection, logistics and levels of service.

Promotion

A successful product or service means nothing unless the benefit of such a service can be communicated clearly to the target market. An organizations promotional mix strategy can consist of:

- a) Advertising: Any non personal paid form of communication using any form of mass media.
- b) Public relations: Involves developing positive relationships with the organization media public. The art of good public relations is not only to obtain favorable publicity within the media, but it is also involves being able to handle successfully negative attention.
- c) Sales promotion: Selling a product service one to one.
- d) Direct mail: Is the sending of publicity material to a named person within an organization. Direct mail allows an organization to use their resources more effectively by allowing them to send publicity material to a named person within their target segment. By personalizing advertising, response rates increase thus increasing the chance of improving sales. Listed below are links to organization whose business involves direct mail.
- e) Internet marketing: Promoting and selling your services online using various forms of online marketing techniques such as banner advertisements, videos or social media.
- f) Sponsorship: Where you pay an organization to use your brand or logo. This organization usually has a high profile so that you know that your brand will be seen by a large audience. Most common use of sponsorship is with sporting events. The 2012 Olympics being held in London is being sponsored by a number of organizations such as McDonalds and Coca-Cola as the event will attract a worldwide audience that will run into hundreds of millions.

One of the best marketing models for promotion and sale is A.I.D.A. marketing model.

A.I.D.A. MARKETING MODEL

The AIDA model consists of 4 different phases that leads to the purchase of a product/service.

Attention

Attention is the 1st phase that will spark the interest of a consumer. What sparks attention is usually by its unique design, pricing, and marketing.

Interest

Interest is the 2nd phase that can create a desire for the product/service. A consumer will want to know more about the product/service, its functions and features.

Desire

Desire is the 3rd phase that stimulates an action to buy. After comparing the pros and cons of the product/service and cross referencing with multiple sources, desire may grow which will lead to the purchase of the product/service.

Action

Action is the 4th phase and the last of the AIDA. The consumer will purchase the product/service after completing the 3 phases. Desire triggers action, and the consumer will buy it when the product/service can fulfill his/her desire.

According to a reference from (<http://www.functional-marketing.com/aida-marketing>.), by understanding the AIDA model, you will know what makes consumers tick from the pricing structure to the designs and features. With such valuable data, you will be able to craft a product/service to the consumer's satisfaction.



Figure 1: A.I.D.A. marketing model

HISTORY AND NEW DEVELOPMENTS OF A.I.D.A. MARKETING MODEL

The term and approach are commonly attributed to American advertising and sales pioneer, E. St. Elmo Lewis. In one of his publications on advertising, Lewis postulated at least three principles to which an advertisement should conform:

According to a reference (Ferrell & Hartline, 2005), the mission of an advertisement is to attract a reader, so that he will look at the advertisement and start to read it; then to interest him, so that he will continue to read it; then to convince him, so that when he has read it he will believe it. If an advertisement contains these three qualities of success, it is a successful advertisement.

According to F. G. Coolsen, "Lewis developed his discussion of copy principles on the formula that good copy should attract attention, awaken interest, and create conviction.", this information is from the book (Geml & Hermann, 2008). In fact, the formula with three steps appeared anonymously in the February 9, 1898 issue of *Printers' Ink*: "The mission of an advertisement is to sell goods. To do this, it must attract attention, of course; but attracting attention is only an auxiliary detail. The announcement should contain matter which will interest and convince after the attention has been attracted".

The importance of attracting the attention of the reader as the first step in copy writing was recognized early in the advertising literature as is shown by the *Handbook for Advertisers and Guide to Advertising*:

The first words are always printed in capitals, to catch the eye, and it is important that they should be such as will be likely to arrest the attention of those to whom they are addressed, and induced them to read further.

A precursor to Lewis was Joseph Addison Richards (1859–1928), an advertising agent from New York City who succeeded his father in the direction of one of the oldest advertising agencies in the United States. In 1893, Richards wrote an advertisement for his business containing virtually all steps from the AIDA model, but without hierarchically ordering the individual elements:

How to attract attention to what is said in your advertisement; how to hold it until the news is told; how to inspire confidence in the truth of what you are saying; how to whet the appetite for further information; how to make that information reinforce the first impression and lead to a purchase; how to do all these, - Ah, that's telling, business news telling, and that's my business.

Between December 1899 and February 1900, the Bissell Carpet Sweeper Company organized a contest for the best written advertisement. Fred Macey, chairman of the Fred Macey Co. in Grand Rapids (Michigan), who was considered an advertising expert at that time, was assigned the task to examine the submissions to the company. In arriving at a decision, he considered inter alia each advertisement in the following respect:

1st The advertisement must receive "Attention," 2d. Having attention it must create "Interest," 3d. Having the reader's interest it must create "Desire to buy," 4th. Having created the desire to buy it should help "Decision".

The first published instance of the general concept, however, was in an article by Frank Hutchinson Dukessmith (1866-1935) in 1904. Dukessmith's four steps were attention, interest, desire, and conviction. The first instance of the AIDA acronym was in an article by C.P. Russell in 1921 where he wrote. An easy way to remember this formula is to call in the "law of association," which is the old reliable among memory aids. It is to be noted that, reading downward, the first letters of these words spell the opera "Aida." When you start a letter, then, say "Aida" to yourself and you won't go far wrong, at least as far as the form of your letter is concerned.

Purchase funnel

Since the early 1960's, AIDA has frequently been illustrated in the diagrammatic format of a funnel, indicating that a larger quantity of potential purchasers become aware, then a smaller subset becomes interested, and so on. It is often referred to as a "purchase funnel," "customer funnel," "marketing funnel," or "sales funnel."

New developments

1. Later versions of the theory have edited the AIDA steps. New phases such as satisfaction (AIDAS) and confidence (AIDCAS) have been added.
2. S - Satisfaction - satisfies the customer so they become a repeat customer and give referrals to a product.
3. One significant modification of the model was its reduction to three steps (CAB):
 - Cognition (Awareness or learning)
 - Affect (Feeling, interest or desire)
 - Behavior (Action).

Cultural references

The character Blake in the film *Glengarry Glenn Ross* by David Mamet makes a noteworthy reference to AIDA. A minor difference here is that the D in Blake's motivational talk is defined as decision rather than desire, presumably implying that the third step not only imbues the customer with the want of the product but also willing to commit them positively to the purchase.

CONCLUSION

For all these reasons, conclusion is that if we want to place the product on the market and sell it, we have to make the product desirable. That the product would be desirable to customers, it is essential to get a good position in the market. Good market position can be achieved by good promotion, and good promotion is very important for any marketing manager. Good promotion can be achieved using effective marketing strategies. Such marketing strategy is A.I.D.A., and A.I.D.A. shows very good results in her use by now.

This process is used by many marketers in their communications to entice prospects to make a purchase or take a desired action. The technique is commonly used in advertising vehicles such as television commercials and direct mail pieces (Blattberg et al., 2008).

The idea is to accelerate through the stages of AIDA to get to the Action. Keep that idea in mind with whatever marketing materials you create. A little bit of thought before you spend your money can bring you a much greater return on your investment.

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QUALITY IN FUNCTION TO ACHIEVE CUSTOMER SATISFACTION

Presentation of research results for retail facilities

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ABSTRACT

Perceptions of service customers contributes to our survival in the market so it is therefore necessary to constantly listen to how much the satisfied customers are and what their needs are. Considering that satisfied customers are crucial for a successful business, it is necessary to constantly conduct research about their satisfaction with current services and needs and to meet the research expectations. This paper presents the results of the research on companies' retail facilities in places that PerSu has its own stores. One of the goals is for PerSu to see where it is in relation to its competitors, and how many customers are satisfied with their quality of service.

Keywords: customer satisfaction, retail facilities, quality, competitiveness

INTRODUCTION

Customer satisfaction is one of the key factors in achieving competitive advantage in today's business organizations; it is closely related to achieving customer loyalty. Satisfaction and customer loyalty are key parameters for developing a successful brand on the local, regional and global markets. Companies that seek to advance the long-term and successful work must act globally. One of the misconceptions of satisfaction, where the practice shows that 40% of customers in the consumer goods stores will never regret to advertise or anything, but they will go elsewhere.

Continuous improvement of business processes is achieved by implementing the concept of quality management, and business factors are recomposed and committed the influence of knowledge. Necessary factors acting on the realization and strengthening the competitiveness of domestic enterprises are: quality, marketing, competitiveness, knowledge, innovation and price.

CRM CONCEPT vs. QM CONCEPT

CRM concept

Every citizen is a customer. Each of us buy and consume every day goods, all using a variety of institutions, spending hard-earned money in different ways-for bills, interest on loans, etc. (Rakić et al., 2002). There are two basic types of customers, and they are: individuals as customers and organizations as customers. The way to keep your customer's organization and ensure repeat orders is to develop a management strategy based on the data and focused on customers in order to increase customer satisfaction by developing long-term relationships and the business strategy is referred to as Customer Relationship Management-CRM. CRM is the mechanism by which you can find who are the buyers of the companies. It allows the satisfaction of customers, their retaining and loyalty. (Milović et al., 2012)

Since the nineties the essence of customer relationships is in itself of customers and information about the company owns them. CRM aims to win new customers, improve relationships with existing customers, increased sales and profits, build customer loyalty, competitive advantage, reduce costs, but also access to new channels of communication with customers. Many studies have shown that companies without CRM, on average, lose about 50% of their customers every five years, most of the lost customers left because of poor service and communication, but also the cost of acquiring a new service to the client are five times higher than the cost of retaining the old. Companies that have developed CRM concept grow almost 60% faster than their competitors without developed CRM, quickly expanding in the market, achieving higher profits and increasing customer loyalty (Čamilović, et al., 2007). If in the future adjustment of the Serbian economy European market, it must be special attention paid to the beneficiaries because no analysis of data about them may happen to run out of them, and they do not be aware of. Improving the competitiveness of Serbia should be achieved by shifting the focus on micro level decision making, as well as acceptance of the new philosophy of business and management (Domazet, et al., 2009).

QM concept

The acceptance of the concept of QM in a company primarily means that should apply strategic decision making in your organization. The issue of achieving customer satisfaction management has become a key issue in further development, which emphasizes the need to understand customer requirements, creating and enhancing the value of products / services to customers, adequate realization of production and the need for updating the knowledge of permanent employees. ISO 9001: 2000 set by the customers at the center of the quality management system, aimed at continuously improving customer satisfaction. This standard is very clear that the central purpose of a quality management system to ensure that organizations implement products and services that satisfy customers. First we need to determine the appropriate requirements of customers in the survey, which asks the right questions in the process of research. The goal is to find out the most important requirements of our customers and try to meet the same. One possible model of customer satisfaction measurement company includes the following segments (Perillieux): requirements analysis environment (competitive), the measurement and analysis of customer satisfaction (satisfaction with the products that people consume / spend), and measuring and analyzing customer satisfaction after the sale. It is necessary to point out the results of measurements of customer satisfaction, but they can not always assume that they are accurate and true because surely there are deviations due to a number of influential factors. Measuring customer satisfaction should be done more often, but under similar conditions that we could compare the results.

QUALITY, KNOWLEDGE AND DOMESTIC COMPETITIVENESS

The main problem of the lack of market success of local companies in the business is probably in the wrong business productivity and inadequate relative price - the quality of the product. Domestic companies in the last few decades had significant problems with labor productivity, which resulted in the formation and growth of the cost of sales prices that were uncompetitive in the market. Creating business strategy and the quality of the business environment are important preconditions for strengthening the competitiveness of the economy, because of that the devastating fact that in accordance with these criteria, Serbia was ranked 95th position out of 144 countries in the world, according to the World Economic Forum (SEF) in 2012 year. Unfortunately, the domestic small and medium enterprises still don't fully use quality management system which significantly affects their competitiveness, both domestically and on the international market because they think that it is not necessary. The processes of globalization of markets and international competitive require companies which want to survive in their business activities must possess the key to improving the quality of operations of local companies, to seek the proper use of knowledge, quality and people.

RESEARCH METHODOLOGY

About the company PerSu BBT

PerSu BBT ad is a retail facility chain with stores in Vojvodina. PerSu markets now operate 95 retail facilities, which employ more than 650 workers. PerSu provides on a daily basis a rich assortment of

merchandise at very affordable prices that is tailored to customers for the purchase that will meet all your needs. Emphasis is given to the satisfaction of their customers' needs of quality products, with the possibility of cost savings due to the lower price categories. Thanks to the experience, a willingness to be part of important events and actions, PerSu markets are increasingly involved in the progress of the wider community in which they are located. The key values that nurtures social responsibility, geared towards those who need such assistance is most needed (humanitarian action to help the sick, humanitarian assistance for vulnerable persons, and others).

The objectives of the research

The main reasons for the research:

1. The survey customers - decision-making process of customers (the needs, attitudes, opinions, intentions and experiences),
2. Research at the demand of the market town of Zrenjanin,
3. Competitors research - advantages and disadvantages,
4. Research organizations - the quality of the business.

The task of the research

The following tasks will be to get this research:

1. Demographics
2. Familiarity with retail facilities
3. Which store do you think is best and why?
4. In which store you don't like to shop, in which you avoid buying and why?
5. Perceptions of price and quality
6. Important factors for purchase
7. Analysis of each brand (PerSu and competitors).

The manner, method and place of sample surveys

The survey was conducted in 2011 year, for the company PerSu because they wanted to see how many customers are satisfied with their service and where they are in relation to their competitors. The first step was assembling the survey. This included questions related to management of retail facilities. The next step was to determine the list of retail facilities that need to do the survey, the number of surveys for each stores as well as a list of competitors, as indicated in the following table, the competitors has changed over the place depending on the store, but mostly is same (Table 1):

Table 1. List of stores with competitors and the required number of surveys for each store

Number of retail facilities	Place of retail facilities	Number of pools	Competitors
BBT 20 – Retail facility 1	Crnogorska 53, Zrenjanin	40	Competitor 1, 2, 3, 4
BBT 55 – Retail facility 2	Carinska bb , Zrenjanin	40	Competitor 1
BBT 48 – Retail facility 3	Mihajlovački drum bb, Zrenjanin	40	Competitor 1, 2, 3, 4
BBT 109 – Retail facility 4	Kralja Petra I 26, Gospođinci	20	Competitor 1
BBT 98 – Retail facility 5	Kralja Petra I 39, Gospođinci	20	Competitor 1
BBT 25 – Retail facility 6	Žarka Zrenjanina 13, Krajišnik	40	Competitor 1, 2

The competitive marks the ordinal numbers in order to protect trade secrets.

After creating and conducting surveys, the data were entered into Microsoft Excel, which were obtained using the data presented graphically. The last step was to make the results of the group and presented in tables. This paper presents the results of a research group of retail facilities.

The survey is conducted on a representative sample of the population which has a landline phone in household. Sample is taken from the directory (electronic), phone numbers are chosen at random, from the web site www.belestrane.988info.rs. The survey was conducted in areas where PerSu has stores. The target population are citizens of 18 years and older.

PRESENTATION OF RESEARCH RESULTS FOR RETAIL FACILITIES

Table 2. Showing demographics-genders, age and education

Retail facilities	Male	Female	18 - 30	31 – 50	> 51	Primary school	Secondary school	Faculty
1	20%	80%	10%	30%	60%	35%	60%	5%
2	33%	68%	13%	40%	48%	13%	78%	10%
3	30%	70%	18%	45%	38%	20%	60%	20%
4	30%	70%	15%	60%	25%	15%	65%	20%
5	30%	70%	10%	35%	55%	50%	50%	0%
6	30%	70%	8%	35%	58%	28%	53%	20%
GROUP	28%	72%	12%	41%	47%	27%	61%	13%

After 200 surveyed customers of demographic data for six retail facilities following results were obtained for most customers, and they are: the women at the age of 51 with high school education (Table 2).

Table 3. Stores that have visited

Retail facilities	PerSu	Competitor 1	Competitor 2	Competitor 3	Competitor 4
Retail facility 1	58%	83%	63%	43%	33%
Retail facility 2	85%	74%	67%	44%	36%
Retail facility 3	73%	73%	55%	45%	45%
Retail facility 4	100%	75%			
Retail facility 5	90%	85%			
Retail facility 6	88%	95%	30%		
GROUP	82%	81%	54%	44%	38%

PerSu is the most visited, followed by Competitor 1, Competitor 2, Competitor 3 and Competitor 4 (Table 3).

Table 4. Top stores

Retail facilities	PerSu	Competitor 1	Competitor 2	Competitor 3	Competitor 4
Retail facility 1	15%	33%	33%	13%	10%
Retail facility 2	20%	18%	15%	35%	13%
Retail facility 3	18%	25%	23%	30%	8%
Retail facility 4	45%	55%			
Retail facility 5	30%	70%			
Retail facility 6	63%	33%			
GROUP	32%	39%	24%	26%	10%

Table 5. Why is PerSu the best store?

Retail facilities	A rich assortment products	Kind staff	Its close to me	Frequently sales	Low prices	Neat, clean stores
Retail facility 1	17%	17%	67%			
Retail facility 2	13%	13%	75%			
Retail facility 3			86%	14%		
Retail facility 4	11%	11%	56%		22%	
Retail facility 5	17%		67%		17%	
Retail facility 6		16%			16%	8%
GROUP	15%	14%	70%	14%	18%	8%

Best shops in the respondents opinion is Competitor 1, then PerSu, Competitor 3, Competitor 2 and Competitor 4 (Table 4). PerSu is the best store because of the proximity to retail facilities, low prices, wide assortment of products, kindly staff, regular common stock, and cleanliness (Table 5).

Customers don't prefer to buy in the following retail facilities: small stores, PerSu, Competitor 4, Competitor 1 and Competitor 2 (Table 6). Nobody said that they don't like to buy from Competitor 3

(Table 6). In PerSu customers don't like to buy because the PerSu stores are far, expensive, unkindly staff, poorly equipped, without action and rotten food boxes (Table 7).

Table 6. Stores where they don't like to buy

Retail facilities	PerSu	Competitor 1	Competitor 2	Competitor 3	Competitor 4	Less stores
Retail facility 1	0%	11%	5%	0%	21%	63%
Retail facility 2	54%	13%	8%	0%	8%	17%
Retail facility 3	19%	6%	6%	0%	31%	38%
Retail facility 4	20%	0%				80%
Retail facility 5	40%					60%
Retail facility 6	6%	6%				88%
GROUP	23%	7%	6%	0%	20%	58%

Table 7. Why they don't prefer to buy in PerSu?

Retail facilities	Groceries are not correct	There's not enough sales	Higher prices than competitors	Unkindly staff	Badly equipped	It is far
Retail facility 1						
Retail facility 2	8%	8%	31%	54%		
Retail facility 3			67%		33%	
Retail facility 4						100%
Retail facility 5			100%			
Retail facility 6			100%			
GROUP	8%	8%	75%	54%	33%	100%

Table 8. Ranking retail facilities compared to the price and quality

Retail facilities	PerSu	Competitor 1	Competitor 2	Competitor 3	Competitor 4
Retail facility 1	15%	25%	24%	18%	14%
Retail facility 2	15%	23%	18%	28%	16%
Retail facility 3	17%	21%	23%	24%	15%
Retail facility 4	50%	50%			
Retail facility 5	50%	50%			
Retail facility 6	41%	38%	21%		
GROUP	31%	35%	22%	23%	15%

Best price to quality ratio is offered by Competitor 1, PerSu, Competitor 3, Competitor 2 and Competitor 4 (Table 8).

Table 9. Important factors for purchase

Retail facilities	1	2	3	4	5	6	GROUP
Close to	4.48	4.25	3.98	1.83	2.40	4.28	3.54
Speed of work at checkout	4.53	4.38	4.43	2.13	2.18	4.43	3.68
Cleanliness store	4.80	4.73	4.90	2.50	2.45	4.83	4.04
Clearly displayed price	4.80	4.85	4.75	2.50	2.48	4.88	4.04
Quality products	4.80	4.83	4.98	2.50	2.48	4.93	4.09
Kind staff	4.85	4.75	4.95	2.50	2.50	4.95	4.08
Low prices of products	4.78	4.75	4.83	2.48	2.45	4.88	4.03
Pleasant atmosphere	4.80	4.73	4.80	2.45	2.33	4.43	3.92
Various ways of payment	3.58	3.75	3.48	1.68	1.78	4.73	3.17
A wide variety of products	4.65	3.73	4.95	2.48	2.45	4.90	3.86

The most important factors for the purchase of the respondents said that they had to the following factors in order: kind staff, quality product, cleanliness of the place, a wide range of products, good prices, and others (Table 9).

The graph shows that PerSu and Competitor 1: satisfy the customer needs, have trust and sales, suits to buy from them, offering good value between prices and quality, they are important for economy, and they have good commercials and they are the most advanced. The PerSu have a wide range of products and chain stores. In the first place is Competitor 1 for real prices, and second place share PerSu and

Competitor 3. PerSu is the second most goods of poor quality and don't like to buy it. The graph gives the conclusion that PerSu is a well placed brand. (Figure 1)

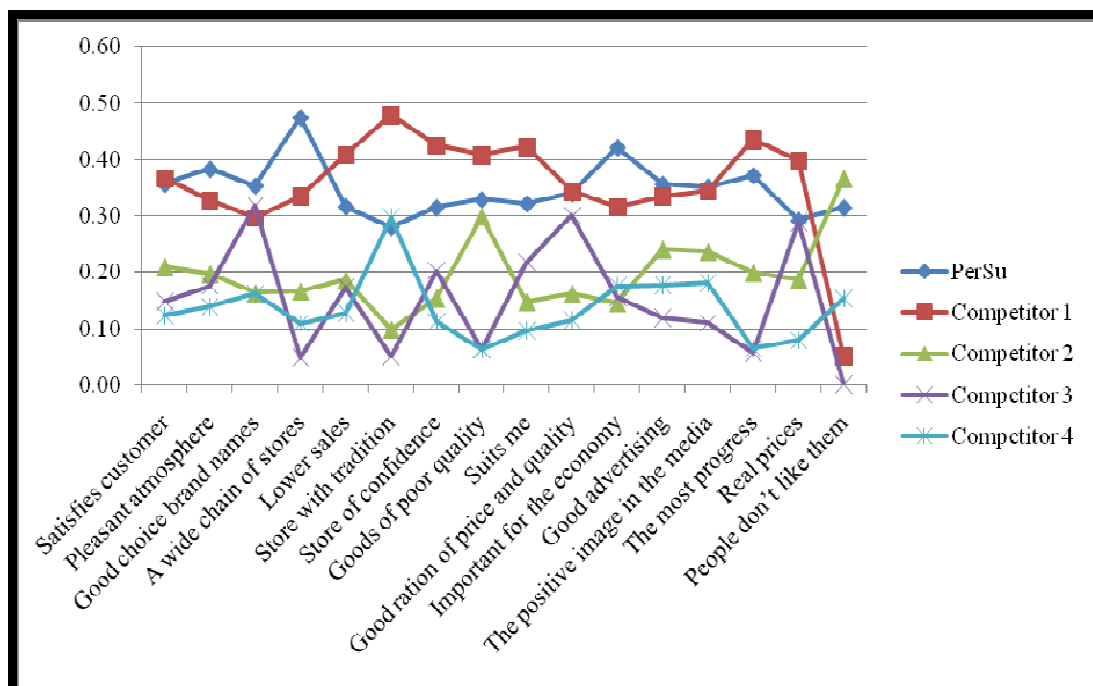


Figure 1. Analysis of each brand (PerSu and competitors)

DISCUSSION AND CONCLUSION

Organization that does not understand or doesn't meet the expectations and demands of customers is in danger of losing its meaning and can quickly become irrelevant in it. 7 Based tasks on the set, in the study were obtained for replies:

1. The most frequent customers are females over the age of 51 with high school education,
2. PerSu, more than all of its competitors, has the most visited retail facilities,
3. PerSu has the best stores and because of its proximity to a retail facilities,
4. Customers don't like to buy in PerSu because of the unkind staff and higher prices than elsewhere,
5. Best price to quality ratio is offered to customers by PerSu, after Competitor 1,
6. Important factors for the beneficiary to purchase listed as: kindly staff, quality product, cleanliness of the place, a wide range of products at competitive prices,
7. Analysis PerSu brand - PerSu brand is well-positioned in the minds of its customers.

The research of the responses received will help PerSu company in the future to improve the quality of their business and to focus on business needs and customer requirements.

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Session Editor's Preface

Operational management deals with important issues like how organizations design, deliver and improve services and products intended to customers/clients. In order for the company to maintain its competitiveness, all operational activities must be supported by strategies. The strategy is only the beginning, because all four activities of the operational management - strategy, design, delivery and improvement - must be seen as interrelated and interdependent elements.

Modern business involves restructuring the business functions. From the traditional understanding, as asserted linear thinking, companies must turn to proactive thinking, which involves understanding and creating changes. In modern business, in managing the company, very important functions have the operational business functions, due to their strategic market orientation. These are marketing, quality, research and development. The growth and development of a company, and therefore its success is determined by a close interdependence between the three aforementioned functions and their synergetic effect.

*Three papers from this session have a common denominator - the production cycle time. The first of these papers analyze the elements of a **“Stochastic model to determine the elements of production cycle time in metal processing industry and textile industry”**. The paper presents an original method for determining the elements of production cycle time using a modified work sampling method. The experimental investigations were done in 2011 and 2012 which involved a large number of Serbian enterprises with a higher organizational level and longer production times t_p in a production cycle t_{pc} . The investigation has shown that the production process is mastered. This has been proved by the methods of stochastic control using the control limits, because production time is found most frequently within the control limits with an error of $\pm 3SD$. The second paper - **“Reduction in the duration of the production cycle time in serial production in metal processing industry”** is essentially a continuation of the previous analysis about the size of a series as the most relevant factor which affects the production cycle time per unit. The paper titled **“Development of the software support for determining the structure of delay and efficiency of the use of capacity in function of shortening the production cycle”**, presents a unique computer support for identification and analysis of the structure of organizational delays. This is an integrated approach to the examination of rational use of the time, as well as the value aspect of utilization of production capacities and the identification and analysis of the utilization of production capacity for shortening of the production cycle.*

*Two papers from this session have a common denominator. This time it is logistics. The first paper titled **“Logistics – From management of materials to integrated logistics”**, based on the analysis of relevant and available domestic and international literature, is an attempt to approach the concept of logistics and look back at its historical development, key activities, and the role and importance of integrated logistics in modern business enterprises. The second paper titled **“Challenging managerial dilemmas about integrations of supply chain”**, is paying attention to logistics, a segment like noted in the paper “logisticians have devoted relatively little attention”. Supply chain management (SCM) presents integrated concept of managing across the traditional functional areas of purchasing operations and physical distribution. Upstream of the purchasing function into suppliers' operations, and materials managers have more or less ignored the management of the flow of finished goods and services downstream through distribution channels, SCM views the entire chain as a system to be managed. This is called the extent of vertical integration. But, in the modern business environment, vertical integrations alone are not enough.*

*The paper titled **“The importance of monitoring and control in realization maintenance of railway vehicles”** analyzes benefits of project management software in terms of monitoring and*

controlling throughout their duration. In the paper, results were used, upon completion simulation of IT support management maintenance railway vehicles using software tool MS Project.

In the paper titled **“Internet of things is using in brand protection with RFID method”** the authors present the achievements using RFID (Radio Frequency Identification) technology in relation to brand protection in today’s industry. The paper, at the beginning, gives the explanation of RFID technology as a modern industrial concept and later moves on to details about brand protection in manufacturing, especially considering production used in automotive/aerospace industry and healthcare equipment. The authors give the elements of cost-benefit analysis of the implementation of RFID technology.

Every year in the USA approximately 1% of all companies declare bankruptcy. As a result of an attempt to define the factors that lead to business bankruptcy, there have been a large number of scientific papers dealing with this problem over the last few decades. A number of techniques and models for business failure prediction have also been developed in order to implement preventive measures to avoid the negative consequences of failure at the level of businesses and the economy as a whole. In this context, the Z-score model of analysis is the most popular model in this field in the world. The paper titled **“Z-score model of analysis”** deals with this topic.

The next paper titled **“Teamwork in Libian non-oil companies”** investigates and explores the conditions of the Libyan business environment in relation to foreign and joint companies, particularly team work in non-oil sector in Libya. Teamwork is primarily humanitarian work aimed to meet a group of people in order to achieve certain goals and who are united by a common link. The first matter of collective action in any of the areas is the opportunity to employ different energies, and melted in one pot, and out of the combined mixture is useful for the benefit of everyone.

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CHALLENGING MANAGERIAL DILEMMAS ABOUT INTEGRATIONS OF SUPPLY CHAIN

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ABSTRACT

Supply chain management (SCM) presents integrated concept of managing across the traditional functional areas of purchasing operations and physical distribution. While logisticians have devoted relatively little attention to managing the chain of supply upstream of the purchasing function into suppliers' operations, and materials managers have more or less ignored the management of the flow of finished goods and services downstream through distribution channels, SCM views the entire chain as a system to be managed. SCM can be defined as managing the entire chain of raw material supply, manufacture, assembly and distribution to the end customer. One of the main decisions of interest in SCM is how much of the supply chain (SC) should be owned by each business. This is called the extent of vertical integration. But in the modern business environment vertical integrations alone are not enough. The alternative to vertical integration is some other form of relationship, not necessarily ownership. This contribution discusses two research questions: 1) Which characteristics define the content of SCM, and 2) Which relationships we can use for SCM?

Keywords: logistics, management, materials management, relationships in supply chain, supply chain management.

INTRODUCTION

Producers in modern environment can be competitive on the market, when they offer suitable price, quality, range, and uniqueness for their outputs – i.e. products or services (Pyka and Scharnhorst, 2009; Mullins, 2010). For this reason they are confronted with the constant dilemma, how to reform their work and behavior to reach the desired target results. Enterprises can assure efficient and successful business on the permanent dynamic adaptation of intentions and aims, use of suitable business concept and innovative work and behavior (Potocan and Kuralt, 2007, Pyka and Scharnhorst, 2009; Potocan and Mulje, 2012).

Entire and innovative forming and performing purchasing operations and physical distribution has key role in modern business (Rushton et al., 2010; Potocan and Mulej, 2012). They define the possible level of suitability when assuring the needs and demands of end-users. Traditional approaches for understanding and consideration of supply chain (SC) enable improvement of work, but not "optimization" of the whole production process of products and/or services in which more organizations collaborate.

To deal with the whole supply chain process many different integrated concepts of managing across the traditional functional areas of purchasing operations and physical distribution were developed. In management literature authors stress four main concepts for managing of SC – i.e. materials management, merchandising, logistic, and Supply chain management.

Supply Chain Management (SCM) presents most developed and strategically significant concept, which can be defined as “managing the entire chain of raw material supply, manufacture, assembly and distribution to the end customer” (Blanchard, 2006; Slack et al., 2010; Christopher, 2011). With use of SCM organization meets some open dilemmas such as: 1) what sort of connections exist among the part of SC, and 2) how can we optimize the parts of the entirety to reach “optimal results” of common work on the base of different integrations.

Organizations in the modern business environment use the entity of vertical and horizontal integrations - relationships if they wish to design and implement more holistic SC and/or SCM. In this framework of the SC and/or SCM participants can be innovated, especially with non-technological innovations, orientated into suitable organizational forming and organized integrations (Bolstorff and Rosenbaum, 2007; Mentzer et al., 2008; Pyka and Scharnhorst, 2009; Emmett, 2012).

Therefore we would like to shift attention from a general-based discussion about SC and SCM to managerial dilemma about develop of suitable relationships in SC and/or SCM. We offer some new suggestions about: development of SCM as integrated concept for management of SC, basic characteristics of SC and SCM for development of different integrations, and basic characteristics of different types of relationships in SCM.

THE SUPPLY CHAIN AND SUPPLY CHAIN MANAGEMENT

They are many different ways, in which the linkage involved in the flow of materials and services can be integrated or grouped together (Hugos, 2006; Slack et al., 2010; Steinfield et al., 2011). In management literature authors emphasize importance of four main integrated concepts – i.e. material management, merchandising and logistics and supply chain management (Chopra and Meindl, 2007; Heitzer and Rendal, 2010; Creazz et al., 2011).

A dominant logistics philosophy throughout the 1980s and into the early 1990s involved in the integration of logistic with other functions in organizations in an effort to achieve the enterprise’s overall success (Anklesaria, 2007; Crocker and Emmett, 2010; Murphy and Wood, 2010).

The early to mid-1990s witnessed a growing recognition that there could be value in coordination of the various business functions not only within single organizations but across organizations as well – what can be referred to as a SC management philosophy (Bolstorff and Rosenbaum, 2007; Mentzer et al., 2008; Emmett, 2012).

Since the early to mid-1990s there has been a growing body of literature focusing on SCs and SCM, and this literature has resulted in a number of definition for both concepts (Russell and Taylor, 2010; Emmett, 2012; Potocan and Mulej, 2012). It’s important that we have a common understanding of what is meant by SC and SCM.

In general, “the SC concept originated in the logistic literature, and logistics has continued to have a significant impact on the SCM concept” (Anklesaria, 2007; Mentzer et al., 2008; Heitzer and Rendel, 2010).

For our work we can define SC as “encompasses all activities associated with the flow and transformation of goods from the raw material stage (extraction), through to the end user, as well as the associated information flow. In reality, several types of SCs exist and it’s important to note several key points. First, SCs are not a new concept in that organizations traditionally have been dependent upon suppliers and organizations traditionally have served customers. And second, some SCs can be much more complex in terms of the number of participant’ parties than others, and coordinating complex SCs are likely to be more difficult than doing so for less complex SCs. Moreover, complex SCs may include “specialist” companies, to provide coordination among various SC parties.

When we talk about SC, the modern managerial approach suggests that companies must recognize the interdependencies of major functional areas within, across, and between firms. In turn, the objectives of individual supply chain participants should be compatible with the objectives of other participants. To what degree objectives are realistically defined and attained, depends on the level of holism of thinking, decision making and action.

On the other side, SCM can be defined as “the systemic, strategic coordination of the traditional business functions and the tactics of these business functions within a particular company and across businesses in the supply chain, in order to improve the long-term performance of companies and the entire supply chain” (Bolstorff and Rosenbaum, 2007; Rushton et al., 2010; Emmett, 2012).

Successful SCM requires companies to accept an enterprise-to-enterprise point of view, which can cause organizations to accept practice and adopt behaviours that haven't traditionally been associated with buyers-seller interactions. Moreover, successful SCM requires companies to apply the systems approach across all organizations in the SC. When applied to SCs, the systems approach suggests that companies must recognize the interdependence of major functional areas within, across, and between firms. In turn, the goals and objectives of individual SC participants should be compatible with the goals and objectives of other participants in the SC. For example, a company that is committed to a high level of customer service might be out of place in a SC comprised of companies whose primary value proposition involves containment.

How SCM changes relations between including participants (Potocan and Kuralt, 2007; Emmett, 2012; Potocan and Mulej, 2012)? Conventional wisdom suggests that participant-versus-participant competition will be superseded in the twenty-first century by supply-versus-supply-chain competition. While this may occur in a few situations, such competition may not be practical in many instances because of common or overlapping suppliers or the lack of a central control point, among other reasons. Rather, a more realistic perspective is that individual members of a SC will compete based on the relevant capabilities of their supply network, with a particular emphasis on immediately adjacent suppliers or customers.

MANAGERIAL CONSIDERATION OF SUPPLY CHAIN MANAGEMENT

In management literature authors defined different approaches for consideration of SCM, which base on consideration of different key attributes of SCM. A number of key attributes are associated with SCM including next characteristics (about details of each characteristics see e.g., Hugos, 2006; Mentzer et al., 2008; Crocker and Emmett, 2010; Christopher, 2011):

Customer power - SCs recognize the power of consumers and view customers as assets. In recent years, a clear shift of power has moved away from the manufacturer and toward customer power. The increasing power of customers has important implications for the design and management of SCs. Because customers' needs and wants change relatively quickly, SCs should be fast and agile. Fast encompasses a speed/time component, while agile focuses on an organization's ability to respond to changes in demand with respect to volume and variety.

Long-term orientation - A long-term orientation tends to be predicated on relational exchanges while a short-term orientation tends to be predicated on transactional exchanges. At a minimum, relational exchange may result in individual SC participants having to rethink (and rework) their approaches to other SC participants. We must mention here also partnerships, as long-term relationship between SC participants. Some partnerships can be informal, while others partnerships involve ownerships. Alternatively, partnerships can be formalized by some type of contractual agreement among the various participants.

Leveraging technology - It is argued that technology has been at the centre of changes taking place that affect the SC, and that two key factors – computing power and the Internet – have sparked much of this change. With respect to the former, SCs can be complex entities consisting of multiple

organizations, processes, and requirements. As such, attempts at mathematical modelling of SCs in an effort to maximize shareholders' wealth or minimize costs. However, the introduction and continued development of the computer chip now allows for fast, low-cost mathematical solutions to complex SC issues. With respect to SCs, the Internet can facilitate efficiency and effectiveness service and reduce their logistics costs.

Enhanced communications across organizations - Because SCs depend on huge quantities of real-time information, it is essential that this information can be seamlessly transmitted across organizations. It is also important that all member of SC understand, that the enhanced communications across organizations is dependent upon both technological capabilities as well as a willingness to share data and make it influential, i.e. information.

Inventory control - Another attribute of SCM involves various activities that can be lumped under the inventory-control aspect. A second aspect of inventory control in SCM involves a reduction in the amount of inventory in the SC, or what some authors have termed a JAZ (just about zero) approach.

Interactivity, inter-functional, and inter-organizational coordination - Until the past 30 years, managers tended to be concerned with optimizing the performance of their particular activities, particular functions, or particular organizations. By contrast, SCM requires managers to subordinate their particular activities, functions, or organizations in order to optimize the performance of the SC. The interconnected nature of SCs suggests that optimal performance will be elusive without coordination of activities, functions, and processes. Additionally, there's little question that inter-organizational coordination is more challenging and difficult than either inter-functional or interactivity coordination. Some possible methods for improving of inter-organizational co-ordinations are: supply-chain councils, placing personnel, coo petition, etc.

Although each of above mentioned characteristics is discussed in literature as discrete entities, interdependencies exist among them. For example, advances in technology could facilitate enhanced communications across organizations, while a long-rang orientation could facilitate inter-organizational coordination.

SUPPLY CHAIN MANAGEMENT AND INTEGRATION

We target our consideration of the integration between the links of the SCM on flows between the operations involved (Blanchard, 2006; Potocan and Kuralt, 2007; Rushton et al., 2010; Slack et al., 2010; Christopher, 2011; Potocan and Mulej, 2012).

These flows may be of transformed resources such as materials or of transforming resources such as people or equipment. The term used to include all different types of flow is exchange. The exact nature of the relationship between the different linkages within the SC can be viewed on a continuum which goes from highly integrated at one extreme through to temporary and short-term trading commitments at the other. We will briefly present basic types of relations between participants of SCM.

Integrated hierarchy - What is known as an integrated hierarchy is a fully vertically integrated firm which houses all activities in the SC from raw material source, to dispatch, to end customers, as well as all their support activities on one site. In an integrated hierarchy there is no inter-company exchange of orders, information and materials because the entire SC is "under one roof". Examples of totally vertical integrated chain are rare.

Semi-hierarchy - In a semi-hierarchy organization the firms in the SC are owned by the same holding company or are part of the same group, but they operate as separate business units. Both integrated hierarchy and semi-hierarchy are examples of vertical integration as in both cases ownership is by the same firm. In semi-hierarchy, however, there is an exchange process between

different organizations where materials, services and money changes hands between the separate business units.

Co-contracting - Co-contracting is a term used to describe alliance between organizations which have long-term relationship (e.g. co-contracting as partnership or lean supply) but which, for various reasons, do not merge but do transfer some equipment (ownership), technology, people and information as well as goods and services. These alliances typically do not include the whole supply chain. A type of co-contracting receiving significant attention is partnership. In partnership, the supplier is a stakeholder in the customer's organization. Partnership is a long-term process and should not be viewed as an instant cost-saving exercise but rather as an investment where future returns are possible but only in the medium to long term. SCM literature also proposed a model of customer-supplier relationship which moves beyond simple partnership which it calls lean supply.

Coordinated contracting - Coordinated contracting involves a prime contractor, who employs a set of sub-contractors, with whom a long-standing relationship exists over several contracts. They are used on a contract basis of each specific job but in between jobs there is no continuing relationship. In coordinated contracting the contractors usually provide the specification and instructions for the production of goods and services to be exchanged. It may provide materials and will usually take responsibility for planning and control of all the sub-contractors. The sub-contractors will often provide the necessary tools and equipment required for their trade or profession.

Coordinated revenue links - Coordinated revenue links are used primarily for licensing and franchising and are a form of relationship which transfers ownership to other, usually smaller, firms while still retaining a guaranteed income for the licensor or franchiser. This type of relationship is common in many services, especially those with very high customer contact. These operations need many small local sites which can be located for the convenience of their customers. Rather than manage all the sites themselves, the original owners of the service concept will license out each individual operation to separate owners.

Medium-/long-term trading commitment - It is not uncommon for businesses to trade with each other for 20 years or more but never exchange formal long-term contracts that legally tie them together. However, where this medium- to long-term trading takes place, some commitment beyond each delivery of a different type can be made. One example is what is called a "blanket order". This is an agreement for the purchasing organization to buy a total volume over a period of time at a price determined by the total, rather than the individual daily, weekly or monthly purchased quantity.

Short-term trading commitment - In situations where there is no interdependence beyond one order, all that is transferred between the parties to the transactions are the order one way and goods and services the other. The agreement is reached after a market search, sometimes competitive tendering and often price negotiation. Once the good or service is delivered and payment is made, there may be no further trading between the parties. Short-term relationship may be used when companies are being considered as more regular suppliers. Many purchases made by all operations are one-off or very irregular. Some public sector purchasing of goods and services is still based on short-term contracts. This is mainly because of the need to prove that public money is being spent as judiciously as possible. However, this short-term, price-oriented type of relationship can have a downside in terms of on-going support and reliability.

With presentation of basic types of relations we return our discussion on starting questions about creation of appropriate SCM. Managers are permanently faced with several dilemmas when development and implement SCM. More important are especially three dilemmas. First, they must define and select important characteristics of SCM which then can use as selection criterions for development of suitable SCM. Second, they must select in which way they wish to connect the parts and participants of SCM – i.e. which relations they must to use. And finally, because

represented typed of relations for SCM can be formed in different ways, managers must decide about appropriate way for formation of selected relationship.

CONCLUSION

A supply chain is a strand, or chain, of operations within an organization's supply network which passes through the organization. There are many different terms (and the concepts describes by them – e.g. purchasing and supply management, physical distribution management, logistics, merchandising, material management, and SCM), some of which overlap, which are used to describes various parts of the SC. They represent an increasing degree of integration between the linkages of SC.

SCM is a broader and strategically more significant concept which includes the entire SC from the supply of raw materials, through manufacture, assembly and distribution to the end customer. It includes the strategic and long-term consideration of SCM issues as well as the shorter term control of flow throughout the SC.

The exact nature of the relationship between the different linkages within the SC can be viewed on a continuum which goes from highly integrated at one extreme through to temporary and short-term trading commitments at the other.

The organization tries to define the totality of working tasks, its mutual relationships, connections and synergies, as well as mechanisms for the suitable connection and coordination of organizational factors.

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INTERNET OF THINGS IS USING IN BRAND PROTECTION WITH RFID METHOD

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ABSTRACT

In this paper we will present the newest achievements using RFID (Radio Frequency Identification) technology in relation to brand protection in today's industry. At the beginning, our presentation of the paper will go to the explanation of RFID technology as a modern industrial concept and later moved on the details about brand protection in manufacturing. We will consider production used in automotive/avio industry and healthcare equipment. For example, carmakers are taking similar steps to improve the safety of their products. Key safety components such as brakes, air backs and seats or the rest parts of the car, can be tagged so that the car manufacturer can trace faulty goods back to the supplier and then demand repairs or replacements. In future it will be possible to link RFID tags containing a unique identification number, such as the Electronic Product Code (EPC), to very important information, e.g. date of manufacture, materials used for that and origin of components. In this paper, as a result of our evaluation we will show that applying RFID technology, also, saves more than 50% of data entry time process. Other benefits of this technology are that gray market activity will be decreased on minimum scale so profit of companies will go up.

Keywords: brand protection, RFID, modern manufacturing, tags.

INTRODUCTION

RFID is a technology for automating the identification and tracking of commodities and collecting information on their whereabouts, their contents and their physical state. An RFID system has several components, including chips, tags, readers and antennas. One of the reasons that RFID is so efficient is that it's designed so that individual items can have an individual identifier (www.qualitydigest.com).

This identifier is a small, programmable, silicon RFID memory chip capable of recording and storing information. The chip is attached to a small, flat, flexible antenna, and this assembly makes up a tag that's attached to an item. To read a tag, a radio frequency (RF) reader, also equipped with an antenna, sends the tag an encoded radio signal. The tag receives some of the RF energy from the reader signal and transmits it back as a return signal that delivers information from the tag's memory.

RFID tags are designed and manufactured in a variety of shapes and sizes depending upon the application's requirements. RFID has a large enough read range to use extremely small tags for such applications as near-field item-level tracking, where tags might reside under bottles caps or behind product labels. But it works just as well with applications such as pallet or case level tracking of products on conveyors. Items that pass through portals, where they can be read from a distance, typically require larger tags.

RFID readers generally comprise a computer and a radio. The computer manages communication with the network, allowing tag data to be sent to enterprise software applications such as enterprise resource planning (ERP) systems. The radio controls communication with the tag, typically using a language dictated by a published protocol such as the electronic product code (EPC) Class 1 specification. This particular protocol, one of several in use, is the most common language used by tags in supply chain applications. The reader can receive multiple signals and identify many items at once. RFID can collect large volumes of data each second from many RFID tagged items as they move across assembly lines, through dock doors and even off of store shelves. Integrated with an enterprise-level network, RFID systems can serve as the first step in identifying and tracking information to be analyzed and used to prompt decisions and actions.

More advanced RFID readers also accommodate remote management and coordination of readers via the company network when many units are used in the same environment. These mechanisms reduce interference and allow coordinated operations. Finally, some readers have state of the art receiver designs that provide for the best possible read range.

RFID antennas can vary in their technologies but are typically attached to the reader at any one of four to eight ports for an equal number of send and/or receive points. The antennas, placed in their own housing, are usually mounted remotely from the reader to obtain the best possible vector to the tags.

Fully realizing the benefits of RFID also requires host computer platforms to manage the reader to tag communications for encoding and decoding algorithms, reader-to-reader communications for managing blocks of readers in close proximity without degrading read rates, reader to enterprise communications for implementing a control and management link between readers and the enterprise, and a platform integration of the reader with existing management structures such as network security and other business applications.

In recent years automatic identification procedures (Auto ID) have become very popular in many service industries, purchasing and distribution logistics, industry, manufacturing companies and material flow systems. Automatic identification procedures exist to provide information about people, animals, goods and products (<http://rfid-handbook.de>).

An RFID system is always made up of two components, as it is shown on Figure 1:

- the transponder, which is located on the object to be identified,
- the detector or reader , which, depending upon design and the technology used, may be a read or write/read device.

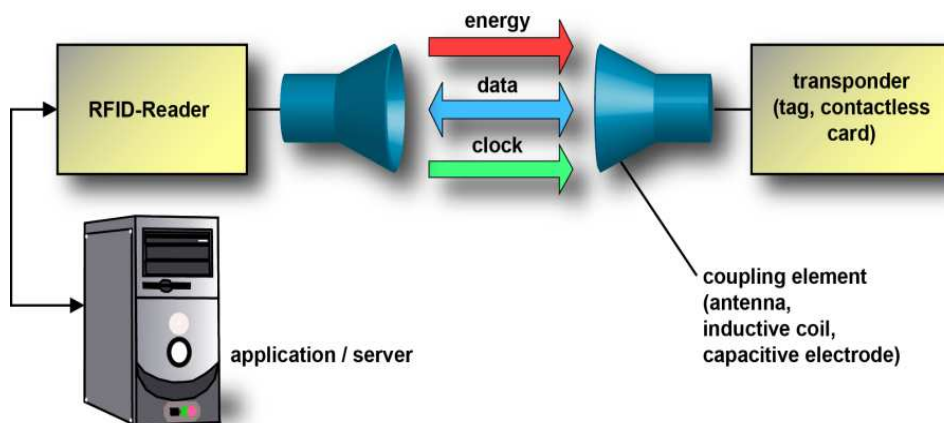


Figure 1: The reader and the transponder are the main components of every RFID system

Source: <http://rfid-handbook.de/about-rfid.html>

RELATION BETWEEN RFID AND BRAND PROTECTION

Globally available security solutions reduce the risk of counterfeiting, diversion and other forms of intellectual property infringement to protect the immediate and long-term value of the brand. Unlike traditional track-and-trace technologies, RFID provides a unique identifier for each tagged item and requires no direct line of sight. These characteristics mean that RFID has the potential to:

- Automate and improve tracking in work-in-progress, warehousing and distribution applications
- Empower just-in-time inventory replenishment, reducing inventory and out of stocks
- Monitor product quality and supply pedigree data
- Prevent counterfeiting
- Enhance the customer experience

As logistics benefits it can be mentioned:

- Accuracy of deliveries
- Authenticity checking
- Reducing inspection costs
- Improved loss prevention
- Speed of processing

Global trade and e-commerce create a wealth of business opportunities, but they also create increased risk of product liabilities with channel diversion, counterfeit drugs and patient safety. Counterfeits result in lost sales opportunities and potential risk for products which can effect human health and safety. Where casualties are involved, it is often incumbent on the true manufacturer to prove the offending product was counterfeit.

Product protection is a never ending story. The threats of counterfeiting and diversion remain constant, but techniques are constantly changing. Protective measures that were once innovative and effective, today, eventually become not secured (Zebra Technologies, 2003).

Manufacturers must use increasingly sophisticated product protection methods to preserve their brands and distribution channels. Fortunately, new resources are available. Now companies can take advantage of their existing labeling systems to further protect their products.

The damage from counterfeiting would be even greater if not for the many security measures that manufacturers undertake. The leading defense against counterfeiting is product authentication. Manufacturers place special marking on products or packaging that distributors, retailers and consumers view to verify authenticity. Secure media for on demand printing is a powerful complement to authentication programs that is simple to enact but can raise protection significantly.

Smart labels embed a radio frequency identification (RFID) chip and antenna within the label substrate material. Data is written to and read from the chip by radio waves using non contact RFID technology. A unique identification number is preprogrammed into the tag when it is manufactured. Additional data, such as lot code, product serial number, expiration date, or customer ID, may be encoded on the fly as the label is being printed. Like magnetic threads, both the appearance and the functionality of RFID chips and antennae are extremely difficult to counterfeit.

Because RFID is not an optical technology, tags can be read inside packaging or if the label is covered in dirt, oil or other contaminants. Read range depends on many factors, but is typically a meter or less. RFID is similar to electronic article surveillance (EAS) technology used to prevent shoplifting, the notable difference being RFID provides identification instead of just detection.

Marking items at the point of production allows for the most tracking and authentication benefits. Most products already receive some type of identification label, so using secure media makes it easy to add another level of protection. Making the move to secure supplies provides additional protection without adding cost or changing processes. The diverse range of media offerings that support authentication technologies makes it possible to label goods at the item, packaging and shipping container levels.

Marking materials at the source enables product verification and auditing anywhere within the facility and within the supply chain. If products or subassemblies are labeled with intelligent media (such as magnetic threads, bar codes or RFID tags that carry data) early in the production process, the label can be read to capture production information, automatically track work in process, or interface with industrial controls for automated routing through assembly and testing processes. Variable information like test data, lot codes, operator ID, production and expiration dates can be encoded on the label to produce an audit trail without manual data entry.

Counterfeit represents fake product in a fake package, fake product in a genuine package, the real product repackaged in a real or fake package, the real product repackaged to extend a shelf life, the real product from a different country repackaged (Jim Mentone, 2012).

Counterfeit in healthcare industry consists of black actions taken in Pharmaceuticals, Medical Devices and Consumer Products. Counterfeiting is a large and growing business: for example, The World Health Organization (WHO) states that worldwide sales of counterfeit medicines could top \$75 billion, a 90% increase in five years, 30% of certain drugs consumed in developing countries are counterfeit and in Africa estimates are that 50% of the anti malarias and HIV drugs are counterfeit.

Counterfeiting is a problem for consumer goods and the healthcare industry in general. In the last 5 years it is identified counterfeit products in every major category, counterfeit products in every region of the world and counterfeits in every channel of sale. It can be mentioned that many newspapers are devoted to this problem as shown on Figure 2.

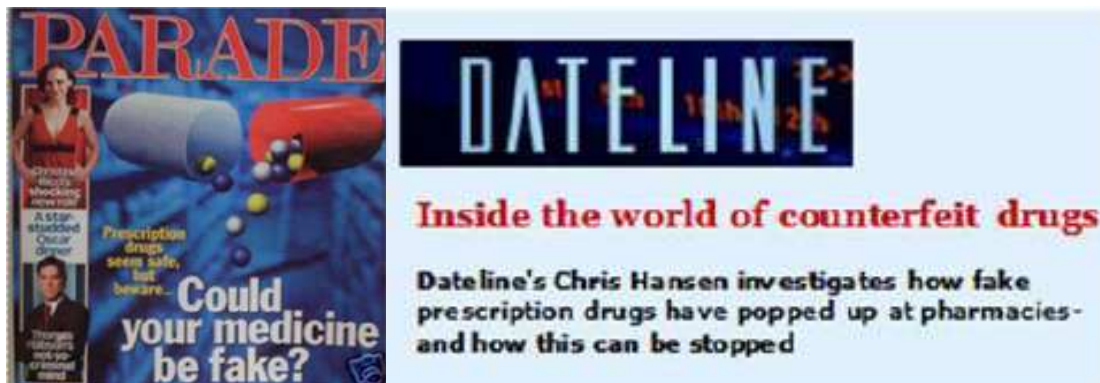


Figure 2: Some journal articles where it is stated counterfeiting in drugs industry

German electrical and mechanical engineering firm, such as Bosch Rexroth is using RFID tags to help its supply chain customers identify fake or stolen mechanical components. Bosch Rexroth builds machines and pneumatic systems for the construction and automotive industry. The firm is conducting a pilot during Q3 in Germany to test if RFID can prevent essential components from counterfeiting, loss and theft (Intertechpira, 2009).

The RFID tags will be tested on mechanical valves that are incorporated into industrial machinery. Rexroth's valves are used in driving, controlling and moving machinery used in industrial and factory automation as well as mobile applications. These are expensive and are sought after on the black and open market.

The tags will contain information on the properties of a valve. RFID will be integrated at item level so each valve will be attached to a tag. Antennas are attached to containers used to transport valves from the production line to Bosch Rexroth's distribution unit. Data from the tags such as date of production, location and time will be stored on the chips embedded in the tag. All the information is evaluated by software via a serial data transfer system at Bosch Rexroth, shown on Figure 3.



Figure 3: RFID provides valve protection

Source: www.boschrexroth.com

The technology should prevent the wrong valves from being installed into machines and will also flag up any counterfeit equipment that has been sent to us. The best antidote for product piracy is innovation at the highest level that enables us to continue to set ourselves apart from the competition and rule out product copies.

Counterfeit valves can cause process mishaps, downtime and serious accidents. The Nuclear Regulatory Commission issued an alert to nuclear power plant operators in 2008 to warn against counterfeiting as three counterfeit valves were discovered in machines at two nuclear facilities in the US. One was installed as a cooling water pump discharge stop check valve while the other two were found in circuit breakers.

The aviation industry represents an ideal opportunity for RFID technology to be introduced on a larger scale. RFID tags and smart labels pose a feasible and justified technology that could significantly improve and aid the checking and quality control of technical plane components. This would ensure worn out parts or electronics are identified before an aircraft is cleared for take off.

RFID can also prevent the use of counterfeit parts. Leading firms such as Turkish Airways, AirFrance and AirSpain, (have all seen their planes break down while in flight because of part failure) must be re-thinking or disposing of existing supply chain management systems and introducing more accurate, real-time analysis. Companies developing RFID could see a dramatic increase in interest from suppliers in the aviation industry because there is a clear opportunity to apply RFID to check every component used on an aircraft. This is likely to be expensive to implement initially, but is surely a price worth paying as - under pressure - airlines need to protect what remains of their brand integrity.

The concept of RFID throughout the commercial aviation industry has been considered frequently over the last 6-8 years. Aircraft makers, part suppliers and operators are aware of the advantages, however, full-scale deployments are still few and far between.

The Airbus A380 aircraft, shown on Figure 4, has benefited from RFID and a part tracking system is in full swing as all of the docks at its central warehouse are enabled to track movement of parts onto the A380. Parts and components range in size and include peices of wings or fuselage assemblies. ODIN as the global leader in RFID software, has now installed more than 100 RFID

tags and readers on the assembly line of the A380. The second phase of the deployment was driven by the end users who are reaping the advantages of RFID as it simplifies their business process and helps them get ahead of their work schedule. Now, the business lines are asking for the technology, rather than technology advocates lobbying business decision makers.



Figure 4: RFID and AIRBUS A 380
Source: Airbus

Suppliers need to become more familiar with the technology so it could take a while before they are fully capable to use RFID across their entire product range. According to sources, Airbus and Boeing are increasingly writing requirements for RFID support into their purchasing specifications, however, which should accelerate and broaden adoption.

CONCLUSION

Global trade and e-commerce create a wealth of business opportunities, but they also create increased risk of product liabilities with channel diversion, counterfeit drugs and patient safety. Counterfeits result in lost sales opportunities and potential risk for products which can effect human health and safety. Where casualties are involved, it is often incumbent on the true manufacturer to prove the offending product was counterfeit.

Secure media is an extremely convenient and cost effective way to protect brands, channels and margins. The variety of security media technologies, and the materials they can be applied to, gives manufacturers tremendous flexibility in designing authentication programs. Secure media fulfills other key requirements by being cost-effective enough to apply to all products or shipments and convenient enough for use at all levels of the supply chain. For organizations that already have any type of labeling system in place, the impact of secure media has on protection will far exceed the incremental expense.

At the end, there is need to create active collaboration group (Protect consumers & patients and Counterfeiting & diversion is serious and growing) . Preserve Branding & Enhance Consumer Confidence (Manufacture & Retailer); Support Business Growth (Alignment with business strategies).

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TEAMWORK IN LIBIAN NON-OIL COMPANIES

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ABSTRACT

At the beginning of the 21st century Libya declared its intention to liberalise its economy and to integrate into the global economy in order to achieve comprehensive development. This study investigates and explores the conditions of the Libyan business environment in relation to foreign and joint companies, particularly team work in non-oil sector in Libya. Teamwork is primarily humanitarian work to meet a group of people in order to achieve certain goals and united by a common link. The first matter of collective action in any of the areas is the opportunity to employ different energies, and melted in one pot, and out of the combined mixture is useful for the benefit of everyone. Through this study, conducted interviews with a teamwork in some non-oil companies, which specialized in various fields such as industry, services and agriculture, which operates in Libya, and find out what are the problems facing the teamwork and how to overcome of these problems. To work effectively together, team members must possess specific knowledge, skills, and attitude, such as the skill in monitoring each other's performance, knowledge of their own and teammate's task responsibilities, and a positive disposition toward working in a team. Such KSAs comprise teamwork.

Keywords: teamwork, non-oil companies, chi-square, reliability analysis.

INTRODUCTION

There is a general consensus in the research literature that a team consists of two or more individuals, who have specific roles, perform interdependent tasks, are adaptable, and share a common goal (Salas et al. 1992). To work effectively together, team members must possess specific knowledge, skills, and attitudes (KSAs), such as the skill in monitoring each other's performance, knowledge of their own and teammate's task responsibilities, and a positive disposition toward working in a team. Such KSAs comprise teamwork (Arthur et al., 2003).

Teamwork involves the formation of teams at different levels of the company, so that they can be represented by the following types of teams: 1 initial project team, 2 strategic team for the level of the whole company, 3 regional strategic teams, 4 Strategic factory teams, and 5 functional teams (cross functional, multidisciplinary-functional or functional-unidisciplinary). If you look at the team as a quality utility particularly important are strategic factory team and cross functional teams. The default strategy team gathers factory manager and executives function within the factory, and is responsible for defining policies and objectives of the factory, the identification of key projects at the factory, the accountability of project teams across function, communication with other factory teams and the like. Cross functional teams are also very important, because most of the problems whose solution requires a lot of time and high costs, the result of bad functional connection. Most of the tools of quality also requires the formation of teams functional.

The Libya, as is the case with some developing countries, suffers from numerous financial and economic problems such as a dependency on the oil and gas sector as the main source of the national income. In addition, the limited capacity of its local market given its relatively small population of not more than 5.7 million in 2006 (Central Bank of Libya, 2008). However, the huge

potential of the hydrocarbon sector, the high levels of financial flows generated from these resources that can provide a reliable source of capital, and the need to develop the country's infrastructure should make Libya a target for foreign direct investment (FDI). Such investment is promising for the simple reason that the use of the associated modern technology provides the ideal investment for the local natural resources. But as yet most of the FDI in Libya has been directed towards the oil and gas sector (El-Fergani, 2002).

THE ADVANTAGES AND DISADVANTAGES OF TEAMWORK

Advantages of teamwork

Although participation in the Community consume a lot of time raises sometimes fret, the feasibility of and behind them remain valuable. Overall The lead teamwork better than individuals alone. When working effectively groups, the members see it as a stimulating and rewarding experience. Wherein they learn so much and develop a deeper understanding of the issues under discussion and also reinforce a sense of creativity and become more preoccupied with public life. Among the most important benefits that accrue to all through work in a team Level 2

High Performance

The teamwork can take decisions and address the problems, they are that determine how companies compete and how bodies work and how doctors deal with their patients. The reason behind all this is simple: The which groups share the workload among them can offer better performance and accomplish more than individuals accomplish if they worked alone. But despite these proceedings impressive, there are exceptions: If the task is simple and monotonous it is best to be done by one person, even if one person knows the answer to a question, or if the task requires an expert specialist, the one person may be more willing to accomplish that task, but if the task is complex and the answers are not clear, the effective range will undoubtedly better performance.

More of Satisfaction among Members

Even the teamwork can not completed more than accomplished by groups of individuals if they worked alone, many people will want to join the working groups, so as to reap the social benefits for them may be as important as the job is done. People affiliated with and work in groups because groups provide them with the opportunity to win friends and social mixing and get peer support and a sense of belonging to a successful team. So it is not surprising that the more I give members the opportunity to communicate with each other Mitsui increased satisfaction with the experience of collective work as a whole.

More than Learning

Additional benefits of the collective action the amount of learning in groups winning actors. The can enhance learning groups through the sharing of information, and to stimulate critical thinking and challenge assumptions and raise the standards of performance. Working in groups gives us the opportunity to learn from and with other members. Members are new learn from old amateur and professional, are not limited to only the opportunity to learn on the subject under discussion, and even learns from behind members how to work together as a team.

More creativity

Teamwork do not lead only pursuant to the best of the action only individuals, but also can generate innovative ideas and creative solutions creative. When the mix of our ideas with others in the group ideas we raise so creative potential of the group.

Disadvantages of teamwork

The more time and energy and resources

Teamwork assigned time and energy and resources. In one study, workers reported that they spend between five to six hours a week in meetings, while staying these meetings as ineffective. And wasting all this time on meetings of others effective means throwing precious resources and efforts so in the trash.

Conflicts

Few people enjoy conflict or they're looking for, but when he meets members of the group to achieve a common goal, there is a great potential that is the difference. Unfortunately, we look at who disagree with us on they are aggressive, and as a result, some are willing to do what he could to avoid conflict and confrontation, including the avoidance of working in groups. This fear of conflict may lead some individuals to avoid meetings that come up for discussion of controversial issues.

The problem of people s

Much as we want others to share with us our concerns and our views of the work, the possibility remains available via so as to create problems. And like everyone else may we met in our daily lives, the members of the teamwork can be be oppositions or lazy or even cruel. So we often keep in mind when we decide to work in a group if we want to work with some of the members of that group or not.

TEAMWORK IN LIBIAN NON-OIL COMPANIES

Sample, companies no, structure enterprises

The table below shows the number of foreign companies that operate in Libya in the non-oil companies namely manufacturing, service and agricultural and highlights the data in relation to economic sectors in which the foreign and joint companies operate. From the data only three out of the 94 companies operate in the agricultural sector, while more than half are in the manufacturing sector (53) and 38 operate in the service sector.

Table 1: Libian companies and sectors

Economic Sector	Number of Companies
Manufacturing	53
Services	38
Agriculture	3
Total	94

The majority of those companies operate in the densely populated municipalities or in areas not far from these municipalities. Thus around 52.2% of the research population was concentrated in Tripoli, 20.2% in Al-Jfara and 11.7% in Benghazi, which is located in the east of the country and is the second municipality (*sha'bia*) after Tripoli in terms of economic importance.

Perceptions

The questionnaires were designed to gather information in relation to the availability of human resources. Question deals with the level of satisfaction of investors with the quality of the local workforce with respect to language skills, technical knowledge and team work.

Although with varying levels of satisfaction, with the quality of the local human workforce. However, it is also true that many of the respondents faced difficulties in relation to using those resources, with the major difficulty being the issue of importing foreign labour. The inadequacy of trained local labour and the restrictions imposed by the GPC for the Labour Force on foreign companies in order to provide more job opportunities for local labour are further issues.

Perceptions on language skills

Table 2. presents the findings regarding the language skills of the local workforce. From the findings, it can be seen that the majority of foreign and joint companies appear to be satisfied with such skills. In other words, 67.6% of representatives appear to be satisfied with the language skills of the local human resources. However, 16.2% of the respondents were dissatisfied with the foreign language proficiency of the Libyan workforce, while 16.2% were undecided.

Table 2: Perceptions on Language Skills

Perceptions	Frequency	Percentage	Valid Percentage
Satisfied	46	67.6	67.6
Unsure	11	16.2	16.2
Dissatisfied	11	16.2	16.2
Total	68	100.0	100.0

Perceptions on technical knowledge

It can be noted from the table that the majority of international companies operating in Libya (72.1%) were satisfied with the level of technological know-how of the local workforce. However, 17.6% were dissatisfied, while 10.3% were undecided.

Table 3: Perceptions on technical knowledge

Perceptions	Frequency	Percentage	Valid Percentage
Satisfied	49	72.1	72.1
Unsure	7	10.3	10.3
Dissatisfied	12	17.6	17.6
Total	68	100.0	100.0

Perceptions on Team Working Skills

The findings shows highlight that the majority of respondents were satisfied with the teamwork performance of the local workforce in Libya. In this regard 63.2% of the participants were happy, as compared with only 22.1% o unhappy. 14.7% of the total respondents were undecided.

Table 4: Perceptions on Team Working Skills

	Frequency	Percentage	Valid Percentage
Perception Satisfied	43	63.2	63.2
Unsure	10	14.7	14.7
Dissatisfied	15	22.1	22.1
Total	68	100.0	100.0

The field study showed that the majority of the companies' representatives appear to be satisfied with the quality of human resources in terms of technical know-how, language and team-work. However, the companies face difficulties associated with employment particularly in relation to the laws which curtail the import of foreign labour, which is necessary as the supply of local skilled labour is inadequate.

Cross Tabulation of Company Business Activity and Team Work

Table 5: Cross Tabulation of Company Business Activity and Team Work

		Team Work			Total
		Satisfied	Not sure	Dissatisfied	
Manufacturing Sector	Number	24	5	8	37
	%	64.9%	13.5%	21.6%	100.0%
Services	Number	16	5	7	28
	%	57.1%	17.9%	25.0%	100.0%
Agriculture	Number	3	0	0	3
	%	100.0%	0.0%	0.0%	100.0%
Total	Number	43	10	15	68
	%	63.2%	14.7%	22.1%	100.0%

From the information shown in table 5, it is obvious that most of the company respondents in the three sectors are satisfied with these skills with 100% satisfaction expressed by respondents from the agricultural sector, 64.9% for the manufacturing sector and 57.1% for the service sector.

Table 6: Chi-Square of Goodness of Fit for Local Human Resource Variables

	<i>Teamwork</i>
<i>Chi-Square</i>	27.912
<i>Df</i>	2
<i>Asymp. Sig.</i>	0.000

CONCLUSION AND DISCUSSION

In general this positive attitude towards the quality of human resources in Libya can be explained by the fact that the human development programmes have been successful to the extent that Libya is now classified as a high performing country according to the 2009 Human Development Report. The report has put Libya at 55 out of 177 countries surveyed with a human development indicator of 0.847 out of a maximum of one (Human Development Report, 2008).

Although for these positive of teamwork there are some problems faced by collective action, which is observed study conducted on companies and through interviews with teamwork it turns out they have some obstacles in the following:

1. Intolerances constructive criticism
2. Intolerance for personal opinion
3. Some members do work full
4. Team members do not put in the appropriate tasks
5. Inability to communicate between team members.
6. Not accommodate the role of leader among members
7. Non-members' commitment to the tasks
8. Lack of appreciation of others and respect for their abilities and their thinking
9. Providing incomplete tasks by Members
10. Lack of prioritization
11. Do not assume responsibility
12. Lack of flexibility within the team and
13. Lack of punctuality.

How do we address the problems of collective action:

1. Treat some of the sickest team
2. Improve phrases reactions
3. Interrogation
4. Encourage effective communication

5. Know-how effective meetings management skills
6. An agenda clarified and
7. Decisiveness and make decisions

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A STOCHASTIC MODEL TO DETERMINE THE ELEMENTS OF PRODUCTION CYCLE TIME IN METAL PROCESSING INDUSTRY AND TEXTILE INDUSTRY

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ABSTRACT: The paper presents the original method for determining the elements of production cycle time using a modified work sampling method. The experimental investigations done in 2011 and 2012 which involved a large number of Serbian enterprises with a higher organizational level and longer production times t_p in a production cycle t_{pc} have shown that the production process is mastered. This has been proved by the methods of stochastic control using the control limits, because production time is found most frequently within the control limits with an error of $\pm 3SD$.

Keywords: production cycle, elements of production cycle time, work sampling, stochastic model.

INTRODUCTION

To ensure rational production and adherence to time schedules in production, quality planning of production and corresponding technical-technological calculations are needed to provide machine operating modes and time duration of machine operations as well as the activities in the manufacturing process. In this way, they are normed, normalized and standardized, so the elements of production cycle (PC) time can be determined in advance for machines, mechanization means and manual work. In practice they are not deterministic but stochastic, especially under conditions of small and medium-sized businesses and as such they have to be monitored.

Capacities utilization levels are possible to monitor using the work sampling method which was first applied by Tippett (Barnes, 1957; Maynard, 1971; Moder, 1980; Richardson & Eleanor, 1982). The elements of PC time also can be monitored using the original method (Klarin et al., 2000; Klarin et al., 2010; Čala et al., 2011; Klarin et al., 2002), but with restricted realm of use, and only three elements of PC time were monitored: the machine is in operation, the machine is in preparation, or the machine is idle (+, x, -). In theory, the PC time – t_{pc} – is divided into production time – t_p – and non-production time – t_{np} – and production time is then further divided into technological time – t_t –, with machine t_{tm} and lead time t_{pt} , non-technological time – t_{nt} – with time of control – t_c –, transportation – t_{tr} – and packaging – t_{pk} -. Non-production time is classified

according to various causes of stoppages in production, and we have carried out a screening of the most general and common ones caused by the lack of raw materials – t_{mr} -, organization – t_o -, machine breakdown – t_b - and other problems – t_{ot} , (Čala et al., 2011).

The PC time involves the time needed to make a unit or a series of units from putting them into production until their storage, and aside from being significant as a technical indicator, it is also important as an economic indicator of freezing current assets, especially raw materials. There can hardly be any enterprise that does not monitor PC time through documentation and analytically, but rarely do they monitor the elements of work within the PC and by analyzing those elements affect their reduction and thereby PC time reduction.

This is the reason why in this paper we prove experimentally the applicability of the original stochastic method to determine the elements of PC time using the results obtained by screening two plants with small scale production as an example. New method will be presented through the representativeness of a screening sample per numbers and time of screening through mathematical parameters, SD and control limits, where the elements of PC time are observed as the elements of the process function.

The model was applied in 2011 and 2012 and involved a larger number of Serbian enterprises. The results obtained for few characteristic enterprises will be presented here.

INITIAL MODEL APPLICATION RESULTS

The first most extensive experiment concerns an enterprise owned by a large German firm engaged in manufacturing car components. Screenings were performed from September 19, 2011 to November 4, 2011. Monitoring included 47 cycles of different series sizes (4 – 10 units) and the time duration ranged from the shortest (240 min) to the longest (420 min), with 10 - 30 instantaneous observations. There were 932 observations in total, while the total time for all cycles amounts to 15,293 min. The average production cycle time - t_{pc} is 325 min and the average production cycle time per unit t_{pc} is 56.2 min.

Investigations related to the coefficient of running time as a function of the series size and where the PC was analytically monitored from the plant's records did not include an in-depth analysis of the relationships between the series.

Data for all cycles elements calculated as percents of cycle time are shown on Fig. 1. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 74.35\%$ and ranges from the bottom control limit BC = 52.64% to the upper control limit AC = 96.06%.

The screening procedure in enterprise II was performed in an identical way to that in enterprise I.

The second experiment is related to a plant that produces military and fireman clothing. Screenings were carried out from September 27, 2011 to November 13, 2011. Monitoring comprised 26 production cycles of different types of clothing and different series sizes ranging from 9 – 117 units, with time durations from 355 min for the shortest to 3700 min for the longest, while instantaneous observations ranged from 21 – 90. Data on production cycle elements collected in enterprise II are shown on Fig.2. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 70.92\%$ and ranges from the bottom control limit BC = 61.14% to the upper control limit AC = 80.70%.

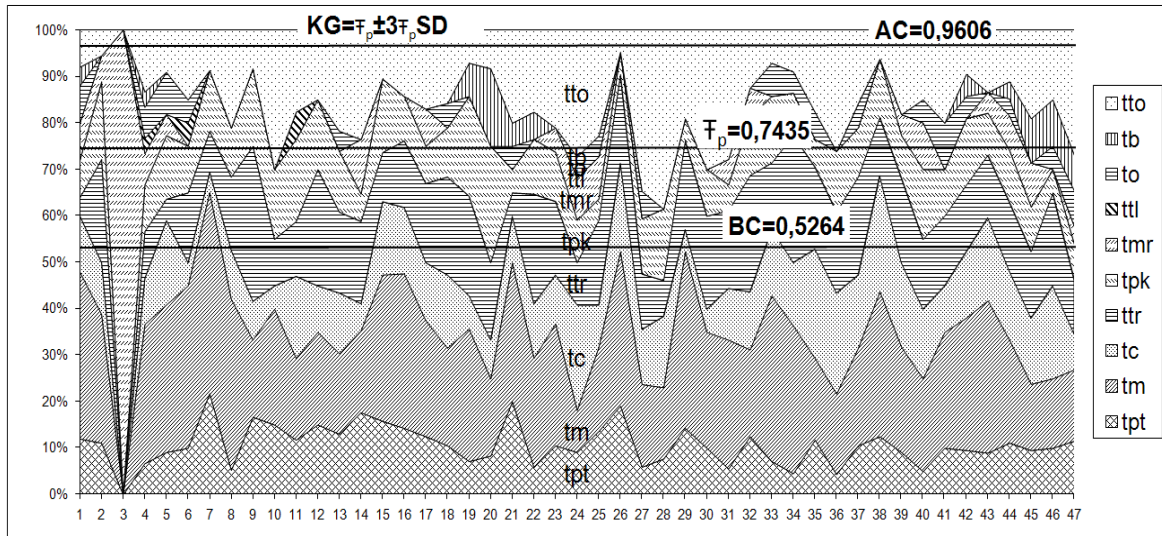


Figure 1: Data for all cycles elements monitored in enterprise I in 2011

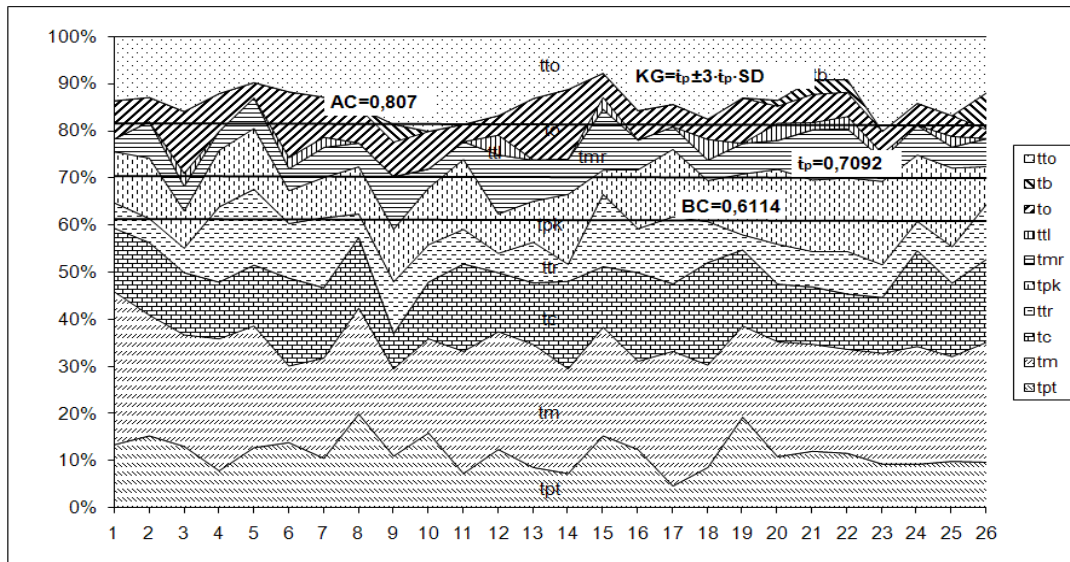


Figure 2: Data for all cycles elements monitored in enterprise II in 2011

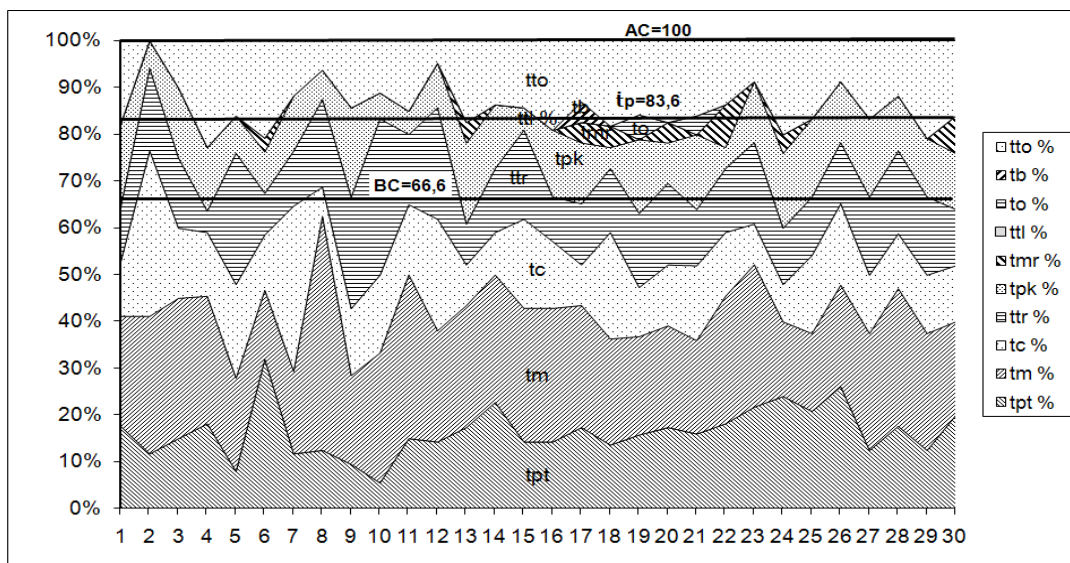


Figure 3: Data for all cycles elements monitored in enterprise I in 2012

In 2012, after model initial application, experiment is again conducted in 2012 to check if there are some improvements in production cycle elements.

In enterprise I screenings were carried out again from 23rd October to 2nd November, 2012. Monitoring comprised 30 production cycles, with 17 to 26 instantaneous observations, with mean value 21 and 644 observation in total. Data on production cycle elements collected in enterprise I in 2012 are shown on Fig.3

Time durations were 233 minutes as average value, while one year later, before model application, it was 325 minutes. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 83.60\%$ and ranges from the bottom control limit BC = 66.66% to the upper control limit AC = 100%. It can be seen that production cycle time after model application is 28% reduced, while average cycle time is reduced from 35 to 17 minutes.

In enterprise II screenings were also made in 2012. Fig. 4 shows that that almost all data fit ± 2 SD control limits, and show higher precision then before. Time t_m is the largest part of production time, with very low oscillations. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 85.22\%$, much larger then in 2011.

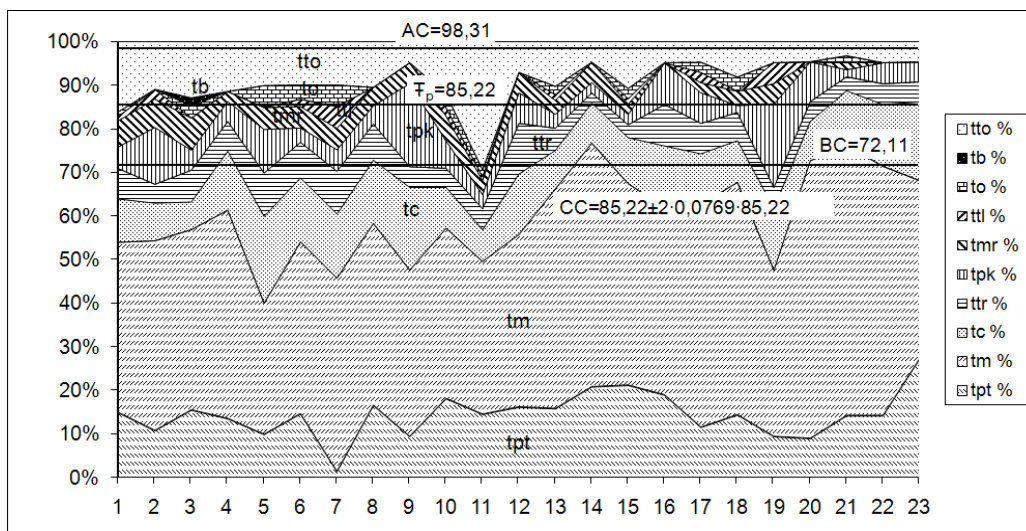


Figure 4: Data for all cycles elements monitored in enterprise II in 2012

CONCLUSION

The original method for determining the elements of production cycle time using a modified work sampling method was proved through experimental investigations done in 2011 and 2012, which involved a large number of Serbian enterprises. Results have shown that the production process is mastered through model application.

The PC is the most significant technical-technological indicator in production and it is necessary to steadily monitor and reduce it;

- Instead of a demanding continuous screening and monitoring of working time elements in an analytical manner, monitoring is much simpler to perform by means of the original stochastic modified work sampling model;
- PC reduction is possible by influencing the factors related to the duration of individual working time elements.
- Time elements trends can be mathematically monitored by establishing the control limits with ± 3 or ± 2 SD from the mean value;

- In experiments to follow optimization is needed for the number of working time elements and stoppages depending on the type of production, and
- Future investigations should establish the characteristics of different types of production, such as the assembly processes in the textile industry and machine shops in the metalworking industry.

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REDUCTION IN THE DURATION OF THE PRODUCTION CYCLE TIME IN SERIAL PRODUCTION IN METAL PROCESSING INDUSTRY

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ABSTRACT

The most relevant factor which affects the production cycle time per unit is the size of a series. The production cycle mean value for the groups formed according to the number of units in a series t_{pcu} moves along the hyperbolic function which has asymptote C , $t_{pcu} = C + b/n$, and, mathematically, these groups do not behave as strata, which means they are linked to deterministic factors of technology and number of units/series.

Keywords: production cycle, elements of production cycle time, work sampling, stochastic model.

INTRODUCTION

To ensure rational production and adherence to time schedules in production planning and corresponding technical-technological calculations are needed to provide machine operating modes and time duration of machine operations as well as the other activities in the manufacturing process. In this way, they are normed, normalized and standardized, so the elements of production cycle (PC) time can be determined in advance for machines, mechanization means and manual work. In practice they are not deterministic but stochastic, especially under conditions of small and medium-sized businesses and as such they have to be monitored.

Capacities utilization levels are possible to monitor using the work sampling method (Barnes, 1957; Moder, 1980; Richardson & Eleanor, 1982). The elements of PC time also can be monitored using the work sampling method method, but with restricted realm of use, and with only three elements of PC time to be monitored: the machine is in operation, the machine is in preparation, or the machine is idle. In theory and practice, the PC time – t_{pc} is divided into larger number of elements, namely production time – t_p and non-production time – t_{np} , while production time is then further divided into technological time – t_t -, with set-up time t_{pt} and lead time t_m , also non-technological time – t_{nt} is composed from time of control – t_c -, transportation – t_{tr} - and packaging – t_{pk} . Non-production time is classified according to various causes of stoppages in production, and we have carried out a screening of the most general and common ones caused by the lack of raw materials – t_{mr} , organization – t_o , machine breakdown – t_b and other problems time – t_{to} (Čala et al., 2011).

APPLICATION OF THE MODEL

The practical application of establishing the mentioned elements of PC time is reduced to instantaneous observations of time elements, where the object of labor moves through the production operations list. A series of units is distinctly marked by this document and an analyst (recorder) can readily identify it. Production cycle is calculated differently depending n type of operations sequence.

The first most extensive experiment concerns an enterprise owned by a large German firm engaged in manufacturing car components. Screenings were performed from September 19, 2011 to November 4, 2011. Monitoring included 47 cycles of different series sizes (4 – 10 units) and the time duration ranged from the shortest (240 min) to the longest (420 min), with 10 - 30 instantaneous observations. There were 932 observations in total, while the total time for all cycles amounts to 15,293 min. The average production cycle time - t_{pc} is 325 min and the average production cycle time per unit t_{pc} is 56.2 min.

Investigations related to the coefficient of running time as a function of the series size and where the PC was analytically monitored from the plant's records did not include an in-depth analysis of the relationships between the series. Data for all cycles elements calculated as percents of cycle time are shown on Fig. 1. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 74.35\%$ and ranges from the bottom control limit $BC = 52.64\%$ to the upper control limit $AC = 96.06\%$.

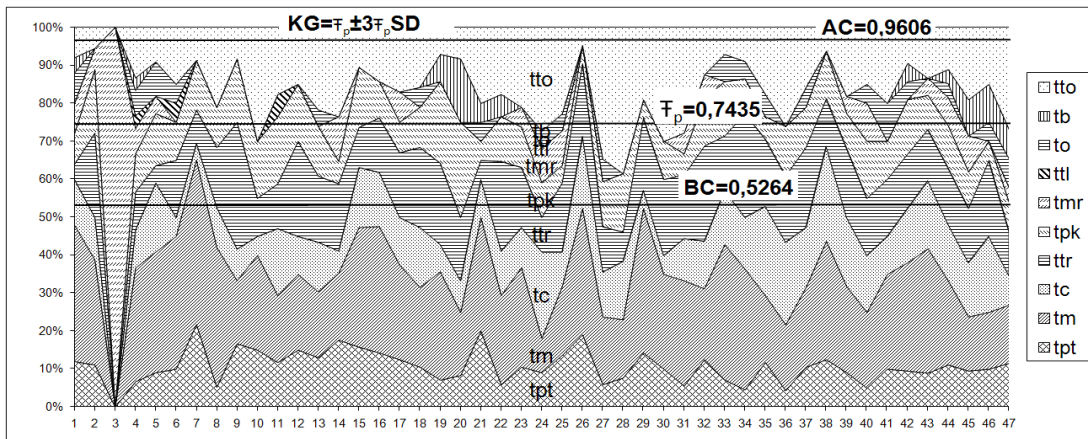


Figure 1: Data for all cycles elements monitored in enterprise I in 2011

Table 1 displays the same data without the groups but with the number of screening cycles and the number of units in those cycle series, with the total mean value of the PC time – \bar{t}_p % that amounts to 76%. The trends of PC time mean values \bar{t}_p by cycles (groups) with an identical number of units in a series in % and the PC mean values per unit in a series \bar{t}_c are given in the diagram in Fig. 2. The mean value for all groups is obtained using the formula:

$$\bar{t}_p = \sum \frac{\bar{t}_{pi} \cdot f_i}{N} \quad (1)$$

where f_i is the number of PCs with an identical number of units in a series

$$\bar{t}_p = \frac{85,41 \cdot 3}{46} + \dots + \frac{79,75 \cdot 3}{46} = 76\% \text{ for a non-stratified set of data from Tab. 1, using formula 2}$$

$$SD_p^2 = \frac{\sum_{j=1}^l (\bar{t}_{pi} - \bar{t}_p)^2 n_j}{n} \quad (2)$$

where n_j is the number of cycles in a group and n is the total number of cycles

$$CC = \bar{t}_p \pm 3\bar{t}_p SD_p \quad (3)$$

CC = 76 ± 3. 0,09606· 76
 AC = 97,9 %
 BC = 54,1 %

Table 1 Number of cycles and number of units in a series for enterprise I in 2011

No	No of cycle	unit/ser	\bar{t}_{pcu} (min/ unit / series)	\bar{t}_p (%)	SD _{tp}
1	3	3	93.10	85.41	7.42
2	4	4	72.48	81.31	16.14
3	18	5	63.29	74.97	28.04
4	10	6	57.02	70.84	29.64
5	3	7	43.50	76.67	16.91
6	5	8	45.50	77.78	10.07
7	3	10	35.67	79.75	10.53
\bar{t}_p (%)		43	52,389	76	

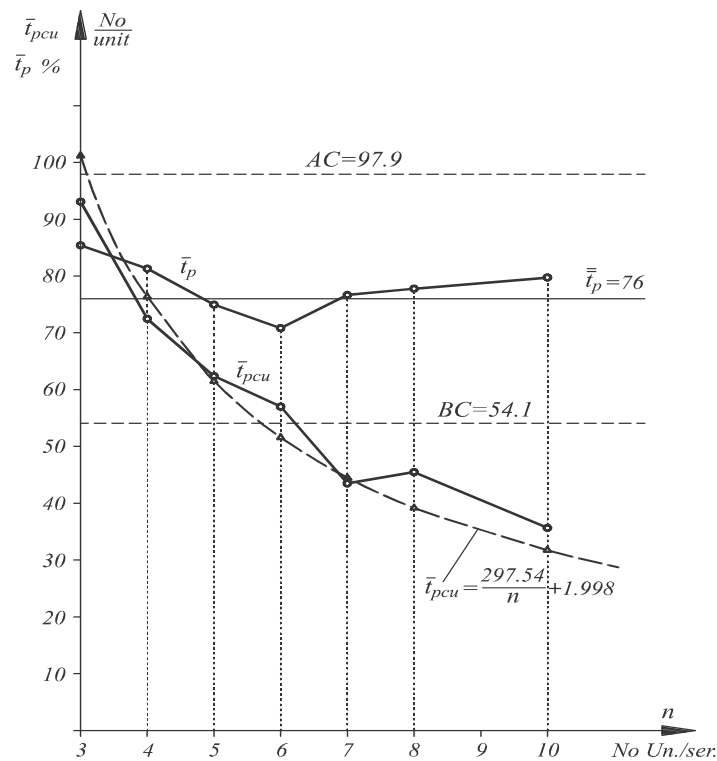


Figure 2: Trends of production time t_p mean values and PC mean values per unit in a series t_{pcu} for enterprise I in 2011

It is obvious from the diagram in Fig. 2 that mathematically viewed the process is mastered, because all the points of \bar{t}_{p_i} lie within the control limits $BC < \bar{t}_{p_i} < AC$, (54.1 < 76 < 97.9).

The trend of $\bar{t}_{p_{icu}}$ can be approximated by the function

$$\bar{t}_{pcu} = c + \frac{b}{n} \quad (4)$$

where n is the number of units, and in enterprise I $c=1.998$ and $b=297.54$.

A statistical set stratification has not been successful because the SD of a stratified set is:

$$\sigma' = \sqrt{\sigma^2 + \delta^2} \quad (5)$$

$$\sigma' = 27,19\%$$

$$SD = \sqrt{(t_{pi} - \bar{t}_p)^2} \quad (6)$$

$$\bar{\sigma}^2 = \frac{\sum_{j=1}^I \sigma_j^2 n_j}{n} \quad (7)$$

$$\delta^2 = \frac{\sum_{j=1}^I (\bar{t}_p - \bar{t}_p)^2 n_j}{n} \quad (8)$$

$$SD_p = 9,606 \%$$

Since $SD < \bar{\sigma}'$ the stratification was unsuccessful, which means that in this enterprise there is no feature distinguishing the PC with a different number of units in a series, but the reduction of time per unit is exclusively the result of technological time, i.e. the elements of working time and the number of units.

2.1. Results after model application

In 2012, after model initial application, experiment is again conducted in 2012 to check if there are some improvements in production cycle elements.

In enterprise I screenings were carried out again from 23rd October to 2nd November, 2012. Monitoring comprised 30 production cycles, with 17 to 26 instantaneous observations, with mean value 21 and 644 observation in total. Data on production cycle elements collected in enterprise I in 2012 are shown on Fig.3.

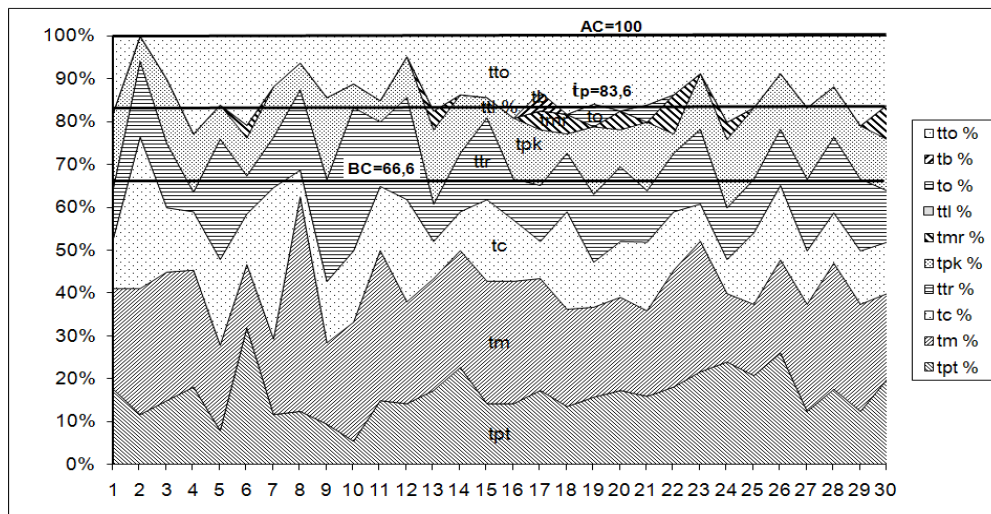


Fig. 3 Data for all cycles elements monitored in enterprise I in 2012

Time durations were 233 minutes as average value, while one year later, before model application, it was 325 minutes. The mean value for all the groups with the same number of units in a series obtained is $\bar{t}_p = 83.60\%$ and ranges from the bottom control limit $BC = 66.66\%$ to the upper control limit $AC = 100\%$. It can be seen that production cycle time after model application is 28% reduced, while average cycle time is reduced from 35 to 17 minutes. Trends of production time t_p mean values and PC mean values per unit in a series t_{pcu} for enterprise I now have different coefficients $c=-7.363$ and $b=239$, as can be seen on Fig. 3 tab.2.

The trend in production time by strata by the number of units in a series of tables 1 and 2 and the diagrams in Figures 2 and 4 shows that there was a significant reduction in production time duration in minutes of $\bar{t}_{pcuser} = 52,389$, 2011. years to $\bar{t}_{pcuser} = 37,7$ for 2012.years, as a result of the stochastic model of research production cycle.

Table 2

No	No of cycle	unit/ser	\bar{t}_{pcu} (min/ unit / series)	\bar{t}_p (%)
1	4		48	85,71
2			51	78,26
3			62	76
4	\bar{x}	3	53,7	80
5	5		43,2	82,35
6			43,2	100
7			35,6	90
8			35,6	77,27
9			56,8	84
10			38,8	93,75
11			41,8	85
12			41,8	95,24
13			41,6	86,36
14			47,6	78,26
15			49,8	77,27
16		47	88,24	
17	\bar{x}	12	40,5	86,5
18	6		32,3	86,66
19			40	80,95
20			40,7	83,33
21			40,8	79,17
22	\bar{x}	4	38,5	82,5
23	7		34,3	69,23
24			23,8	85,71
25			23,8	88,89
26			31,3	77,27
27			31,6	78,95
28			31,6	80
29	\bar{x}	6	30,1	80
30	8	1	30,6	78,26
31	9	1	31,7	83,33
32	10		30,4	91,3
33			27,5	91,3
34	\bar{x}	2	29	91,3
35	12	1	27,6	75
Σ			281,7	656,89

$$\bar{t}_p = 82,33 \%, \bar{t}_{pcu \text{ ser}} = 37,7 \text{ min}$$

CONCLUSION

The original method for determining the elements of production cycle time using a modified work sampling method was proved through experimental investigations done in 2011 and 2012, which involved a large number of Serbian enterprises. Results have shown that the production process is mastered through model application. The most relevant factor which affects the production cycle time per unit – t_{pcu} – is the size of a series.

- By applying stochastic model of research production cycle in a representative plant showed a significant reduction in the duration of the production time in minutes from $\bar{t}_{pcu \text{ ser}} = 52,389$ in 2011 years to $\bar{t}_{pcu \text{ ser}} = 37$ in 2012.years.
- The PC mean value for the groups formed according to the number of units in a series t_{pcu} moves along the hyperbolic function which has asymptote C, $t_{pcu} = C + b/n$, and, mathematically, these groups do not behave as strata, which means they are linked to deterministic factors of technology and number of units/series.

- The process is mastered to a higher degree when all levels of working time elements are utilized to a higher degree (or %) and production time t_p is the most important for the process. This means that it is more favourable to apply higher organizational and production levels in the stochastic model for establishing the elements of PC time;
- In experiments to follow optimization is needed for the number of working time elements and stoppages depending on the type of production

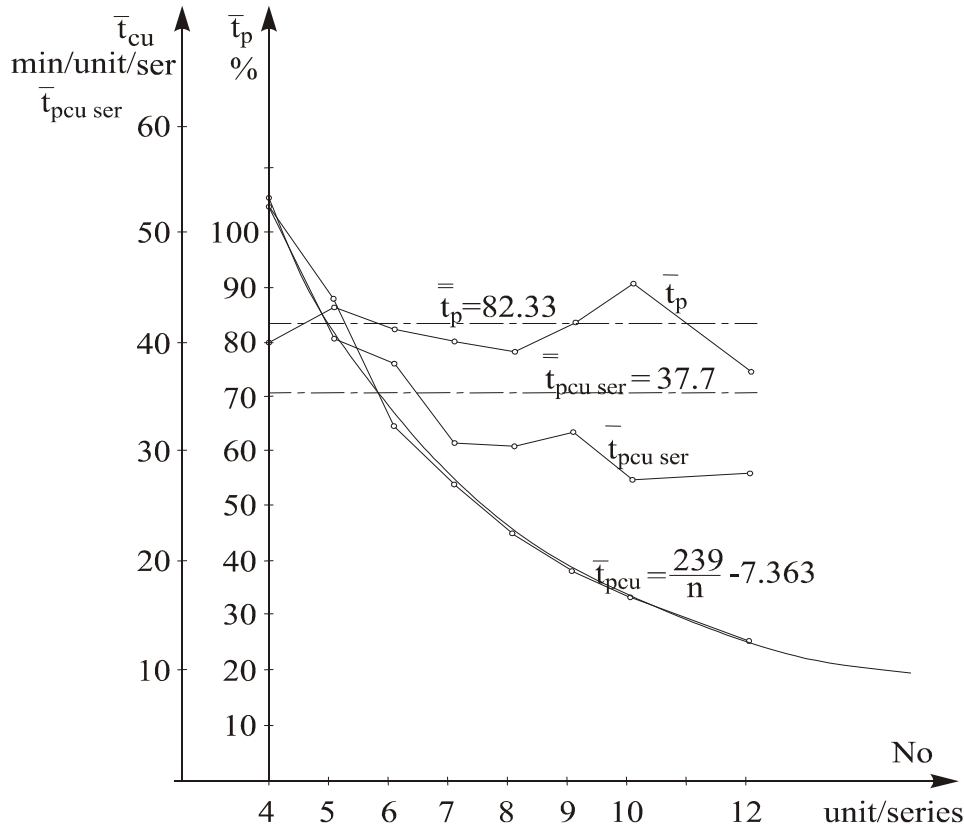


Figure 4: Trend of production time t_p , mean values and PC mean values per unit in a series t_{pcu} for enterprise I in 2012

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DEVELOPMENT OF THE SOFTWARE SUPPORT FOR DETERMINING THE STRUCTURE OF DELAY AND EFFICIENCY OF THE USE OF CAPACITY IN FUNCTION OF SHORTENING THE PRODUCTION CYCLE

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ABSTRACT

This paper presents a unique computer support for identification and analysis of the structure of organizational delays. This is an integrated approach to the examination of rational use of the time, as well as the value aspect of utilization of production capacities and the identification and analysis of the utilization of production capacity for the shortening of the production cycle.

Keywords: Reduction of Production Cycle, Production Delays, Continuous Improvement

INTRODUCTION

In the modern production in the competitive environment of the global market, the key question is how to promote a product with high quality, low cost, suitable assortment with respect to the required delivery time. are required to continuously undertake a wide range of organizational and technological measures for improving production processes and operations. The analysis of the level of capacity utilization and business results indicate possible changes which the company should take in terms of rational use of existing production capacity. In addition, with respect to the possibility of buying new equipment or replace existing ones in accordance with the selected technology.

An important task of the organizers of production is a permanent work on creation of the conditions and steps taken to reduce the time duration of the production cycle. Shortening the duration of the production cycle can be achieved by undertaking various organizational and technical measures: application of the new operation (investment in new technological equipment, etc..) and the design and implementation of efficient organization of work and so on.

Theoretical and practical research indicates increased interest in the world for using different methods and techniques in solving the problem of shortening the duration of the production cycle. The issue of optimizing the use of production capacity has been considered from various aspects in a number of papers (Radojicic et al, 2012b; Klatin, 1984; Agrawal et al 2000; Radojicic et al, 2012b; Bhat, 2008, Cala et al, 2011; Radojicic et al, 2012c).

CLASSIFICATION AND SOURCES OF DELAY IN PRODUCTION

Synchronization of the production program (scope and range) on one hand, and the size, structure and usage of production capacities, on the other hand, represents a significant organizational and technological problem with strong implications on the effects of operations and performance of firms.

A high percentage of organizational delays due to waiting for the material and documentation is worth mentioning, which indicates the need for taking organizational and technical measures for their reduction.

In the organization of production there must be harmonization of temporal and spatial dimensions of the designed technical process, operational preparation, organization of maintenance, funds for the work etc. Delays can be described as unnecessary delays, as opposed to those which cannot be avoided, but can only be reduced to a minimum, and we will call them the necessary delays.

"Equipment maintenance is a fact of life. Companies that understand this and use TPM to get the most out of their resources see: significantly decreased maintenance costs; increased equipment availability and profitability; improved teamwork and employee involvement. TPM provides the tools to turn maintenance programs into a competitive advantage." (Overall Equipment Effectiveness)

However, many authors emphasize the analysis of delays in production, as a critical element of productive maintenance: "The difference between the ideal and the actual situation is due to delays. Calculating the overall equipment effectiveness (OEE) rate is a crucial element of any serious commitment to reduce equipment- and processrelated wastes through total productive maintenance (TPM) and other lean manufacturing methods like Operational Excellence, Six Sigma or World Class Manufacturing." (TPM). The same authors suggest six types of delays, Table 1.

Table 1. The Six Big Losses

Loss Categories	The Six Big Losses
Downtime (lost availability)	Equipment failures Waiting (i.e. Setup and adjustments)
Speed losses (lost performance)	Idling and minor stoppages Reduced speed operation
Defect losses (lost quality)	Scrap and rework Startup losses

Source: TPM - Total Productive Maintenance, Vorne
Available at: <http://www.vorne.com/learning-center/tpm.htm>

Since it is clear that the delay exists, by type and place of occurrence, in a huge amount (theoretically an infinite amount), for better understanding it is necessary to make a classification and thus enable much easier research activities. One possible way of delay classification would be as follows: delays in time, delays in material, delays in exploitation and other delays.

This paper presents the key elements of the development of the application solution which support the identification and analysis of organizational delays. This is an integrated approach to the rational use in the examination of the time and the value aspect of utilization of production capacities, as well as identification and analysis of the utilization of production capacity in function for the shortening of the production cycle.

CHARACTERISTICS OF THE SOFTWARE SOLUTION

Based on theoretical considerations, it is developed a software solution in MS Access. A number of elements influence the use of this platform in the development of applications, and the possibility of establishing stand-alone applications that can be implemented individually. On the other hand, provides a further upgrade of the application by the users themselves, as well as application in a network environment and thus their implementation in the companies, as well as in small and medium enterprises.

Developed software solution allows analysis of the structure of organizational delays and various losses (in time, materials, exploitation and other delays). It also creates preconditions for taking appropriate organizational and technical measures for reducing to a minimum, and some completely eliminate. This leads to reduction in fabrication time and shortening of the production cycle, and thus increase the coefficient of working assets.

In addition to the computer support in analyzing the structure of organizational delays, the developed software solution allows determination of the value-time aspect of capacity utilization. It is a new integrated approach to this problem and determination of not only the computational level of capacity, but determination of the actual level of capacity and the limits of accuracy. It also gives a comparative overview and analysis of the results of calculation of value-time and time level of capacity.

Figure 1 shows the introductory menu for selection of the calculation of actual level of utilization of production capacity, the calculation of value-time level of capacity utilization, as well as analysis of the structure of production delays.

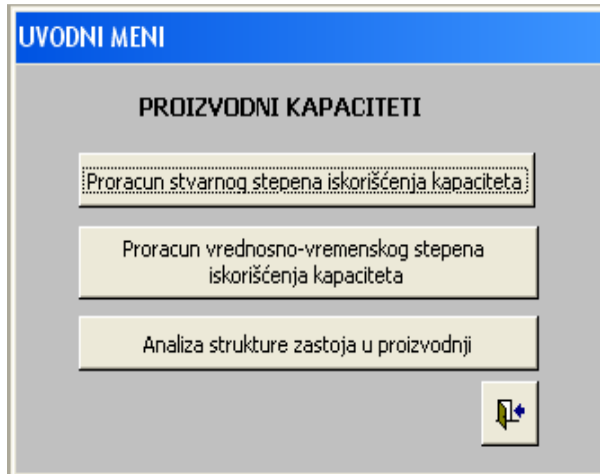


Figure 1: The initial menu of the application

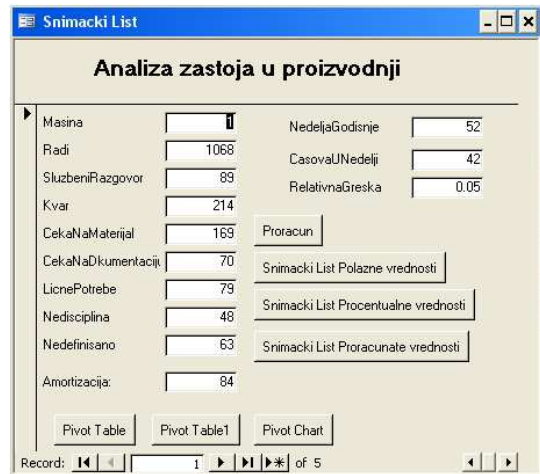


Figure 2: Form for entering the initial values

THE ANALYSIS OF THE STRUCTURE OF DELAY IN PRODUCTION

This paper presents the key elements of the application development related to database design and the most important segments of the code. The possibility of integration with other tools is very important for the end user. In the considered program solution, in the database are entered all values for the analysis of the duration of the production cycle. In the presented consideration are selected some pre-defined reasons for delays : Official conversation, Failure, Waiting for material, Waiting for documentation, Personal needs, Lack of discipline, Undefined.

Figure 2 shows the form for entering the initial values that are entered for each machine separately. Apart from the number of perception when the machine is running and listed individual delays, the application allows entering the data for the calculation of annual fund of working hours for each machine, as well as relative error with which we can count.

Total number of perceptions, including machine operation and organizational delays, represents the sum of the values recorded for each machine:

$$\begin{aligned} \text{UPDATE [Recording Sheet] SET [Recording Sheet].Total} = & [\text{Recording Sheet}]!\text{Works} \\ & + [\text{Recording Sheet}]!\text{OfficialConversation} + [\text{Recording Sheet}]!\text{Failure} + [\text{Recording Sheet}]! \\ & \text{WaitigForMaterial} + [\text{Recording Sheet}]!\text{WaitingForDocumentation} + [\text{Recording Sheet}] \\ & !\text{PersonalNeeds} + [\text{Recording Sheet}]!\text{LackOfDiscipline} + [\text{Recording Sheet}]!\text{Undefined}; \end{aligned}$$

Expressed in percentage, the value of machinery and organizational delays are shown in Figure 3

In purpose of determining the organizational delays that arise due to delays in material and waiting for the documentation, for each machine separately and for all machines, required calculations were carried out in a series of steps. The program listing is displayed in an appropriate way, while all the solutions of calculated values of the recording sheet are shown in Figure 4

The programming code of the annual fund of working hours for the working conditions in one shift is interpreted as follows:

UPDATE [Recording Sheet] SET [Recording Sheet].AnnualFundOfWorkingHours = [Recording Sheet]!WeeksPerYear * [Recording Sheet]!HoursInTheWeek;

Mašina	Radi %	Službeni Razgovor %	Kvar %	Ceka Na Materijal %	Ceka Na Dokumentaciju %	Licne Potrebe %	Nedisciplina %	Nedefinisano %	Ukupno %
1	59.33	4.94	11.88	9.38	3.88	4.38	2.66	3.5	100
2	67.22	4.5	2.44	8.88	8.66	3.72	2.38	2.16	100
3	51.33	4.72	12.61	10.22	12.44	4.5	2.33	1.83	100
4	47.44	6.83	14.72	8.22	8.83	4.22	5.27	4.44	100
5	49.66	3.83	10.16	10.83	9.33	4.66	7.27	4.22	100

Figure 3: Percentage values of the recording sheet

Vrednosno-vremenski stepen iskorišćenja kapaciteta (%): 54.627

Mašina	Godišnji Fond Radnih Sati	Ukupan Fond Radnih Sati	Godišnji Fond Produktivnih Sati	Godišnji Fond Neproduktivnih Sati	Godišnji Fond Produktivnih Sati Ukupan	Godišnji Fond Neproduktivnih Sati Ukupan	Potrebni Broj Opazanja
1	2184	10920	1295.76	888.24	6005.53	4914.47	1097
2	2184	10920	1488.08	715.92	6005.53	4914.47	780
3	2184	10920	1121.04	1062.96	6005.53	4914.47	1517
4	2184	10920	1036.08	1147.92	6005.53	4914.47	1773
5	2184	10920	1084.57	1099.43	6005.53	4914.47	1622

Figure 4: The calculated values of recording sheet

Organizational delays can be analyzed, depending on the needs, in different ways. One example might be the analysis of organizational delays due to waiting for materials and documentation. In the next step, in order to check for each machine, is achieved the satisfactory number of observations (for the relative error $\epsilon_p=5\%$) and performed the required calculations.

Programme Interpretation of the calculation of the necessary number observations is shown in the following listing for all machines individually:

UPDATE [Recording Sheet] SET [Recording Sheet].RequiredNumberOfObservations = 4*(1-[Recording Sheet]!Works%/100)/([Recording Sheet]!RelativeError*[Recording Sheet]!RelativeError*[Recording Sheet]!Works%/100);

Based on the calculated values of the number of observations per machine (Figure 4) it can be concluded that for all recorded machines is achieved satisfactory number of observations.

The software solution presented in this paper provides a sophisticated approach to the analysis of some delays using Pivot Table. Pivot Table allows the creation of different reports, obtaining values of summary and analysis of different delays in the interactive way. Another significant possibility is the formation of an interactive Pivot Chart report, resulting in a wide range of personalized chart by the user (Figure 5).

A significant possibility of using MS Access tool is integration with other Microsoft tools. This allows further analysis of data and creation of personalized reports by the users themselves. Figure 6 shows the connection with the format of MS Access database from other tools, such as MS Excel, or a choice of data at the first step of connecting to the database.

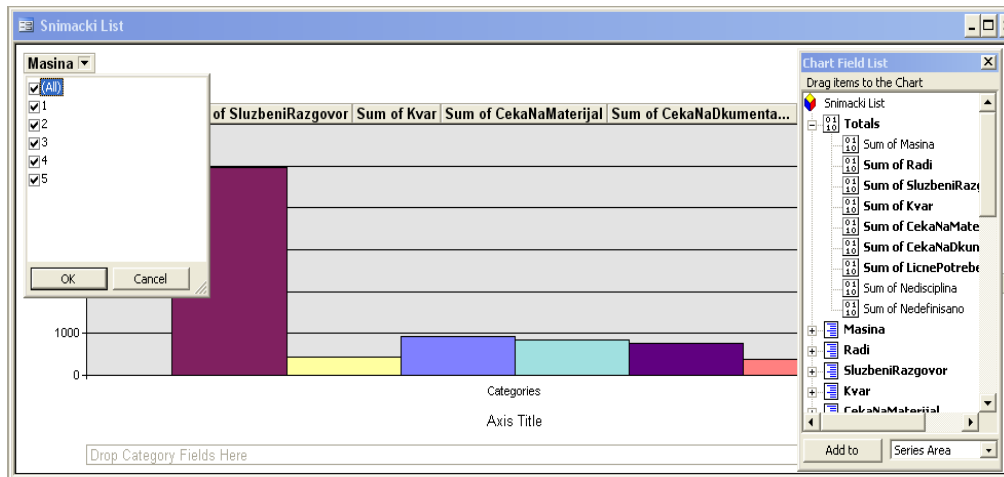


Figure 5: The formation of Pivot Chart diagram

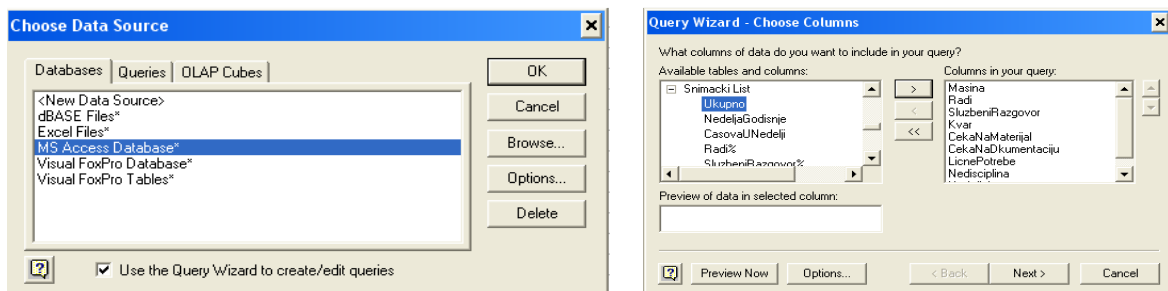


Figure 6: The choice of data inn connecting to a MS Access database

The possibility of integration with other tools is very important for the end user. In the considered program solution, in the database are entered all values for the calculation and the analysis of production delays. Connection to the MS Access allows the formation of further reports in MS Excel tool. One example of using created database and further analysis by the end users and the possibility of establishing further graphical interpretation is shown in Figure 7

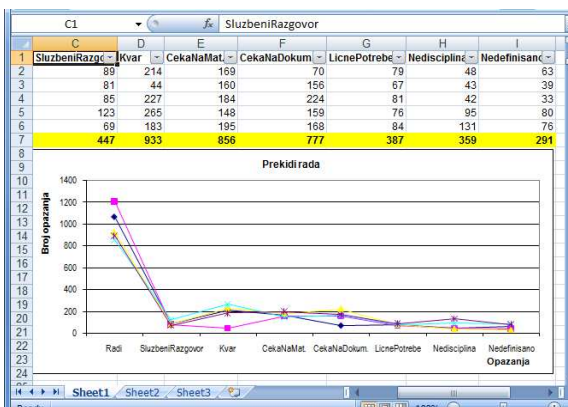


Figure 7: The graphical interpretation of the results

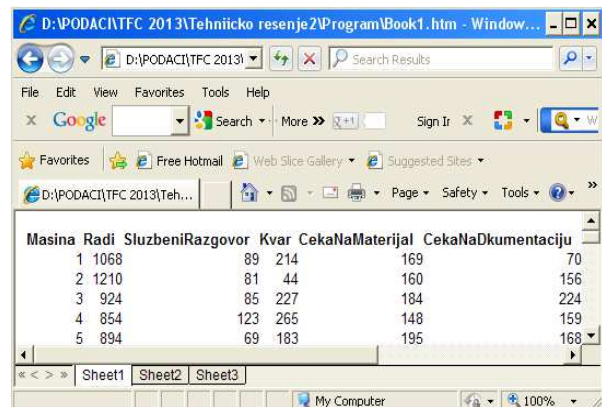


Figure 8: Implementation of Internet/Intranet technology

It should be noted that further improvement of the considered solution involves upgrading by elements of Internet / Intranet technology. Upgrade by elements of Internet technology allows natural and simplest way of connecting with modern integrated information system. In addition, allows access to data regardless of location and centralized administration of the entire system. Figure 8 shows the form to access data from a displayed application solution, by using Internet technologies.

CONCLUSION

The software solution presented in this paper allows an analysis of organizational delays and various losses (in time, materials, mining and others) which creates the preconditions for taking appropriate organizational and technical measures for reducing to a minimum, and some completely eliminated. All this implies a reduction of the period of fabrication, that leads to a shortening of the duration of the production cycle, and thus increase the coefficient of working assets. Therefore, it can be said that the important task of all the organizers of work is to investigate the sources and factors of delays, and establish valid measures for reducing these delays, to a minimum. This allows a significant improvement of performance of the production companies. Researches of this kind are a permanent task for professionals and all employees in production i.e. causes of delays should be constantly explored and eliminated.

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LOGISTICS – FROM MANAGEMENT OF MATERIALS TO INTEGRATED LOGISTICS

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ABSTRACT

Globalization and decentralization of production, as well as the revolutionary developments in information and communication technologies, have led to the expansion in the development of logistics. Logistics firstly appeared in the military industry, and then in the second half of the 20th century, in the companies. Today we can say with certainty that the logistics is present in all areas of business and efficient flow of products, energy, information, capital and people cannot be imagined without adequate logistic support. Logistics constantly matured through time, expanding its area of action and conformed to the requirements and development of the environment and new technologies. To determine the definition, in the sense used in the paper, logistics was defined as a multidisciplinary field that includes all the activities that allow for planning, directing, design, management and control of all processes of movement of goods, energy and information across various systems. This paper, based on the analysis of relevant and available domestic and international literature, is an attempt to approach the concept of logistics and look back at its historical development, key activities, and the role and importance of integrated logistics in the modern business enterprises.

Keywords: logistics, management of materials, logistic management, integrated logistics

INTRODUCTION

Logistics is the totality of tasks and measures stemming from company goals, and are related to optimally provision of material, information and value flows in the enterprise transformation process (Rupper, 1991). Subject of logistic research are all material flows in places where production begins, till the point in consumption where it ends (Christopher and Wills, 1972). Logistics management includes operational activities, transportation, warehousing, material handling, delivery, logistics network creation, inventory management, planning, supply and demand, at the level of a company. The main aspiration of the logistics system is to precisely define the user requirements and to form an offer of logistics services based on these requirements. Quality of services and satisfied customers ensure competitiveness, market share and long term profits to a holder of logistics services.

The main goal of logistics is often expressed through the famous concept of "7R": the *right goods* in the *right place*, at the *right time*, in the *right quantity*, at the *right conditions*, in the *right package* and at the *right cost*. In other words, the logistics is directed towards satisfying customer requirements through achieving the benefits of place, time and quantity. This seemingly simple definition contains the key logistics activities, because it emphasizes the spatial and temporal dimension, cost, service and quality. Logistics as a business function includes all activities necessary for the complex preparation and realization of spatial and temporal transformations of goods and knowledge. It tries, using human resources and assets, to put at the market disposal

requested goods at the right time and the right place, in the required quantity, quality and price, and with the accurate information related to such goods. The emphasis is on the minimal cost and optimization in order to achieve higher profitability.

LITERATURE REVIEW

Because the applicability of logistic concept in many areas of business and various levels of management, the literature reports a number of different definitions of logistics. Morgenstern had the great significance for the development of logistics science. According to him, the logistics operations consist of providing certain quantity of goods and services for activities that consume those goods and services in order to maintain certain current or expected future level. Stocks come from the source, and must be moved to activities with transportation means, i.e. transformed in time and space (Morgenstern, 1955). Magee (1960) believes that the logistics refers to the art of managing flow of materials and products from suppliers to customers. Council of Supply Chain Management Professionals (CSCMP) gave the several important definitions of logistics and logistics management. Logistics Management is part of the logistics chain and includes planning, implementation and control of effective and efficient flow (storage) of goods and services, and related information from point of origin to the point of consumption in order to meet customer needs (CSCMP, 1998). Logistics management is an integrating function, which coordinates and optimizes all logistics activities and integrates logistics activities with other functions (CSCMP, 2005). Society of Logistics Engineers (SOLE) defined logistics as an area of support that management uses during the lifetime of the product, or system for efficient use of resources that ensures adequate review of logistics elements during all phases of the life cycle, so that timely impact on the system ensures effective access to spending resources.

Rupper (1991) meant that the logistics is totality of tasks and measures stemming from company goals, and related to optimal providing of material, information and value flows in the transformation process in the company. According to another definition, logistics includes flows of materials and products entering the company, moving in the production or distribution process, and all output product flows from the company (Johnson et al, 1999), which means that there are input logistics, management of materials and physical distribution. According to Mentzer et al (2001), logistics is the process of planning, implementing and verification of success in creating the flow and storage of goods, services and related information from point of origin to the point of consumption, all in compliance with the customer's requirements. So, logistics encompasses all logistics activities that help in the movement of products from the initial raw materials to the final consumer (Bloomberg et al, 2006). Waters (2003) believes that logistics activities add value to the products, because they made them available at the right place and at the proper time, and Kotler (2003) adds that it is important to deliver a quality product to the consumer at the lowest possible cost for the company.

EVOLUTION OF LOGISTICS

The *traditional understanding of logistics* is mainly related to the efficient movement of materials and finished goods through the storage and transport. Logistics activities "were dispersed in the company, with no real control" (Bloomberg et al, 2006) and included rationalization and managing individual technological operations, related to the particular workplace, office or department. Each function in the company individually controlled flow of material, without optimization of required inventory optimization, throughout the production flow and so they created interphase warehouses. Due to the partial optimization and poor communication between the parts of the company, logistics activities weren't implemented according to the potentials.

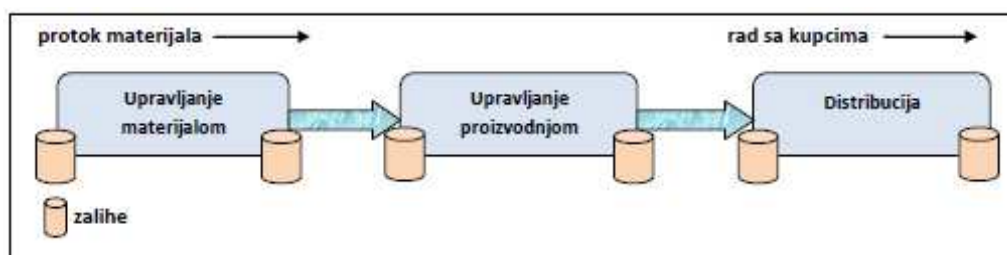


Figure 1: Traditional logistics

In the second phase of *functionally integrated logistics*, companies increasingly recognized the importance of logistics and the need for introducing the logistic function as equal with all other functions in the company. It was realized that further detention of logistics activities under the authority of different departments, leads to an increase of total costs and that the partial optimization doesn't provide the optimal solution for the entire enterprise. That was resulting with logistics functions managed from one central location. Coming up to the vertical function integration of activities in the areas of management of materials, production management and distribution. Stock issues are handled by functions.

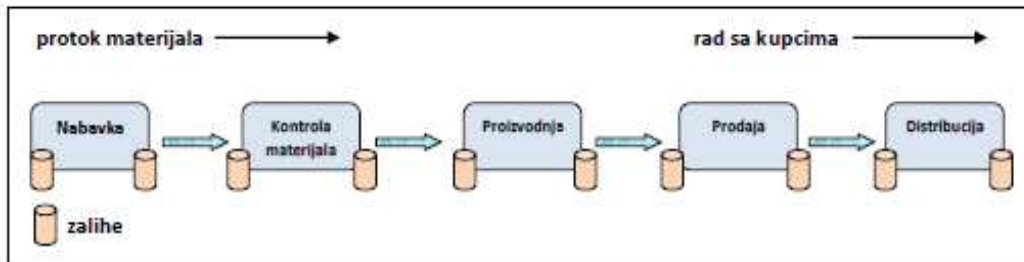


Figure 2: Functional integration of logistics

In the third phase, *inbound logistics* connects strategic and operational activities and represents horizontally integrated management of logistics processes in the company. The process involves a set of activities that are performed in serial or simultaneously, producing output that contributes to achieving the mission of the company. Logistics now covers all activities related to planning, managing and controlling the flow of material and service products. Therefore, the physical distribution of products is associated with the processes of management, and issuing of inventories is managed at the level of the company.



Figure 3: Internal integration of logistics

According to the fourth phase, the *external logistics* is integrated management activity that goes beyond business enterprise (Weber, 2002). Logistics is involved in the supply chain that connects buyers and suppliers, from raw materials to finished products and their storage. The problem of inventories is solved at the level of the entire supply chain. Efficient supply chains do not hold unnecessary inventories, which mean that the optimization is carried out at the entire supply chain.



Figure 4: External integration of logistics

When we add the time dimension to these phases in the development of logistics, we can identify the following historical periods:

- Period to 1960. was characterized by expressive concentration on productive activities, in order to rationalize and reduce production costs. Means of production were fully used, and the production of goods for storage was minimal. Logistics was firstly reported some 50 years ago in enterprises for the production and distribution of consumer goods. Logistics was a set of activities in the area of procurement and inventory control, and logistics activities were dispersed all over the company. Business functions, which performed fragmented logistics operations, were completely isolated.
- The period between the 1960 and 1970. was characterized by the improvement of sales and marketing, along with increased costs due to a rise of inventories, expand product range and introduction of shorter product delivery times. Enterprises recognize the impact of logistics, so the activities are grouped into materials management and physical distribution, and attention is increasingly transferred to the satisfaction of consumer needs. There is a growing interest for certain logistic factors such as delivery time, delivery method and degree of product availability. However, a variety of functions, which were included in logistics as a discipline, were treated separately and differently. The first logistic associations and institutes were established, like the National Council of Physical Distribution Management (later CSCMP) in 1963.
- The period between the 1970 and 1980. was characterized by a systematic approach when logistics was treated as a set of interrelated activities. It comes to optimization of individual functions of logistics and the emergence of computer systems for management of materials (Material Requirement Planning - MRP), distribution (Distribution Requirement Planning - DRP), production (Kanban and Just-in-Time concepts). Emphasis is placed on the optimization of the entire logistics system, a major concern of logistics managers is to ensure that the products reach their destination in good condition and at the lowest possible cost.
- The period between the 1980 and 1990. was characterized by the rapid development of information technology. Using computers, especially PCs, were made conditions for the effective use and integration of logistics activities, which has improved the efficiency and productivity of the logistics. Michael Porter introduced the concept of "value chain" to provide a framework for organizations to develop competitive strategies. It was created awareness that logistics can help organizations create and sustain a competitive advantage.
- In the period after 1990. E-commerce (Internet, EDI, e-mail) has become globally accepted communication. Quick and cheap communication systems enable organizations to establish and maintain contacts 24 hours a day, seven days a week. Enterprises with integration of system of suppliers, manufacturers and mediators, create a supply chain. High quality becomes a standard and companies differentiate based on performances of their own logistics activities. Logistics becomes a major functional area in which to perform process reengineering and achieve significant improvements. Logistics becomes a major functional area to perform process reengineering and achieving significant improvements.

As one can see from the foregoing, the understanding of the term logistics has evolved. Today, we mainly seen its broad meaning which includes all logistics activities associated with the physical movement of goods in the upstream (supply) and downstream segment (sales), and managing relationships with suppliers and customers. Logistics involves processes of material and product flows which are entering the company, moving into production or distribution processes and all output flows of goods from the company (Johnson et al, 1999).

LOGISTICS MANAGEMENT AND SUPPLY CHAIN

Some authors look at the logistics and supply chain as synonyms, because of promoting the same idea - the right product, at the right time and place, in proper condition and at affordable costs (Ballou, 2004), or make a minor difference between them. Today, the authors who make a clear distinction between the two terms are in the majority and we will present conclusions of some of them. According to Cooper et al (1997), logistics is concerned with materials and their flow within a single enterprise, and supply chain is the integration of all business processes along the supply chain. They state that successful supply chain is measured not only with the degree of integration of logistics activities within a supply chain, but also with a degree of integration of key business

activities and processes at the level of the entire supply flow. Christopher (2005) defines logistics management as a process of strategic management of procurement, transport materials and components needed for production, and storage and distribution of finished products through marketing channels in a way that increase profits through effective system of orders. The term of supply chain management involves connection and coordination between all processes of company and other entities that operate within a supply chain. Compared to logistics, supply chain has broader meaning and stresses the importance of the relationship between companies and their impact on the elements and processes of the external environment. Therefore, the difference between logistics and supply chain has strategic-operational or function-procedural nature.

CSCMP defined logistics management as a part of supply chain management, which includes operational activities of transportation, warehousing, material handling, delivery, creating logistics network, inventory management, planning supply and demand at the level of a company and managing strategies for external acquiring (Milanović-Golubović, 2005). Supply chain, on the other hand, represents a network of organizations involved, with upstream and downstream connections, in different processes and activities that produce value in the form of products or services directed towards final user or consumer (Rogers and Tibben-Lembke, 2005). It can be said that the logistics management includes management of product flows in front, behind and within a single company, while the concept of supply chain management considers all aspects of the supply chain within a distribution channel (Božić and Aćimović, 2010). From the mentioned and many other definitions can be concluded that logistics management is actually part of the supply chain, which consists of three main processes:

- *the procurement of raw materials, their management and storage,*
- *process management and disposal of materials within the production flow*
- *process of storing final products and their distribution to the final users.*

INTEGRATED LOGISTICS

Logistics activities aim to ensure the flow of materials, information and energy. Ballou (2004) suggested that all logistics activities should be divided into two major subgroups: primary (transport, resupply, ordering) and supporting activities (storage, material handling, packaging, production organization, IT support). Basic logistics activities are related to the movement of goods through the distribution channels, such as transportation, inventory management, material handling, etc. Supporting activities are moving through the distribution channel and establishing waiting time, availability and selection of methods for provide services. When these two parts of logistics merge, they became an integrated logistics. Arthur D. Little (1991) defined integrated logistics as process of forecasting customers needs and desires, raising capital, materials, people, technology and information needed to fulfill those needs and desires, optimizing production networks of goods or services in order to meet customer demands, and use of the network in order to meet the customer requirements within the time limit. Based on the definition, it can be concluded that integrated logistics consists inbound logistics (movement of products to businesses), the logistics of the company (movement of products within the company) and outbound logistics (movement of products from the company to the consumer). Each of these relations is going on with realization of five primary activities of logistics: transportation, warehousing, inventory, management of materials and information.

The concept of integrated logistics was developed rapidly and it refers to managing different activities as one integrated system. Although initial logistics activities were scattered throughout the company, over time the importance of logistics were recognized, so their activities were reorganized in management of materials and physical distribution. Then the companies realized the necessity of controlling the flows of goods and services, so they integrate all logistics activities into one system. Perception of logistics, almost exclusively associated with the transport and storage, was changed, and concept of integrated logistics, which includes a continuous flow of product through the distribution channel to the final user, appeared (Bloomberg et al, 2006).

Accepting the concept of integrated logistics, company achieves optimal customer services, while minimizing costs and making profits at the same time, directly affects to the efficiency and accuracy of materials procurement and product delivery. Therefore, the essence of logistics is in integrated approach to all its constituent activities: materials handling, customer services, logistic communications, inventory management, warehousing, transportation, and determining the optimal location of factories and warehouses. Effects achieved by integration of logistics activities are: an improved information relationship between storages of different levels, enabled clearer understanding of all relevant factors that influence on making complex management decisions, reduced level of inventory in warehouses due to the faster, more frequent and reliable transport implementation, reduced time of realization of activities related to customer requirements (shortened interval of forecasting and greater accuracy of forecast results), increased quality of services and lowered total cost due to joint monitoring of transportation and storage activities, optimization of storage location, and possibility to implement more complex analysis.

CONCLUSION

In this work we tried to define the concept of logistics, clarify evolutionary stages in its development, from the original dispersed activities, through their functional and internal integration, to external integration, i.e. integrated logistics. We also reviewed on the relationship between logistics and supply chain management, and finally pointed out the significance of the effects achieved by integration of logistics activities.

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Z-SCORE MODEL OF ANALYSIS

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ABSTRACT

Every year in the United States approximately 1% of all companies declare bankruptcy. As a result of an attempt to define the factors that lead to a business bankruptcy, there have been a large number of scientific papers dealing with this problem over the last few decades. A number of techniques and models for business failure prediction have also been developed in order to implement preventive measures to avoid the negative consequences of failure at the level of businesses and the economy as a whole. In this context, the *Z-score* model is the most popular model in this field in the world. It has served as the inspiration and basis for a number of authors to develop their own models of analysis using the same statistical techniques. This paper presents the most popular model for the prediction of business failures of companies, the so-called *Z-score* model of analysis.

Keywords: Z-score, business failure, bankruptcy, ratio indicators, multipliers.

INTRODUCTION

The interest in empirical research of business failures dates back to the 1980s. Until then, research was mainly focused on the survival and growth of businesses. However, it should be noted that empirical studies of business failure are far more complex than studies of successful businesses. It should also be noted that business failure and liquidation are not synonymous, meaning that the two terms cannot be equated. Namely, the approach to defining business failure depends on the perspective of observation. From the economic point of view, failure is a situation in which the rate of return on invested capital is continually decreasing. Seen from a legal point of view, failure is equated with formal bankruptcy. However, a business may be relatively unsuccessful compared to the competition, but that does not mean that the business will go into liquidation. For example, a small private business, whose shares are not quoted on the stock exchange, generate limited profits and growth lower than the average of the branch, but the owners of these businesses are satisfied and operate as long as the company is solvent. Therefore, there is no generally accepted definition of business failure, but it certainly ranges from the inability to realize income from the invested capital to the legal bankruptcy followed by liquidation of the company.

The research in the area of business failure prediction has permanently attracted the attention of many theorists and practitioners in the last few decades. Consequently, a number of techniques and models to predict the business failure of an enterprise have originated. However, the most famous model is the Altman Z-score model of analysis. Namely, a professor at New York University, Edward Altman was the first to successfully apply a statistical model to predict the bankruptcy of a business. His Z-score model is the most popular model in this field in the world. In this regard, the initial hypothesis of the Altman model was that a limited number of economic categories predominantly affect the financial condition of a business, and that by their analysis and placing in the logical relationships by ratio numbers, one could come to know whether and to what extent the

specific business might be having financial problems. Since his model was tasked primarily to detect the occurrence of the risks of bankruptcy of businesses, mainly those ratio numbers that indicate solvency, liquidity and profitability were taken into account.

In defining the model, Altman tested 22 ratio numbers using statistical techniques. In addition, testing was conducted on a sample of 66 companies, of which 33 companies that had filed for bankruptcy and 33 successful enterprises. The testing was repeated successively, and each time he omitted the indicator that proved the weakest in predicting bankruptcy. The application of such "*multiple discriminate*" techniques aimed to assign appropriate weights to ratio indices that contribute the most to distinguishing between successful businesses and those businesses that had filed for bankruptcy. The result of the Altman's test defined five relevant relationships (indicators) and calculated the index known as the Z-score, which is used to predict the potential failure a business. Therefore, of the 22 initial financial relationships, Altman eventually chose 5 relationships (indicators).

THE FORM OF THE Z-SCORE MODEL

In accordance with the above mentioned, it should be noted that the Z-score model of analysis is based on the weighted sum of several individual indicators. Specifically, based on a weighted sum of several individual indicators the financial health of a business is determined. In addition, a larger sum means better financial stability of the business, and vice versa, smaller sum warns of possible financial difficulties. The results of the Z-score model of analysis deserve special attention, as the data that this model uses have a useful and analytical value. This model is based on the definition of the five indicators, or variables of a discriminant function. Accordingly, the original Altman Z-score index can be calculated using the function which has the following main components:

$$Z = 1.2 * X_1 + 1.4 * X_2 + 3.3 * X_3 + 0.6 * X_4 + 1.0 * X_5$$

where:

X_1 = Working Capital to Total Assets ratio;

X_2 = Retained Earnings to Total Assets ratio;

X_3 = Earnings Before Interest and Taxes to Total Assets ratio;

X_4 = Market Value of Equity to Total Liabilities ratio;

X_5 = Sales to Total Assets ratio.

$X_1 = \text{Working Capital} / \text{Total Assets}$. Working capital is also known as the net working capital and it presents the calculated value which is often used in assessing the creditworthiness of businesses. In addition, a positive and high value of working capital is preferable because it suggests that much of the working capital is financed through long-term sources of funding. This ratio, which is used rather seldom, proved to be an excellent indicator of financial difficulties a business. It is classified among the indicators of liquidity of businesses. When analyzing the financial statements, in the balance sheet, the position of current liabilities is subtracted from the position of current assets, which means that this measure can be obtained on the basis of the following form:

$$X_1 = \text{Current assets} - \text{Current liabilities} / \text{Total assets}$$

$X_2 = \text{Retained Earnings} / \text{Total Assets}$. Retained earnings are in fact undistributed income. However, if the balance sheet shows loss, then the difference between the undistributed income and the loss is taken. This difference can also be negative, which occurs when the undistributed income is smaller than the loss. Therefore, for the higher value of this ratio, positive business operations are necessary. This ratio is classified as the indicator of profitability, except that one should be considering the age of the enterprise, because if the enterprise is young, the value of the denominator may reduce the accuracy of this ratio indicator. In financial statement analysis, this indicator can be obtained on the basis of the following form:

$$X_2 = \text{Undistributed income} / \text{Total assets}$$

$X_3 = \text{Earnings Before Interest and Taxes} / \text{Total Assets}$. The earnings before interest and taxes present a category which well reflects the earning capacity of a business. It is obtained when finance costs are added to the position of earnings before taxes from the income statement, which means that this category is in fact the gross profit increased for financial costs. However, if instead of the gross income there is a loss, then the loss is subtracted from the financial costs. In addition, this result can be negative which will happen when the loss is greater than the financial costs. This ratio is one of the most commonly used indicators. It is classified among the indicators of corporate profitability. In financial statement analysis, this ratio can be obtained on the basis of the following form:

$$X_3 = \text{Net income} + \text{Interest charges} + \text{Taxcharges} / \text{Total assets}$$

$X_4 = \text{Market Value of Equity} / \text{Total Liabilities}$. In corporate enterprises whose shares are sold on the stock exchange, the market value of equity is equal to the product of the market value of their shares on the stock exchange recorded on the balance date, and the number of shares held by shareholders. In corporate enterprises whose shares are not sold on the stock market, as with all other businesses, instead of the market value of equity, the book value of equity is taken. In addition, total liabilities include all liabilities of the business on the balance date. This ratio is classified among the indicators of solvency, since by putting the market value of equity to the book value of liabilities ratio we get insight into the sources of financing of a business. In financial statement analysis, this ratio can be obtained on the basis of the following form:

$$X_4 = \text{Market value of equity} / \text{Current liabilities}$$

$X_5 = \text{Sales} / \text{Total Assets}$. The sales include income from the sale of goods, products and services, while the total assets are equal to the sum of assets minus excess capital loss stated in the assets. This ratio shows the business' ability to place its products and services in the market. By putting the sales to the total assets of the company ratio, one gets the real picture of the efficiency of the company, which is why this indicator is classified among the indicators of efficiency. In financial statement analysis, this indicator can be obtained on the basis of the following form:

$$X_5 = \text{Sales proceeds} / \text{Total assets}$$

THE APPLICATION OF THE Z-SCORE MODEL

Based on a weighted sum of the indicators that we have previously explained, the financial condition of a specific business is estimated. Larger sum means greater financial stability of the enterprise, while in contrast, smaller sum warns of financial problems.

On the basis of empirical research, and the results obtained in the original Z-score model, the classification of businesses is carried out as follows:

- a) If $Z \geq 3.0$ this means that the financial situation of the business is stable and that it is not threatened with bankruptcy.
- b) If $Z \leq 1.8$ this means that the financial situation of the business is unstable and it is threatened with bankruptcy.
- c) If $Z \leq 1.8$ or ≥ 3.0 , i.e. if Z is between 1.8 and 3.0 this means that the business is in the so-called "gray area" and that it is likely that its financial situation is unfavorable.

As we can see, Altman believes that the threshold is 1.8, which means that the business whose Z-score index is below this value will go bankrupt, while, at the same time, the upper border value is 3.0, which means that businesses with Z-score index above this value will not go bankrupt. In addition, it should be noted that the according to Altman's formula, businesses with a strong asset base will have a high Z-score, although the business operations may be declining. The Altman Z-score is a multivariate model for the prediction of bankruptcy of companies. It can be used as a model to identify the financial health of a business in relation to its profitability, productivity,

market value, and managerial skills, from the point of view of being able to maintain competitiveness of businesses. Based on empirical estimates of analysts, the application of Z-score model proved to be accurate in predicting business failure in about 85% of cases in the first year and in 70% of cases in the second year, before the announcement of bankruptcy. However, Z-score is the most appropriate for use in the first two years before the bankruptcy of a business, when experienced financial analysts can clearly identify if businesses are faced with significant difficulties and problems of declining business operations.

The Z-score model of analysis can find practical application in any analysis of the financial condition of a business, from credit risk analysis and security requests for the approval of funds, investment risk in buying part or the whole business, credit rating of the business, to the compliance reviews, i.e. *going concern* assumption. Consequently, the possible beneficiaries of Z-score model may be: banks, investment funds, potential buyers of shares of enterprises, enterprise suppliers, its strategic partners, credit rating agencies, auditing firms, etc. Of course, there is a group of internal users of the results of this model who are vitally interested in the fate of the business such as employees, owners, management and others. All this suggests that the list of potential users of the results of the Z-score model cannot be easily completed. Additionally, it should be borne in mind that the fate of bankruptcy does not miss even the largest enterprises as well as systems of particular importance for the whole economy. Therefore, government officials may be the potential candidates for the results of the Z-score model, as well as the general public.

CALCULATION OF THE Z-SCORE INDEX

Based on the aforementioned, it can be seen that Edward Altman used the multiple discriminant analysis to predict the bankruptcy of a business. Out of the 22 financial indicators, he chose 5 which, according to him, were representative, i.e. the best for predicting bankruptcy. Based on the 5 selected indicators, Altman formulated the Z-score model which could predict bankruptcy of a business for the period 1-5 years with a certain probability. The study involved businesses in the same industry that had gone bankrupt and those which had not. Additionally, the financial statements of these companies were taken for the same year and the year prior to bankruptcy for businesses that had gone bankrupt. For this reason, some writers and analysts popularly call the Z-test "the predictor of bankruptcy" since the test evaluates the financial condition of a business and the likelihood of its liquidation. However, given the fact that the Z-score model is used not only to assess the business failure of private businesses, but public enterprises as well, we believe that the popular name "the predictor of bankruptcy" is not the most appropriate, since in our domicile conditions the bankruptcy of public enterprises is highly unlikely, regardless of their financial situation.

The calculation of the Z-score index is performed in the following four steps:

1. Five ratio numbers are calculated;
2. Obtained ratio numbers are multiplied by predetermined multipliers;
3. Multiplied ratio numbers are added together
4. Obtained sum of multiplied ratio numbers is compared to the previously determined standard.

Observing everything that has been previously mentioned, it is possible to present the practical application of the Z-score model of analysis on a hypothetical example of two enterprises (A and B). In doing so, we must bear in mind the above mentioned values of indicators of the Z-score model, on the one hand, and the data from the balance sheets and income statements of the hypothetical enterprises, on the other hand. Accordingly, one can calculate the values of the Z-score indexes of both enterprises (A and B). In this regard, the application of the Altman Z-score model is given in Table 1.

Table 1: Z-score model of analysis

Ratio indicators	Enterprise "A"	Enterprise "B"
X ₁ = Working Capital / Total Assets	8.573 / 290.078 = 0,0296	37.039 / 269.213 = 0,1376
X ₂ = Retained Earnings / Total Assets	120.586 / 290.078 = 0,4157	45.132 / 269.213 = 0,1676
X ₃ = Earnings Before Interest and Taxes / Total Assets	28.037 / 290.078 = 0,0967	9.432 / 269.213 = 0,0350
X ₄ = Market Value of Equity / Total Liabilities	239.494 / 50.584 = 4,7346	204.263 / 64.629 = 3,1605
X ₅ = Sales / Total Assets	297.069 / 290.078 = 1,0241	223.393 / 269.213 = 0,8298

Enterprise A:

$$Z = 1,2 \times 0,0296 + 1,4 \times 0,4157 + 3,3 \times 0,0967 + 0,6 \times 4,7346 + 1,0 \times 1,0241$$

$$Z = 0,0355 + 0,5820 + 0,3191 + 2,8408 + 1,0241$$

$$Z = 4,8015$$

Enterprise B:

$$Z = 1,2 \times 0,1376 + 1,4 \times 0,1676 + 3,3 \times 0,0350 + 0,6 \times 3,1605 + 0,0 \times 0,8298$$

$$Z = 0,1651 + 0,2346 + 0,1155 + 1,8963 + 0,8298$$

$$Z = 2,9111$$

Based on the obtained results of the Z-score model of analysis one can draw certain conclusions about the financial stability of the enterprises "A" and "B". They are reflected in the following:

Enterprise "A" has the Z-score of 4.8015 which is higher than 3.0, which is the lowest score at which an enterprise can be considered financially stable. Accordingly, it is considered that this company has a good credit performance, i.e. good creditworthiness.

Enterprise "B" has a Z-score of 2.9111 which is lower than 3.0, but also higher than 1.8. This means that the enterprise operates in the "gray" (risk) area, and for this reason it has minimal credit performance, i.e. minimal creditworthiness.

If the evaluation of creditworthiness by using the Z-score model of analysis shows that an enterprise's solvency is not satisfactory, then it is necessary to make projections of the balance sheet and income statement for the next five years, in order to obtain a relatively reliable insight regarding the question: will the enterprise and when have a relatively good business performance? In this regard, practical experience has shown that some businesses managed to improve their business performances if in the following period they managed to achieve projections of the balance sheet and income statement, and if they did not make dividend payments from the net income.

CONCLUSION

Given the fact that the from the construction of the Z-score model to its actual testing, more than 30 years had passed, it could be said that the Z-score model for bankruptcy prediction of a business deserves special attention, since it has confirmed great functional and analytical value of the accounting data it uses. In this regard, it should be said that although the ratio analysis which this model uses was already a well-known method of analysis, the applied multidisciplinary approach in construction of the Z-score model still proved to be successful, which de facto signaled a broader range of applications of this approach in many other areas of economic and financial analysis. The Z-score model of prediction of business failure of an enterprise analyzes all significant aspects of the financial situation of the company: liquidity, profitability, activity and financial structure. Therefore, it enables assessment of both current as well as future financial health of the company. However, the Z-score has some drawbacks, mainly related to the fact that it is not immune to

accounting mistakes and that it does not take into account indicators of cash flow. Moreover, it is not appropriate for the analysis of new businesses, since these businesses typically do not have retained earnings. Consequently, the Z-score model of analysis for the prediction of business failure, i.e. bankruptcy of enterprises, should not be taken as a substitute for detailed financial analysis. Namely, this model is best used for quick assessment of the financial situation of businesses, and if the Z-test indicates the presence of potential difficulties in the business operations of an enterprise, then it is advisable to conduct a detailed financial analysis of the company. This practically means that the results of the Z-score model of analysis should still be taken with caution, above all, bearing in mind the important constraints in the implementation of the model. Therefore, it can be concluded that the Z-score is an excellent technique for a synthetic insight into the financial health of an enterprise, but in the contemporary conditions Z-score still cannot be a reliable means of forecasting the business failures of enterprises. The model points to the problems in business operations of enterprises, but it is only indicative, and for a more reliable diagnosis of the financial health of an enterprise it is necessary to make a series of additional tests. An accurate and reliable method for the prediction of business failures of enterprises has still not been found.

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THE IMPORTANCE OF MONITORING AND CONTROL IN REALIZATION MAINTENANCE OF RAILWAY VEHICLES

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ABSTRACT

Today, with the development of contemporary information technology, computers have the primary function in monitoring and control of processes realizations of any project. An important segment for efficiency each business process, i.e. projects is ably managing in real-time during the process execution of the project and only thus can be achieved that realization of project maintain along the route according to the plan. This paper analyzes benefits of project management software in terms of monitoring and controlling throughout their duration. In the paper, the used results, upon completion simulation of IT support management maintenance railway vehicles using software tool MS Project.

Keywords: project management, monitoring and control, maintenance railway vehicles.

INTRODUCTION

Observations in this paper are the consequence of a five-year research of the project management, for the first time publicly set forth at the conference "Yu Info 2013" entitled - Simulation of IT support management maintenance railway vehicles using software tool MS Project. The goal of these considerations was to determine if implementing projects management software would improve the effectiveness in workshops for maintenance railway vehicles. The key strengths indicate that project management software is particularly useful in the planning phase, including creation of a single database, estimation and planning resource, scheduling and cost control, resource allocation, internal communications within the project team and external communications outside the project team, monitoring of activities, decision-making etc.

However, in this paper the topic will be reduced to only two key aspects. Specifically, the focus of this paper is to demonstrate the importance of monitoring and control throughout of the process of management maintenance of railway vehicles. Monitoring implies – collecting, recording, and reporting information concerning project performance that project participants and others stakeholders jelly use. Controlling represents – use of data based on monitoring for insight actual performance to planned targets. On this basis, project managers, when needed, usually introduce corrective measures to eliminate of eventual disorders, so that overall project remains on track.

THE BASIC NOTIONS OF MONITORING AND CONTROL ON REALIZATION OF WORKS

The management project functionality enables managers to plan, implement, monitoring and control of the business processes, or projects. It supports structuring, scheduling, as well as operational and financial planning and execution. Monitoring and control of the realization projects can be defined as the systematic and continuous collecting, analyzing and using of information for the purpose of management control and decision-making. Monitoring and control are an integral part of the whole project management. They provide information by which management can identify and solve implementation problems, and assess progress in relation to what was originally planned.

There are more steps in the drafting of a monitoring and control system, and they are:

- Analysis objectives,
- Review implementation procedures,
- Review indicators,
- Design report formats,
- Prepare an implementation plan for the monitoring and control system.

The monitoring and control as a key part of in system of maintenance the rolling stock, refers to the following notions:

- Planning of the process implies the scope works in maintaining railway vehicles, according to existing standards and normative,
- Plans are developed to accomplish the successful outcomes in maintaining railway vehicles,
- Executing of the process implies that accomplish the necessary work in maintaining railway vehicles and satisfy the set objectives,
- Closing of the process implies that the finalize individual activities, or completing phase or that ultimately the close everything required works in maintaining of railway vehicles,
- Monitoring and controlling of the process involve tracking, reviewing, and controlling the progress and performance of the activities, identify required changes to the management plan in maintaining of railway vehicles, as well as taking corrective measure,
- Process in maintaining rail vehicles when they begin, must be completed. And this implies regularly and consistently monitoring through the activities from initiation to closure. Hence, monitoring and control is a set of ongoing activities that span the entire process in maintaining rail vehicles.

Actually, it means that the definition of success for maintaining railway vehicles, in relation to expectations, implies the need for some sort of route or plan, thereby giving responses to questions from the aspect of who, what, when, where, how, and why. It follows, that monitoring and control by means of the project management the essential key for successful realization of the project maintaining railway vehicles. The monitoring and control is the process of tracking, reviewing and regulating of the routes to meet the objectives according to the project management plans. Monitoring and control in maintaining of railway vehicles includes more notions at once, as we can see in Figure 1.

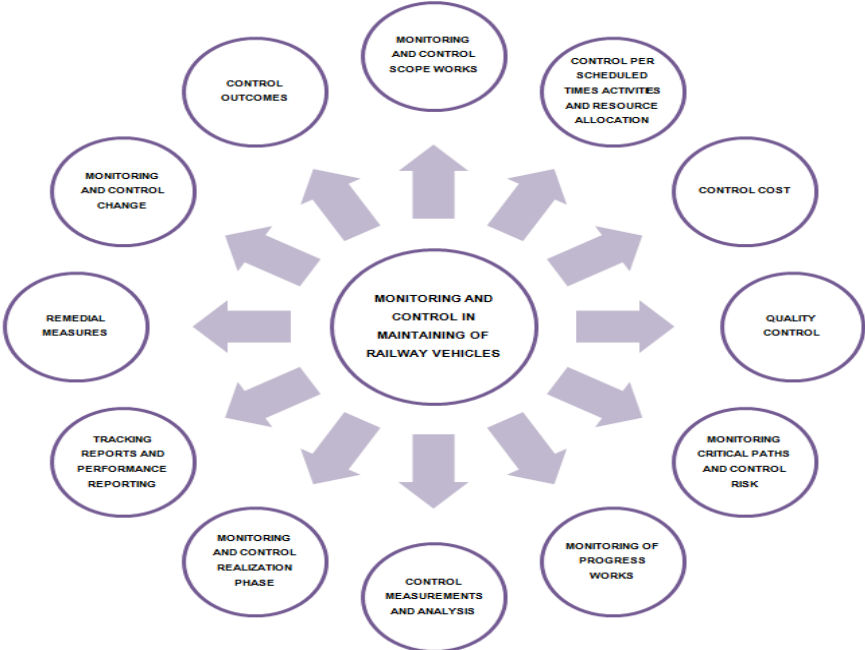


Figure 1: The graphical view of notions monitoring and control in process maintenance

THE FEATURES OF PROJECT MANAGEMENT FOR MONITORING AND CONTROL

Every management system in any business process, i.e. in realization of the project focuses on the time, costs and scope of works. These are key details of the project. For achieving of good results it is necessary to establish an outstanding system to monitor and control realization project. The with their software tools MS Project in terms monitoring and control realization of projects represents one of the best solutions. The key advantages of monitoring and control in realization of the project are measurements and comparisons, to achieve regularly and consistently identifying the variances from the plan and scope of works. According to the contents text PMBOK Notes 2, the monitoring and control includes:

- Controlling changes and recommending preventive action in anticipation of possible problems,
- Monitoring the ongoing activities according to plan management and the performance baseline,
- Influencing the factors that could circumvent integrated change control.

The solution MS Project is a very good software tool for helping in managing process of work during the regular repair wagons. A convenient way to show progress of works is options "Tracking Gantt". On Figure 2, we see application of "Tracking Gantt" in the example of repairs wagons series Eas. In him, we can see whether tasks are started or finished, or we can see their percentage of completeness and much more. For example: Out this option, we can make reports the completed works during of the repair wagons. About the details usage "Tracking Gantt" options, there were more words at the "Yu Info 2013".

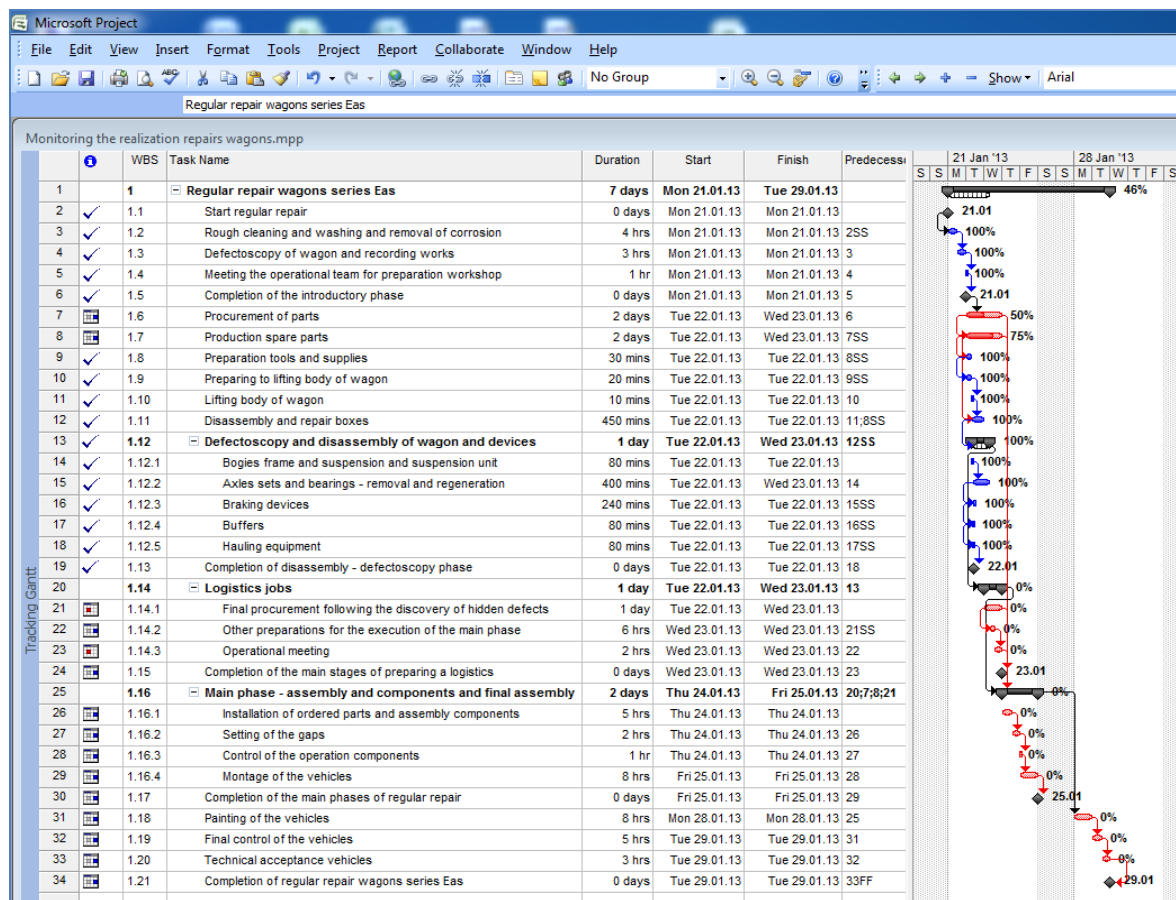


Figure 2: Tracking Gantt view of regular repair wagon series Eas

Managers in the workshop for repairing wagons should checking situation of works very frequently, of course, depending on the extent and duration of repair wagons, on the basis planned of the budget and activities. Nearly all data should be of an operational nature for internal use by the project team, but also for external use with stakeholders. A few selected items, and plus aggregated data on the resources involved in the maintenance of railway vehicles and they are key indicators for tracking reports and performance reporting. In Figure 3, we see the existing six options for reports. Details for use of these options were described in the Microsoft Project 2007 Tutorial.

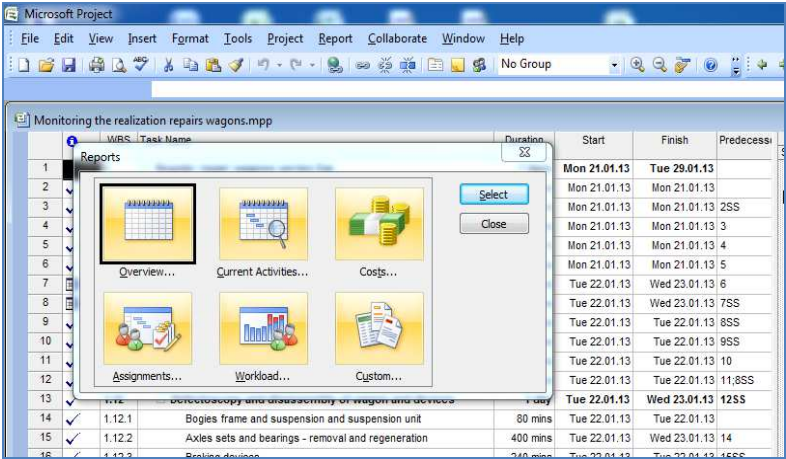


Figure 3: Options for Reports concerning of repair wagons

"Cost Reports" in project is a very effective means of monitoring and control the fiscal-situation of a project. By using these reports, project manager one can quickly and accurately to concentrate on the pressing cost issues and catch potential problems early. As shown in the Figure 4, "Cost reports" offer the possibility of five categories for reviewing project costs and budgets.

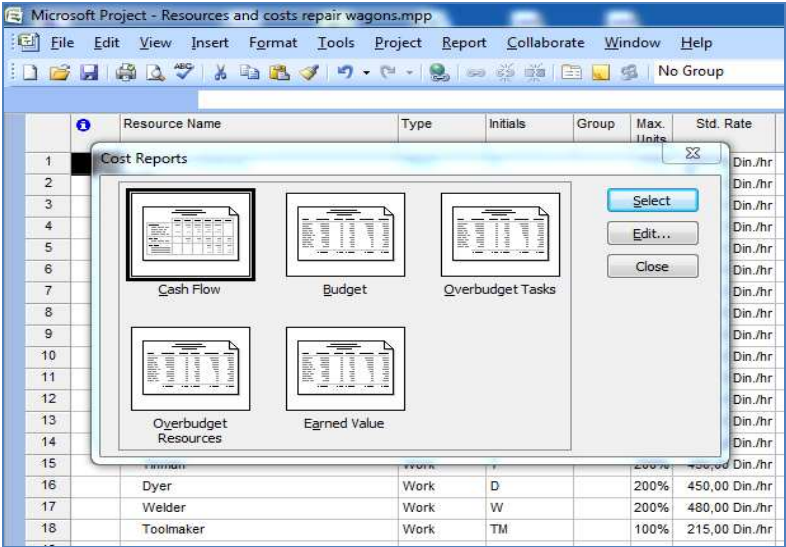


Figure 4: "Cost Reports" concerning of repair wagons

Monitoring and control the quite often focus on the critical paths. By its very nature the critical path almost contains the entire tasks project, which can affect the completion date of the project. These are usually the longer groups of tasks that follow each other. In this case it is manufacture and purchases spare parts of wagons.

In the project it is possible for there to be more than one critical path. But, for better project control it is best to retain the project schedule to one critical path. The project management team must

make effort on keeping the critical paths on track. If this is the case the overall project will remain on track. In project management team must be wary that do not spend much effort on the critical path, because in that case, other tasks do not have good monitoring and control.

The "Gantt Chart" is a formatted to display the critical paths, in red color, and it is easier for tracking execution tasks. The "Gantt Chart" Wizard toolbar button forms the critical path automatically. Also, the critical path can be seen in the Network Diagram view, and it is a chart showing all tasks and task dependencies the relationships between tasks. This option is suitable for creating and fine adjustments the schedules in a flow chart format. Tasks can be created, resources assigned, tasks linked, etc., in the same way as in the "Gantt-Chart", as we can see in Figure 5.

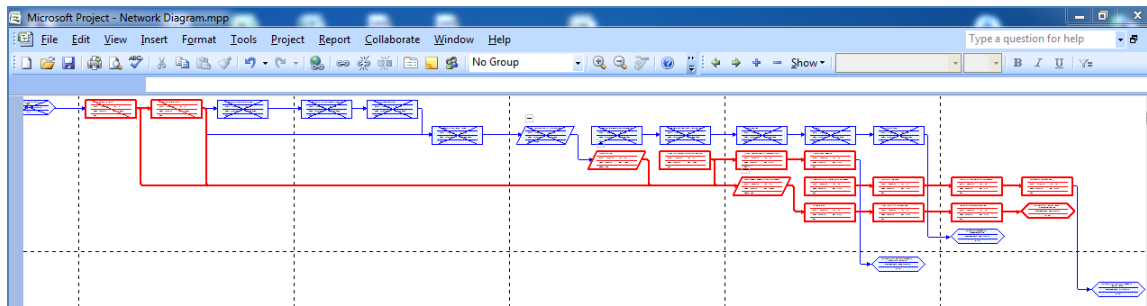


Figure 5: Network Diagram view of regular repair wagon series Eas

THE RELIABILITY IN MONITORING AND CONTROL REALIZATIONS OF MAINTENANCE

The key step for each project is monitoring and control the schedules. This step is performed throughout the life of the project and he harmonizes the work result lines up with the schedule plan. Schedule control require the use of progress reporting, schedule change control systems, such as the use of project change requests, performance management, and variance analysis to determine if additional action can agree schedule with the plan.

However, to get back to terrain of the repair wagons. When ready project for repair wagons, as well as required financial and material resources, only then the most important part begins, and that is realization. It is very rare that the repair to go exactly according to plan. Project management hence has the complex task of establishing controls over the process repair, and that stay on track towards the achievement of its objectives. This is done through monitoring and control, which can be defined as systematic collection, analyzing and use of information for management control and decision-making before, during and post each phase of the projects repair wagons.

Monitoring and control are not reliable only based on the data collected. Information must be in the right form, on right place and on time. Only then, can timely and appropriate to be bringing decision for solution problems and ensure that the project to be successfully finalized. The equally, communications between the project team and stakeholders are part of overall accountability in the realization of each project repair wagons. They are essential to process maintenance wagons, respectively to timely inform stakeholder of issues that may come up during the realization of repair wagons.

CONCLUSION

The IT can be perceived as a means automatization of business management, easier and faster data processing, transferring and saving. The monitoring data are processed as information in electronic form so as to enable decision timely making. The software project management for support in decisions one can applied in the railroad transport system in order to improve its quality.

This paper shows options of the MS Project that can be used for monitoring and control of realization activities of the maintenance railway vehicles in the Railways of Serbia. Application of the MS Projects it might improve the quality of work, lessen the cost and increase availability of railway vehicles.

This approach with its possibilities includes use: of new technologies in sector maintenance railway vehicles, computer equipments for monitoring and control activities in maintenance and of modern diagnostic devices for more efficient organization of the maintenance. With all the other improvements, Railway of Serbia can offer its transport advantages for potential users and finally, finds financial benefit. It is necessary that "Serbian Railways" Joint-Stock Company Belgrade one day commence the introducing modern technologies and catch up with successful European Railways.

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Session F: ECONOMY

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Session Editor's Preface

Modern business is affected by the globalization process of economic flows, rapid technological development, but also by the effects of global economic crisis. Business conditions have changed in comparison to ten years ago, the global competitors come from newly industrialized countries and competition is becoming more and more intense. Neoliberal economics, which as a practice had been dominated by the early eighties of the twentieth century, failed. Unhealthy development of international financial system certainly was the crucial factor in establishing world economic crisis. On the other hand, it is believed that the industrial nations have to cope with more dangerous economic mega – trends, such as increase of energy and raw materials prices (this trend, despite some fluctuations will continue for the next ten years, as newly industrialized countries want resources for themselves), long – term decline in industrial products prices which will decrease the purchasing power of the industrialized countries, aging population and declining birth rates in industrial nations.

Transitional countries are also affected by economic crisis, primarily arising from investors' withdrawal, or freezing current investments. Otherwise, the countries in transition are in a worse economic position than other countries, due to the fact that they are in the process of restructuring the economy, and transitional recession occurs as a result of this process.

*The paper titled “**The determination of the selection factors of BPMS for the financial statements audit process**” presents the factors and steps of selection of appropriate BPMS for the financial statement audit process. Business process management software enables the integration and implementation of activities according to defined routing rules, automation of business activities, monitoring and measuring the performance of the business process.*

*Next paper “**Analysis driving and limiting factors in investment decisions – the case of Serbian**” is aimed to analyze the driving and limiting factors that are present on the Serbian market to attract foreign investment. The theoretical and practical analysis would serve to draw conclusions about the measures and conditions that Serbia should apply, that meet in order to be more competitive in relation to other countries in the region to attract foreign investment.*

*The paper “**Analysis of foreign exchange risk assessment work for credit of all corporate entities**”, deals with risk management questions. Sector Risk Management and also its credit analysis department for large, medium and small companies, due to the analysis of the financial statements in its comments require specific comments relating to the exposure arising from FX risk.*

*In the paper titled “**Management of commercial bank's sustainability: methodological aspects**” the author defines the commercial bank's sustainability management and identifies its species. Also, the author offers the methodological approach to create the commercial bank's management system sustainability and highlights the elements of this system. Provisions on features of management of commercial bank's sustainability in terms of its normal operation and during the crisis are substantial.*

*“**Pension funds in function to strengthen corporate governance in Serbia**” emphasizes some of the following issues. Unstable political situation in Serbia is not favorable for almost anyone, including capital markets, and consequently Pension Funds. Bearing in mind the difficulties faced by voluntary pension funds in Serbia, as opposed to pension funds abroad, the situation is not so bad. The regulatory framework is complete, infrastructure of pension funds is reinforced, and however, trends in the market are still inadequate: since 2007. The stock market is in constant decline, the risk monitors risk. If we wish to make conditions for pension funds to conduct their*

activities, as in developed countries, pension funds must achieve much higher returns in the coming years and increase their assets on a significant proportion in the financial system of Serbia. The justification of this research is the fact that the voluntary pension funds should be one of the generators of the development of the domestic economy and should contribute to rise of the competitiveness of domestic companies so they will be able to join the global trends of modern business.

In the paper titled **“Competitiveness in Serbian economy in the period of crisis”**, the authors analyze competitive environment on domestic market. Foreign direct investments are the main mechanism of globalization of the world economy. They are primarily an economic phenomenon, based on the assumption, and proved in practice that their optimal actions contribute to the overall economic growth. The presence and size of certain factors foreign investment depends on the type of foreign investment and capital importing countries open to receive foreign capital. Serbia's strategic goal is to increase their competitiveness and to join the group of the most competitive European countries. To achieve competitiveness it is necessary to strengthen the key competitiveness factors, primarily to establish a stimulating investment climate for investments, primarily in education and infrastructure and improving the strategic management and leadership.

In the paper **“Capital adequacy indicator of the relative credit standing of banks in Serbia”**, the subject of research is an analysis, in theoretical and practical terms, of roles and functions of capital in the banking and financial management of the business. The paper presents the function of providing capital funds for the establishment of new institutions, creating the resources for future growth and expansion, providing a buffer of protection against risks and exhilarating confidence of the population in the long-term viability and survival of the bank.

The paper **“Leasing – a contemporary form of enterprise financing”**, deals with leasing as a form of international business cooperation. Contemporary economic practices are increasingly using leasing arrangements as a modern form of financing of movable and immovable capital goods. Similarly, the aim of this paper is to highlight the growing importance of leasing as a contemporary form of enterprise financing in the market conditions, as well as its advantages and limitations.

“Credit risk of banks in the financing of investment”, presents the alternative financing methods with a focus on banks, and considers the key points in the analysis of credit risks in banks by financing investment projects. In an uncertain business environment for each investment project all critical success factors of the project should be taken into consideration. If all parameters of the investment project are satisfied, the selection of the financing method of the investment can be a critical success factor. There are various financing alternatives, including direct investment, bank loans, loans from international development banks, financial instruments on capital markets etc. If financing of the investment involves domicile or foreign banks, it is necessary, first of all, to examine whether it can bear the burden of financing the project.

The paper titled **“Importance of cost-benefit analysis in investment management”** is aimed to point out the basic elements of the cost-benefit methodology for the assessment of investment projects. The effects of an investment project can be assessed and analyzed both from the aspect of an enterprise and from the aspect of broader social community. Enterprises as investors are most often interested only in direct economic effects of investments which can be measured with sufficient exactness and expressed in quantitative terms, whereas they are usually not interested in indirect economic effects which are harder to measure and express quantitatively. However, one should bear in mind that some investments are such that must be considered and assessed, first of all, from the broader aspect (e.g. in transportation system, energetic and alike). In that context, cost-benefit analysis presents the method used for making investment decisions which influence the development of broader social community – certain region, economy, society as a whole.

*The paper “**Forfeiting as a contemporary form of enterprise financing**” highlights the importance of forfeiting as a modern form of enterprise financing, as well as its advantages and limitations. Forfeiting is related to the purchase of long-term outstanding receivables arising from the delivery of goods and services - mainly in export. Generally, it is a repurchase of long-term and outstanding receivables where the buyer assumes all the risks of collection of receivables from a third party. As a rule, forfeiting organizations set up banks with high financial and investment potential. This allows banks and their forfeiting organizations, with the acceptance of appropriate risk, to achieve much higher profit margins than those that can be achieved through regular credit transactions. On the other hand, forfeiting offers a number of advantages that are not typical for the traditional methods of enterprise financing.*

*In the paper “**Possibility of managing future risks in current global economy**”, the authors analyze the strategic way of facing changes and risks in our current hyper-competitive global economy. The model of Kotelnikov is a new approach to the change management and it enables management to perceive opportunities in the environment and to build its competitiveness on using opportunities in a proper way.*

The papers covered by this session deal with topical issues of contemporary economy that has been burdened by negative effects of the global economic crisis. The presented topics answer some very important questions related to improving competitiveness, economic development of transitional countries, as well as the overall international business.

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MANAGEMENT OF COMMERCIAL BANK'S SUSTAINABILITY: METHODOLOGICAL ASPECTS

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ABSTRACT

World Financial and Economic Crisis of 2008-2009 identified the need to substantiate ways of increasing the sustainability of commercial banks in a dynamically changing environment. This in turn requires efficient and based on a scientific foundation management of their sustainability. This paper substantiates the author's definition of commercial bank's sustainability management and identifies its species. The methodological approach to create the commercial bank's management system sustainability is offered; elements of this system are highlighted. Provisions on features of management of commercial bank's sustainability in terms of its normal operation and during the crisis are substantiated.

Keywords: commercial bank, commercial bank's management system sustainability, principles and mechanism for management of commercial bank's sustainability.

INTRODUCTION

In any studies of Russian and foreign scientist, until recently, commercial banks sustainability wasn't considered as the object of management in the truest sense of this word. That is why in the economic literature there isn't such a definition as "management of commercial banks sustainability." Taking this into account, we believe it is appropriate to propose the following author's definition: management of commercial banks sustainability is a set of activities aimed at achieving the smooth and efficient operation (including development and the achievement of competitive advantage in the banking market) of a credit institution which allow for it to make a high profit in good time as well as to mitigate the threats and (or) the effects of the crisis using the experience to overcome them in the future.

Today management of commercial banks sustainability can be classified according to the following grounds:

1. according to the level (the Global Economic Community, the state, the Central Bank, the shareholders, top management, ordinary performers, public);
2. according to the content (management of commercial bank's sustainability in whole, management of financial sustainability, management of organizational and structural sustainability, management of capital sustainability, management of the market (commercial) sustainability, management of functional sustainability, etc.);
3. according to the coverage of management (management of commercial banks sustainability, management of the group of commercial banks sustainability).

Other classification grounds of management of commercial banks sustainability are similar to classification grounds of management in whole.

Among other things, the management of commercial banks sustainability has specific parameters at the different stages of banks life and the business cycle phases (see Table 1).

Table 1: The main parameters of management of commercial banks sustainability in terms of its normal operations and during the crisis

Key parameters	Management of commercial bank's sustainability:	
	in terms of prosperity (of the economy and/or commercial bank)	during the crisis (in the economy and/or commercial bank's operation)
1	2	3
1. Primary aims	Raising of level of bank's sustainability, increasing of business value, improving of efficiency of bank's operation, increasing of competitive advantage, increasing of clients' number	Achieving a stable state
2. Existing restrictions	Not significant, flexible	Hard (the main limitation is time)
3. Characteristics of the internal environment	Stable	Unstable
4. The result	Full (partial) achievement of aims which were set in front of bank	

However, it should be noted that management of commercial bank's sustainability may only be exercised, if there is a real acting system which is an integral part of the credit institution, the so-called commercial bank's management system sustainability.

THE COMMERCIAL BANK'S MANAGEMENT SYSTEM SUSTAINABILITY AND ITS ELEMENTS

In general, a system is defined as "a set of elements that are in relationships and connections with each other which forms certain integrity, unity (Semenov A., Nabokov V., 2008)." For the purpose of this research, in our view, Glushchenko V.V. and Glushchenko I.I.'s definition from "The study of management systems..." (2004) is more accurate definition, which was adjusted according to the specific problem under our study. Thus, the commercial bank's management system sustainability can be represented as a such system which is intended to impact on the object of management (sustainability of a commercial bank) and, moreover, that transforms this object to the desired state, giving to its parameters and processes certain quantitative or qualitative values and being specific instrumental, normative, functional embodiment of implement technologies for the solutions of the designated problem of management. Like any management system, the commercial bank's management system sustainability includes a number of items. They are:

1. principles of management;
2. aims;
3. tasks;
4. functions of management;
5. main participants;
6. the object;
7. mechanism for management.

Principles are "original assumptions of the theory, the guiding idea, the initial phase of systematization of knowledge, and meaningful generalization based on an analysis of the facts; and the facts, in turn, serve as an ongoing test of the correctness of the principles which were already established (Freidina E., 2008)." In management theory a basic rule of organization of management also is understood as the principle (Freidina E., 2008).

The basic principles of management of commercial bank's sustainability advisable to divide into two groups.

1. General principles: the principle of adaptability, the principle of integrity, the principle of a comprehensive and systematic, flexibility principle, the principle purposefulness, the principle of scientism, the principle of variance, the principle of strict compliance with banking and other legislation, feedback principle, the principle of prediction, the principle of effectiveness.
2. Specific principles: principle of maintaining of reliability and stability, principle of transparency and accountability, the principle of banking risks' balancing.

Agreeing with the opinion of Holnova E.G. (2010), we are going to distinguish else three specific principles of management of commercial bank's sustainability:

- the principle of banking assets and liabilities' balancing;
- the principle of individuality and bank's conformity to the development of the economy;
- the principle of non-use of unfair methods of competition in relation to other financial market participants.

The main goal of management of commercial bank's sustainability is to ensure its long-term sustainability and maintenance of short-term.

Implementation of this goal may be possible due to a decision by a number of tasks:

- creation of the concept of management of commercial bank's sustainability;
- creation of the model (-s) for assessing of commercial bank's sustainability;
- proposal of targeted and critical indicators of commercial bank's sustainability based on the model (-s);
- establishment of an information database for analysis and evaluation of commercial bank's sustainability;
- implementation of an integrated assessment of commercial bank's sustainability and its subspecies;
- identification of indicators and standards of the banking operation which were established by external regulators;
- fulfillment norms of current legislation, internal instructions, and orders;
- preparation of the final judgments and opinions on the commercial bank's sustainability and its subspecies;
- results of such assessment are compared with the target and critical standards;
- promotion of evidence-based recommendations to maintain and improve the bank's sustainability;
- analysis of the effectiveness of management decisions;
- using of advanced and efficient methods of management of commercial bank's sustainability;
- prediction of external and internal conditions of the commercial bank's functioning and anticipating, preventing to reduction and/or loss of commercial bank's sustainability in the future;
- ongoing monitoring and timely restoration of commercial bank's sustainability in case of reducing of its level;
- minimization of losses, when reducing of commercial bank's sustainability can't be avoided due to a number of circumstances;
- increasing bank equity;
- monitoring of liquidity;
- creation of special funds;
- improving of risk management;
- improving of a bank's competitiveness.

Functions of management are "the actions on the object which take objectively necessary forms at various stages of them implementation (Razu M., 2008)." The first mention of the functions of management is dated to the beginning of the 20th century, when a French mining engineer Henri Fayol proposed the idea of the existence of the five functions of management: planning, organizing, commanding (administration), coordinating, and controlling. Subsequently, the set of functions of management were being modified, and today the basic functions of management are: planning, organizing, leading, and controlling. The planning function involves the process of defining goals, establishing strategies for achieving those goals, and developing plans to integrate and coordinate activities.

Organizing involves the process of determining what tasks are to be done, who is to do them, how the tasks are to be grouped, who reports to whom, and where decisions are to be made. Leading involves motivation of subordinates, influence individuals or teams as they work, selection the most effective communication channel, or dealing in any way with employee behavior issues. Controlling is the function of management related to tracking of the course of works, so that they should be carried out in

accordance with the plan and the adjusted standards, and the elimination of any significant deviations (Robbins S., Coulter M., 2007).

However, taking the Meskon M., Albert M., and Hedouri F.'s view (1999), we note that the leading (leadership) should be considered as a separate activity. In this regard, for the purposes of this study, we are going to use such function of management as motivation (incentives performers to implement the planned activities and the achievement of identified goals).

We also consider it appropriate to identify a number of additional functions of management of commercial bank's sustainability. They are: analysis, monitoring, coordination, supervision, and regulation. Analysis is "the function of management which uses the means and methods of studying a situation, problems by the way of identifying and comparing the properties and characteristics of the study's objects by the preassigned criteria and indicators to determine the state of these objects, their features and trends of changing (Gaponenko A., 2003)." The analysis precedes to implementation of all the basic functions of management. Monitoring is specially organized permanent observation of the object of management and its processes, as well as internal and external factors impact on the object of management in order to assess and predict its condition. Monitoring differs from the controlling by its orientation towards assessment of the process rather than result.

Coordinating as a complement and development of the organizing allows providing orderliness of all management system elements to achieve an effective level of its functioning in time and space.

Supervision is "a form of legal activities of authorized persons which manifests in the commission by them in accordance with their competence of legally significant actions to resolve of legal affairs on their supervised objects, arising in connection with the failure or improper implementation of laws by state agencies and officials in order to ensure law and nomocracy, prevent and suppression of offenses (Pogodina N., Karelin K., 2012)." In the domestic banking system the Central Bank of the Russian Federation is the authorized person of this jurisdiction.

Pursuant to Article 56 of chapter X of Federal Law No 86-FZ , dated July 10, 2002 "On the Central Bank of the Russian Federation (Bank of Russia)":

- Bank of Russia is the authority of banking regulation and supervision. The Bank of Russia performs outgoing supervision of compliance by credit institutions and banking groups of banking laws, normative acts of the Bank of Russia and mandatory standards established by them;
- the main goals of banking regulation and supervision are to maintain the stability of the Russian banking system and protecting the interests of depositors and creditors. The Bank of Russia does not interfere in the operational activities of credit institutions, except as required by federal laws.

Thus, it should be noted, that the main difference between this function and others consists in the fact that the participant of supervision can't be a business owner. It must be merely a public authority. Regulation is "the management activity of maintain the operating modes of the management system in the field of objective laws and goals of overarching (management) system, and to ensure the conditions for manifestation of objective processes and trends, achieving goals of management system (Gaponenko A., 2003)."

On the object of management (commercial bank's sustainability) three large groups of participants (systemic, institutional and others) affect. Detailed description of these participants of management of commercial bank's sustainability is given in Table 2.

It should be noted that between the institutional participants and the object of management there is some «borderline» state, because to some extent this group of participants also performs as a management subsystem. This conclusion is based on the assumption that the complex commercial bank's sustainability, among other things, involves achieving organizational and structural sustainability.

Table 2: The main participants of management of commercial bank's sustainability and their functions

Participants	Participants' functions
1	2
Systemic	
The authorities of banking regulation and supervision	Analysis, monitoring, coordinating, supervision, controlling
Institutional	
Shareholders	Planning, regulation, controlling
Board of Directors	Planning, organizing, regulation, controlling
Executive management, officials	Organizing, motivation, analysis, controlling
Internal audit	Analysis, controlling
External auditors	Analysis, controlling
Others	
Public	Motivation

THE MECHANISM FOR MANAGEMENT OF COMMERCIAL BANK'S SUSTAINABILITY

The study of any management process requires the identification of its mechanism. In our opinion, the mechanism for management of commercial bank's sustainability is a set of methods and tools of impacts of management's participant on a managed object (commercial bank's sustainability), using a different type of support in order to implement functions of management. The elements of the mechanism for management of commercial bank's sustainability are:

- methods of management;
- management tools;
- information and empirical and regulatory and legal support.

Let us consider each element separately. A method of management is "a set of techniques and ways of exposure to a managed object for achieving the identified goals of the organization (Korobko V., 2010)." The set of methods of management of commercial bank's sustainability includes administrative and economic methods. The necessary conditions for a functioning of the credit institution are created by using administrative methods.

Administrative (direct) methods of management involve using of:

- system of statutes of the Global Financial Community (e.g. Basel Principles) or a country and a region in which particularly taken credit institution is operating;
- system of normative and methodological (obligatory to execution) documents of a commercial bank;
- operational management system (implementation of a power by head of commercial bank through orders, participation in governance, and a transfer of its authority and responsibility).

Economic (indirect) methods of management of commercial bank's sustainability include: tax methods (they are the most actively used by financial authorities in conditions of crisis phenomena in economy; they include: an introduction of a reduced rate of tax on profits of commercial banks for a certain period of time, tax holidays, etc.); normative (they assume an establishment of the mandatory standards of activity of commercial banks by Central Bank and their adjustment in accordance with the requirements which are determined by the dynamically changing environment); corrective (they allow affecting on the sustainability of a commercial bank maneuverably, raising its level. In contrast to the previous two it can be used as "external" regulators and the top management of a bank). Under the tools of management of commercial bank's sustainability we will understand means of practical implementation of managerial decision. Tools of management of commercial bank's sustainability include: financial statements, business plan, liquidity, capital and funds of the bank, its assets, the Central Bank of the Russian Federation's refinancing operations, the mandatory standards set by the Central Bank of the Russian Federation for the commercial banks (Required Reserve Ratios for credit institutions,

prudential economic standards of the banking activity, groups of indicators for the assessment of the financial stability of the bank in order to recognize it enough to participate in the deposit insurance system), credit portfolio, the financial derivatives, the cost of its own shares and bonds of the bank, the closure or reduction of loss-making branches, twinning (connection) with a reliable partner (preferably to attract foreign banks as a partner), etc.

Finally, information and empirical (a set of financial, economic, commercial, statistical, and other information necessary to perform analytical calculations and analysis of the current situation during each concrete moment of time) and regulatory and legal support (a set of rules, regulations, laws, standards, methodical instructions, explanations, etc., regulating the organization of commercial bank). Thus, due to the first component, participants of management receive the necessary information about the current state of affairs in the bank, based on which they can carry out management actions; the second component is needed for coordination of process of management of sustainability, in other words for the legislative regulations.

CONCLUSION

As repeatedly the practice shows, if the environment changes dynamically, the risks associated with banking activities will increase significantly. That is why at present the issues related to management of commercial banks' sustainability, which is the primary basis for their effective functioning and development in a changing environment, sound very actual. But effective management of commercial banks' sustainability, in turn, can only be realized through an integrated indication of all elements of this system. Taking this into account, in this paper: author's definition of management of commercial bank's sustainability is proposed; classification of species of management of commercial bank's sustainability is offered; content of the management system of commercial bank's sustainability with the detailed characteristics of its elements is defined; participants of management of commercial bank's sustainability and management functions, which they perform, are presented; characteristic of management of commercial bank's sustainability in terms of its normal operation and during the crisis is given.

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COMPETITIVENESS IN THE SERBIAN ECONOMY IN THE PERIOD OF CRISIS

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ABSTRACT

Globalization and high capital mobility, followed by a partial influence of internal factors, directly contributed to the transformation of the economic system in the world. Among others, significant changes included the fiscal system, under which, the fiscal authorities seek to tax, financial and other incentives and build competitiveness. In times of crisis, stable economic, financial and political system, as well as provided legal security of property, are essential prerequisites for the creation of an enabling environment for investment. Today, foreign direct investment main mechanism of globalization of the world economy. They are primarily an economic phenomenon, based on the assumption, and proved in practice to their optimal actions contribute to the overall economic growth. The presence and size of certain factors foreign investment depends on the type of foreign investment and capital importing countries open to receive foreign capital. Serbia's strategic goal is to increase their competitiveness and to join the group of the most competitive European countries. To achieve competitiveness it is necessary to strengthen the key competitiveness factors, primarily to establish a stimulating investment climate for investments, primarily in education and infrastructure and improving the strategic management and leadership.

Keywords: Competitiveness, Fdi, Economy, Crisis

INTRODUCTION

Dealing and measurement of domestic production subject to international competition affects the creation, in each of the industries and activities, absolute standards for measuring their economic performance necessary for successful inclusion in the competition in the global market. The relative standard economic indicators taken separately are not sufficient for assessing the competitive performance. Especially not enough comparison to the local level with other industries and economic activities within the area of a state. There are no properties competitiveness of the economy that can be realized and recognized in all industries and their segments. International economic relations and international exchanges allow each country to provide all the necessary products and services that do not produce itself, and that in the competitive domestic industries and raise the rate of productivity growth, specialization in those industries and their segments in which the focus of the competitive position given economy. The flow of international economic relations and the dynamics of international competitiveness caused by the change or loss of the old, and the adoption, development and improvement of new competitive positions. It is a requirement that the economy of a country as a whole, maintain and enhance the competitive position in the world economy. Global Strategy, which is a necessary condition for the competitive advantage of enterprises, and means the sale and purchase under the most favorable conditions in the global market.

COMPETITIVE POSITION OF SERBIA IN THE PERIOD 2010-2012.

Despite contrary to announcements of economic policy makers, the competitiveness of the Serbian economy since the financial crisis and economic decline, both in absolute and relative terms. In recent years, some of the reforms in Serbia, with a view toward enhancing competitiveness, have started but have not been followed to the end, which decreases as the current growth potential and growth prospects in the medium / long term since it lost valuable time for taking concrete measures and that other countries, particularly those in the region, to properly exploit the moment to increase the competitiveness of their economies.

Of the 16 transition countries of Central and Southeastern Europe, Serbia, the competitiveness on the penultimate 15th place, ahead of Bosnia and Herzegovina. Since 2008. year, which coincides with the start of the financial crisis, Serbia has lost its position as the absolute - was a fall grade point average competitiveness with 3.90 in 2008. to 3.84 in 2010. year - and relatively, since it fell to the list of competitiveness of transition countries with 13 of the 2008th at 15 2010th year. Serbia on the list ahead of Macedonia and Albania, and Bosnia and Herzegovina has significantly narrowed the gap, threatening that she achieved. Grouped factors of competitiveness, in the period 2008-2010. years, competitiveness has deteriorated in most other factors besides infrastructure, health, basic education and higher education and training.

Table 1. The competitiveness of the Serbian economy by groups of competitiveness (2008-2010)

	2008		2009		2010		Growth reviews	
	Rank (od 134)	Rank score 1-7	Rank (od 133)	Rank score 1-7	Rank (od 139)	Rank score 1-7	2010/2009	2010/2008
Institutions	108	3,4	110	3,2	120	3,2	0,0%	-5,9%
Infrastructure	102	2,7	107	2,8	93	3,4	21,4%	25,9%
Macroeconomic Stability	86	4,7	111	3,9	109	4,0	2,6%	-14,9%
Health and primary education	46	5,8	46	5,7	50	6,0	5,3%	3,4%
More education and training	70	3,9	76	3,8	74	4,0	5,3%	2,6%
Goods market efficiency	115	3,7	112	3,7	125	3,6	-2,7%	-2,7%
Labor market efficiency	66	4,4	85	4,2	102	4,1	-2,4%	-6,8%
Development of financial markets	89	3,9	92	3,9	94	3,8	-2,6%	-2,6%
Knowledge and use of technology	61	3,5	78	3,4	80	3,4	0,0%	-2,9%
The market size	65	3,6	67	3,7	72	3,6	-2,7%	0,0%
The successful functioning	100	3,5	102	3,4	125	3,2	-5,9%	-8,6%
Innovations	70	3,1	80	3,0	88	2,9	-3,3%	-6,5%

Source: World Economic Forum (2010)

Since 2008., the macroeconomic factor group in Serbia, the most deteriorated. However, this is partly the result of changes in methodology - this year introduced a factor rating credit rating in which Serbia is ranked poorly (83rd place) - which to some extent reduces the average grade of macroeconomic factors. However, it must be pointed out two important trends: (1) almost all other macroeconomic factors in Serbia are recorded in the period of crisis worsening, which was within acceptable limits given the adverse external circumstances, and (2) the rate of national savings is in Serbia very low levels - from 136 countries for which the national savings rate is known, Serbia is at 131st place. Low national savings is particularly important in the current external circumstances, bearing in mind that during the crisis period and the first years after the crisis is expected to significantly lower the movement of international capital and domestic savings is a key source of financing for economic growth and development. From the above said, it appears that national saving is increasingly becoming a bottleneck competition, and economic development in the whole of Serbia.

In addition to macroeconomic factors, it is necessary to pay special attention to institutional factors, goods market efficiency and business sophistication in Serbia, which, according to the World Economic Forum, the main bottlenecks for improving the competitiveness of the Serbian economy. The essence of failure related to the institutional framework and the efficiency of goods markets is reflected primarily in the fact that the institutional framework in Serbia is still not good enough for the investment, and that comes from too much government regulation, poor efficiency of the judiciary and the legal system inadequate.

Table 2. Analysis of progress in competitiveness (SEE countries)

	Index value			Absolute growth		The relative growth	
	2008	2009	2010	2010/2009	2010/2008	2010/2009	2010/2008
Albania	3.55	3.72	3.94	0.22	0.39	5.9%	11.0%
Montenegro	4.11	4.16	4.36	0.20	0.25	4.8%	6.1%
Bosnia and Herzegovina	3.56	3.53	3.70	0.17	0.14	4.8%	3.9%
Macedonia	3.87	3.95	4.02	0.07	0.15	1.8%	3.9%
Hungary	4.22	4.22	4.33	0.11	0.11	2.6%	2.6%
Serbia	3.90	3.77	3.84	0.07	-0.06	1.9%	-1.5%
Croatia	4.22	4.03	4.04	0.01	-0.18	0.2%	-4.3%

Source: World Economic Forum (2010)

On the other hand, Serbia has certain advantages that would in the future be able to rely, such as tax rates - especially in the aftermath of the crisis when it come to the fore cost competitiveness factors - the quality of math and science education.

COMPETITIVE POSITION OF SERBIA IN 2012.

According to the World Economic Forum in 2012. Serbian year ranked 95th position on the list, which includes 144 countries with a recorded value of the Global Competitiveness Index (GCI) of 3.87. In the previous year the value of GCI for Serbia is almost negligible declined by 0.01, which did not lead to the displacement rank of Serbia. In fact, if one takes into account that the list of countries expanded compared to the previous year (adding the two countries) Serbia is still at the 95th position, despite the depreciation of the IGC, and stagnation can be considered on the same level of competitiveness.

Table 3: Global Competitiveness Index 2007-2012 (SEE countries)

	Albania	Bosnia and Herzegovina	Montenegro	Greece	Croatia	Hungary	Macedonia	Serbia
2007	3,48	3,55	3,91	4,08	4,20	4,35	3,73	3,78
2008	3,55	3,56	4,11	4,11	4,22	4,22	3,87	3,90
2009	3,72	3,53	4,16	4,04	4,03	4,22	3,95	3,77
2010	3,94	3,70	4,36	3,99	4,04	4,33	4,02	3,84
2011	4,06	3,83	4,27	3,92	4,08	4,36	4,05	3,88
2012	3,91	3,93	4,14	3,86	4,04	4,30	4,04	3,87

Source: World Economic Forum (2007-2012)

The highest value of GCI's (5.72) and first place in 2012. Switzerland were recorded, while the lowest value (2.78) Burundi noted that at the last, 144 place. It should be noted that the theoretical value of the IGC in the interval from 1 to 7. Historically the highest value of 3.90 GCI Serbia made before the first wave of the crisis in 2008. year, but next to, 2009. The value of GCI declined markedly to 3.77. The decline in the value of GCI is compatible with the fact that the competitiveness of the economy has declined due to the negative expectations of businessmen affected by the first wave of severe crisis worldwide scale.

Table 4: Ranking of countries according to the Global Competitiveness Index 2007-2012, (SEE countries)

	Albania	Bosnia and Herzegovina	Montenegro	Greece	Croatia	Hungary	Macedonia	Serbia
2007	109	106	82	65	57	47	94	91
2008	180	107	65	67	61	62	89	85
2009	96	109	62	71	72	58	84	93
2010	88	102	49	83	77	52	79	96
2011	78	100	60	90	76	48	79	95
2012	89	88	72	96	81	60	80	95

Source: World Economic Forum (2007-2012)

The following table shows the structure of the GCI, by supporting pillars of competitiveness in 2011. and 2012. year. Since we have concluded that in 2012. there was no significant change in the value GCI, based on what certainly can not be concluded that neither Serbian nor regressed progressed in terms of overall competitiveness, showing competitiveness pillars for two consecutive years may indicate changes in the composition of Serbia's competitiveness.

Table 5. Value at GCI pillars of competitiveness (2011-2012)

	Poles of competitiveness	2011	2012
1	Institutions	3,15	3,16
2	Infrastructure	3,67	3,78
3	Macroeconomic Stability	4,18	3,91
4	Health and primary education	5,82	5,73
5	More education and training	3,98	3,97
6	Goods market efficiency	3,49	3,57
7	Labor market efficiency	3,94	4,04
8	Development of financial markets	3,74	3,68
9	Knowledge and use of technology	3,63	4,10
10	The market size	3,61	3,64
11	The successful functioning	3,08	3,11
12	Innovations	2,90	2,81

Source: World Economic Forum (2012)

In the framework of institutions and infrastructure segments (first and second pillars), Serbia has a competitive advantage only in fixed telephony. Low values of sub-administrative infrastructure and implementation of the state, many point to the weaknesses that reduce competitiveness. In the area of macro-economic environment (third pillar) Serbia has no competitive advantage, which can not be said for the segment of health and primary education (fourth pillar). In the area of higher education and training (fifth pillar), there is a competitive advantage when it comes to the number of those enrolled in higher education institutions and the quality of math and science education, while an alarming percentage of highly educated people leaving the country. In the field of goods market efficiency (sixth pillar), Serbia is competitive in the segment tax rates, as well as the time required for starting a business. On the other hand, despite the booming demand of what we saw in the past few years, the sophistication of buyers has remained at a very low level. In the field of labor market efficiency (seventh pillar), Serbia has a competitive advantage, which applies only to the cost of firing workers, making this entire segment of the market makes it uncompetitive, as evidenced by the high rate of unemployment. The lack of competitive advantage is present in the capital market. Marketability in Serbia is very vulnerable, because there is a monopoly in many areas of business (eighth pillar). This can be attributed to the low efficiency of competition policy, which affects the reduction in the intensity of local competition. Regarding the level of technical equipment (ninth pillar), competitive advantage exists only in the field of Internet bandwidth, while the perceived weaknesses in the areas of access to new technologies and the number of foreign direct investments in the field of their transfer, which directly affects the low absorption of new technologies by the company. Weak technological capacities resulting in uncompetitive products

difficult to find their way to consumers, causing a decrease of the market and makes it uncompetitive (tenth pillar). Another logical consequence of the lack of competitive advantage in the areas of business sophistication (eleventh pillar) and innovation (twelfth pillar). The low level of investment in research and development of innovative capacity reduces and prevents the improvement of operational efficiency and the implementation of differentiation strategy.

FOREIGN DIRECT INVESTMENT AS A FACTOR OF DEVELOPMENT OF SERBIAN ECONOMY

Of particular importance to increase the competitiveness of the Serbian economy are the system of incentives for the mobilization of savings and the credibility of financial institutions, which should contribute to increasing the competitiveness of companies and the economy as a whole. Competitiveness of exports depends on the lending institutions and export insurance. Macroeconomic policy has multiple effects on the competitiveness of enterprises, namely: policies that over the course of maintaining the exchange rate at a certain level affects the competitiveness of the economy, monetary policy through interest and control liquidity affects the competitiveness of the economy through fiscal policy that revenue, expenditure and deficit / surplus affects the competitiveness of the economy, foreign policy and competition policy through the protection of domestic production and employment, strengthening competitiveness and liberalization of capital transactions affect the competitiveness of the economy, a policy that income through administered prices and wage bill over the impact on the competitiveness of the economy.

Tax incentives have the greatest effect in those countries where tax rates are high and were just obstacles to investment, while in other countries that have a vision barriers, tax incentives will not have such a big effect. The most important tax incentive, which has just achieved the greatest effect, is the exemption from a certain time period. It is the most attractive because of the potential losses that usually occur in the first year of operations. However, investors often make decisions based on the transparency of the tax system, ease of administration and payment of taxes, which sometimes plays a much larger role than tax incentives. The effectiveness of the policy of introducing tax incentives is often very uncertain. The introduction of incentives directly affect the decision-making system of foreign investors. As a group of foreign investors is very heterogeneous, tax incentives will have the same effect on all investors. The problem of measuring the efficiency of the tax incentive is increased by the fact that the implementation of FDI investors achieve different goals. Most developing countries extensively use tax incentives to attract foreign direct investment, but in many countries the incentive is limited. However, a major drawback of this type of attracting foreign direct investment to our foreign investors rely more on fiscal elements when deciding on mobile capital investment and actual economic conditions left in the shadows.

By creating a single market, Customs duties and barriers to crossing of goods, services and financial assets of individuals, which leads to mutual competition between countries. Every country is trying to offer better tax conditions in order to attract more investors and labor relative to countries that are in the immediate surroundings. Through investment, attracting a great deal of money and capital, and thus strengthens the economy as a whole. In terms of attracting investment, some countries have gone so far as to have their tax rates closer to zero-rate or even abolish them. Much lower levels of investment in Serbia in recent years clearly show that Serbia is unable to use his investment potential because there is no clear strategy. Moreover, an aggravating factor in this case the state has created with his unnecessary bureaucracy and, in addition, slow and expensive. Even when investors deal with it and start up a business, any dispute brings him in an unfavorable situation of waiting and wasting time and money because there is no strong and effective rule of law. If you want to achieve a higher level of attractiveness, these are the areas where it is necessary to make efforts to bring the level of international practice. It should be noted that in the last year and there are positive developments for us to see whether they will continue in the coming year, and what effects it will bring.

As the only way out of the bad situation in which Serbia is the attraction of foreign direct investment at any price. It will have a positive effect on our problems such as unemployment and balance of payments deficit. Adoption of long-term development strategy based on FDI is certainly imperative in this regard. Doing so will be institutionalized Serbia's commitment to planning your environment and create a consistent policy to attract investment and that will depend on the change of government and thereby changing conditions as in our case very often. As the latter, it should be noted that there is no better way of attracting and retaining investment of stable and orderly environment in which it operates.

CONCLUSION

Competitiveness has become a dominant economic theme. Its importance, in addition to the traditional need to be more competitive, thus better than others, and contributed to the global economic crisis through which all economies. It is certain that a Serbian model of growth and prosperity, which, until now, have to implement the changes, leaving the expansion of domestic demand as a key driver of growth. The basis for growth in the future must be much greater extent domestic savings and investment, as opposed to the current model, which is dominated by domestic consumption. Irreversible process of globalization of the world economy has led to a situation where states are becoming competitors in an effort to offer the most productive business environment. Competitiveness of the business environment has a direct impact on the quality of the companies that will be present and determine the performance of the overall economy of a country. The economic prosperity of an economy depends on the ability of companies to achieve and maintain a high level of productivity and to continually innovate. Can easily be seen that the underdeveloped countries today is characterized by uncompetitive business environment and that is the main engine of the future development of these countries to raise the level of competitiveness (by Serbian competitiveness today occupies 95th place out of 144 countries). Backlog for the region, although there is definitely not impossible, but the region imposes a faster pace of progress that Serbia does not follow the same intensity. State of the national business environment can not be fixed overnight, and it must be the fruit of a long-term work to achieve the goal. The best solution is the adoption of a national strategy that would serve as guidance for all of the changes that are necessary to stimulate the competitiveness of Serbia.

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THE DETERMINATION OF THE SELECTION FACTORS OF BPMS FOR THE FINANCIAL STATEMENTS AUDIT PROCESS

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ABSTRACT

The audit of financial statements is a complex business process of audit firm, which is characterized by a large number of activities which have to be completed in defined period of time and in the defined order. Since the audit is the business process, in order to improve the efficiency and effectiveness of this process, in the financial statement audit process can be applied the business process management software (BPMS). Business process management software enables the integration and implementation of activities according to defined routing rules, automation of business activities, monitoring and measuring the performance of the business process. Given that at the market can be found a large number of BPMS, which are primarily different by functional characteristics, the audit firm has a problem of selection of appropriate BPMS that will fully satisfy the requirements of the audit process. In order to reduce the risk of choosing inadequate BPMS for audit process, the analysis of the factors for the selection of BPMS is need. This paper presents the factors and steps of selection of appropriate BPMS for the financial statement audit process.

Keywords: BPMS, financial statement audit, process, the selection factors.

INTRODUCTION

According to ISA (2009) the objective of the financial statement audit is to provide reasonable assurance of the accuracy and fairness of the financial statements in terms of their compliance with the financial reporting framework. The audit opinion, whether the financial statement give true and fair view, are presented in the form of the audit report. Together, audit report and financial statements are the basis for effective and efficiency decision making (see more: Andric et al. 2012). The importance of auditing financial statements for the quality of financial reporting affects the need for implementation of the audit process by the competent auditor in a qualitative way. Failure to implement the audit activities in a qualitative way and the expression inadequate audit opinion, undermines the quality of financial reporting, as well as decision making process.

The audit of financial statements is a very complex process in which as the factors of successful implementation can identify the following problems:

- A large number of audit tasks have to be carried out in the defined order, such as the rules of sequential, alternative, parallel and conditional tasks realization.
- It is not enough to implement audit tasks, it is necessary to document the entire audit process. Documentation of audit activities represents the evidence about the quality of audit process.
- The time for the implementation of the audit engagement is limited. Non-implementation audit tasks in a defined period of time may result that the audit report is not supported by sufficient competent evidence. Furthermore, the late issuance of the audit report will not have any role and importance for decision making.

- The audit is conducted by the audit team in which have to be defined the segregation of duties and responsibilities, as well as coordination of work, monitoring and review of realized audit activities.

In order to improve the efficiency and effectiveness of the financial statement audit, it is necessary to approach to audit as a set of activities which have to be managed in an integrated way on the basis of adequate business process management software (BPMS). The main features of BPMS are reflected in the modeling and performing the business process activities, automation of tasks such as creating and archiving the documentation, as well as providing system control and monitoring of the process by authorized persons (see more: Jaksic, Mijic, 2012). Furthermore, BPMS has to delegate business tasks to the right users at the right time, using the right information resources (Hagemans et al. 2010). In the market there are a large number of different BPMS, which vary according to additional functional features such as foundation software on Internet technology, the ability to communicate with others application via Internet services, the possibility of integration with applications for creation documents, application for electronic mail, systems for resource planning, databases etc. In order to efficiently and effectively manage the audit process, it is necessary to choose a modern business process management software that respond to the requirements of the process of financial statement audit, with respect to all of its characteristics.

THE FACTORS OF CHOICE OF BUSINESS PROCESS MANAGEMENT SOFTWARE

A large number of software solutions for business process management complicate the problem of choosing the appropriate software to manage the process of financial statement audit. Selection of appropriate software for business process management involves selection of software that fully meets the requirements of the organization, and that such software is available to the organization (see more in: Chang, 2006). Buying a BPMS creates the cost for audit firms, while the using of it creates the benefit. So, buying inadequate software solution that will not be able to meet the requirements of the audit process will produce only cost to the audit firm. To reduce the risk of improper purchases of software solutions, according to Jeston and Nelis (2008) the choice of adequate business process management software should be based on an analysis of five factors:

1. functionality
2. technical infrastructure
3. usability
4. price
5. vendor support

The analysis of the factors of selection an appropriate BPMS should be conduct in with the following steps:

- development the specification of the requirements the audit process in terms of functional characteristics of BPMS and conduct the comparative analysis of two or more BPMS by functional abilities.
- Analysis of additional factors of selection of BPMS as well as technical infrastructure, usability, price and vendor support.

THE ANALYSIS OF FUNCTIONAL CHARACTERISTICS OF BPMS FOR AUDIT PROCESS

Adequate BPMS for the audit process has to ensure that all activities of the audit process are conducted according to the regulatory framework, as well to ensure efficiency, effectiveness and quality of the audit process. Given the specifics of the audit process, a BPMS for audit process should ensure implementation of the following functional characteristics:

- Define and integrate all the activities on the overall audit process according to audit regulation and routing rules.

- Implementation of all audit tasks according to the methodology, in order to prevent the end of audit process and preparation of the audit report before all the activities carried out and documented.
- Automation of conducting audit activities such as creating and storing documents in electronic form, or conducting audit tests.
- Segregation of duties and responsibilities for employees as part of audit team in order to prevent duplication of realization of tasks and implementation of audit activities by unauthorized persons.
- Communication between members of the audit team and communication with the senior staff of the audit client.
- Integration of different software applications and platforms such as programs for creating documents, communication software, auditing software, database, internet technology etc.
- Dislocation of the audit process in a way that the physical presence of the members of the audit team in audit firm is not required. BPMS should enable to auditors access to software solutions and database via Internet technology.
- Automatic documentation of current audit activities and constant access to the documentation of the previous audit engagements.
- Access to an audit activity that is currently in the process, review activities implemented at the individual audit engagement and by the individual members of the audit team.
- Protection of audit documentation and the audit process from access by unauthorized persons, by establishment administrative function at the level of the audit firm.
- Possibility to implement quality control at the level of the audit firm, and the standard of quality control by the responsible professional and government bodies, by establishing a system of documenting the process and system of monitoring the audit process.
- Adaptability of BPMS to individual requirements of audit engagements, while maintaining the consistency and integrity of the audit process.

Based on the requirements defined by the business process of financial statement audit, the minimal functional characteristics of BPMS for audit process should be identified. The comparative analysis of functional characteristics of BPMS should result in selection or narrowing the list of potential BPMS for financial statement audit. (Table 1)

Table 1: The comparative analysis of available BPMS according to the minimal functional characteristics for audit process

Functions	BPMS 1	BPMS 2	BPMS 3
<i>Modeling</i>			
- modeling all the activities of the audit process	x	x	x
- checking the semantic of model	x	x	x
<i>Realization of audit activities</i>			
- model is based on Internet technology	x	x	x
- integrate all activities of the audit process	x	x	x
- automation of certain activities of the audit process (automatic document creation and archiving of audit files, automation of audit test)	x	x	x
- integration with other software tools (databases, programs for managing documents, word processing programs, programs for working with spreadsheets, e-mail programs)	x	x	x
- protection of audit records from unauthorized access	x	x	
- segregation of duties between the members of audit firm	x	x	x
<i>Monitoring and analysis</i>			
- ability to implement monitoring by the general director of the audit firm		x	
- measure and report about the performances of the audit process	x	x	
<i>Optimization</i>			
- adaptability to the specific requirements of audit engagement		x	x
- Improving the existing model	x	x	x

ANALYSIS THE ADDITIONAL FACTORS OF SELECTION BPMS

After conducting a comparative analysis of the available BPMS and selecting one or two potential BPMS, the next step is to conduct analysis of additional factors of selecting BPMS such as technical infrastructure, usability, price and vendor support.

Review of the technical infrastructure to support the functionality of BPMS is based on the following main aspects of hardware and software (Jeston, Nelis, 2008):

- What operating system platform is needed?
- What hardware is required for a server?
- What hardware components are required for client computers?
- Which databases are supported?
- What is the limit on the number of users of BPMS?
- What is the limit on the amount of data?
- Does the existing technical infrastructure of organization (audit firm) supports the operation of BPMS or additional cost of buying new technical infrastructure is need?

The usability of BPMS refers to the ease of understanding and using software by the users. The factors usability takes into account the following issues (Weske, 2007):

- a) user-friendliness:
 - Is the user interface easy?
 - What is the minimum of user training needed?
 - How does the software provides user management (e.g. via code)?
- b) Support:
 - Does the software provide on-line help manual?
 - Does the software have an integrated user guide?

Price of software solutions for business process management is directly related to the financial capacity of the organization in terms of purchasing software solutions. Decisions about the choice of BPMS are made on the basis of two components of BPMS price:

- a) price of BPMS on the market:
 - price of basic software solutions,
 - cost of additional modules,
 - price per license for period.
- b) the cost (price) of additional maintenance of BPMS
 - cost (price) maintenance
 - cost of training and education of users,
 - price of consulting services.

The analysis of vendor support as one of the factor of choice of BPMS include the following issues:

- What type of support provided by the supplier of maintenance, training and the like?
- What is the position of suppliers in the market?
- What is the position of software compared to other software solutions?

CONCLUSION

In order to select appropriate software for managing the financial statements audit process, it is necessary to conduct an analysis of the factors in terms of functional characteristics of the software, technical infrastructure, usability, price and vendor support. Decisions about the purchase of software solutions for managing business processes without this analysis may result with choice of inadequate software solutions. Buying inadequate software solution present just the cost to the organization (audit firm), and does not contribute to managing audit process and achieving the

goals of audit. Generally, the selection of inadequate BPMS is the result of wrong management decisions which are often based in the following situations:

1. The requirements to manage business processes in organizations are not huge, but the organizations are buying BPMS extra functionality. This decision resulted in the creation of unnecessary high cost of buying and maintaining BPMS.
2. The organizations buy the basic BPMS, which is modest in terms of functional characteristics and is not able to meet the growing requirements of business process management. The negative consequences of such decision are the creation of additional costs of buying new BPMS in a very short period of time.
3. When the organizations are buying the newest BPMS or a BPMS which is used by rival firms, while not looking at the requirements of its specific business processes, such decision will result in inefficiency in business process management and high costs of BPMS for the company.

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ANALYSIS DRIVING AND LIMITING FACTORS IN INVESTMENT DECISIONS – THE CASE OF SERBIAN

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ABSTRACT

The process of entering the international market depends on several factors. When making the decision to invest in a particular country, the strategic investors perform detailed analysis of the legal, institutional, market and economic environment of the country you plan to invest. The goal of their analysis is certainly protect against risk, but also the commitment of those investments that will bring a positive rate of return. In the market economy, developing countries, such as Serbia, the entry of foreign investors will bring significant benefits. In addition it enters foreign capital and technology, comes to accelerating economic activity, higher employment, and thus raising the standard of living of the population. The aim of this paper is to analyze the driving and limiting factors that are present on the Serbian market to attract foreign investment. The theoretical and practical analysis would serve to draw conclusions about the measures and conditions that Serbia should apply, that meet in order to be more competitive in relation to other countries in the region to attract foreign investment.

Key words: investment, factors, risks, investors, conditions

INTRODUCTION

Making an investment decision can be done in phases, depending, in the first place, on the development stage of the country planning the entry on one hand, and on institutional limits and barriers, as well as competition situation of the country in which the investment is planned to be made on the other hand.. Economic and financial crisis, that first appeared in the financial sector, and later spreading to the real sector as well, affected developed countries, developing countries and countries in transition. In such economic circumstances companies planning to enter a foreign market choose entry modes with the lowest risk level, because in the unstable market conditions interested investors show higher risk aversion.

According to (Petrović, Denčić, 2010, 28-29), in times of economic and financial crisis decrease in international direct investments usually happens for following reasons:

1. There is a decrease in investment capabilities of multinational companies that, in times of crises, face additional internal limitations (profit decrease, problem in maintaining liquidity) as well as external limitations (higher price of capital)
2. As a consequence of the most serious global recession ever there is diminished readiness of multinational companies to invest internationally, especially in developing countries, and their risk aversion is higher.

Entry mode represents the means of company internationalization and determines the degree of exposure to international competition, commitment of resources and management efforts in activities that the company will realize abroad (Somlev, P.I., Hoshino, Y, 2005, 577).

Foreign direct investments are the most favourable foreign capital entry mode since they have a long-term horizon, i.e. they offer long-term development perspective as it is quite difficult to attract foreign investments from certain country in times of unstable economy and crisis. Moreover, they offer the benefit of sharing the risk between the foreign investor and the host country since the cost of capital investment moves in step with the host country's economic fortunes (Tarzi, S, 2005, 499).

DRIVING FACTORS FOR INVESTING IN SERBIA

As it was pointed out in the beginning, the process of entering a foreign market depends, in the first place, on the development stage of the country planning to enter a foreign market on one hand, and institutional restrictions and barriers as well as competition circumstances in the country it is planned to be invested in, on the other hand. In the remainder of this paper will be presented driving factors that are present on the Serbian market.

Privatization-transforming public and national property into private property – According to the data of the Privatization Agency¹ by the end of the year 2006 in total 1400 companies were privatized (of which 346 terminated the contract) pursuant the Privatization Law from 2005. In the period from 2006-2009 in total 851 companies were privatized. There were 537 companies that were not privatized and that were in restructuration by the end of the year 2011. Based on the Analysis of the privatization effects of the aforesaid Agency the conclusion was reached regarding the impact of the privatization process on the income, business result, productivity, property value and employment. The research showed that privatized companies increased revenue by 69% while those not privatized remained at the same level, privatized companies from losses amounting to 102 million Euros began making profit that at the end of the year 2010 amounted to 200 million Euros, while non-privatized companies constantly make losses. As far as productivity is concerned, income per employee in privatized companies increased, while this increase in the non-privatized companies can be assigned to downsizing. In privatized companies the value of the assets is increased by 47%, while in non-privatized companies there is a decrease in value by 17%. As far as employment is concerned, it has decreased both in privatized and non-privatized companies.

High growth potential – Serbia is at 64% of the development stage compared to the year 1989, thus expectations of the investors are to realize high growth rates by investing in our country², what represents one of important motives to enter any market

Cheap workforce (measured by wage and productivity ratio), but on the other hand highly educated workforce (knowledge of a foreign language and computer skills).

Overcoming trade barriers in exchange of goods (import-export). According to data of Chamber of Commerce and Industry of Serbia³, Serbia has thus far signed following international contracts of free trade: CEFTA 2006, came into effect in July 2007, and in Serbia in October 2007, EFTA, signed in December 2005 with Switzerland and Lichtenstein, which came into force in October 2010, one with Norway and Island came into force in 2011. Agreement with Russian Federation came into force in year 2000, and further trade liberalization was enforced in 2009. Agreement with Belarus entered into force in March 2009, with Kazakhstan in October 2010, and with Turkey it was signed in June 2005, and came into effect in September 2010.

Increase in market share – mainly realizable with foreign investments of horizontal type and with those forms of foreign investments that are aimed at the market, typical for multinational companies.

¹ www.priv.rs

² www.makroekonomija.org

³ www.pks.rs

Lowest tax on profit and value added tax in the region – According to data of the Chamber of Commerce and Industry of Serbia, Serbia has the lowest tax rate on profit in the region and it is only 10%, while value added tax rate is also the lowest and it is 20%.

The globalization of markets and competition, the elimination of import barriers, reduce costs, particularly by investing in companies that carry high investment in new technology (research and development, information technology, new product development, the adoption of management methods), are certainly important drivers of foreign direct investment.

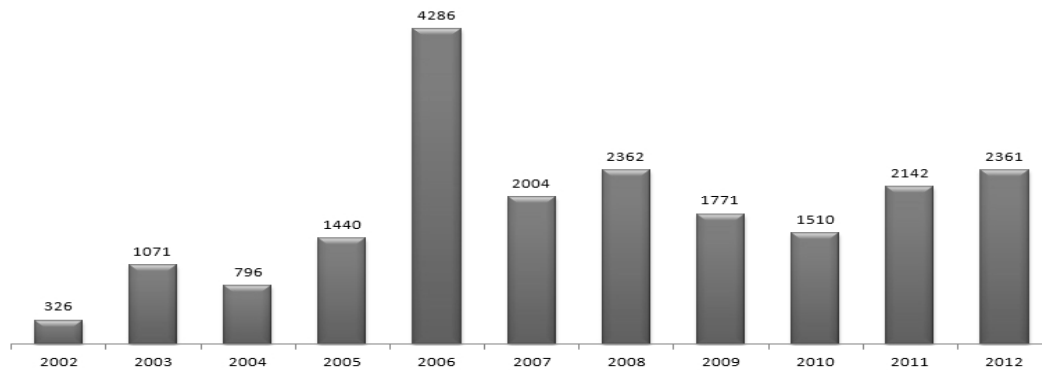


Figure 1: The level of investment in Serbia from 2002 – 2012 in mill. USD according NB Serbia⁴

As mentioned before the economic crisis, as a result of the collapse of the mortgage market began in the summer of 2007, and has grown rapidly during 2008. For a given graph, we see that in the year (2006.) just before the start of the economic and financial crisis, FDI inflow was the largest. The privatization of several enterprises and transforming social and state ownership created the first pre-requisite for attracting foreign direct investment, and so we see that since 2002, been a growing trend of foreign direct investment with variations that are characteristic of all transition economies and attract foreign direct investment through privatization process.

In the period since 2002. until November 2012. were realized FDI in the amount of 20,069 USD. In years were recorded variations that are characteristic of almost all transition countries, depending on the characteristics of the institutional environment, the action of the global economic crisis and attract FDI through privatization. In the year 2012 according to data for the first three quarters derive the amount of FDI in 2361 million. USD of outward FDI amounted to 2208 million. USD, based on non-resident investment in Serbia and residents abroad which led to a net inflow of EUR 153 million USD⁵

LIMITING FACTORS TO ENTERING SERBIAN MARKET

In addition to the many driving factors, you should definitely ignore the numerous limiting factors to foreign investment of course considered when making an investment decision. As for the Serbian market, as leading factors put limits could include: political risk, excessive bureaucracy, and the inability to predict the key economic indicators. Political instability in the country, excessive administration, that long wait certain licenses as clear legal basis, the risk of excessive exchange rate fluctuations are significant brake in attracting foreign investors.

In order to attract foreign investment and increase the attractiveness of investing in foreign direct investment in the Serbian market, one of the key requirements for this type of investment is a healthy market and economic environment. Select a country or target of the foreign investors to invest definitely depends on their expectations and opportunities to achieve high rates of return for

⁴ www.pks.rs

⁵ www.pks.rs

a given rate risk which is particularly characteristic of developing countries and countries in transition. Risks such as political instability (conflicts, corruption, undefined ownership structure), and economic and financial instability (exchange rate fluctuations, changes in interest rates, recession, inflation) are a very important lever in the investment of building trust and creating an environment for which they are, or foreign investors are not interested.

One of the first risk factor is certainly underestimate the value of local businesses and buy local companies at much low prices, which of course is the loss of the national economy, and these processes have also occurred in Serbia. Since no foreign investment is not possible to technological modernization of the economy as well as its market-oriented restructuring in terms of creating a more efficient, profitable and export-oriented economy (Ćirović 2004, 185), another factor that occurs is the risk that foreign investment after the investor will be solely interested in strengthening domestic production while neglecting export component, which would undermine the country's balance of payments situation.

As has been noted that without foreign investment is not possible to technological modernization of the economy as well as its market-oriented restructuring in terms of creating more efficient, profitable and export-oriented economy, so the financial support for the investment of a country of great importance, and its absence be an important factor in making an investment decision.

According to the Serbia Investment and Export Promotion Agency⁶ so far by the agency has approved 252.2 million to fund 222 active projects, which led to the opening of 44,046 new jobs, for Serbia is certainly one of the most important elements with regard to the problem with unemployment facing Serbia.

After a comprehensive theoretical and practical analysis of existing conditions, previous results, the present driving factors, opportunities and constraints, a framework for the projection of possible future scenarios in terms of foreign direct investment in the Serbian market and draw conclusions about the measures to be taken to attract foreign investors in the domestic market.

CONCLUSION

First, by analyzing the driving factors of foreign direct investment and risk factors, we conclude that one of the key conditions for an efficient market environment, and creating an environment in which the company valued at the fair value, while preventing the emergence of corporate takeovers by underestimated values and thus cause loss to the local economy. Of course, to achieve this requirement is necessary because legal compliance and harmonization of national and international regulations and standards regarding the determination of value, as well as public access to information and preventing information asymmetry.

Secondly, since the foreign capital in the country, such as the Serbian necessary because their own sources of funding are not sufficient, it is necessary to provide more support in the district of mechanisms to encourage foreign direct investment. Investments are necessary, because without them there is no economic recovery, economic development, job creation and improved living standards.

Thirdly, it is necessary to economic, financial and political reform, particularly in the reduction and risk management, as in the economic and financial crisis, the greater the investment of aversion to risk. Existence of legislation which clearly defined ownership structure, mechanisms to maintain inflation at the targeted level, as well as solutions to preserve the value of the domestic currency and foreign exchange risk management, creates the conditions necessary to create a healthy economic environment and reduce risk when investing.

⁶ www.siepa.gov.rs

Fourthly, it is necessary to harmonize the regulations and permits for investment and construction, because it is still expressed high opacity regulations, and therefore follows the excessive demand for foreign investment administration that requires a lot of time, sometimes accompanied by refraining from investing or choose another target.

Fifth, Serbia candidate status for EU membership gives investors a clear signal to increase the security of their investments. Accepting the nomination, Serbia has received acknowledgment that the transition process has done a great shift in the economic, political and legal reform, and now have the foreign investment of is equal rights in terms of investments in Serbia, as well as in any other developed country, a member of the EU. Since the candidate just the first step for a big fight and the road to the membership, reform needs to continue to build a healthy market, legal, economic and institutional environment which would certainly further influenced the process of increasing foreign direct investment in the Serbian market.

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PENSION FUNDS IN FUNCTION TO STRENGTHEN CORPORATE GOVERNANCE IN SERBIA

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ABSTRACT

In the developed European countries, state pensions systems are in crisis, so the employees, especially the young increasingly opting for private pension funds. Due to demographic changes in Serbia, and in other developed countries, the increasing number of elderly relative to the working people population, the pension systems based on intergenerational solidarity, where employees finance pension funds, are no longer able to pay the high pensions. The system of state pensions is in crisis in most developed countries, particularly in Europe. Therefore, it is estimated that the private pension funds in this decade will experience great expansion. The unstable political situation in Serbia is not favorable for almost no one, including capital markets, and consequently Pension Funds. Bearing in mind the difficulties faced by voluntary pension funds in Serbia, as opposed to pension funds abroad, the situation is not so bad. The regulatory framework is complete, infrastructure of pension funds are reinforced, however, trends in the market are still inadequate: since 2007. The stock market is in constant decline, the risk monitors risk. If we wish to make conditions for pension funds to conduct their activities, as in developed countries, pension funds must achieve much higher returns in the coming years and increase their assets on a significant proportion in the financial system of Serbia. The justification of this research is the fact that the voluntary pension funds should be one of the generators of the development of the domestic economy and to contribute to raise of the competitiveness of domestic companies so they will be able to join to the global trends of modern business.

Keywords: Pension funds, Serbian, property, financial market.

INTRODUCTION

State pensions system is in crisis and in most developed countries, particularly in Europe, and the employees, especially the young are increasingly opting for private pension funds. Therefore, it is estimated that the private pension funds in this decade experienced great expansion. A retired to think about the time, when people were working at full strength, it is best when you are aware of employees and employers. State tax incentives stimulate employers to pay extra pension. If a company employee in the private fund payment of four thousand, for her, it all costs, but if the money directed to pay, the state will contribute in taxes and still have to remittance of 2,700 dinars. In order to reform the pension system in Serbia has introduced a system of voluntary private pension funds in order to allow citizens to provide extra income in addition to state pensions, and to minimize differences and ensure their income in old age. The Law on Voluntary Pension Funds and Pension Plans adopted in September 2005., and entered into force April 2006. year.

The basic institutions necessary for the operation of the fund are: a) A Pension Fund Management, b) Voluntary pension (pension) fund, c) The custodian bank. The fund management company may operate one or more of the Funds, and can only be established as a closed joint stock company with

a minimum capital in the amount of one million Euros. Domestic and foreign persons can be founders and shareholders. Majority is entitled to payment of pension contributions and pension rights, i.e. to withdraw and use the funds to acquire the age of 53, and no later than the age of 70. Also, in the case of extraordinary medical expenses and permanent work disability can withdraw and use the funds before the age of 53 years of life. What is needed is good to inquire about the persons who manage the fund, as the fund is chosen on the basis of trust and personal reasons. There is a possibility that the funds differ in the amount of fees they charge for their services, and this factor should be taken into account. Time when pension funds have developed business selection the fund will depend on the return earned by the fund. If the low rate of return the fund member may transfer its funds to another fund where the yield is higher, while not paying any compensation, other than the actual expenditure required to physically transfer the proceeding. Payment of contributions to the fund allows the purchase of investment units. The investment unit varies depending on the price movements of securities and other assets in which the fund invested assets. If we want to know how much investment units purchased, it can be determined by dividing the amount of the payment (minus a fee) to the value of the investment units of the payment date. Funds are required to publish every day the value of the investment unit. The amount of assets in the fund can be calculated by dividing the number of investment units in the account multiplied by the value of the investment units of the fund on a given day.

PENSION FUND IN SERBIA

Pension funds, institutional investors are individuals who provide security and stability of income after completing the service life. In many countries of the modern world are among the largest institutional investors in the financial markets, hence they are sometimes called the term "big players" because they have huge sums of capital willing to invest in various financial instruments. Voluntary pension fund is a type of investment fund that is used for the collection of voluntary pension contributions and their investment in order to secure private pensions. In Serbia, taking into account the level of development of the financial markets, pension funds there since 2006. year. At present there are nine pension funds. Pension funds due emphasized social responsibility, have quite a conservative approach to investing in the financial markets. Therefore, they are under strict regulations of the National Bank of Serbia.

Table 1. Pension funds in Serbia

	Value	Change	Date of last change
<u>Dunav Fond</u>	1504.54	-0.15	06.02.2013
<u>SoGe Ekvilibrio</u>	1543.87	-0.01	06.02.2013
<u>SoGe Štednja</u>	1568.44	0.02	06.02.2013
<u>Raiffeisen Future</u>	1853.32	0.04	05.02.2013
<u>DDOR Garant dinar</u>	1044.89	0.19	19.02.2012
<u>Delta Generali Basic</u>	1440.09	0.01	17.02.2012
<u>Triglav Penzija</u>	1315.85	-0.04	17.02.2012
<u>Delta Generali Index</u>	1178.95	-0.18	17.02.2012
<u>DDOR Garant</u>	1387.76	0.14	14.02.2012

Since the start of operations of voluntary pension funds in Serbia passed a little more than six years. In this period of their net assets are augmented continuous way. At the end of the second quarter of the 2012th the net assets of pension funds amounted to 14.25 billion dinars. In comparison to the previous quarter grew by 6.2%, while growth in the past year was 2.8%. In the first quarter of last year to individual members' accounts were paid 728.88 million dinars, which has affected the growth of net assets. Total payments of members, with holding payment of the fees in this period amounted to 712.69 million dinars. Members are based payments during the quarter drew 206.66 million dinars, while the total amount of fees that are collected by the company in that period 84.93 million dinars.

Table 2. Net assets in the sector at the end of period (in billions of RSD)

2007.	2008.	2009.	2010.	2011.	2012.	
					T1	T2
3,05	4,64	7,19	9,86	12,45	13,42	14,25

According to the table below, it can be concluded that the voluntary pension fund market is still highly concentrated. If funds are classified into groups according to the size of the net assets of the fund in relation to the amount of the net assets of the sector, in groups, large and middle there are 2 fund, and together they make up over 96% of the market, while the largest fund has share of over 41%, which also indicates that the market is highly concentrated.

Table 3. Number of funds in groups according to market share (in units)

The share of net assets on %	2007.	2008.	2009.	2010.	2011.	2012.	
						T1	T2
Large (20)	3	2	2	3	2	2	2
Medium (5-19,99)	-	2	3	1	2	2	2
Small (0-4,99)	4	6	5	4	5	5	5

Pension Funds in Serbia are permitted following investments:

- The debt securities issued by the National Bank of Serbia and Republic of Serbia, in securities issued by legal entities guaranteed by the Republic of Serbia, as well as in securities issued by international financial institutions - up to 100%,
- The debt securities issued by the territorial autonomy and local self-government in the Republic of Serbia - up to 20%,
- The debt securities issued by entities based in the Republic of Serbia and legal entities headquartered in the state of the European Union and countries of the Organization for Economic Cooperation and Development (OECD) - up to 20%,
- The mortgage bonds issued by the Republic of Serbia - up to 30%,
- The certificates of deposit issued by banks headquartered in the Republic of Serbia and banks headquartered in the state of the European Union or the OECD - up to 20%,
- The shares of legal entities registered in the Republic of Serbia and shares of foreign legal entities with headquarters in the Member States of the European Union or the OECD - up to 30%.

Investment restrictions of the Fund assets as prescribed by our law on pension funds arose from the need to protect themselves, fearful "insured, considering all the negative experiences that were experienced during the 90-ies. No wonder, therefore, that there is no limit investments in government bonds, but the limitations present in other instruments and all because of portfolio diversification. It is permitted to invest in quality stocks (up 30%) and corporate bonds (up 20%). In the domestic market it shares with a minimum market capitalization of 10 million euros in free circulation and 80% of the working days of trading in the last twelve months (including most of the actions that are part of BELEX15). On stock exchanges abroad minimum market capitalization of shares is 500 million Euros and the shares quoted on the stock exchanges of the European Union and OECD countries for at least two years.

Fund's assets may not be invested in securities issued by

- Management Company
- The custodian bank that maintains the account of the fund,
- broker-dealer or an authorized bank conducting brokerage activities in the securities trade,
- shareholder of the management company,
- Related parties set out above.

In the absence of rating agencies in Serbia, bonds of companies in which to invest the fund's assets must be guaranteed by domestic or foreign banks or warranty legal entity based in the European

Union and the OECD, which has a rating of at least A rating (Standard and Poor's, Fitch), or A2 (Moody's), the same level of credit rating to close the loop and to invest the fund's assets in mortgage-backed securities (30%) and municipal bonds (to 20%) when they appear in the domestic market. Investing in certificates of deposit issued by domestic and foreign banks is limited to 20%. Investing assets in cash deposits in domestic banks is limited to 5%, the investing in cash deposits at foreign banks is not allowed.

THE ASSETS OF THE FUND AND CONTRIBUTIONS

Payment of contributions in the second quarter of the 2012th the rate was close to 729 million dinars, which represents the largest capital contribution payments from the beginning of the voluntary pension funds. Contribution payments are made mostly through pension plans where the greatest savings for the company on the basis of the exemption of taxes and contributions paid amount to the maximum amount prescribed by law. Also organizers pension plans have the option of negotiating on fees when payments for its members, which is one of the major reasons for payment in this way.

In the second quarter of the 2012th the total contribution of about 16% was related to individual payments, 39% relating to the payment of the employer whose employees contribute to the pension fund, while about 45% were paid through pension plans. This ratio remained steady since 2008. year. Although there is the possibility of individual, most payments are over payers and pension plans. Companies can pay for their employees in fund assets, making a saving through tax exemptions, demonstrating interlude greater responsibility towards their employees. Great potential for further growth in the number of members of the pension fund is just the big companies with many employees. Distributions are made mostly single. Since the withdrawal is conducted by members who qualify, and not long into the fund and the amount accumulated to date is relatively small this method of payment is expected. Payments from the Fund are increasing from year to year. This phenomenon is a normal consequence of the development of the system, because the increase in contributions and net assets, as well as increasing the number of years of operation of the system of voluntary pension fund, will increase the payout speaking in absolute terms.

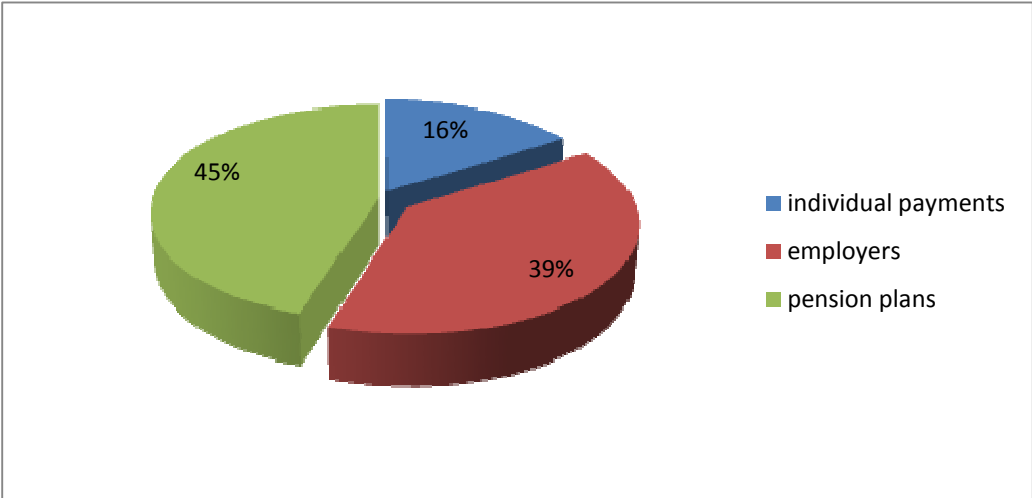


Figure 1: Investors in pension funds in Serbia (2012)

In 2012, year payments were higher than payments for more than 500 million dinars. However, what does not correspond to the pension funds that the funds were withdrawn as soon as the user completes the requirements for withdrawal, i.e. a minimum of 53 years before got the requirement for a state pension. One reason is the short period of payments and small accumulations.

The structure of the funds' assets did not significantly change. The highest number of total fund assets of state debt securities of up to 85.4% of which consists of Treasury bills 31.3%, savings

bonds and 6.9% Treasury bonds make up 47.2%. Term deposits have 5.6% , stocks with 4.1% of shares and demand deposits with 3.4% share. The estate is invested only 0.6% of fund assets.

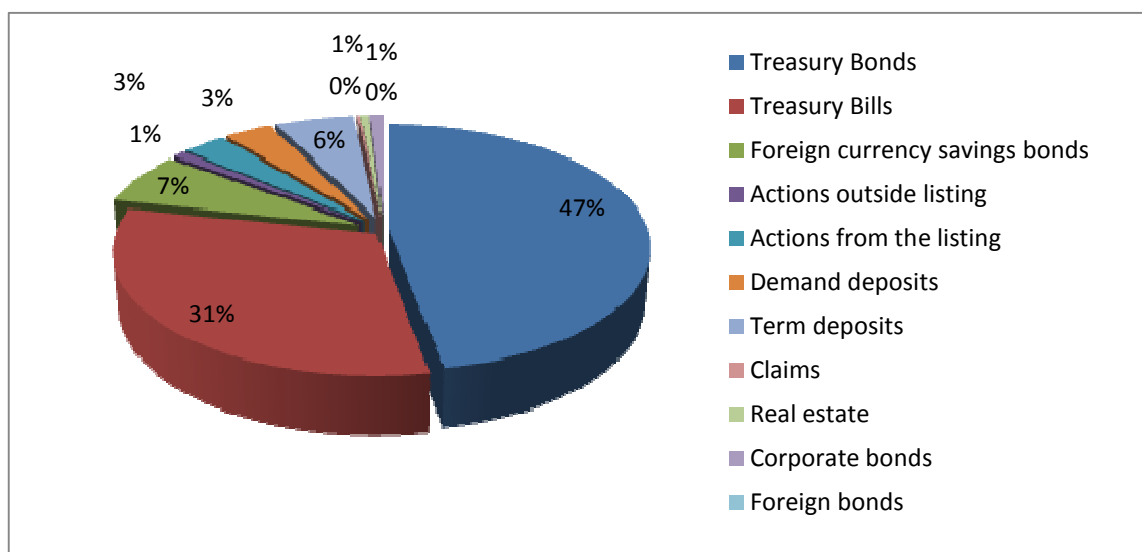


Figure 2: The structure of the total fund assets (2012)

In foreign currency, the euros, is 3.18 billion or 22.3% of total assets, while in the domestic currency is 11.10 billion or 77.7% of total assets. Most of the property, over 90% is exposed to interest rate risk, which is consistent with a high share of debt securities in the fund's portfolio. Credit risk is also concentrated in investments in government debt instruments.

CONCLUSION

Bearing in mind the difficulties faced by voluntary pension funds in Serbia, as opposed to funds abroad, the situation is not so bad. Generally the past year have been successful for voluntary pension funds, but at the same time tough. The regulatory framework is a complete, robust infrastructure funds are, however, trends in the market are very inadequate: since May 2007. The stock market is in constant decline, the risk appears to risk, primarily non-economic - the elections, the political situation in the country. Despite the bad factors, it is good that some citizens and employers recognize the need to save for old age. Of course, the return of pension fund returns should be distinguished from each member individually. How anyone has the individual account depends mainly on when and how much was paid was paid.

Despite the business risks that exist everywhere in the world, and especially in Serbia, Voluntary pension funds are well protected. Their assets are separate from the assets of the company that manages the fund. If the management company initiated bankruptcy proceedings, the assets of the pension fund may not be subject to execution or lien. And finally, most importantly, funds operate in a transparent manner, the state has provided tax relief and employer payments to funds begin to observe as a comparative advantage in the labor market. In this situation, financial education has become a key factor of stable development of voluntary pension funds.

The emergence of new financial instruments, particularly long-term, it is very important for the functioning of the fund, because in this way allows for more efficient management of resources and risk management, and greater diversification of investments in accordance with the investment plan of each company. Also, there are taxes exemption are increased with the increase in the retail price, so the initial 3,000 dinars, 4647 dinars today is where employers are free. With economic recovery and strengthening of the country's standard of living will increase the level of payments to private pension funds. Clear signals about the necessity of timely superannuation, sent by the citizens of

policy makers, as well as strengthening the awareness and education of the population, should influence the further development of voluntary pension funds in the country.

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CAPITAL ADEQUACY INDICATOR OF THE RELATIVE CREDIT STANDING OF BANKS IN SERBIA

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ABSTRACT

Bank is a specialized institution whose primary function is mediating in the field of money in order to supply the required amount of play money and credit. Importance given to the successful management of the banks stems from the role of banks in the entire economic system of a country because of its role in the economy of each country, the bank has to survive, operates and provides stable operation of the economy. Capital and risk are closely related to each other. Providing a satisfactory level of capital and retaining a sufficient amount of money in order to protect the interests of depositors, borrowers, employees, owners and the general population, one of the major challenges in the management of banking. They face the risk of bank owners include credit risk, liquidity risk, market risk and operational risk. The subject of research is an analysis in theoretical and partial terms, roles and functions of capital in the banking and financial management of the business. Performs the function of providing capital funds for the establishment of new institutions, creating the resources for future growth and expansion, providing a buffer of protection against risks and exhilarating confidence of the population in the long-term viability and survival of the bank.

Keywords: Capital, quote banks, risk, financial statements, management

BASEL II CAPITAL FRAMEWORK

Economic processes in Serbia define the process of risk management in the banking industry and on this basis the minimum amount of capital required as a safety barrier. What is the capital of the much higher risk of wider coverage. Unlike many institutions that avoid risk, banks as financial institutions must seek to be exposed to it in order to operate successfully. One banker said: "We make money by taking risks." Because of the great importance of the banking sector, the specific activities of banks, as well as to protect the interests of depositors and other financial services, the National Bank of Serbia has both an interest and a responsibility to assess the adequacy of risk management and capital from foreign banks, thereby supporting the achievements and experiences of member states of the European Union. The new Basel II framework, which came into force in Serbia 31.12.2011.year. The approach provides a consistent risk assessment and the calculation of regulatory capital. Strengthening the bank's capital will create conditions for the growth of its lending activities. The basis for the growth of banks in the country are the restrictive measures of the National Bank of Serbia, especially in the area of credit rating individuals and legal entities. The most dynamic growth capital in the past have had a highly developed network of banks and retail operations. The Basel rules on capital, were formally Adopted in July 1988th year, designed to firmly maintain high levels of capital. The Basel capital standards and issued capital of the minimum necessity for the international activities of the bank. Provided Basel I, the different sources of capital banks were divided into two basic types. Rules of the Basel II agreement, implied that the minimum capital requirements remain the same for most types of loans Regardless of credit rating, but will vary in relation to the quality of loans. According to the Basel II minimum capital adequacy ratio in Serbia is set at 12%.

Framework for risk management and capital requirements set by the National Bank of Serbia is consistent with the Basel II framework, and it consists of three pillars:

- Pillar 1: Calculate the amount of assets weighted by risk capital requirement,
- Pillar 2: Supervisory review process, including the process of assessing the adequacy of internal capital,
- Pillar 3: Rules of disclosure on risk management and capital adequacy.

PLANNING AS A BASIS FOR ACHIEVING THE REQUIRED LEVEL OF CAPITAL

Quote banks as borrowers, primarily caused by the amount of capital, and vision and structure of resources and reserves on the one hand and the way the structure of the loans from the other side. Banks must meet the requirements of the minimum capital level, before they have a license and that the minimum level of capital in the corporate business venue. The ultimate goal of banking regulation is to preserve the trust of the general public in the banking system. One method of maintaining public confidence level is the preservation of capital, maintenance of liquidity, asset quality and legislation. The possibility of raising funds in the capital market are influenced by the monetary and general economic trends. Banks have a good credit rating to facilitate access to financial markets and may issue shares (capital increase made) in order to collect capital. Smaller banks with poor reputations tend to rely more on internal collection of equity, because investors are reluctant to invest in the shares of such issuers. Conditions for such growth is the bank's profitability to the bank to maintain optimum levels of liquidity and solvency. Between the ratings of the bank and the cost of capital in developed financial markets there is a significant correlation.

Capital is not free, it comes at a price. For external sources of financing (loans, bonds, common stock, preferred shares) the price represents actual cash paid for interest and dividends. Each bank is behaving rationally determine its target capital structure, and then go in for capital raising in order to achieve the target structure. To estimate the costs of equity is possible to use the traditional method and modern method of determining the cost of capital (Capital Asset Pricing Model). The traditional approach to measuring the cost of equity is based on the profit that shareholders expect the average investment. Capital Asset Pricing Model assumes knowledge of knowledge of risk-free rate of return, the coefficient of systemic risk and market risk premium. Investment in government securities is risk free, and the risk-free rate of return equal to the rate of return of government securities. Coefficient of systemic risk, the beta coefficient expresses the measure of agreement yields concrete banks and the rate of return economy as a whole. According to the calculation of the London Business School Risk Measurement Service, beta coefficient is very high banking to 1.40, and thus systemic risk, compared with sales of food on a large 0.75 and 0.79 petroleum, food 0.82 and hotel 1.24 (Samuels J.M., Wilkes F.M., Brayshaw R.E., 2000.)

An internally-generated capital has the advantage that it does not have to depend on the funds in the open market, thus avoiding fluctuating costs and the loss of control of shareholders, because it prevents dispersion of ownership. However, the internal capital has its drawbacks, because the gains are taxed by the state. Reliance on the growth in net earnings as an internal source of capital, but not necessarily making a decision on the amount of earnings that will be retained and the amount that will be paid out as a dividend to shareholders. Governing Board of Directors and managers must agree on the retention ratio, current retained earnings, current net income after taxes that determine the dividend payout ratio. Stock prices have been declining, while lowering dividend date. Disclosure of a lower dividend stimulating effect not only on the existing shareholders and potential shareholders have, and also the purchase of new capital in the future makes it much more complex. The optimal dividend policy is one that maximizes the value of shareholders' investments. If the bank wants to increase its internal capital needs to increase earnings or retention ratio. The following formula helps management and Board of Directors of directors to answer the question, how fast it should grow earnings to preserve the ratio of capital to assets of a bank or other financial institution if they continue with the same rate of payment of dividends to shareholders? (Peter S. Rose 2005.)

The growth rate of internal capital or retained earnings/equity = ROE * retention ratio

$$= \frac{\text{Net income after taxation}}{\text{Equity}} * \frac{\text{Earnings retention}}{\text{Net income after taxation}} \quad (1)$$

Suppose that the bank's management has estimated the rate coefficient yield equity (ROE) of 10% for this year and plans to pay shareholders cash in the amount of 50% of any net earnings that the bank taking. Assets of these banks can not grow more than 5% (0.10*0.50) under that assumption, if it drops low enough supervisory authorities insist that the bank will increase the level of equity. If it is expected that commercial banks assets grow at a rate of 10% this year, what will be a combination of equity yield ratio and the retention rate of your current salary to keep the ratio of capital to assets? (Peter S. Rose 2005.)

Table 1: Predicting growth rates of assets

Predicting growth rates of assets	ROE	Retention ratio
0.10	= 0.20	* 0.50
0.10	= 0.15	* 0.67
0.10	= 0.10	* 1.00

METHODOLOGY CALCULATING CAPITAL ADEQUACY AND RISK ASSETS BANKS

Under the terms of the bank's capital to its credit rating applies only to pure equity raised by selling shares issued and whose sum meets or exceeds the legal minimum. The bank's capital is the sum of core capital and supplementary capital minus deductible items. Policy of commercial banks is to maintain a strong capital base in order to maintain the confidence of investors, creditors and markets and enable future development of the business. Capital has a number of vital roles in daily operations, expanding business and ensuring long-term stability of the bank. The role of bank capital to cover unexpected losses and performs failure protection, to ensure the safety of depositors and lend, and to be able to meet the needs of depositors of credit in case of negative economic trends. The amount and type of capital that the bank will be required will depend on the structure of its assets, liabilities and forecast the profit and expenses. The Bank is obliged to conduct its operations so that at all times its capital remains at a level that is not less than the dinar equivalent of EUR 10,000,000 at the official exchange rate.

Capital adequacy ratio equal to the ratio of the sum of bank capital and risk-weighted assets capital requirements. Capital adequacy means compatibility of capital relative to the risk, and is calculated as the product of a certain weight and the risk categories, which practically demonstrates the following table (Ostojić, 2008.):

Table 2: Category of risk according to Basel II

Risk categories	Description of assets	weights
Category 1	Cash & Bonds	0%
Category 2	Bonds of local collectivities	20%
Category 3	Mortgage loans (credits)	50%
Category 4	Loans to customers	100%
Category 5	Receivable in foreign currency	125%

Under the asset quality and asset structure in the first place means the quality of placements, their structure and degree of risk. Risk adjusted assets are calculated by multiplying each category with the corresponding weight, or amount of money in the assets section of balance and then received and capital adequacy in relation to adjusted assets. Risk adjusted capital ratio is obtained as the ratio of capital to risk-adjusted assets. Under Basel II, this ratio should be at least 12%, if the indicator is below 12%, the bank would have to raise their own capital or to reduce the risk level of their investments. At the end of the third quarter of the 2012th The banking sector in Serbia operated a total of 33 banks, which indicates the number unchanged compared to the 2011th year.

Total net assets of the banks amounted to 2844 billion, and total capital of 574 billion. Assets structure indicates that most of the positions are loans, with an increase over the previous year, those two at the end of the third quarter of the 2012th The share of 62.7%, which points to the basic task of bank loans. On the other hand, the share of the second largest category, callable deposits and loans decreased to 11.2%, due to a reduction in foreign exchange reserves of the National Bank of Serbia and loans under repo transactions. Position Cash and cash equivalents increased compared to last year, primarily due to increased current accounts and foreign currency accounts.

Table 3: Structure of the assets of the banking sector in Serbia

	30.09.2012.	31.12.2011.	31.12.2010.
Cash and cash equivalents	260	153	139
Callable deposits and loans	318	511	408
Make deposits and loans	1.783	1.592	1.631
Securities	264	182	168
Other assets – Fixed assets and investment property	75	77	71

The currency structure of assets in foreign currencies (approved loans in foreign currency indexed loans and foreign currency) - foreign currency makes 85.3% euro, Swiss franc 7.3% and 7.4% in other currencies. Maturity structure of the sector's assets are characterized mainly by short-term funds with funds dominated deposits up to 14 days, which in total assets recorded a share of 36.1%. Funds with maturities of up to one year with a share of 17.7%, while funds with maturities exceeding one year is 46.2%.

There are three concepts that show the level of capital. The first is the concept of equity capital or nominal capital value of liabilities. The second concept is a regulatory or statutory level of capital. The third concept is the CAR (capital at risk), the amount of capital that is in balance with the overall bank risk. In order to monitor the adequacy of capital produces a report on capital requirements and capital adequacy. Unlike the VAR (value at risk) which can be calculated at all organizational levels of the bank, CAR is calculated on the total level of the bank. Quantitative determination of the meaning of VAR is to ensure an adequate level of quantitative economic capital, or capital at risk (CAR). Capital adequacy ratio of the banking sector at the end of the third quarter was 16.40% (Table no. 3, kvartalni izveštaj, NBS). Serbian banking sector can be considered satisfactory capitalized given the relatively high level of average capital adequacy ratio. The largest portion of the total capital requirements at the end of the third quarter of the 2012th the concerns about credit risk, counterparty risk and counterparty settlement / delivery (189.4), while the rest goes to operational risk (23.1), currency risk (2.6) and price risk (0.6).

Table 4: The capital adequacy of sector in Serbia (in billions of dinars)

	30.09.2012.	31.12.2011.	31.12.2010.
Capital	398.7	444.9	455.4
Capital (after deduction)	280.0	305.2	
Supplementary capital I	68.5	73.8	90.0
Supplementary capital I (after deduction)	14.7	17.2	
Supplementary capital II		-	-
Deductibles	172.4	196.2	138.5
TOTAL regulatory capital	294.7	322.4	407.0
TOTAL capital requirements	215.7	202.4	245.3
Credit risk, counterparty risk and settlement/delivery	189.4	175.2	242.5
Foreign exchange risk	2.6	3.8	2.5
Price risk (debt securities)	0.6	0.7	0.3
Price risk (equities)	0.0	0.0	0.0
Operational risk	23.1	22.7	
Capital adequacy ratio	16.40	19.11	19.91

Assessment of internal capital adequacy based on defined objectives and principles of risk management, identification, measurement and monitoring of risks to which the bank is exposed to in its operations. Attitude towards risk, conditioned by the size of the bank and its organizational structure, and the interest of the best interest of the bank's management. Bank management on the basis of an exceptional solvency of banks ensures the continuity of their work and commitment. Suggestions risk capital focused on the types of activities in which the bank is involved. The first position is based on to statistical indicators, which suggest the measurement of performance and provides the best forecasts of the problem banks. Another approach to measure the risk taken by the bank based on the perception that certain activities more risky than the other, which ultimately means that the more risky bank activities should be capitalized at a higher level. Indicator of the bank, an indicator of the degree of protection of at-risk banks. Positive earnings is required each bank to move, which is to "pass" for a safe and healthy growth of the banking business. Managers of commercial banks should be valued in a manner that is consistent with the evaluation of their banks in the capital market.

CONCLUSION

Quote banks is a key indicator on current financial condition of the bank, as well as evaluating the possibilities for its future operations and development. Serbian financial market should be much to do in order to allow banks full and equal technique to determine creditworthiness relative to banks in developed economies. Solvency is a measure of the financial health of commercial banks, it is a measure of the overall "health" of society and the state. Failure to comply with the principles of corporate governance in banks may increase risk and lead to a destabilization of the financial system of a country. Historically, inadequate management, is one of the main actors of serious banking crises in developing countries. Identification, assessment and monitoring of bank solvency is very complex and important issue. Long-term debate among bankers, financial analysts and controllers for how much and what kinds of capital should be held by banks.

This paper presents perspectives on the role of capital in the function of the controls behavior of banks in Serbia. Equity is the ultimate line of defense against failures and bankruptcies, which provides the bank needs time to respond to the different types of risks faced and to once again become profitable. In addition to the assessment of financial market, the bank has to provide funds to cover possible risks. This is primarily related to capital adequacy, as well as the need to establish reserves to cover risks. Serbian banking sector can be considered satisfactory capitalized given the relatively high level of average capital adequacy ratio. Although the crisis may reduce or eliminate the process of bringing about change the capital structure of banks, but there is no universal mechanism for resolving the crisis situation in the banks that can be applied in all economies, but with respect to economic, social and political elements in the country where the crisis originated.

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ANALYSIS OF FOREIGN EXCHANGE RISK ASSESSMENT WORK FOR CREDIT OF ALL CORPORATE ENTITIES

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ABSTRACT

Exchange rate risk occurs in all businesses that have a currency mismatch between assets and liabilities in terms of more or less floating exchange rate. Due to the nature of the work, the exchange rate risk is most pronounced in businesses that are engaged in foreign trade. Consequences of the operations of the borrower arising due to changes in exchange rates, are important because they may have a negative / positive effect on the creditworthiness of the business of the company, which can be expressed through the two most important aspects. First, the negative / positive impact on the income statement and earnings of companies (net result) through the realized and unrealized negative / positive foreign exchange losses and other negative / positive impact on cash flow businesses through increased / decrease the pressure to have to set aside larger / smaller amounts of money for regular servicing obligations. Sector Risk Management and also its credit analysis department for large, medium and small companies, due to the analysis of the financial statements in its comments that required specific comments relating to the exposure arising from FX risk.

Key words: foreign exchange risk, credit assessment, exchange rates

INTRODUCTION

An integral part of the credit risk, as the most significant risk in the banking business, is the currency risk. As its name implies, this is the risk associated with the currency in which the loan is granted or other placement. Currency risk is inherent in all those banking systems that are commonly referred to as dollarized or evroizovanim systems. Usually, these are systems in which the assets and liabilities of banks (and other financial institutions, and a substantial part of the real sector) mainly denominated in foreign currencies or assets and liabilities denominated in local currency but indexed to a rule, stable and convertible currency such as the dollar or the euro (hereinafter the currency or foreign currency clause).

The main reason is the almost universal acceptance indexed in most of the financial operations of the financial system, the desire to ensure the protection of creditors' claims if there is a sudden drop in the value of the local currency against the value of major currencies (mostly U.S. dollars or euros).

Currency clause has become standard in granting loans and other investments in those countries where the local currency is stable for many years. The reason for such behavior of banks can be found in the fact that the depositors and the bank in the recent past, however, suffered significant losses due to the appreciation of the domestic currency. The depositors, particularly depositors, because of the losses they have suffered are no longer willing to save in local currency, but almost absolutely favored savings and deposit in foreign currency or indexed, even under conditions when the local currency is already stable for many years. In these circumstances, banks have had to adapt to the market and begin to take deposits in foreign currency or indexed, and this is the structure of the sources of funds, along with other factors, contributed to the placement of the funds in foreign

currency or indexed to protect the bank from that part of the currency and credit risks, and also aligned its foreign exchange position.

If there was a significant decline in the value of the local currency, with loans in foreign currency or indexed contacted the currency risk because it would increase the bank's exposure to essentially increase righteousness of these placements denominated in local currency. Currency clause in this case does not provide perfect protection for the bank, but it all depends on what kind of currency structure of assets and liabilities and income and expenses are clients of the bank, pursuant to which it is exposed to credit risk. If customers do not have adequate assets or income in foreign currencies or their claims are also indexed or otherwise protected from the value of the local currency, the bank is to "increase" their claims are indexed consequence, further exposure to credit risk.

In order to avoid possible negative effects of any potential instability caused by the sudden change of the exchange rate of the local currency, it is reasonable that banks are adequately protected by the good credit analysis, but also to provide additional capital for unsecured claims.

CURRENCY RISK MANAGEMENT

Identifying, measuring, monitoring and controlling currency risks and reporting on it are subject to all balance sheet and off-balance sheet items exposed credit risk, which also are subject to weighting for the purpose of calculating capital adequacy. Performing such analysis is required by law. Since the currency risk associated with bank currency risk of their customers, banks should establish a process for assessing, matching client's foreign exchange position. This process should include all clients or groups of connected clients, according to which the banks have claims in foreign currency or foreign currency receivables or where they intend to approve loans and contingent liabilities in foreign currency or indexed.

Macroeconomic aspects of exchange rate changes, ie . reasons for the strong USD (appreciation):

- Insufficient USD liquidity and high short-term interest rates;
- New RSD debt instrument issued by the NBS / Treasury;
- Aggregate demand (slower lending, lower wage growth);
- Effects and falling prices of primary agricultural products, and
- Projected net inflow of foreign investment direktinh.

Macroeconomic aspects of exchange rate changes, ie. reasons for the weak USD (depreciation):

- A deep international financial crisis and political factors;
- The current account deficit;
- Continuously increasing balance of payments deficit;
- Realization of profit by non-residents;
- Ability to rating agencies topple Serbia's credit rating;
- Decrease in interest rates by the NBS;
- Medium-term financial risk (of the privatization, increasing foreign debt);
- Fiscal expansion and Growth regulated prices.

Banks need to continuously monitor all developments in the market and to measure the impact of possible changes in exchange rate return on loans and other investments, and in standard, and eventually changed business conditions (especially in terms of potential abrupt change of course).

Therefore should establish the credit analysis system for continuous monitoring of various loan portfolios exposed to currency risk, by which should define detailed procedures:

- Determine the degree of compliance of foreign exchange positions of the client;
- Measurements of the potential impact of sudden changes in the exchange rate on the likelihood of repayment of loans and other investments, as well as the potential loss would thus be incurred and

- Determining the value of the entire loan portfolio exposed to currency risk.

Currency risk management methodology should include detailed criteria and procedures for assessment of conformity foreign exchange position and client procedures to estimate their potential vulnerability to sudden changes in the exchange rate by all loans denominated in foreign currency. The established methodology should provide quality management of currency risk, taking into account the type of portfolio characteristics of individual client or group of connected clients, the importance of security instruments and their appropriateness to protect sales of foreign exchange as well as the currency in which the prominent placement.

Features based on which the bank evaluate the conformity of foreign exchange positions of the client, which should be installed in its methodology are:

- The report on foreign exchange position of the client in a given period;
- Establishing quality sheltered currency positions client collateral;
- Conformity Assessment currency positions based on client foreign exchange cash flows client and
- Other elements defined by the bank itself, provided that the client provides reliable protection against foreign exchange risk.

As for the clients who were found to have unmatched currency position, the bank can assess protection from indexed to the level of individual loans if the credit policies defined methodology for sheltered individual placements.

METHODOLOGY FOR MONITORING CREDIT RISKS ARISING FROM CHANGES IN EXCHANGE RATE (DEPRECIATION/APPRECIATION) AND EFFECTS ON CORPORATE PERFORMANCE

As part of standard processing and credit analysis of the borrower company, at the request of NBS is essential that when making funding decisions based on analysis of borrower financial ratios, banks include risk assessment and the risk of exchange rate fluctuation. Sector risk management due to the analysis of the financial statements In his comments to be sure that a specific comment refers to the exposure arising from FX risk.

Negative aspects of the business by the company that changes in exchange rates may cause in the long run are already involved in making projections, which are working on the basis of assumptions and information received from the client, and the conservative model that prepares the bank and in the preparation of the same (projected) are taken into account exchange rate fluctuations and possible negative / positive implications for the client's business, and therefore the decision on approval means acceptable level of risk that may results from changes in exchange rates.

Consequences that arise on the business of the borrower due to changes in exchange rates, are important because they may have a negative / positive effect on the creditworthiness of the business and the company, which can be expressed through the two most important aspects:

- Negative / positive impact on the income statement and earnings of companies (net result) the realized and unrealized negative / positive exchange rate differences and
- Negative / positive impact on cash flow businesses through increased / decrease the pressure to be allocate larger / smaller amounts of money for regular servicing obligations.

Given the above, the negative / positive aspects of the company's operations at that exchange rate movements may cause in the short term, should be viewed in the following way:

- Rate of finance charge to cover operating result;
- Denomiranog share of debt in foreign currency, together with debts containing Fx klazulu relative to total debt;

- Share purchases / expenses from abroad in total procurement / cost materials;
- Share of sales abroad in total sales;
- Consider whether the purchase contracts include an option for protection against risks that can arise if any increase in prices of inputs, with the possibility of correction invoice (sales) values output up as a cost due to the change of input-a and
- Whether the customer is able to adjusting the prices of their products and services in accordance with the exchange rate changes to address this type of risk.

Indicator rate coverage ratio of financial expenses is crucial in determining exposure to exchange rate risk of the Bank which indirectly arising from business clients with whom the Bank has a credit relationship, because the same can be calculated based on data from the annual financial statements of the company. All other information is qualified as a qualitative and serve only as an indication of the determination and the addition of FX risk, given that they come from management and there is no possibility to determine their validity, and therefore their relevance in establishing the FX risk is lower but not negligible.

The rate of coverage of financial expenses (EBIT / financial expenses) should indicate the capacity and ability of the company (the "cushion of safety") that in the short term can withstand sudden changes in the exchange rate, which can be negative or positive effect on corporate performance, and also on the creditworthiness of the borrower.

Given the regulatory and supervisory request to create two scenarios, which are based solely on the assumption of nominal depreciation of 10% and 15% annually, Fx risk gradation is shown as follows:

- There is no certainty regarding the protection of FX risk (interest rate coverage is $\leq 100\%$);
- A very low level of security in terms of protection against FX risk (interest rate to cover the $< 115\%$);
- Low level of security in terms of protection against FX risk (interest rate to cover the $< 125\%$);
- Average degree of safety for the protection of FX risk (interest rate to cover the $< 150\%$);
- An acceptable level of safety for the protection of FX risk (interest rate coverage is $\geq 150\%$) and
- Good coverage in terms of protection against FX risk (interest rate coverage is $\geq 200\%$).

Participation debts / obligations denominated in foreign currency, together with the obligations that contain Fx clause in total liabilities should be viewed from two perspectives:

- Dependence on external sources of financing, and that portion of obligations with respect to total liabilities is subject to change due to negative exchange rate changes and
- Share of purchases from abroad in total procurement.

For point under number one criteria for risk assessment are as follows:

- $<10\%$ (Very low participation - the negative effects caused by the borrower's business promonomom course are minor);
- $<20\%$ (Low participation - the negative effects caused by the borrower's business promonomom rate is meaningless);
- $<30\%$ (Acceptable part - the negative effects caused by the borrower's business promonomom course are important but do not threaten liquidity);
- $<40\%$ (High participation - the negative effects caused by the borrower's business promonomom course important with the ability to threaten liquidity) and
- $>40\%$ (Very high participation - the negative effects caused by the borrower's business promonomom course are important and can lead to problems with liquidity and credit standing of the customer).

For point number 2 under the criteria for risk assessment are as follows:

- <5% (Very low risk);
- <10% (Low risk);
- <15% (Exchange rate risk is present but insignificant);
- <20% (Exchange rate risk is present in the boundaries of acceptability);
- <25% (Exchange rate risk is present and significant);
- >30% (Exchange rate risk is present and high) and
- >50% (Exchange rate risk is present and very high).

Table 1:FX Risk Analysis

	The date of the last annual report	Date of submission of loan application
<u>FX Risk</u>	<u>31.12.2012.</u>	dd-mm-yy
The total amount of debt denominated in foreign currencies at the last annual report and at the date of loan application (to take into account long-term loans, lease liabilities)	ask the client	ask the client
The total amount of debt denominated in foreign currencies at the last annual report and at the date of loan application (to take into account long-term payables from abroad)	ask the client	ask the client
The total amount of debt denominated in foreign currencies at the last annual report and at the date of loan application (to take into account short-term loans)	ask the client	ask the client
The total amount of debt denominated in foreign currencies at the last annual report and at the date of loan application (to take into account short-term loans)	ask the client	ask the client
The total amount of debt initially approved in dinars but contains a clause revaluation / adjustment in accordance with the change of the exchange rate at the date of the last annual report and at the date of loan application (to take into account long-term loans)	ask the client	ask the client
The total amount of debt initially approved in dinars but contains a clause revaluation / adjustment in accordance with the change of the exchange rate at the date of the last annual report and at the date of loan application (to take into account short-term loans)	ask the client	ask the client
Total		
Total / total debt (the sum of long-and short-term liabilities)	%	%
The total amount due on the date of the last annual report and at the date of loan application (long and short) to overseas customers	ask the client	ask the client
The total amount due on the date of the last annual report and at the date of loan application (long and short) to overseas customers / Total current assets	%	%
The total amount of purchases (cost of materials / cost of goods sold) from abroad for the reporting period	ask the client	ask the client
	%	%
The total amount of sales abroad	ask the client	ask the client
The share of sales abroad in total sales	%	%
Is there a possibility of upward adjustment policies contracted sales value of output as a result of changes in the cost of inputs	ask the client	ask the client
Whether the client is able to change the price in accordance with changes in exchange rate	ask the client	Ask the client

Source table: Razvojna banka Vojvodine, 2012.

CONCLUSION

As part of standard processing and credit analysis of the borrower company, at the request of NBS is essential that when making funding decisions based on analysis of borrower financial ratios, banks include risk assessment and the risk of exchange rate fluctuation. If there was a significant decline in the value of the local currency, with loans in foreign currency or indexed contacted the currency risk because it would increase the bank's exposure to essentially increase righteousness of these placements denominated in local currency. Currency clause in this case does not provide perfect protection for the bank, but it all depends on what kind of currency structure of assets and liabilities and income and expenses are clients of the bank, on the basis of which it is exposed to credit risk. If customers do not have adequate assets or income in foreign currencies or their claims are also indexed or otherwise protected from the value of the local currency, the bank is to "increase" their claims are indexed consequence, further exposure to credit risk.

In order to avoid possible negative effects of any potential instability caused by sudden changes in the exchange rate of the local currency, it is reasonable to adequate protection of banks and to provide additional capital for unsecured claims, as well as establish a constant monitoring system of currency risk and incorporate it into your credit policies and procedures, both at the level of individual clients, groups of connected clients and the level of the entire loan portfolio exposed to currency risk.

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CREDIT RISK OF BANKS IN THE FINANCING OF INVESTMENT

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ABSTRACT

In an uncertain business environment for each investment project should be all of the critical success factors of the project taken into consideration. If all parameters of the investment project are satisfied, the selection of the financing method of the investment can be a critical success factor. There are various financing alternatives, including direct investment, bank loans, loans from international development banks, financial instruments on capital markets etc. If the financing of the investment involves domicile or foreign banks, it is necessary first of all to examine whether it can bear the burden of financing the project. The aim of this paper is to present the alternative financing methods with a focus on banks, and to view the key points in the analysis of credit risks in banks by financing investment projects.

Keywords: investment financing, banks, credit risks

INTRODUCTION

The importance of financial institutions in the maintenance of business processes of entities is very important. Financial institutions, especially banking institutions in developing countries, play a key role in securing funding, and on thus way in smooth functioning of business enterprises. In developed market economies, financial institutions appear as well in the role of institutional investors in the financial markets. Seen from this perspective, the financial institution has significant influence on the operations of business entities, both through loan portfolios and through the portfolio of securities. In the context of this influence it is very important to determine the business risk of financial institutions, rather than the same are involved in the financing processes. As confirmation of this paragraph shall serve experiences the emergence of the financial crisis, which testify to the importance and impact of financial institutions on the corporate sector. Therefore, guided by the light of experience of the financial sector crisis spread to the corporate sector, it is of great importance to identify the risk of financial institutions.

METHODS OF FINANCING INVESTMENTS

There are a number of ways to finance investment projects. For example, direct investment, commercial bank loans, export credits, loans from international development banks, funds from bilateral aid programs, the financial capital market instruments etc. For the success of a project and project financing is essential a good and high-quality preparation and adequate evaluation regarding its effectiveness from the aspect of investor. On the other hand, for the external funders it is essential to estimate the eligibility of investors. The identification and management of risk is crucial factor for the success of the investment project. For this reason, the first step is to identify the risks that may be influence the investment and the investor and then monitor and supervise it.

TYPES OF RISK

All bankers should be aware of the other risks to which their banks and indeed other commercial enterprises, including the bank's borrowing customers, may be exposed to during the transaction of their business. The risk can never be totally obviated but good management can minimize it. Being aware of the risk is only the first step in deciding how it should be managed and minimized. The principal types of risk to which enterprises including banks are exposed are (NBS, 2004):

Credit risk is the inherent risk whenever the bank lends money or issues a credit instrument such as a Guarantee or a Letter of Credit on behalf of a customer. There is no such thing as a risk free credit. The risk is simply that the customer who borrows money or asks the bank to issue a Letter of Credit or a Guarantee on his behalf will not be able to meet his obligations to the bank for the repayment of principal and the payment of interest and fees on their due dates. The risk can be minimized by careful consideration of all credits before they are entered into and diligent management throughout their term. The bank should ensure that it is adequately rewarded. The reward to the bank is by way of the interest rate margin - the difference between the rate of interest at which the bank lends and its cost of funds - the average rate it pays for its deposits plus any fees it charges its borrower for taking the risk.

Foreign Exchange Risk occurs whenever a bank or other enterprise has a mismatch of currencies i.e. assets or income in one currency and liabilities in another. Although instruments such as forward and option contracts have been developed which can be used to reduce this risk, they are not currently available in Serbia. Banks in Serbia should accordingly seek to ensure that all currency mismatches are identified and reported to management on a regular basis and can be reversed if exchange rates start to move against the bank. Banks should also be aware when their borrowing customers are exposed to foreign exchange risk. This is particularly important when a customer borrows from a Bank in one currency - usually because the interest rate is lower - but has no assets or income in the same currency.

A bank is exposed to *Interest rate risk* when the interest rate basis or period on which the bank takes deposits from its customers differs from the basis or period on which it lends money to its customers. Should a bank e.g. lend on a fixed rate basis for a specific medium or long term basis and it does not have deposits on a matching basis, it is exposing itself to interest rate risk and may lose money if market rates move against it.

Market risk results from permanent market changes - new products appear, as do new technology and new competitors. Banks and other enterprises must be aware of changes in their markets and adapt to these changes or they risk losing their share of the market. The pressure from shareholders on banks and other enterprises to increase profits drives them to seek new markets either new products or new geographic markets. Examples are European banks expanding into North America and more recently banks expanding into new product markets such as stockbroking. All markets are competitive and the risk is that the bank or enterprise may find that they are unable to compete successfully in the new market because of insufficient research before launching into the new market and consequent lack of understanding of the market. This is of particular concern to a bank not only when it is itself launching into a new market but also when it is requested to fund the launch by one of its customers into a new market.

We can say that banking is a 'people business' and that a bank's best assets are its people. This is true, however every human being is fallible and capable of making mistakes and errors of judgment, which can cost the bank money. This *human risk* is minimized by ensuring that the bank recruits good quality staff, trains them well for the jobs they have to do and properly motivates them by compensating them fairly and providing good working conditions.

The *operational risk* arises because of inadequate or failed internal processes or systems. This risk takes many forms and is probably best described by way of examples. A bank may lose money on a

loan because the loan was not approved by a person of sufficient standing or experience to approve the loan. To minimize this risk a bank should always ensure it has an adequate credit approval process in place. A bank can also lose money because its documentation is found not to be complete and enforceable because there was no system in place to ensure adequate checking of documentation before the loan was drawn down. To minimize this risk all banks should have established operating procedures in place, in writing and preferably in the form of a manual detailing precisely who is responsible for doing each of the activities in which the bank is involved and the way they should be done and who is responsible for checking that they are done correctly.

Country risk is the possibility that the borrower is unable to fulfill his obligations to the creditor because of political, legal, social and economic reasons which occur in the country where he invests.

According to the regulations, every financial institution or bank is obligated to evaluate and monitor risk exposure. Because of its exceptional importance, special attention in this paper will be devoted to credit risk and the credit risk situation in the banking sector of Serbia.

CREDIT RISK MANAGEMENT AND THE SITUATION IN SERBIA

For all large and more progressive banks it is a practice to separate the functions of credit risk management from the everyday business of customer relationships and lending. The credit risk management function is responsible for the overall management of the risk asset portfolio with the purpose of establishing and maintaining a sound and profitable risk asset portfolio. The lending or commercial banking departments are responsible for the bank's relationship with individual borrowers.

Because of the importance of the credit risk by financing an investment all banks should have detailed credit risk management policies and procedures. It should be intended as a 'living document' to be continually up-dated and revised as the needs of the bank change and particularly as the bank grows. It is particularly important when a bank is growing that the growth should be controlled growth. Accordingly, a diversified portfolio spread amongst a wide customer base in different industries and geographic areas is better equipped to withstand an economic downturn than one which is concentrated in specific areas and / or geographic areas. To ensure diversification of the portfolio, limits should be established within the portfolio for credit risk to specific customers (or groups of customers with related ownership), industries and geographic areas. These limits may be expressed either as specific amounts i.e. maximum Euro 5 million to an individual customer, industry or geographic area, or as a percentage of the bank's capital, e.g. 10% of the bank's capital.

Looking at the Serbian banking sector as a whole, as of September 2013, the loans granted by banks comprised 63% of assets (NBS). The largest asset category – loans, advances and deposits – recorded an absolute increase of RSD 16.6 bln (0.9%), while its share in total assets remained broadly the same at 62.7% (June 2012: 62.8%). The structure of this loan portfolio is as on Figure 1.

Total (net) lending of the banking sector⁸ at end of the third quarter came at RSD 1,750.7 bln (June 2012: RSD 1,710.3 bln), up by RSD 40.4 bln or 2.4% compared to a quarter earlier. Total increase of RSD 40.4 bln is distributed across sectors as on Table 1.

Sector-wise, corporate lending (to public and other enterprises, which accounted for 9.7% and 90.3% of total corporate lending, respectively) had a dominant share. It amounted to RSD 976.3 bln (June 2012: RSD 929.9 bln) or 55.7% of total loans. Corporate lending rose by RSD 46.4 bln or 5.0% on the previous quarter.

Next in size was lending to natural persons (households, farmers and private households with employed persons) in the amount of RSD 569.4 bln (June 2012: RSD 565.8 bln), with a share of 32.5% and an increase of RSD 3.6 bln or 0.6% on the previous quarter. Loans to finance and insurance sector shrunk the most (by RSD 7.9 bln or 16.8%) and reached RSD 39.2 bln (June 2012: RSD 47.1 bln), accounting for 2.2% of total lending. Loans to public sector amounted to RSD 63.2 bln (June 2012: RSD 64.6 bln) and made up 3.6% of total lending at end-Q3. This category shrunk by RSD 1.4 bln or 2.1%. At end-September, lending to foreign entities and foreign banks came at RSD 36.8 bln (June 2012: RSD 37.0 bln), i.e. at 2.1% of total lending. This was a decrease of RSD 0.2 bln or 0.5%.

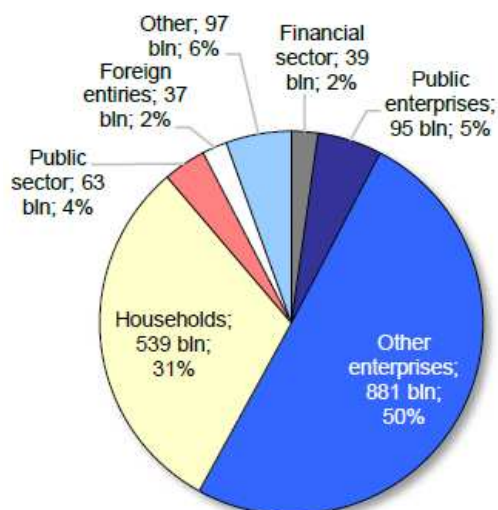


Figure 1: Serbia's banking sector lending activity composite on 30 September 2012 (NBS, 2012)

Table 1: The increase of non-performing loans across the sectors in third quarter of 2012 (NBS, 2012)

Sector	Amount to the previous quarter in 2012	%
Finance and insurance	-7.9 bln	-16.8%
Public sector	-1.4 bln	-2.1%
Public enterprises	-2.1 bln	-2.1%
Household sector	+4.4 bln	+0.8%
Corporate sector	+48.5 bln	+5.8%
Foreign entities and foreign banks	-0.2 bln	0.5%
Other clients	-1.0 bln	1.0%

To determine the exposure to credit risk NPL should be included in the analysis. Monitoring the level and trend of NPLs is vital for identifying potential problems in the collection of receivables and is at the same time indicative of deterioration in the quality of the loan portfolio. Analysis of the level of NPLs in relation to the allowances for impairment, regulatory reserves and capital provides insight into banking sector's capacity to absorb losses resulting from NPLs.

In accordance with the internationally accepted definition, a non-performing loan means the status of outstanding debt on individual loan (including the amount overdue) (NBS, 2012):

- where the payment of principal or interest is 90 or more days past due after the original maturity date;
- where at least 90 days of interest payments were added to the loan balance, capitalized, refinanced or delayed by agreement; or
- where payments are less than 90 days overdue, but the bank has assessed that the borrower's repayment ability has deteriorated and doubts that the payments will be made in full.

Total (gross) non-performing loans of the banking sector at the end of the third quarter stood at RSD 399.5 bln, making up 19.9% of total (gross) loans. The structure of NPLs showed no major changes from a quarter earlier. Corporate NPLs (public and private sector) at RSD 237.4 bln made up 59.4% of total NPLs (vs. 58.9% in the previous quarter). In this category, NPLs of other enterprises represented the key factor behind the NPL growth. Namely, of the total NPL increase of RSD 18.4 bln in Q3 (to which all sectors contributed, except the sector foreign persons), as much as RSD 12.8 bln was generated by other enterprises. Decreasing by RSD 12.8 bln from the previous quarter, loans to other enterprises came at RSD 236.5 bln and continued to hold the largest share (59.2%) in total NPLs. The sector of other clients (mostly including legal entities undergoing bankruptcy) lost the major influence it had on total NPL movements. Its share in total NPLs slightly dropped from 21.9% to 21.7%, with the NPL ratio of 93.52%. Allowances for impairment were made for RSD 56.0 bln (64.5%).

As the share of NPLs in total lending was significant, an additional analysis must be carried out from the aspect of the banking sector's ability to provide sufficient cover for such loans from reserves for estimated losses under balance sheet receivables.

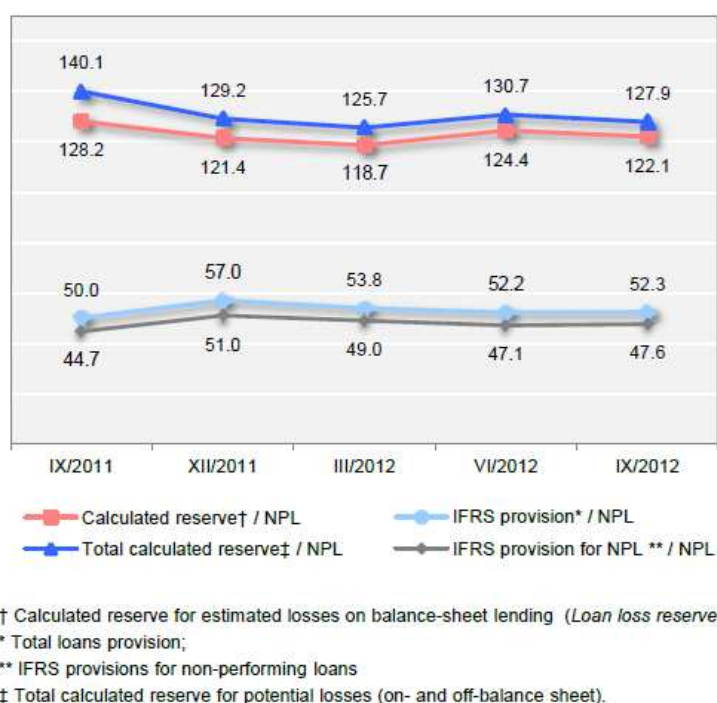


Figure 2: Non-performing loans coverage in percentages (NBS, 2012)

At end-September 2012, the ratio of NPL coverage by calculated reserve for estimated balance sheet losses (the so-called “loan loss reserve“) equaled 122.1% (June 2012: 124.4%), which means that banks’ calculated reserves (under balance sheet items only) fully covered total gross NPLs. In parallel with the gross NPL growth, allowances for impairment were also increased, so the NPL coverage by allowances for impairment remained at the same level (52.28%).

CONCLUSIONS

A large amount of NPLs is the product of granting loans to companies operating in the industry that are riskier. The structure of the loan portfolio to the corporate (the most riskier sector) in the banking sector of Serbia is as on Figure 3.

From the figure we can observe that the largest share of NPLs is in the processing industry (34%), commerce (22%) and construction industry (19%). Since in the commerce sector and the processing industry consist of a large number of companies it can be considered that the risk in

these two industry branches is diversified. However, loans to the construction sector are exposed to a bigger risk, because in this area is a small number of companies operating, and the investment and in this way also the loans to the investors are higher. This risk is reduced by a sufficient amount of reserves set aside for the NPL and so this risk can be considered diversified.

In the financing of investment analysis of financiers credit risk is unavoidable. In every country there are some branches which are riskier than the others. In Serbia's banking sector these branches are construction and the real estate industry. In the analysis of financial institutions it should be given a special attention to these branches, loans to these branches should be covered by provisions in order to avoid losses.

Looking at the banking sector as a whole, we can consider that there are some branches which carry a higher risk. Therefore, the analysis of individual banks should put emphasis on the analysis of the NPL coverage in these branches. If financial institutions (banks), according to this analysis, the required level of reserves set aside in case of NPLs, credit risk will be covered, and the bank will be stable in order to submit financial burden of further investment.

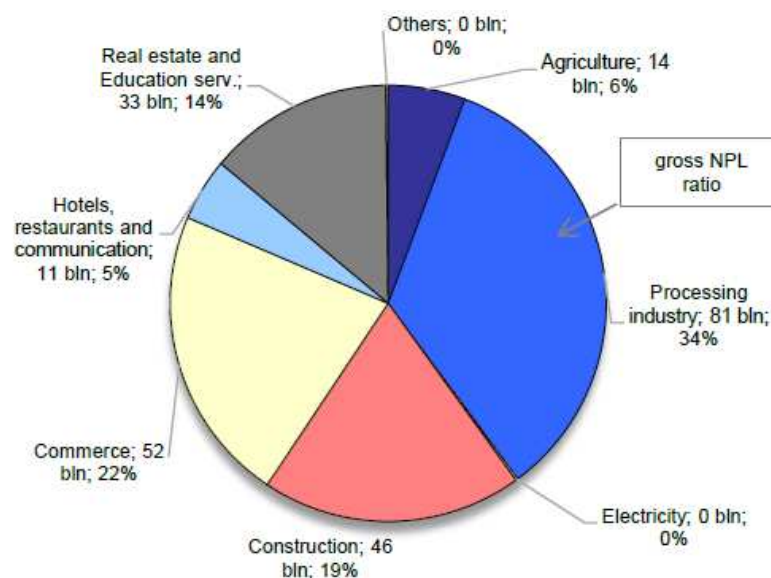


Figure 3: Corporate non-performing loans composition (NBS, 2012)

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LEASING – A CONTEMPORARY FORM OF ENTERPRISE FINANCING

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ABSTRACT

It is an undeniable fact that people have never before changed the world they live in as rapidly as they do today. These changes are the result of permanent technological innovations and their application in the modern world. Constant technological innovations include not only significant investments in research and development but also major investments in their widespread applications. In this regard, it is logical that large global corporations and multinational companies were able to make investments in research, development and application of new technological innovations. Large global corporations not only had huge owned capital at their disposal but also additional sources of financing by share issuing or loans. However, broad implementation of capital goods as very expensive commodities could not be realized by classical methods of procurement of capital goods or by using own funds and loans. Therefore, the contemporary economic practices are increasingly using leasing arrangements as a modern form of financing of movable and immovable capital goods. Similarly, the aim of this paper is to highlight the growing importance of leasing as a contemporary form of enterprise financing in the market conditions, as well as its advantages and limitations.

Keywords: leasing, seller, buyer, financing, calculations.

INTRODUCTION

Before the advent of leasing debt was the only external source of funds. However, with the emergence of leasing, two external sources of funds appear simultaneously, with the contemporary economic practice today increasingly using leasing arrangements as a specific form of financing of movable and immovable capital goods. Generally, leasing arrangements include such transactions in which a company, instead of completing the purchase of the necessary equipment, takes equipment on a lease from specialized institutions, for a specified period which is long enough to get the equipment depreciated. Hence, the leasing arrangement does not result in a change of ownership. Namely, the lease is based on the idea that ownership is not fundamental and the most important category in the field of modern production and turnover of capital goods. In the modern market economy more importance is given to the possibility of free use of capital goods rather than their ownership.

Leases solve substantial financial problems of sellers and buyers alike. Through leasing the seller eliminates the problem of financing the buyer, while the buyer is free of the burden of having to go into debt relations. For this reason, leasing as a form of financing is mostly used by small and medium-sized enterprises and start-ups. Leasing improves the creditworthiness of the lessee company, because it reduces its dependence on conventional sources of financing such as bank loans. In addition, leasing fees can be paid from the part of the proceeds realized by the exploitation of the leased property in question. For the entire duration of the lease fees are fixed. Similarly, for a business funded in this manner, leasing fee presents the final planned value which enables easier making of own calculations. In long-term leases, the lease fee can be regulated in a degressive or a linear way. Unlike a loan, which has very strict rules, leasing offers the possibility

to adjust the leasing fees to the financial circumstances of the lessee. On the other hand, the profit and loss account of the lessee treats payment of leasing fees for the use of the leased asset as expenditure, which means that it is charged as operating costs. Also, payment of leasing fees is made from profit, which means from funds prior to the settlement of all legal and contractual obligations. In this context, leasing in the modern market economy is increasingly taking up prominent place as a specific form of financing of movable and immovable goods.

TYPES OF LEASING

As a form of financing of a company's reproduction flows, leasing can occur in various forms and contents. Therefore, there are different types of leasing contracts in business practices depending on the criteria that are taken into account during their classification. According to the character and degree of obligation, two main types of leasing arrangements can be distinguished: *firstly*, operating or business lease, and *secondly*, finance lease.

Operating or business lease – is a short-term lease arrangement. The leasing agreement is concluded for a period shorter than the expected life of the leased asset (usually equipment), while the fees paid by the lessee are always smaller than the value of the leased asset. In doing so, the lessor bears the risk of obsolescence and loss of equipment, pays insurance, taxes and license costs. Of course, all of these, as well as maintenance and service costs, the lessor charges to the lessee through leasing fees, each smaller than the value of the leased asset. With this type of lease the risks and benefits of ownership of the leased asset are not transferred to the lessee, but are retained by the lessor who is the legal and economic owner of the leased asset. Therefore, an operating lease is called a non-full-pay-out agreement, or an agreement on the remaining book value because the lessor for the duration of the contract can amortize only a portion of their investment costs from fees paid by the lessee. An important feature of the operating (business) lease is that the lease contract may be canceled at any time.

Finance lease - is a long-term lease arrangement. Finance lease agreement establishes the basic period in which neither side has the right to terminate the contract. This period generally corresponds to the regular time of use of the leased asset (usually equipment). Unlike operational, finance lease is, according to its characteristics, called a full-pay-out agreement, in which the total amount of the agreed payments regularly exceed the purchase price of the subject of lease, so that the lessor can amortize their investment costs. In addition, for this type of contract the lessee will bear all costs and risks of the leased equipment, which are normally borne by the lessor in operating leases. Therefore, in the finance lease, the lessee is required to bear the risks and benefits associated with ownership, although he has no legal right of ownership. According to IAS 17 (International Accounting Standards 17), in order for the lease arrangement to have the characteristics of finance lease at least one of the following conditions needs to be fulfilled:

1. the lease transfers ownership of the asset to the lessee by the end of the lease term;
2. the lessee has the option to purchase the asset at a price which is expected to be sufficiently lower than fair value at the date the option becomes exercisable that, at the inception of the lease, it is reasonably certain that the option will be exercised;
3. the lease term is for the major part of the economic life of the asset;
4. at the inception of the lease, the present value of the minimum lease payments amounts to at least substantially all of the fair value of the leased asset;
5. the lease assets are of a specialised nature such that only the lessee can use them without major modifications being made;
6. the lessor's losses associated with the cancellation of the lease are borne by the lessee;
7. the lessee bears gains or losses from fluctuations in the fair value of the residual value;
8. the lessee has the ability to continue to lease for a secondary period at a rent that is substantially lower than market rent.

Bearing in mind that as a form of financing of a company's reproduction flows, leasing occurs not only in various forms, but also contents, in addition to the above mentioned basic classification into

the operating and finance lease, it should be noted that there is also a division into the *direct and indirect lease*. This also means that every operational and finance leasing can be direct or indirect. According to many authors, *indirect leasing* (leasing in a narrow sense) is the real leasing in which three parties are involved: (a) the manufacturer i.e. supplier of investment asset which is the subject of the lease, (b) the financier i.e. leasing company as lessor, and (c) the lessee who is interested in the use of the asset which is the subject of the lease. However, *direct leasing* (leasing in a broader sense) is such a leasing arrangement where only two parties are involved: (a) the manufacturer i.e. supplier of the investment asset, and (b) the lessee. It should be noted that the direct leasing is frequently referred to as manufacturer leasing which is used by manufacturers to cover immediate needs to provide their customers with additional services or to place new products on the market. In this regard, the manufacturer takes on regular service obligations and delivery of spare parts. Such additional obligations of the manufacturer do not make manufacturer lease agreements different qualification from those applicable to all agreements concluded through leasing companies, as they do not de facto violate the main provisions of lease, which is in fact the basic nucleus of each lease structure.

Within these basic distinctions between operating and finance leases, i.e. direct and indirect leases, there are divisions into several types of leases that will be noted here only briefly, without engaging in a precise clarification of each. In this regard, it should be noted that certain types of leases can be differentiated in terms of very different criteria. However, for our purposes here it is enough to mention several of the following criteria for the classification of leasing arrangements according to: (1) the length of time, (2) the type of leased asset, (3) the contractual obligations at the end of the lease, (4) the types of obligations related to the maintenance of the equipment provided in the lease, and (5) the country in which the lessor and the lessee are located.

According to the length of time for which the leased asset is leased, there are several types of leasing, namely: (1) a short-term lease with a term of up to three years, (2) medium-term lease with a term of three to seven years, and (3) long-term lease with a term of more than seven years. However, lease terms can be longer (e.g. 15-20 years) when complete plants and investment goods of high value are concerned.

According to the type of leased asset, there is a difference between the lease of equipment and facilities, although it is possible to talk about the leasing of movable and immovable assets. The subject of the lease is usually new equipment, but it can also be used, but in a usable condition, which means that it was not completely amortized by prior use in a way that it cannot be subject of a lease.

According to the contractual obligations at the end of the lease, we can distinguish different types of leases: (1) forward lease, (2) lease purchase, (3) revolving (renewable) lease, and (4) lease option. In the *forward lease*, the term of the leased equipment is precisely determined and it must be returned to the lessor after the expiry. In the *lease purchase*, the contract explicitly states that the lessee is to buy the leased equipment on expiry of the lease period. In the *revolving lease*, the contract explicitly specifies that the lease is to be extended at the end of contracted (base) period. In *lease option*, the agreement explicitly specifies that the equipment which is the leased asset will be purchased by the lessee during or at the end of the agreement period, although there are views that it provides only option (right) for the purchase, but not the obligation to buy the leased asset.

According to the type of obligations related to the maintenance of the equipment provided in the lease, we can distinguish between the net and gross lease. In a *net lease*, the lessor does not assume any obligations in terms of repairs, maintenance and servicing of equipment provided in the lease. However, in a *gross lease*, the lessor assumes the obligation to perform maintenance, spare parts supply, repair, overhaul and maintenance of equipment, as well as train lessee's employees how to operate the equipment. Also, the lessor has the obligation to provide insurance for the equipment for the duration of the lease agreement. For this extra work, the lessee pays a certain fee that may be included in the lease fee or paid separately.

According to the country in which the lessor and the lessee are located, we can distinguish between domestic and international lease. A *domestic lease* is when the donor and the lessee are located in the same country. An *international lease*, is when the lessor is in one country while the lessee is in another. International lease arrangements are related to investment goods of high value (ships, aircraft, computer equipment, etc.). Such arrangements are concluded for the purpose of enterprise development and transfer of modern technological achievements from developed countries to developing countries, but with minimal input of capital of domestic companies.

LEASING CALCULATIONS

Lease study is very important for making a decision on purchasing equipment on lease. It has three main parts, namely: technical-technological, economic and financial part. *The technical-technological part* of the lease study contains information on the equipment that is to be leased, with production characteristics and evaluation of practicality of its procurement. *The economic part* of the lease study contains information about the production effects of the use of the leased equipment, such as: increase in the production volume, increased services, increased productivity, efficiency improvement, greater degree of completion of the offer range and the like. *The financial part* of the lease study contains elements used to determine the value of the equipment, the cost of the lease, the lease income etc.

The final part of the lease study is a lease agreement, which specifies the elements given in the study. Any agreement for the leasing arrangement must include the following elements: (1) the contractual parties in the leasing business, (2) a detailed description of the subject of the leasing business, (3) the name and quantity of leased equipment, (4) the total value of leased equipment, (5) the delivery time of equipment, (6) the lease term of equipment, (7) the time, place and manner of payment of lease installments, (8) the guarantee of the lessee to the lessor of equipment, (9) the way of collection of equipment, (10) the right of ownership of equipment, (11) the right of control over equipment, (12) the insurance of equipment, (13) the loss and damage to the equipment, (14) the interest on late payments of lease installments (15) the manner of return of equipment at lease expiry, (16) the right of the lessor to terminate the lease (17) the arbitration concerning disputes over lease arrangements, (18) bank costs, (19) the equipment specification, (20) the time of entry into force of the lease agreement.

What is characteristic for all types of leasing arrangements is that they are accompanied by lease calculations. Practical experience shows that the calculations are made for leasing businesses under a year and over a year. For example, the calculation (costs) of imported leased equipment *with a term of under a year* generally contains the following elements: annual lease value, customs duty, import tax, import duties, importer commission, the cost of leasing, the number of installments (2 - 12), lease term and manner of payment. Also, calculations (costs) of imported leased equipment *with a term of over a year* should contain the following elements: the total value of the equipment lease, customs duty, import tax, import duties, importer commission, the agreed term of payment, monthly or semi-annual payment installments, the annual rate of depreciation of equipment, length and manner of payment of lease.

Each lease arrangement over a year is considered a tangible investment. After the repayment of the contracted price of the leased equipment, it becomes the property of the lessee, and is entered in their books as equipment and other fixed assets (tangible investments). However, one should keep in mind that if the lease does not include the purchase of the residual value of equipment, then it is usually returned to the owner or purchased at the contract price. Similarly, the implication is that only the paid part of the agreed lease is an intangible asset. The rest of the equipment value is treated as the value of fixed assets (tangible investments), which is subject to monthly and annual depreciation. The main characteristic of a leasing calculation is that each of its elements must be based on the elements of a study on the leasing arrangement. If there is an intermediary between the manufacturer (the lessor) and the lessee (usually a leasing organization), then the calculation of

the leasing arrangement must necessarily have its own special elements, such as: leasing organization fees, sales tax, purchase price of the rest of the equipment etc.

Once a calculation of the cost of the lease is made, depending on the type of leasing arrangement, then its comparison to the calculation of other available sources of funds is made. As a rule, we compare the alternatives of the procurement of equipment on leasing and buying it on loan. If the equipment is bought on loan, then a classical calculation is made, related to the purchase of equipment on loan for a set period, with payment in advance, credited part of the value of equipment, cost of interest and other costs. After determining the cost of loans and leases, cash flow is determined, i.e. cash inflows and outflows of these two forms of financing. In this context, it is possible to give a concrete example in which it is assumed that a domestic company does not have the necessary fixed assets for the production process. Similarly, it is logical that the company will immediately be faced with the controversial question: *whether to acquire the fixed assets on loan or lease?* Based on such an analytical framework of lease observation, it is possible to make comparative calculations and definitely decide on how to resolve the mentioned issue (Tables 1 and 2).

For example, let's suppose that we have a set of machines, electronic computers, with depreciation rate of 20%, and 5-year life. The marketing estimate of the economic use is only 2-3 years, primarily taking into account technical progress and the offer of such machines in the market. In order to ensure proper decision by a company's management related to the purchase of equipment, the following additional information is also presented:

1. The amount of investment on loan is € 160.000, the interest rate is 12%, time of payment is three years, in equal annual installments, the discount rate is 12%, the tax and contributions from profit are 15%.
2. The amount of lease rent is € 70.000 per annum. In addition, the leasing agreement provides spare parts as well as technical aging of equipment up to 3% of annual rent value. These expenses are borne by the lessor, and the agreement may be renewed (optional) after three years of use and the equipment may be purchased, with the rents treated as advance payments.
3. In both cases, the liquidation value is negligible.

Table 1: Calculation of equipment procurement on loan

Value	1 st year	2 nd year	3 rd year
1. Annuity ($V^3 12$)	66.944	66.944	66.944
2. Of which – interest only	13.611	12.800	8.033
3. Amortization	32.000	32.000	32.000
4. Savings [(2 + 3) x 15%]	6.841	6.720	6.005
5. Net expenditure	60.103	60.224	60.939
6. Discount factor $II^3 12$	0,8928	0,7972	0,7118
7. Current value (5 x 6)	53.660	48.010	43.376

Ds= 145.046 (at the moment of calculation = 0)

Table 2: Calculation of equipment procurement on lease

Value	1 st year	2 nd year	3 rd year
1. Leasing costs	70.000	70.000	70.000
2. Tax savings (1 x 15%)	10.500	10.500	10.500
3. Spare parts and technical servicing	2.100	2.100	2.100
4. Total savings	12.600	12.600	12.600
5. Net expenditure (1 – 4)	57.400	57.400	57.400
6. Discount factor $II^3 12$	0,8928	0,7972	0,7118
7. Current value (5 x 6)	51.246	45.759	40.857

D's = 137.862 (at the moment of calculation = 0)

Bearing in mind that the loan discount sum (Ds) is greater than the lease discount sum (D's), i.e. $145.046 > 137.862 = + 7.184$ euro, it leads to a logical conclusion that the purchase of the subject equipment on lease is more acceptable, since the investment on that basis is lower for 7.184 euros. By analyzing the example given, it can be concluded that in addition to the above, there are further advantages of purchasing equipment on lease, such as: *firstly*, there is no risk of technological obsolescence of the equipment after three years, *secondly*, the rate of return is higher since leasing does not increase the amount of assets employed, and *thirdly*, the level of indebtedness of the company is not increased. Given the fact that there is a difference in the life (depreciation) and the duration of the lease agreement or bank loan, it is characteristic that after the third year of equipment use, its liquidation value of 64.000 euro remains, i.e. $160.000 - 96.000 = 64.000$.

CONCLUSION

In the modern market conditions, there is a growing importance of leasing as a form of financing and a factor of efficiency of business operations. Due to the presence of technological progress, modern enterprises are in need of permanent investments in order to meet increasingly stringent manufacturing standards, rigid environmental requirements and more demanding consumers. Consequently, for a wide application of new technological solutions, business practices have had to find adequate, fast and flexible market instruments. One of these instruments is the lease – as a contemporary form of enterprise financing, which allows purchasing of capital goods without acquiring ownership of them.

In the present context of the general crisis, when investment funds are substantially limited for many business entities, the lack of investments would lead to relative or absolute delays, decline in productivity and decrease in financial effects of business operations. For this reason lease arrangements enable business entities to use modern capital goods, with all positive effects arising from this, and they cover two basic levels: microeconomic and macroeconomic. *At the microeconomic level*, leasing operations allow many companies to use modern capital goods in conditions of inadequacy and scarcity of investment funds, and at the same time to preserve the creditworthiness of companies for other profitable activities, thus removing bottleneck situations, initiating production processes, increasing employment, liquidity, productivity and profitability, all without securing loans (credits) through mortgage. *At the macroeconomic level*, leasing operations allow activation of production capacities, modernization of equipment, increase in global productivity and competitiveness of the domestic economy, and increase in the exports and profitability of the global economy. Similarly, for Serbia as a country in transition, development and further implementation of the leasing arrangements in all business segments are particularly significant, so that in the upcoming period, Serbia may achieve the level of business development similar to that of its surrounding countries, especially countries of the European Union.

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IMPORTANCE OF COST-BENEFIT ANALYSIS IN INVESTMENT MANAGEMENT

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ABSTRACT

In order to estimate realistically the investment process and assess the justification of realization of an investment project it is necessary to establish and analyze the overall effects brought by the realization of certain investments. The effects of an investment project can be assessed and analyzed both from the aspect of an enterprise and from the aspect of broader social community. Enterprises as investors are most often interested only in direct economic effects of investments which can be measured with sufficient exactness and expressed in quantitative terms, whereas they are usually not interested in indirect economic effects which are harder to measure and express quantitatively. However, one should bear in mind that some investments are such that must be considered and assessed, first of all, from the broader aspect (e.g. in transportation system, energetics and alike). In that context, cost-benefit analysis presents the method used for making investment decisions which influence the development of broader social community – certain region, economy, society as a whole. The aim of this paper is to point to basic elements of the cost-benefit methodology for the assessment of investment projects.

Keywords: cost-benefit analysis, investments, cost, benefits, investment criteria.

INTRODUCTION

Investment process is characterized by single or recurring investments made in the present, the effects of which are expected in the future. To be able to realistically observe and assess the justifiability of the realization of an investment project, it is necessary to identify and analyze the overall effects brought by the realization of certain investments. Enterprises as investors are mostly interested only in direct economic effects of investments which can be measured with sufficient exactness and expressed in quantitative terms. On the other hand, indirect economic effects of investments, which are very difficult to measure and express quantitatively, are not of particular interest to enterprises. However, when assessing the justifiability of realization of an investment project, one should always bear in mind the effects that the project brings to other economic entities or the broader social community. In this context, the cost-benefit analysis (CBA) is a technique to identify, analyze and compare the total costs and benefits of a specific investment.

The cost-benefit analysis quantifies and adds monetary values to all effects (both economic and non-economic) and expenses related to the project realization, based on which it calculates the net (social) benefits. In other words, the cost-benefit analysis is a method of evaluation of the investment policy, which quantifies the results and the impact of the chosen investment policy on all the members of a community, and should be distinguished from the cost-effectiveness analysis (CEA). The task of this analysis is to identify the most cost-effective solutions for a given investment objective. Therefore, the focus is on the selection of the most favorable investment option. In addition, it comes down to optimizing predetermined fixed objectives, with the criterion of minimizing the present value of the costs of the investment project implementation. In the

application of the cost-effectiveness analysis, there is an assumption that the objective of the investment project is predetermined and is identical for all alternatives.

In the cost-benefit analysis, the costs and results of an investment project are not predetermined, but the selection of projects is compared to the set values of costs and outcomes. In addition, there is a possibility that all alternatives for the achievement of a development objective may be rejected as unsatisfactory. Namely, the cost-benefit analysis is based on the idea that the same effect may not be positive for the enterprise and for the society as a whole alike, which means that the objectives of certain enterprises and the society as a whole may not always fully conform. An investment project can bring significant positive economic effects to the investor, while at the same time (e.g. due to environmental pollution, etc.) it can be detrimental to the society as a whole. Because of such possible differences in relation to individual and overall social objectives, the cost-benefit analysis insists on the social effects of investments, i.e. the observation and assessment of their effects from the point of view of the society as a whole, which is exactly the main feature of this method. In the given context, the cost-benefit analysis is frequently used for evaluation of investment projects that require large financial investments and have important effects for many areas of social and economic activities. These include, first of all, investment projects in transport (road, rail, air, water) followed by large investment projects in the energy facilities, water management, agriculture, and non-industrial sectors (education, health).

The basic concept of the cost-benefit analysis is to take into account and calculate or estimate all social benefits and costs of an investment project, and on the basis of comparison (weighing) of the total benefits and costs, assess its profitability. In addition, only those projects for which the total benefits outweigh the total costs can be evaluated positively, which means they are acceptable for implementation. Therefore, no matter which of them is in question, the cost-benefit analysis requires taking into account total costs and total benefits that the society may have from a particular investment project.

The exceptional complexity of the cost-benefit analysis issues, as well as its proper applications in practice, requires knowledge of several important issues that will be presented in this paper, namely:

- a) identification and measurement of costs and benefits of an investment project, and
- b) criteria to be used in the cost-benefit analysis.

IDENTIFICATION AND MEASUREMENT OF COSTS AND BENEFITS

The cost-benefit analysis is based on a concept by which one needs to consider, identify, and quantitatively evaluate and express in monetary terms all the costs and benefits which an investment project brings to the society as a whole. Similarly, the identification and measurement of social costs and benefits is especially important in the application of the cost-benefit analysis, but because of the many peculiarities and difficulties, it also represents the biggest problem in the whole process of using this method in the evaluation of investment projects. The cost-benefit analysis is used in the so-called economic analysis of projects and it defines contributions to the overall social goals, as opposed to the so-called financial analysis which determines their effectiveness from the point of view of private investors.

The application of the cost-benefit analysis is especially recommended by the World Bank. In this regard, it suggests that in the determination of costs and benefits for the society as a whole (economic analysis) one should start from the effects a specific project gives to the investor (financial analysis) and, by including or excluding certain groups of costs and benefits, come to the overall results from the point of view of the society as a whole. This is the first part of the work, which is much easier. After determining all social costs and benefits that an investment project brings, they should be evaluated and expressed in the monetary form. In this regard, we resort to the use of an appropriate price system that allows the conversion of various effects into monetary terms. To measure social effects, which are brought by projects, the cost-benefit analysis uses

corrected market prices, which are usually called accounting prices. They are usually quite different from market prices, which are used in the financial evaluation of projects and are not able to express all of their social effects, and are therefore not suitable for use in the cost-benefit analysis. Market prices are a valid indicator of the results evaluation only in perfect market conditions. In imperfect market conditions, market prices are not a reliable measure of effects of projects on development objectives, so they need to be corrected and replaced with accounting prices. In the above context, the accounting prices are a way of correcting distortions and irregularities that exist in market prices, due to imperfect markets, weak economic policy of a country, existence of monopolies or other reasons.

Generally, the accounting prices are a principled approach to measuring and assessing project effects, but their calculations can be different and quite complex. The basic question to be resolved in determining the accounting prices is whether they are in fact tradable (marketable) or non-tradable (non-marketable) goods, which depends primarily on whether such goods, merchandise or services can be exported or imported. Tradable (marketable) goods are those that can be imported or exported, and non-tradable (non-marketable) goods are those whose domestic production costs (including transportation costs) are too high to enable competitive exports, or too low, to enable competitive imports. In other words, it is the price that is higher than the FOB price for exports, and lower than the CIF price for imports.

There are two basic methods for determining accounting prices, and they are: (1) *the Little Mirrlees method (LM method)* and (2) *the UNIDO method*. They differ primarily according to the adopted price system and the choice of the accounting unit of measure. While the LM method assumes that world prices (CIF for exports, FOB for imports) are a very good approximation of accounting prices, the UNIDO method determines them based on the characteristics of domestic demand, i.e. consumers' willingness to pay for a product or service. Given the importance of these methods, we will attempt to explain them more precisely.

1. *The Little Mirrlees method* is based on world prices as the basis for determining accounting prices. According to this method, world prices are taken for accounting prices. Moreover, prices at borders are used as world prices, such as CIF prices for exports, and FOB prices for imports. In this approach, it is considered that most of the inputs and outputs of the project belong to tradable (marketable) goods that are valued at world market prices, i.e. prices at borders. For non-tradable (non-marketable) goods, the Little Mirrlees method proposes a procedure which is reflected in the following: (a) non-tradable goods should be broken down into their components, (b) a part of these components belongs to tradable goods and should be valued using the prices at borders as accounting prices (c) the remaining parts of non-tradable goods can be converted to world prices using standard conversion factors. When it comes to world prices, tradable goods are converted from the world foreign exchange prices to world prices in local currencies, according to the official exchange rate, and the conversion of non-tradable goods from local to the global system of prices (in local currency) is performed using the so-called standard conversion factor.

Conversion factors are used to convert prices from one system to another and from one currency to another. They are used for the price conversion of non-tradable goods, in the domestic market and in the domestic currency, to the accounting prices. Although conversion factors can be determined for each separate non-tradable good, in practice they are typically determined for groups of similar non-tradable goods. When the specific conversion factors cannot be determined, then the standard conversion factor, which is average, is used for all non-tradable goods. The standard conversion factor is the ratio of the official and the accounting exchange rate, which is represented with the formula: $SCF = OER / AER$, where the symbols used have the following meanings: SCF - the standard conversion factor, OER - the official exchange rate, AER - the accounting exchange rate. Based on this formula, the accounting foreign exchange rate can be obtained as the product of the official foreign exchange rate and the reciprocal value of the standard conversion factor, which is the foreign currency conversion factor (FCCF), respectively: $AER = (1 / SCF) \times OER = FCCF \times OER$.

The standard conversion factor (SCF) is used for conversion from one price system to another. The official exchange rate (OER) is used to convert one currency to another, and the accounting exchange rate (AER) performs combined conversion from one (global) price system and one currency (foreign exchange) to another (domestic) price system and another currency. However, the accounting exchange rate (AER) corrects only the existing price disparities at the aggregate level, tradable - non-tradable goods, but not the price disparities within the group of tradable goods. For this reason, the most commonly used are the systems of world prices in domestic currency, i.e. the standard conversion factor (SCF) for correction of domestic prices of non-tradable goods to world prices.

2. *The UNIDO method* starts from domestic prices as the basis for determining accounting prices. In this method, accounting prices are determined on the basis of characteristics of domestic demand, i.e. the assessment of the "willingness to pay" for certain goods or services. In addition, domestic demand is taken as the unit of measurement (numéraire), and analogously, all values are expressed in domestic prices. Since non-tradable goods are here calculated in domestic prices and domestic currency, they can be directly included in the analysis and evaluation without alterations or conversions. For tradable goods which are imported, the prices quoted in foreign currencies are converted into domestic prices and domestic currencies by applying the accounting exchange rate. According to the UNIDO methodology, relevant effects of the project can be divided into three main groups: (a) Direct social economic results or net outputs of the project, (b) Direct social economic costs as inputs of the project, (c) Indirect social economic results and costs, which are presented as external effects (positive and negative).

In the above context, it should be borne in mind that the cost-results analysis also requires resolution of the problem of the time delay of effects, in terms of making decisions at the present moment. Thus, a need for discounting has arisen. In addition, the discount rate is usually defined as the rate of decline of the value of the measurement unit in time. In this regard, in the UNIDO approach, the discount rate is in fact the discount consumption rate, while in the LM approach, the discount rate comes down to the so-called accounting rate of interest, which is generally different from the discount consumption rate.

COST-BENEFIT ANALYSIS CRITERIA

The basic principle of the cost-benefit analysis states that a project for implementation is justified only if the overall benefits it brings are higher than the expected costs. This principle is also used in defining the relevant criteria for the assessment of efficiency of investment projects, and of course, observing the other elements which are necessary to consider in such cases. When evaluating investment projects, using the cost-benefit analysis, it is possible to use a number of assessment criteria. Four criteria will be presented here, namely:

1. The net benefit present value criterion,
2. The internal rate of return criterion,
3. The benefit-cost ratio criterion,
4. The payback period of investment criterion.

1. *The net benefit present value criterion* is the difference between total discounted benefits and total discounted costs of implementation of investment projects. Accordingly, this criterion can be represented using the formula $K_{ns} = K_s - T_s$, where the symbols used have the following meanings: K_{ns} - net benefit present value criterion, K_s - total discounted benefits (present value of the total project benefits), T_s - total discounted costs (present value of the total project costs). Evaluation of investment projects using this criterion is done in such a way that each project with a positive K_{ns} value, i.e. higher than zero ($K_{ns} > 0$), is considered to be economically efficient and on that basis its implementation is justified. When choosing among several mutually exclusive projects, the most suitable for the realization is the one with the largest positive K_{ns} value. As an indicator which operates with absolute values of benefits and costs, this criterion is much more suitable for the

assessment of individual projects, rather than for choice of one among several investment alternatives. Specifically, when assessing the validity of a project there are no major obstacles in deciding because the decision maker relies on a positive present value of net benefits. However, when choosing among several projects, there are differences which require some other factors of influence to be taken into account, which makes this criterion difficult to use.

2. *The internal rate of return criterion* is the discount rate at which the sum of discounted benefits is equal to the sum of discounted costs, i.e. the present value of net benefit is zero. Defining this criterion can be represented with the following formula: $K_{ns} = K_s - T_s = 0$.

Evaluation of investment projects using this criterion is done in a way that each project with the value of the internal rate of return higher than the interest rate on the capital market (or the adopted discount rate) is considered reasonable and economically justified for implementation. If there is a choice among several mutually exclusive projects, the one generally considered to be more favorable is that with the highest internal rate of return. However, this postulate is rarely used in practice since it is assumed that the internal rate of return criterion is not suitable for selecting and deciding among several projects. Accordingly, in theory, the relative rate of return is most commonly used when choosing among several projects. In addition, the relative rate of return is the discount rate with the discounted difference of benefits equal to the discounted difference of costs of the two observed investment projects. The method of evaluation of investment projects using the relative rate of return is the same as for the internal rate of return. Calculation of the internal rate of return is a quite complicated operation. Only with the simplest of investment projects, where the investment is made on a one-time basis, the calculation of the internal rate of return is relatively simple and is carried out using the annuity tables. In all other cases, there is no possibility of immediate calculation of the internal rate of return, but the calculation is done with the given formula using an iterative procedure. Complicated calculations of the internal rate of return are also a major obstacle for the application of this criterion in practice. It is rarely used because it is not suitable for choosing and deciding among several projects.

3. *The benefit-cost ratio criterion* is expressed, in fact, with the coefficient of their mutual relations and is, from the quantitative point of view, the relation of total discounted benefits and total discounted costs of any single investment project. The benefit-cost relation coefficient shows how many units of benefit can be obtained from each unit of the costs spent. Defining this criterion can be represented by the following formula: $K = K_s / T_s$.

Evaluation of investment projects using this criterion is done in a way that each project with the value of this criterion (the ratio coefficient of benefits and costs) is higher than one ($K > 1$), it is considered economically efficient and on that basis justified for implementation. When choosing among several mutually exclusive projects, the most suitable for the realization is the one with the highest value of the ratio coefficient of benefits and costs. Although in theory it is believed that this criterion is inferior in its characteristics, compared to the net benefit present value criterion, it is nevertheless quite suitable for practical use, especially when choosing among several projects, and should be used in such cases. This criterion is not sensitive to the different structures of benefits and costs, and in such cases it is more realistic compared to the criteria of the present value of net benefits. In this regard, it is another advantage when choosing among several available investment projects.

4. *The payback period of investment criterion* is the period of time, expressed in years, for which the present value of net benefits from investment will repay the total invested assets. Defining the criterion, in this sense, can be represented by the formula: $t = I_s / K_{sk}$, where the symbols used have the following meanings: t - the payback period of investment, I_s - the present value of the total investments, K_{sk} - annually discounted net benefit value.

Evaluation of investment projects using this criterion is done in a way that any project is considered economically efficient, and on that basis justified for implementation, if the payback period is

shorter than the pre-determined, normative maturity period. For the normative payback period, the economic life of the equipment installed in the investment may be approximately taken. When choosing among several mutually exclusive projects, the priority is given to the one with the shortest repayment period. It should be noted that the payback period of investment can be used to assess a number of projects, and this occurs only in the case of similar projects or projects with multiple versions of the same one. In other cases, this criterion is unreliable, its shortcomings becoming apparent, since it does not take into account the entire period of exploitation of investment projects. The payback period of investment criterion is typically used in cases of investment projects in which rapid technological and economic obsolescence of equipment is present, and the investors aim to promptly repay the invested funds to be able to acquire modern equipment again. This criterion is very easy to apply and calculate, and this is one of the main reasons for its frequent use in practice. However, its main shortcoming is that it does not take into account the benefits and costs of projects in the entire period of exploitation of investment, but only up to the moment of all invested assets. This may seem as an unjustified oversimplification of the analysis and investment evaluation, particularly from the aspect of investors, who are primarily interested in whether the total benefits, which are present in the entire period of investment exploitation, will exceed the total costs of the projects. The payback period of investment criterion does not answer this essential question and is therefore unacceptable for many investors in terms of the sole criterion for the evaluation of investment projects.

CONCLUSION

The paper briefly outlines the basic elements of the cost-benefit methodology for the assessment of economic justifiability of investment projects. Regardless of the project concerned, the cost-benefit analysis requires taking into account the overall benefits and costs to the society. The basic idea of the cost-benefit analysis is to take into account, calculate and evaluate all the social benefits and costs of a project and, on the basis of comparison of total benefits and costs, to assess the validity and profitability of a specific investment. Considering the importance and complexity of this methodology, it is necessary to systematically and seriously work on the education of workers in the fields of science, banking and the economy, concerning the application of this methodology in the modern investment management. Wider application of this methodology in practice requires a long process that should lead to improvements in the area of investment, especially in countries in transition as well as to improve the efficiency of investment projects of broader social importance (investment projects in the fields of energetics, water management, agriculture, etc.).

Despite many uncertainties and justified complaints in relation to whether individual investment projects are at all possible to evaluate quantitatively from the macro point of view, i.e. whether the social benefits and costs can be assessed accurately and reliably, it is the fact that the cost-benefit analysis is still quite used in the world. Despite all the problems and shortcomings, it remains the only right method to be used in the evaluation of investment projects from the macro point of view.

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FORFAITING AS A CONTEMPORARY FORM OF ENTERPRISE FINANCING

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ABSTRACT

Forfaiting is a modern non-credit transaction by which the repurchase of long-term receivables is carried out. Repurchase of receivables is made before maturity, so the countries with developed market economies use forfaiting as a form of accelerated debt collection. Forfaiting is related to the purchase of long-term outstanding receivables arising from the delivery of goods and services - mainly in export. Generally, it is a repurchase of long-term and outstanding receivables where the buyer assumes all the risks of collection of receivables from a third party. As a rule, forfaiting organizations set up banks with high financial and investment potential. This allows banks and their forfaiting organizations, with the acceptance of appropriate risk, to achieve much higher profit margins than those that can be achieved through regular credit transactions. On the other hand, forfaiting offers a number of advantages that are not typical for the traditional methods of enterprise financing. For that reason forfaiting provides many companies with competitiveness and survival in the market. The aim of this paper is to highlight the importance of forfaiting as a modern form of enterprise financing, as well as its advantages and limitations.

Keywords: forfaiting, forfaiter, exporter, importer, bank.

INTRODUCTION

In modern economic practices, forfaiting is one of the specific ways of enterprise funding. This form of financing occurs in large individual transactions for delivery of equipment, "turnkey" construction of facilities or capital projects with deferred payment ranging from one to several years. The essence of a forfaiting contract is reflected in the fact that the bank (forfaiter) purchases its client's receivables from the third party (the buyer-investor), which the client (seller-producer) assigns with the transfer of instruments for the settlement of maturity that was contracted with the buyer (bills of exchange, documentary letters of credit, a guarantee of a third party, etc.). The bank accepts assignment of receivables and pays a nominal value of the receivables to the seller (producer) as its client, minus the discount interest rate, fees and expenses related to the job. In addition, the bank is obliged to bear the risk of collection of assigned receivables, i.e. will not seek reimbursement of outstanding receivables from the seller-producer. Forfaiters are usually large banks or other financial institutions which have great potential for refinancing or obtaining of funds in the capital market. The main motive of the forfaiter is profit, which is often a few percentage points higher compared to that which would be achieved from the invested capital under the usual market conditions.

By concluding a forfaiting contract, the seller (producer) acquires cash, which *de facto* means that they have sold their commercial loan to the bank and since the bank paid for the transferred receivables, now the bank provides funding to the buyer (investor), collects assigned receivables at maturity, with transferred payment instruments, and thus actually returns cash given to the seller (producer). Bearing in mind that the assigned receivables are higher than the given amount of cash for the discount interest rate, fees and expenses, bank gains income equal to the difference between assigned receivables and given cash. In addition, it should be noted that the amount of the discount interest is influenced by: the degree of risk taken on by a commercial bank, creditworthiness of the

third party (debtor), type of collateral, economic and other conditions in the country where the property is located etc. Solvency of the third party, from whom the receivables are collected, is very important for a forfaiting contract and it can be expressed in different forms such as: in the form of securities, in the form of transferable documentary letter of credit with deferred payment period, in the form of guarantees of third parties and civil legal assignments.

Conclusion of forfaiting agreements is commonly practiced in export activities (export of equipment, construction of facilities and execution of capital projects). The forfaiting agreement, as a supplementary form of long-term transactions financing, provides conditions for the purchase of supplies, equipment and modern technology without using own funds or seek loans from commercial banks. From the aspect of financing costs (expenses), it should be said that this form of crediting is somewhat more expensive compared to conventional bank loans, but it has more security in terms of the collection of receivables. Bearing in mind that it is the sale of goods on credit, in this way local exporters (sellers-producers) are enabled to place their products or services on the international market at a much more favorable terms. In contrast, for the importer, the free import of modern technology from highly-developed countries is of particular importance, which is a fundamental prerequisite to the development and improvement of domestic technology and manufacturing companies' development.

PARTICIPANTS AND RELATIONSHIPS IN THE FORFAITING BUSINESS

When it comes to forfaiting arrangements, it should be noted that the main participants in the business of forfaiting are the following: (1) the seller-exporter, (2) the buyer-importer, (3) the customer's (importer's) bank, (4) forfaiting organization, and (5) optional subjects. In the process of doing forfaiting business, several legal and financial relationships are formed between these parties, each of them producing legal effects only for the involved parties (Figure 1).

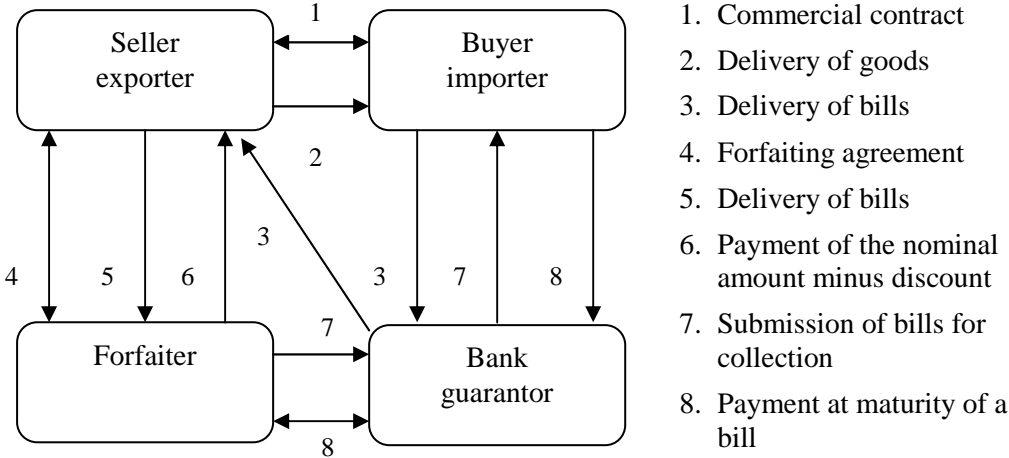


Figure 1: Forfaiting transactions

(1) **Seller-exporter** is the entity that produces investment equipment, builds entire facilities, carries out works abroad and approves sales on credit to customers-importers, although it cannot and does not want to be responsible for further care of it, and tries even during negotiations of purchase to find a forfaiting organization that will repurchase the receivables.

(2) **Buyer-importer** is the entity that has the intention to buy specific investment equipment but lacks the necessary funds for the intended investment. For this reason it turns to the seller-exporter (manufacturer) with a request to have the purchase on credit approved.

(3) **Bank of the buyer (importer)** is a financial institution through which the major tasks of payment securing are performed in connection with the use of factoring mechanism. The bank's

activities are directed towards the issue of collateral such as guarantees and avals in favor of the seller-exporter (producer).

(4) **Forfaiting organization** is a company engaged in forfaiting business, which has good business relations at home and abroad as well as opportunities to refinance receivables due to the seller-exporter (producer) on domestic or international capital markets. Therefore, forfaiting transactions are mostly performed by large and reputable banks which have a network of branches and correspondent relations with foreign banks. Such banks usually provide specialized organizational units or agencies for forfaiting jobs.

(5) **Optional subjects** are mediators in forfaiting operations whose role is limited exclusively to mediation, i.e. finding forfaiting buyers and sellers, as well enabling their contact with forfaiting organizations. A fee is charged for mediation services, which, although not too high, increases the costs of exports of investment equipment.

In the last decade forfaiting jobs have been gaining more importance, so forfaiting is increasingly becoming a common form of export financing, which frees the exporter from the potential risk by selling its receivables before the date of maturity. The seller acquires funds through the process of forfaiting, i.e. makes profit and has no need to seek loans from commercial banks. In other words, the exporter converts its sales on credit to cash transactions. In addition, the forfaiting bank purchases receivables, absorbs the risk of the collection and is entitled to lower the amount of the receivables for the agreed discount. Similarly, forfaiting business is very similar to factoring, with the exception that instead of selling receivables within the country, here the sale of receivables is carried out abroad. The company that has exported goods sells its receivables from the customers abroad to the relevant financial institution engaged in forfaiting, and it is, as a rule, a commercial bank registered for such operations.

SIMILARITIES AND DIFFERENCES BETWEEN FORFAITING AND FACTORING

Bearing in mind that the object of the contract in enterprise financing through forfaiting and factoring are receivables with a specific maturity date and value, there is a need to define basic similarities and differences between them. The main similarity is that the seller (producer) immediately after the signing of the contract comes to cash without having to wait for the collection of the receivables in question. However, the differences between these two forms of financing can be described as follows:

1. Forfaiting operations are always performed by banks, while factoring operations are commonly done by factoring companies backed by big business. In addition, banks can perform factoring activities but it is still less common.
2. In forfaiting operations, the bank assumes the risk of collection of receivables, while in factoring the company does not always have to take on the risk, which primarily depends on the specific conditions of the factoring agreement.
3. A forfaiting agreement is always concluded for a specific job (receivables) considering large values of receivables, while in factoring operations, there may be a "global assignment" which means that all receivables from the buyer, which have arisen and will arise in the future, are assigned to a factoring company according to the previously signed agreement of "global assignment."
4. In forfaiting, receivables are always long-term, with repayment period of several years. However, in factoring, receivables are short-term and usually do not exceed a period longer than six months. In addition, the best receivables are considered those with maturity of 30-90 days.
5. In forfaiting operations, interest rate is always higher, given that its base is the current interest rate on capital market and the risks are much higher. However, in factoring the interest rate is always lower, given that its base is the current interest rate on the money market and the risks are much lower.

In the context of the above mentioned, a logical conclusion comes to mind that when an entity (enterprise) decides regarding the application of forfaiting and factoring, it needs to bear in mind a number of benefits that both forms of financing provide to their users, but it is also necessary to take into account all of their limitations, especially when it is viewed from the aspect of specific economic circumstances of certain countries, which determine both the client and the forfaiter or factor for contracting.

ADVANTAGES AND LIMITATIONS OF FORFAITING

Generally, forfaiting offers a number of advantages when it comes to financial and other possibilities that are not characteristic of the so-called traditional methods of enterprise financing. The main advantages of financing through forfaiting can be best seen when viewed from the aspect of forfaiting advantages for users, i.e. participants in forfaiting arrangements. Therefore, we will present the main advantages of forfaiting for importers, exporters and forfaiters.

Advantages of forfaiting for the seller-exporter are as follows:

- Collection of receivables is carried out immediately after the delivery of the equipment, thus turning sales on credit into a cash transaction;
- Improves the liquidity of exporters;
- Increases the credit potential of exporters, because they can borrow further;
- Eliminates possible losses due to insolvency;
- Eliminates the risk of rising interest rates in the future;
- Eliminate the risks from fluctuating exchange rates;
- Eliminates the risk arising from changes in creditworthiness of the debtor;
- Eliminates administrative problems and the costs of debt collection;
- Credit insurance is not required;
- Contracts can be concluded quickly due to the simplicity of documentation;
- Forfaiting costs may be included in the price of export business;
- Exporter does not need to litigate over the settlement of receivables.

Advantages of forfaiting for the buyer-importer are as follows:

- Enables import of the most modern equipment and technology on credit, not having to engage own funds at the time of the closing of transaction;
- Increases the borrowing capacity of the importer;
- Repayment of the loans according to a fixed interest rate;
- Documentation is simple and can be provided relatively quickly, which simplifies the process of conclusion of forfaiting contracts;
- Importer may choose the currency of payments, regardless of the needs of exporters;
- Reduces the restrictive clauses for taking new bank loans;
- Enables avoidance of administrative costs which are high in loan taking.

Advantages of forfaiting for forfaiting organizations or banks are as follows:

- Documentation is simple and quick to complete, so there are no complex contracts as in loan operations;
- Purchased receivables are easily negotiable and marketable in the secondary market;
- Provides a possibility to achieve significant revenue, i.e. gain profit which is higher compared to that which would be achieved in the capital market.

In contrast to the mentioned advantages of forfaiting, we can say that it does have certain shortcomings. In this respect, the key problem is that it is a relatively expensive way of financing. Namely, the cost of financing by forfaiting of receivables is often quite high, even higher than other alternative financing options, since in the cost of financing expressed through the discount rate the forfaiter includes the costs of financing and refinancing, in accordance with the current market

conditions and risks, as well as administration costs. Although forfaiting is one of the more expensive forms of import of capital equipment, buyers-importers still find it advantageous, taking into account, first of all, all of the mentioned advantages and overall benefits offered to them.

Finally, it could be concluded that tough competition in the capital equipment markets and unfavorable conditions for investments were key reasons for the decision of exporters to offer loans to buyers-importers and thus assume the function of financing which had been otherwise formally performed by banks and other financial institutions. However, in order to eliminate the risks of loan repayment, exporters turned to specialized financial institutions that began with the application of forfaiting. In addition, the most important characteristics of forfaiting, such as: relatively simple application, flexibility and promptness of decision making, added to the popularity of forfaiting in the process of encouraging exports and imports of capital equipment. Therefore, forfaiting became one of the main mechanisms to provide conditions for banks to incorporate, together with the classical ones, new operational forms of business in their offer, which are also known as para-banking forms, but which also provide complementarity and continuity to traditional sources of financing.

CONCLUSION

In modern market conditions, there is a growing importance of forfaiting as a form of financing and a factor of efficiency of business operations of enterprises. Simplicity and flexibility of its application have contributed to the popularity of forfaiting in the process of encouragement of exports and imports of investment equipment. Forfaiting arrangements enable business entities to use modern investment goods, with all positive effects arising from this. Forfaiting as an additional form of financing enables the importer to purchase equipment and modern technology without engaging their own funds or seek loans from commercial banks. Forfaiting as a form of financing is more expensive compared to conventional bank loans, but it offers opportunities for exporters to sell their goods and services to foreign markets under acceptable conditions. In this way creditworthiness of enterprises is preserved and many of them are enabled to use modern technology in conditions of inadequacy and scarcity of investment funds. Similarly, for countries in transition, development and further implementation of forfaiting operations are particularly significant, so that these countries may acquire modern equipment from the highly-developed countries, which is a fundamental prerequisite to the development of domestic technology development and development of manufacturing companies.

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POSSIBILITY OF MANAGING FUTURE RISKS IN CURRENT GLOBAL ECONOMY

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ABSTRACT

The possibility of predicting future in current global economy, which is being shaken by the tumultuous global financial and economic crisis, is very questionable. The importance of studying change is crucial. We analyzed strategic way of facing changes and risks in our current hyper-competitive global economy. The model of Kotelnikov is a new approach to the change management and it enables management to perceive opportunities in the environment and to build its competitiveness on using opportunities in a proper way.

Keywords: Strategic Management, risks, change management, vision.

INTRODUCTION

The possibility of predicting future in current global economy, which is being shaken by the tumultuous global financial and economic crisis, is very questionable. The global economy is passing the critical stage which may be described as a hyper-turbulent and hyper-complex.

Changes are extremely difficult to be predicted. The changes are huge and they encompass the world as a whole, not a one country can escape it. In this context, there is an urgent need of shift towards the other perspective, which should be crucially different from the one that brought us the crisis in which we are now.

We will try to define, within this global economic context, the possibility of predicting future changes and especially the global character, structure and dynamics of the changes.

The special issue is a methodology that could be used. Although there are many voices in academia and economic policy that this is the era of permanent adapting and there is no space for strategy, our opinion is that the strategic approach is still effective and can be used in a very suitable way.

We will try to conceptualize our strategic way of thinking, in order to find a way of managing changes in this transitional post-crisis era, by building a strategic future-oriented framework as a model of business doing in the hyper-complex global economic environment.

STRATEGIC APPROACH IN TERMS OF GLOBAL UNCERTAINTY

Globalization, as a process of expanding neoliberal type of capitalism globally, throughout the world, in its newest stage shown its severest face. The globalized economy has seen the most destructive crisis in its whole history. Now, while in 2013, about five years since the beginning of the global economic catastrophe, the majority of countries are still occupied by it.

Strategic management has evolved during the second half of the 20th century in an important issue and art and science of managing change for the purpose of long-term perspective of the companies, coordination and interaction dynamics of their business in the highly dynamic market.

The term and concept of Strategic management is not new. It was first used in the 1970-s. But, in its early phase, strategic management was understood rather as a strategic planning, a kind of administration staff. Only in the 1990s, the view on strategic management has changed, and it was started to be defined as a process.

Strategic management can be defined variously, but we can state that it is “the process of identifying and executing the organization’s strategic plan, by matching the company’s capabilities with the demands of its environment.” (Dessler, 2007)

Perceiving strategic management as a process demands that we divide it in distinct steps, stages or phases. Steps of the Strategic Management *imply the change* as a primary factor of the business and economy as it is. In the Strategic Management process there are several stages or steps that could be defined. In a mode of strategic management process, there are 7 distinct steps (See Fig. 1), and they are the following:

1. Define the current business and mission
2. Perform External and Internal Audits
3. Formulate New Business and Mission Statements
4. Translate the Mission into Strategic Goals
5. Formulate Strategies to Achieve the Strategic Goals
6. Implement the Strategies
7. Evaluate Performance

From these steps, the first 5 can be defined as a strategic planning part of the whole process. The sixth step is strategic execution, and the last step is strategic evaluation.

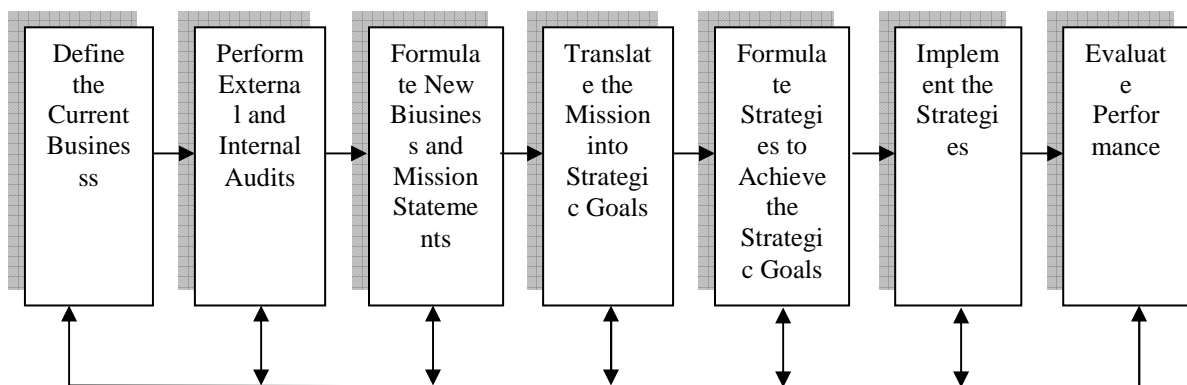


Figure 1: The Strategic Management Process

The main purpose of the strategic management is to *manage change*. If we take a famous SWOT analysis as an essential strategic instrument, we can assert that strategic management tends to decrease the threats and risks and increase the opportunities.

The vision is the most important stage in the management process. It is the Alpha of the management process. Without vision, we don’t know where to go. Vision gives certainty in business. As Warren Bennis and Bert Manus, both prominent management “gurus” say on vision (Dessler, 2007): “To choose a direction, a leader must first have developed a mental image of a possible and desirable future state for the organization. This image, which we call a vision, may be as vague as a dream or as precise as a goal or mission statement. The critical point is that a vision

articulates a view of a realistic, credible, attractive future for the organization, a condition that is better in some important ways than what now exists.”

Peter Senge, speaking about leadership in such turbulent environment, puts an accent on the »creative tension« (Senge, 1999) that leaders must engage in, if they want to push the organization afloat.

Michael E. Porter, one of the leading management and strategic gurus of today, remarked the lack of strategic approach in the current organizations, so that leaders of the organizations often tend to substitute strategy for adaptation and tactical approach. He criticized that approach, calling it “operational effectiveness”, in a seminal paper *What is Strategy?* (Porter, 1996). Porter says: “The root of the problem is the failure to distinguish between operational effectiveness and strategy. The quest for productivity, quality, and speed has spawned a remarkable number of management tools and techniques: total quality management, benchmarking, time-based competition, outsourcing, partnering, reengineering, change management. Although the resulting operational improvements have often been dramatic, any companies have been frustrated by their inability to translate those gains into sustainable profitability. And bit by bit, almost imperceptibly, management tools have taken the place of strategy. As managers push to improve on all fronts, they move farther away from viable competitive positions.”

Porter here marvelously sees the heart of the problem that our highly changeable economy poses – we must not trade-off strategy for some short-term and ineffective tool or method. Operational effectiveness is needed, but it is definitely not a strategy. As Porter terms it “A company can outperform rivals only if it can establish a difference that it can preserve. It must deliver greater value to customers or create comparable value at a lower cost, or do both.” (Porter, 1996). And he makes a difference between two of them: “Operational effectiveness (OE) means performing similar activities better than rivals perform them. Operational effectiveness includes but is not limited to efficiency. It refers to any number of practices that allow a company to better utilize its inputs by, for example, reducing defects in products or developing better products faster. In contrast, strategic positioning means performing different activities from rivals’ or performing similar activities in different ways.” (Porter, 1996).

AN OPPORTUNITY-DRIVEN STRATEGIC MODEL OF MANAGING CHANGE AND RISKS

Vadim Kotelnikov involved a new approach to the hyper-complex and hyper-competitive global economic environment. He called his method “opportunity-driven business development” (Kotelnikov, 2013) and he asserts that it is a real approach to the new era of rapid and unpredictable change. He says: “Opportunity-driven business development is an experimental approach to be practiced by companies facing radical industry or market change.... Opportunities arise and crystallize on a continuous basis.” (Kotelnikov, 2013).

Kotelnikov (Kotelnikov, 2013) introduced new model that is opportunity-driven business development model, which comprises three subsystems or elements:

- a) Strategic Intent
- b) Challenges
- c) Opportunities

The Kotelnikov’s model (see Fig. 2) is radically different from the standard strategic management approach. Opposite to the standard model, which is a “Top-Down” directed, pyramid-shaped, the model that Kotelnikov suggests is stretched as “Top-Down plus Bottom-Up”, and that unique structure makes it superior to the standard pyramidal strategic model.

This model of managing change functions in such way that opportunities from the environment may present a challenge to the organization, and at the end may provoke an strategic intent.

Kotelnikov defines the strategic intent as “a high-level statement of the means by which your organization will achieve its vision. It is a statement of design for creating a desirable future (stated in present terms). Simply put, a strategic intent is your company's vision of what it wants to achieve in the long term.”

So, in a way, the strategic intent may be understood as a vision, but vision that should be well-defined and connected with action. This is a purely proactive way of thinking and resolving change. Instead of reactive “waiting” for the environment to make some favorable constellation for us, organizations must be prepared to confront the changes and seek the opportunities.

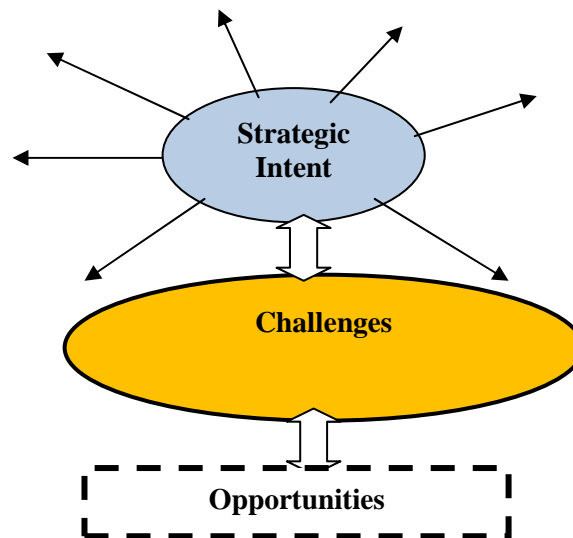


Figure 2: Opportunity-driven business development model

In this new approach to change and risks that the organization faces in the environment, the opportunities are the focus and the goal that is emphasized. This needs suitable system of continual scanning and monitoring of the environment, so that every signal that suggests some opportunity should be verified, analyzed and used as competitiveness factor. Here the strategic intent is the key to a business success. This model is more flexible and definitely faster in response to changes and risks in the turbulent environment.

CONCLUSION

In our era of hyper-competitiveness, the importance of strategy is still evaluated. Organizations must have strategic or, in other words, long-term optic and perspective in order to enhance their potentiality and promote their competitiveness. The new approach to the change that Kotelnikov’s model offers perceives every risk as a potential opportunity. It looks at a strategy in a truly dynamic way, trying to use every resource, every element of the environment and to achieve the goals that the management post.

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Session G: ECOLOGY AND SUSTAINABLE DEVELOPMENT

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Session Editor's Preface

Ecological consciousness is becoming a consistent part of economic practice in most developed countries. From the developing priorities standpoint, the protection of natural resources and, especially the rational use of all resources and their potentials, are of considerable strategic value. Although the information revolution is already a reality, the global economy is still being shaped. The number and types of stakeholders will be multiplied, so decisions will not be made on the bases of a simple either-or principle, but will require a more subtle and-and approach, which is hitherto unknown.

The most rational is production without any waste, in other words, production in which raw materials and energy are fully used. Such technology is environmentally safe. Production costs in the energy sector are on the increase mainly as a result of the constant growth of fossil fuel prices. The global economy presumes uncertainty. The best indicator for such a statement is the current global economic crisis which is not yet over. On the other hand, the mobility of the global economy viewed from the aspect of capital transfer offers numerous possibilities to those who are courageous and energetic enough to adjust to it. Global competition is becoming more intensive, noticeable and offensive. Competition has become internationalized in most industries and companies enter the markets through global strategies. The global economy is founded on the idea of the world without borders, and this is no longer a dream, or an option, but a reality.

*In the paper “**Life cycle management approach – a promising concept to deal with sustainability goals**” the authors deal with environmental and sustainability issues of the Life Cycle Management (LCM), as expected to reveal necessary information on industrial products and materials, taking into account their environmental performance in every stage of development or processing. LCM is being increasingly popular while planning and organizing industrial activities worldwide and covers wide range of activities: environmentally friendly product design, material recovery, product take-back scheme development, closed-loop material processing, as well as many other similar or interrelated concepts. Yet it remains widely unknown to manufacturers and particularly small and medium enterprises (SMEs) that operate in transitional markets of South-East Europe. This paper aims to raise environmental awareness among industries and SMEs of various kinds, by promoting the LCM approach as a tool to comprehend and confront contemporary sustainability issues.*

*At the beginning of the 21st century, there was a sudden increase in oil prices in international markets. Therefore, many countries around the world have view to alternative energy sources as strategic in terms of developing their economies. In order to overcome the crisis and minimize its consequences, many countries have adopted a number of strategic decisions that involve more or less radical changes in many areas of the economy. To increase energy security, economic competitiveness, as well as reduce the negative environmental impact, the European Union is making significant efforts to promote and use renewable energy sources and improving energy efficiency in all energy sectors. The paper titled “**Utilization of renewable energy in Serbia and European Union**” highlights the trends in energy efficiency and use of renewable energy sources in European Union, and analyses the situation in Serbia and its possibilities in this field.*

*Development of industrial manufacturing and energy industry has an increasingly serious impact on environmental quality. Preservation of basic environmental elements is a necessary requirement for any organization intent on being competitive. Industry and energy sectors have a need for implementation of standardized procedures in a wide range, and paper titled “**Implementation of principles of ISO 14000 standards and principles of water quality management in industry and energy sector**”, emphasizes standardization in two specific areas: eco-standards and water quality.*

*The next paper deals with eco-systems. Industrial development and pollution, that burdens it, significantly affect the eco-systems. Light pollution, as a type of pollution, also negatively affects the living nature, particularly those species of plants and animals whose rhythm of life is substantially harmonized with the daily rhythm. The paper titled “**Studying the ecological impacts of light pollution on wildlife**”, deals with amphibians (particularly frogs and salamanders) as a model on which it explores the impact of this type of pollution.*

*Two papers in this session deal with waste management issues, emphasizing the waste management practices and cost-effectiveness analysis. In the first one, titled “**Waste management best practices on cruise vessel**”, this topic is viewed through the analysis structured taking into account those innovative actions, where they exist, used to store, separate, reuse and treat or prepare waste on board the cruise vessel. The second one, titled “**Waste management and possibilities of energy utilization from municipal waste in the city of Niš**”, deals with the cost-effectiveness analysis of the energy utilization from disposed waste based on waste quantity and the estimated quantities of energy that can be obtained in the process of waste incineration.*

*The paper titled “**Environmental protection as an element of organization's social responsibility**”, points out the significance of socially responsible behavior of an organization in modern society, especially in the field of environmental protection. This paper provides a broader picture of what is meant by “environmental protection”, putting the companies in the position of socially responsible behavior. Considered issues are: elements of organization's social responsibility, social responsibility in environmental protection, business effects of social responsibility, public relations and social responsibility. Organizations and individuals have to take care of environmental protection – in this way they respect the most important element of social responsibility.*

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WASTE MANAGEMENT BEST PRACTICES ON CRUISE VESSEL

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ABSTRACT

Best waste management practices are those practices selected by a systematic process and judged as good, exemplary or successfully demonstrated to reduce negative impacts on the environment. "Best" is a term that depends on the context, those practices will depend on what stage of development the sector is and the executive commitment as well (Jan Tytgat., 2012). This commitment presumes a willingness to strive for a level of performance that exceeds basic regulatory compliance requirements or common standards of practice. The analysis is structured taking into account those innovative actions, where they exist, used to store, separate, reuse and treat or prepare waste on board the cruise vessel. If no findings have been revealed, best practices guidelines from International Maritime Organization (IMO) or Cruise Lines International Association (CLIA) have been studied in support of final conclusions. The methods of analysis and synthesis of the result of desk research process will be used. The study should contribute at presenting a model used by cruise vessels based on best practices in waste management leading to cruise motto "nothing overboard".

Keywords: waste management, best practices, environment, nothing overboard, legislative background.

INTRODUCTION

Cruise same as other human activities, provoke different environmental impacts according to Schmidt (2000). It is generally accepted that shipping provides the most cost effective and environmentally sound method of transportation for goods worldwide when compared with road, rail and airfreight. But all vessels generate pollution, including waste according to Butt (2007). Taking in to consideration that the passenger on cruise vessel is one of the main waste producers producing at least 3kg of waste according Manual on the Practical Implications of Ratifying, Implementing and Enforcing MARPOL 73/78 (2002) cruise lines have put a lot of efforts into reducing, selecting and managing the waste generated onboard. In fact, a misinformation gap exists between what cruises have implemented regarding solid waste management and the implementation of Marpol 73/78 Annex V, concerned with preventing solid waste pollution from vessels. The main objectives of this preliminary study is to learn from the cruise lines the best practices used to separate, prepare and manage waste on board the vessels.

Waste management on cruise vessel is determined by implementation of Marpol 73/78 Annex V, concerned with preventing solid waste marine pollution from vessels. Even though storage capacities on cruise vessels are restricted because of space and weigh limitations and security constraints they are adopting „nothing overboard“ system, what we are calling best practices, because mentioned is not determined by Marpol 73/78 Annex V, in which there is a classification, according to determined circumstances, where discharge in to the sea of solid waste is permitted.

SOLID WASTE MANAGEMENT ON BOARD

Environmental policy goal of "Nothing overboard" for solid waste at sea have been established in most of cruise companies (www.cruisecritic.co.uk). To reach this goal, during the last 10 years cruise companies have put more efforts in reducing waste generation, achieving to cut it almost in

half. Many of the waste management technologies introduced into cruise fleet are concerned with prevention of waste.

Cruise vessels can reduce the solid waste they generate by different strategies:

- Purchasing in bulk;
- encouraging suppliers to use more efficient packaging;
- reusing packaging when possible;
- using more environmentally friendly packaging materials.

Storage

Costa Cruises is some possible sustainable scenarios: like the substitution of water bottles with feasible alternatives: use of dispenser, use of reusable bottles, use of green bottles; substitution of wine bottles with feasible alternatives (bag-in-box); use of yogurt dispenser instead of pots; the substitution of disposable boxes for fruit and vegetables with reusable ones; bags instead of cans, plastic pallet instead of wooden one. **Holland America** Cruise Line gives priority to bulk purchases with minimum packaging and affirms reducing their eight tons of waste generated each day by working with their supply chain. **Royal Caribbean** eliminated disposable utensils and started buying condiments in bulk and worked with suppliers to only purchase items with minimal packaging. All plastic water bottles were eliminated in exchange for biodegradable and reusable options.

Segregation

Most of the analyzed cruise lines have marked containers throughout the vessels in order to encourage passengers and crew to recycle. Designated bins, located in public areas and on open decks, collect food, glass, aluminum and plastic products.

Reuse

Donations are done by Carnival Cruise Lines and Holland America Cruise Line when donating furniture, technical goods and all equipment that can still be used to local charities in homeports and ports of call instead of sending them for disposal.

Treatment

Mechanical methods are used in order to reduce waste and enlarge storage capacity:

- Compactors,
- pulpers,
- crushers,
- incinerators (cruise ships incinerate between 75% and 85% of garbage according to the United States Environmental Protection Agency in its 2008 study),
- grinders.

Carnival Cruise Line has implemented PAWDS (The Plasma Arc Waste Destruction System) on M/S Fantasy. Mentioned cruise ship's system is in operation today and has logged nearly 5.900 hours while processing an estimated 2.4 million pounds of solid waste. PAWDS uses plasma energy with temperatures over 5.000°C, to rapidly and efficiently destroy combustible waste aboard ships (<http://www.environmental-expert.com/articles/plasma-arc-waste-destruction-system-pawds-a-novel-approach-to-waste-elimination-aboard-ships-296790>).

Recycling

- Disney Cruise Line recycles traditional materials from the ship, like aluminum and cardboard, what resulted in over 405 tons of materials redirected from waste. Materials like ceiling panels, scrap metal and excess plastics, are recycled through a partnership.
- Holland America Cruise Line is recycling aluminum, glass, ferrous metals, and paper.
- Norwegian Cruise Line's recycles all solid waste including plastics, aluminum, glass and wood for ashore recycling, only food solid waste is to the sea.
- Costa Cruises has technologically an advanced equipment to treat and process waste. This includes food and drink cans, aluminum foil, spray cans and aluminum trays. The recycling of aluminum enables a saving of 95% of the energy required to make new aluminum from bauxite.
- MSC Cruises also agreed with the CLIA aluminum collection from ships. Items that will be taken and recycled include cans, foil used in cooking, and tubs and containers used for storage.
- Royal Caribbean is recycling aluminum and glass. Only food waste is pulped and discharged more than 12 miles from land.

Energy recovery

Disney Cruise Lines has a noteworthy example in energy recovery from waste incineration, where rerouted excess heat generated in the ships' engine boilers, efficiently powers evaporators used in the process of turning sea water into potable water.

Revised MARPOL 73/78 Annex V

The MARPOL Convention sought to eliminate and reduce the amount of garbage being dumped into the sea from the vessels. The revised Annex V (applying from 1st January 2013) prohibits the discharge of all garbage into the sea, except if provided otherwise. Revised Annex V reduced a boundary between cruise vessels good practice of „nothing overboard“ and MARPOL Annex V.

According to revised MARPOL 73/78 Annex V waste is to be grouped into categories for the purposes of the Waste Record Book (or ship's official log-book) as follows:

- Plastics
- Food wastes
- Domestic Wastes (paper products, rags, glass, metal, bottles, crockery, etc.)
- Cooking Oil
- Incinerator ashes
- Operational wastes
- Cargo residues
- Animal Carcass(es)
- Fishing Gear.

CONCLUSION

Subject that was part of this research is a wide range of regulations and practices going on on each vessel under regulations and practices determined by each cruise company. Revised MARPOL 73/78 Annex V dealing with solid waste produced on the vessels is from 1st January 2013 in most of it regulating and finally distinguishing different categories of solid waste. Mentioned is finally bringing to collision work and practices done on cruise vessel with law regulations. Even a lot of things done by cruise vessels is well known and considered as good practice, lack of use of that already recycled material on the shore makes me think of local communities unawareness. Recycled material from cruise vessels can be used as a resource for production; what is rarely done in some cruise ports more as an exception that as a practice (International Maritime Organization.,

1992). Usually local communities are more likely to criticize, especially environmentally, cruise vessels instead to realize lost opportunity by ignoring solid waste process done on cruise vessels

RECORD OF GARBAGE DISCHARGES

Ship's name: _____

Distinctive No., or letters: _____

IMO No.: _____

Garbage categories:

- A. Plastics
- B. Food wastes
- C. Domestic wastes (e.g., paper products, rags, glass, metal, bottles, crockery, etc.)
- D. Cooking oil
- E. Incinerator Ashes
- F. Operational wastes
- G. Cargo residues
- H. Animal Carcass(es)
- I. Fishing gear

NEW TABLE LAYOUT AS BELOW:

Date/ Time	Position of the Ship/Remarks (e.g., accidental loss)	Category	Estimated Amount Discharged or Incinerated	To Sea	To Reception Facility	Incineration	Certification/ Signature

Master's signature: _____ Date: _____

Figure 1: Record of Garbage Discharges
Source: Revised MARPOL 73/78 Annex V

Table 1: Time taken for objects to dissolve at sea

Time taken for objects to dissolve at sea	
Paper bus ticket	2-4 weeks
Cotton cloth	1-5 months
Rope	3-14 months
Woollen cloth	1 year
Painted wood	13 years
Tin can	100 years
Aluminium can	200-500 years
Plastic bottle	450 years

Source: Hellenic Marine Environment Protection Association (HELMEPA)
(<http://www.imo.org/ourwork/environment/pollutionprevention/garbage/Pages/Default.aspx>)

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LIFE CYCLE MANAGEMENT APPROACH – A PROMISING CONCEPT TO DEAL WITH SUSTAINABILITY GOALS

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ABSTRACT

Environmental and sustainability issues are positioned rather high on the agenda of managers that direct modern industrial or entrepreneurial units. Life Cycle Management (LCM) is expected to reveal necessary information on industrial products and materials, taking into account their environmental performance in every stage of development or processing. Acquiring LCM approach should enable wider insight in interactions of various business activities with the environment, and also should allow for timely predicting possible environmental consequences that are often far beyond manufacturing plant gates. Life Cycle Management (LCM) cover wide range of activities: environmentally friendly product design, material recovery, product take-back scheme development, closed-loop material processing, as well as many other similar or interrelated concepts. LCM is being increasingly popular while planning and organizing industrial activities worldwide. Yet it remains widely unknown to manufacturers and particularly small and medium enterprises (SMEs) that operate in transitional markets of South-East Europe. This paper aims to raise environmental awareness among industries and SMEs of various kinds, by promoting the LCM approach as a tool to comprehend and confront contemporary sustainability issues.

Keywords: Life Cycle Management, Sustainable Manufacturing, SME, LCM

INTRODUCTION

The insufficient sustainability of the existing models of production and consumption has an increasing impact on the biosphere, social relations, character of industrial development and economic flows. Orientation towards sustainable lifestyles primarily implies greater resource efficiency, i.e. decrease in the utilization of material and energy resources per product or unit. The future of modern societies directly depends on the readiness to achieve prosperity and economic growth within the limits of available reserves. Therefore, the quality of life depends on the readiness and capacity to satisfy the needs with the decrease in the utilization of material and energy resources and raw materials through the application of new organizational, technical, economic and social models. Achievement of this ambitious goal implies change in the principles of design, production, use and treatment of post-consumption products.

Promoting the LCM thinking is the basic prerequisite for successful, well taught out, steps toward sustainability of contemporary societies. Life Cycle Management address entire range of fields and activities, such as: designing products, recovering materials, exploring waste markets and waste exchanges, exploring possibilities to improve both the environmental performance and profitability of proactive companies, establishing systems for taking back products by manufacturers, and directing regulation change that should facilitate recovery of industrial waste.

The LCM approach is deeply rooted in Industrial ecology – the concept based on the presumption that the nature might provide the model for industry how to minimize harmful waste while

maximizing the economical use of it. On other hand, the LCA related concept of Design for Environment is about rethinking products in a manner that, at the ends of their active lives, those could easily be transformed into inputs to other processes and industries. Industrial ecology is all about merging manufacturing and service activities, symbiotic allocation of different industries, analyzing experiences from different communal-industrial systems, and system approach to global environmental problems. There are numerous complementary tools and strategies that could facilitate the goals and intentions to build LCM based sustainable eco-industrial systems, such as (Glisovic, Miloradov, Jankovic, 2005):

- Materials flow analyses
- Zero emission policies
- Life Cycle Analyses of products and services
- Environmentally Conscious Product Design
- Waste-to-product and energy efficiency benchmarking
- Materials substitution
- Dematerialization

The main goal of LCM is to strive toward the reducing environmental impact per product unit trough the chain from extraction and primary production to consumption and reuse of materials and energy – the cycle lately named "from cradle to rebirth".

THE THEORETICAL FRAMEWORK AND INSTITUTIONALIZATION THEORY

In attempt to disclose state of play of LCA/LCM acceptance among industries and/or other stakeholders, so called Institutionalization Theory has been used as convenient vehicle to achieve certain level of understanding of the situation (Frankl 2001). Institutionalization theory, as described in the works of Tolbert and Zucker (1996) recognizes the characteristics of the different stages under introduction of any novel concept into industrial activities until it becomes routinely used by all relevant players and/or departments within company.

The theory describes three phases of the institutionalization process. The first phase, called the habituation, usually take place in a specific department of the company. The second phase, by most considered the crucial one, during which the new concept begins to spread out within the company, is called the objectification. If the proposed new concept survives the first two stages, and being steadily integrated within company activities, it goes into the final stage of the institutionalization procedure, in the theory named the sedimentation phase.

METHODS

The authors have decided to apply comparative survey based on similar researches in spatially and temporally different domains: the theory of the institutionalization has been applied in one previous research to 16 companies in the energy sector in France, Germany, Italy, the Netherlands, Sweden and the UK (Frankl 2000). Later on, similar attempt was made in the few countries of SE Europe (Montenegro, Bosnia and Serbia) among different power generation companies/units (Glisovic and Zikic 2007). The latest survey has been attempted five years afterwards (2012) on the equal ammount of companies, but the results are yet to be processed, after repeted survey due to noticed drawbacks. Although significant shortcomings in the design of questionnaire and the methodology itself have been detected, survey both illustrates and confirms the findings from developed countries reported almost a decade ago by other authors.

FINDINGS

The LCM, being still a young concept in the observed countries, did not set roots in spite some obvious progress, and that companies did not, by large, expressed the need for LCA in their regular decision making (as described in the works of Jensen 1997). Figure 1 combines the findings of

Frankl (2000) with more recent findings in the region, and shows the position of the observed companies along the “institutionalization–adoption curve”, thus illustrating the level of adoption of LCA within a company as a function of time.

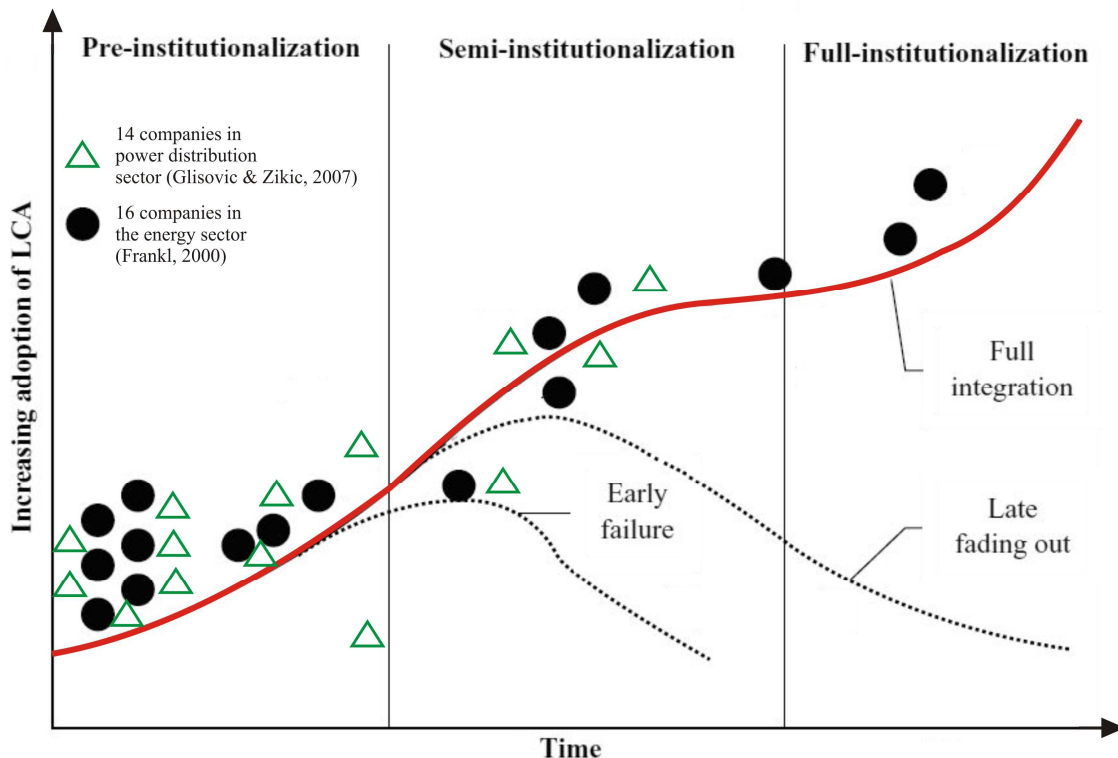


Figure 1: the level of adoption of LCA as a function of time (modified after Frankl, 2000)

Upon closer insight in the questionnaires, impressions of the authors were as follows:

1. There is considerable awareness of the importance of environmental issues for society and business.
2. However, there is insufficient knowledge on what LCA is all about among observed companies.
3. Lack of relevant information on the concept is obvious among the majority of SMEs

Obstacles to wider implementing of LCA/LCM approachis are:

- Initial funding –providing governmental and international financial support to LCM activities
- Lack of viable data –no reliable and comprehensive country specific data
- Lack of experience and professional expertise

Confronting obstacles in initial phase significantly depends on institutionalized support, apart from individual enthusiasm and motivation.

IMPLICATIONS AND BUSINESS OPPORTUNITIES

The productivity of resources, representing the economic value gained by using the unit of resource, has been growing in the EU at the annual rate of 2.2% over the previous decade, mostly as a consequence of increased efficiency and growing share of the service sector in the European economy. It is necessary to support the development of technologies for optimal utilization of resources, and thus provide preventive protection of the environment. The so-called “eco-industry” is one of the fastest growing sectors of industry in the European economy. It encompasses all producers and service providers dealing with measurement, prevention or remediation of environmental characteristics of water, air and soil, as well as resolving the issues of waste or

reclaiming disturbed ecosystems. This sector includes the production of equipment for the exploitation of renewable energy sources, sustainable construction and consulting services in the field of environmental protection. EU represents one third of the global market for the placement of environmental protection technologies, and their further development has been directed through the Environmental Technologies Action Plan (ETAP), which provides support for innovation in this field. Thus, solving environmental issues becomes an exceptional business opportunity, as it opens a new, profitable market segment, one where positive growth is almost certain.

For the companies outside the European Union with ambition to export into its economic area, it is particularly significant to take into account EU Directives that prevent placement of non-compliant products on the European market. Whatever main purpose of each of the Directives is, all of them usually impose requirement on producers to take into account the entire Life-Cycle of products. This ensures that the core issues of importance for environmental protection (use of materials and water, emissions and effluents, waste treatment and recyclability) are perceived in the initial stage of product development. The Directives usually specify minimum requirements for various product categories, but also leave space for voluntary implementation of reference parameters for each of the product groups. In each category, the product with the superior characteristics becomes the reference model used to formulate criteria. Application of relevant data and methods is of essential importance for both producers and decision makers in order to recognize environmental characteristics of products and to monitor progress in this field. The European Commission is in the process of defining reliable methods for the assessment of environmental performance, keeping in mind the Product Life Cycle. The findings are to be included in the manual intended for the industry and retail sector.

DISCUSSION

The global ecosystem is endangered by numerous antropogenic impacts that all could be traced back to manufacturing and consuming goods and services. It is necessary that manufacturing and service providing industry fundamentally analyze effectiveness of existing processes, products and procedures from environmental standpoint, trough some form of LCA.

The true challenge in managing necessary changes targeted at achieving postulates of sustainability is to find an adequate systemic approach that would include the following:

- supporting technical improvements of environmental features
- market promotion of superior products
- stimulating demand for environmentally friendly products on the market
- application of economic incentives for producers and consumers who express environmental consideration
- informing the public on social significance and individual advantages of life cycle approach
- raising consumers' awareness on the impact of their behavior on the character of supply
- supporting consumers in identifying products whose life cycle is compliant with sustainable production postulates

LCM, being a systemic approach, provides appropriate framework for a comprehensive directing life cycle based activities, both within industries and among consumers (individual and corporate alike).

There are several life cycle based approaches to adapt production and consumption patens to principles of sustainable development without additional costs and at the benefit of both the consumers and manufacturers. Some of possible directions for action have already been indicated in EU documents or strategic frameworks adopted by individual member states, recognizing that sustainable economies and sustainable lifestyles are of vital importance for European societies and the environment. The European Commission presented the Sustainable Consumption and

Production and Sustainable Industrial Policy Action Plan in 2007. Basic goals of this document are directed to the following:

- improving the overall environmental performance of products throughout their life cycle
- promoting and stimulating the demand of better products and production technologies
- supporting consumers to make informed choices in the market and opt for environmentally friendly products
- industry incentives for innovation and recognition of business opportunities in the sphere of environmentally friendly production.

The EU Action Plan is based on legislation (regulating the design of energy consuming products, labeling environmental performance of products and implementation of the eco-management and audit scheme) and initiatives targeted at the population and institutions of public importance to stimulate procurement of environmentally friendly products. The intention behind the implementation of the action plan is to overcome shortcomings in the implementation of mentioned approaches. Moreover, new activities are proposed in order to combine existing elements and promote a comprehensive approach based on life cycle thinking.

Measures undertaken by the EU in promoting sustainable production and consumption are targeted at four basic fields:

- creating higher quality products regarding environmental performance
- more cautious consumption of goods
- 'cleaner' production processes and
- support to global efforts for the establishment of sustainable production and consumption

The basic elements for implementing these measures include the following: introducing standards for ecodesigns of certain types of products, establishing regulations to conduct "green public procurements", application of eco-labels for the identification of goods and providing incentive mechanisms for eco-innovation. Those tasks are closely related to performing Life Cycle Assessments (LCA), defining Product Category Rules (PCRs) and applying Environmental Product Declarations (EPDs) – activities, tools and strategies that all belong under framework of LCM (Schenck, 2010).

CONCLUSIONS

Implementation of LCA and appropriate legislation worldwide has already led to improvements of production processes from the aspect of energy efficiency, reduction in the emission of pollutants and waste and an increase in the rate of recycling within individual sectors of industry. The problem persists in the domain of efficient use of technical materials and it is linked with optimization of structures, the use of recycled content and design of environmentally friendly products. Moreover, a part of the problem rests in organizational issues, logistics and guidance, so LCM framework provides a multidisciplinary and comprehensive approach in search for sustainable solutions.

Promotion of the LCA concept is of particular importance for the countries in transition since the regional environment would be heavily impacted by consumerism and emerging markets. Mainstreaming of life cycle thinking among local, national and supranational bodies is necessary in order to confront sustainability issues in a proper way. Instead of remaining passive, waiting for environmental impacts to strike, those vulnerable societies should undertake adaptation, based on acquired knowledge about eco-effectiveness and resources management. Academia, governmental agencies and consultant firms should couple efforts in popularization of this important system approach in the region of West Balkans and South East Europe in order to facilitate timely implementation of life cycle management principles region wide.

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WASTE MANAGEMENT AND POSSIBILITIES OF ENERGY UTILIZATION FROM MUNICIPAL WASTE IN THE CITY OF NIŠ

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ABSTRACT

On the landfill of the city of Niš is yearly disposed about 72000 t of solid waste. Based on this quantity and the estimated quantities of energy that can be obtained in the process of waste incineration, it is done the cost-effectiveness analysis of the energy utilization from disposed waste. In this paper is also presented all the positives sides of this process and directions of the future development within the goal to make the landfill of the city of Niš technically and ecologically secured and to set up the system that can obtained energy from waste.

Key words: energy, efficiency, landfill, incineration, waste management

INTRODUCTION

Environmental sustainability implies the preservation of natural resources where it is necessary to take into account the level of consumption of renewable materials, water and energy resources, is not beyond the level in which natural systems are able to compensate independently. Protection from the harmful effects of waste on the environment involves the treatment of all types of substances and products including packaging and packing material for these substances. Planning of waste management, permits, supervision, activities and responsibilities of waste management, as well as the compensation, they were prescribed by the special law of waste management (Fideco, 2001).

It can be considered that almost all of the products that people use in everyday life, after use, they are becoming waste. It is necessary to manage it properly, because the amount of waste every day increases with the increase of the number of the people on the planet. Development of the cities and industries, as well as the increase of the number of the inhabitants, there is the increase in all types of consumption, as the result we have the increase of the solid, municipal waste, which has to be delay properly and controlled. Municipal waste is a very complex and heterogeneous material, which under normal conditions is in the solid state of matter. It also raises the question of rehabilitation of waste with very complex composition which is generated in the territory of cities. Very few of these toxic materials are permanently destroyed and only in small portion are recycled.

Waste management therefore implies creation, collection and storage, transportation, treatment, recycling, utilization and disposal. Management of municipal solid waste depends on the type of waste and on that basis may provide possible solutions to minimize the existing waste.

For each resident in the major cities of the world is coming three or more kilograms of waste per day. Therefore, with the increase of population and the standard of living increases and the amount of waste, this should be considered as a resource (Amidzic and Biocanin, 2005).

In the context of treatment and technology for sustainable waste management, there are different approaches. Practice of developed countries show that the most common are: disposal, recycling, composting and reuse parts of waste and burning (incineration) of waste. In addition to these standard technologies, there are sophisticated technologies for the exploitation of energy from waste, such as pyrolysis, gasification and plasma. Unfortunately, the practice of waste management in our country is rather low. As the most common method of waste treatment, that is mostly applied, is the unselectively disposal in landfills, which in addition to incalculable consequences for the environment, highly uneconomically treated with materials and energy form waste.

This paper presents methods for the elimination of waste, their advantages and disadvantages; also it is presented the attempt of simplified techno-economic analysis of justification of acceptable solution for incineration of waste in the landfill of the city of Niš.

CHARACTERISTICS OF WASTE

All types of materials that are inferior, and are generated in the process of production, operation, use, transportation and other activities can be regarded as waste. According to the EPA classification, it is identified four criteria for determining the characteristics of hazardous waste: flammability, explosiveness, reactivity and toxicity. Due to improper treatment, hazardous waste can release gaseous products into the atmosphere. The solid waste can be classified as food waste (from households), ash (from households waste incineration), garbage (paper, wood, garden waste, textiles, rubber, plastics, metal cans, glass, ceramics), vehicles (discarded passenger and commercial vehicles), industrially waste (from food processing, ash from boiler furnace, chemical industry waste, mining and metallurgy), building materials waste (lumber, bricks, pipes, tiles, kick), special waste material (medical, explosive, radioactive) and waste from waste water treatment (solid material from the grids and sludge).

One of the most common pollutants in the environment is ashes. During the operation of power plants, ash is produced from coal and can pollute the soil, water and air. It can be used for production of ceramic elements, for production of dry mortar and mortar at construction sites. It can also be used in the manufacture of the blocks on the basis of ash and lime, in addition to concrete and cement, as the filler for asphalt and bitumen mass.

Industrial waste is any waste material generated in the process of industry. This waste can be: inert and dangerous. Inert industrial waste in its entirety or by separation of certain components can be disposed in municipal landfills. Dangerous industrial waste includes all waste in liquid solid and gaseous form, generated from activities and contains the substance or chemical elements and their compounds that threaten the environment, human health and life. The solution for hazardous waste can be introduced through four stages: hazardous waste minimization, recycling and reuse of hazardous waste treatment and incineration and disposal of remaining hazardous waste.

In most of our cities there is the very significant problem of depositing waste. Existing urban landfills are unregulated, with no additional objects and measurements. Sanitary landfill requires the specific procedure and sequence of activities in the construction process, with this procedure arises from the legal obligations that are contained in several laws and regulations.

WASTE TREATMENT

In view of the present situation, two methods have been applied for destruction of municipal waste:

- Destruction without exploitation,
- Destruction with exploitation.

The thermal waste treatment includes incineration - there are two variants of burning the waste:

- Waste incineration without energy recovery,
- Waste incineration with energy use (Milisavljevic et al., 2010).

Waste incineration is applied in order to reduce their quantity and utilization of obtained energy. With waste incineration, the available chemical energy, defined with thermal power, is translated into the physical energy of flue gases, defined with gas temperature. However, there are positive and negative sides of incinerators: energy use from flue gases after combustion, combustion process destroying all microorganisms including pathogens, effective problem solving of hazardous waste, reduction of the volume of waste, water pollution, air and soil.

For successful design of incinerators the main thing is that more accurate estimation of the quantities and characteristics of waste in the future. Waste that is used in the incineration process should meet certain conditions, namely in the first place, its lower calorific value must be greater than the minimum defined value. Average lower calorific value of waste must be at least 6 MJ/kg for all seasons, and the average annual minimum 7 MJ/kg (The World Bank Technical Guidance Report, Washington, 1999). The second condition that should be fulfilled is the appropriate composition. Waste that is composed of sand and plastic does not satisfy the conditions of incineration despite its lower calorific value is greater than the minimum required value. The following condition should be fulfilled is the stability of the quantity and composition during the year. In accordance with the recommendations of the sustainability options of incineration in small communities (under 200000 populations) annual amount of waste for incineration should not be less than 50000 tons and weekly variations in the delivery of waste should not be higher than 20%.

In order to increase accuracy of project of potential incinerator it is necessary to determine the amount of waste, its composition and changes in the annual production of waste and all this in order to have more accurate assessment of waste generation during the scheduled operation of incinerators. Since content and the amount of waste depends on the cultural, climatic and socio-economic conditions, it is impossible to use the data for another area, but it is necessary to make its own assessment for each area for the planned construction of the incinerator. The guidelines for planners are reducing the amount of waste due to the increased use of components of waste suitable for recycling, high degree of moisture and ash in waste collected from households and delay in collection of commercial and industrial waste with the exception of store waste has a higher calorific value (Hester and Harrison, 1995). Data collection of the production and composition of the waste must be done by a professional, experienced and independent organization on the basis of modern methods for the implementation of such a complex research (Dyson and Chang, 2005). The assumptions about the collection and delivering of industrial and commercial waste in incineration plant should be based on positive and negative incentives for existing institutions and organizations involved in the collection of such waste.

THE LANDFILL OF THE CITY OF NIŠ

City of Niš produce 198 tons of waste ter day. What citizens of Niš thrown away as unnecessary in one year occupy more than 300000 m³. The city landfill in Niš occupies an area of approximately 31 ha. The width of arranged area for waste disposal is about 350 m, length is about 750 m and the average depth of the landfill is 16 m (Jovanovic et al., 2010). For the treatment of waste in the city of Niš is responsible PUC "Mediana" Niš which deals with the collection, transportation and disposal of waste from urban areas of Niš, and users are citizens, SMEs and industry. Approximate number of citizens covered by services of this company is approximately 250000 residents, living in territory of about 600 square kilometers. The main and basic technique of removing waste is a waste disposal at the municipal landfill where waste spreads around the landfill, compress and covers with a layer of inert material (soil, hummel, etc.).

The daily amount of waste generated by households from one resident in the city of Niš is 0.724 kg. On annual basis this amounts to 264.1 kg. In the spring time, the amount per capita is 0.418 kg, while in the autumn it is 0.354 kg (Stefanovic, 2010). This is shown in Table 1.

Table 1: The amount of generated waste in kilograms

Type of waste	The amount per day /resident	The amount per year /resident	The amount per day /city	The amount per year /city [x10 ³]
Total waste	0.724	264.1	197534	72100
Food waste	0.244	89	66570	24298
Yard waste	0.075	27.45	20531	7494
Plastic	0.128	46.75	34964	12762
Paper	0.111	40.41	30222	11031
Glass	0.037	13.47	10074	3677
Metal	0.014	5.018	3753	1370
Rest	0.115	41.99	31408	11464

The collected data lead to the fact that the daily content of food waste is 0.244 kg per capita, and yard waste 0.075 kg. In percentages, this is 33.7% for the food waste and 10.39% for the yard waste. This is followed by plastic with 17.7% in total quantity of waste, and then paper with 15.3% and glass with 5.1%. The amount of metal in the total waste is very small and it is 1.9%.

The value of waste heat can vary greatly from town where it came from. In Western Europe the value of waste heat can be between 3000-10000 kJ/kg while in the U.S. it is between 6000 and 14000 kJ/kg. The average value of thermal power waste from cities in Germany is 9200 kJ/kg and in Switzerland 10000kJ/kg. According to data obtained in Subotica the lower heat value of municipal solid waste power for that region is approximately 8400 kJ/kg. Thermal power of the collected waste in Niš is larger than Europe and rest of Serbia and it is approximately the size of our lignite thermal power (13.5-20.0 MJ/kg). The acquisition of reliable data on waste characteristics (quantitative, qualitative analysis) is ensured by the years of research done by the established methodology using the current standards. In the Republic of Serbia, such tests have not been carried out yet.

Thermal energy that would be given by complete combustion of solid waste generated in one day, in the territory of Niš is:

$$197534 \text{ kg} \cdot 14297 \frac{\text{kJ}}{\text{kg}} \approx 2824143598 \approx 2824143.598 \text{ MJ} \quad (1)$$

Based on this analysis, it can be concluded that this waste can be effectively used as fuel (e.g. in the cement industry), or destroyed by burning in which the received thermal energy would be used (see Table 2).

The average daily amount of natural gas in winter time for the heat plant at the Faculty of Mechanical Engineering is 8350.8 m³. Thermal power of the natural gas is 33338 kJ/kg.

Daily amount of heat for heat plant is:

$$8350.8 \text{ kg} \cdot 33338 \frac{\text{kJ}}{\text{kg}} \approx 278398970.4 \approx 278398.97 \text{ MJ} \quad (2)$$

In the table 2 mentioned analysis shows that the thermal energy obtained by combustion of waste is nearly ten times higher than the combustion of natural gas. However, complete combustion is difficult to achieve, the efficiency is lower than with natural gas combustion. If we take into account cost of raw materials, in spite of the inaccuracies in the analysis, it can be concluded that with the combustion of municipal waste a considerable amount of energy is released by multiple lower cost compared to the classic fossil fuels.

Table 2: Thermal power of solid waste

Components	Daily amount [kg/city]	Mass share of components [%]	Thermal power of components [MJ/kg]
Organic materials	66570	40.8	14.7
Plastic	34964	21.43	15.0
Paper	30222	18.52	15.0
Rest (textiles, rubber, leather)	31408	19.25	16.3
Total	163164	100	14.851

Based on this evaluation, the construction of incineration plant would create the conditions for the opening of 150-200 direct workplaces. New workplace would be open in enterprises which would serve the facility. The implementation of such analysis creates the preconditions for the development of cost-effective and sustainable waste treatment, with special emphasis on the promotion of optimal energy aspects. Prediction of energy effects and economic analysis of the application of incineration of waste in city of Niš might be implemented based on existing estimates of quantities and composition of waste. Bearing in mind that the city of Niš produces around 72100 tons of waste per year, it can be rough estimated that about 50% of the waste can be incinerated with the possibility of obtaining heat and electricity. If the average generated useful energy (heat and electricity) from ton of waste is about 1800 kWh, it can be expected about $1800 \text{ kWh/t} \times 36000 \text{ t} = 64800 \text{ MWh}$ of useful energy or approximate saving effect of € 3.24 million per year, including the energy cost of 0.05 € / kWh (Jovic et al., 2007). Also, if we analyze the economic impact of rational use of waste, we should keep in mind significant resources that can be achieved with planned approach and market mindset when it comes to secondary materials and recycling.

CONCLUSION

One of the undesirable consequences of landfills is the creation of the landfill gas. The components of landfill gas, methane (CH_4) and carbon dioxide (CO_2) are the gases that cause the greenhouse effect and it is necessary to reduce their emissions in the atmosphere. The analysis shows that the thermal energy obtained by combustion of waste is nearly ten times higher than the combustion of natural gas. However, complete combustion is difficult to achieve, because the efficiency is lower than with natural gas combustion. If we take into account cost of raw materials, it can be concluded that with the combustion of municipal waste a considerable amount of energy is released by multiple lower cost compared to the classic fossil fuels.

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IMPLEMENTATION OF PRINCIPLES OF ISO 14000 STANDARDS AND PRINCIPLES OF WATER QUALITY MANAGEMENT IN INDUSTRY AND ENERGY SECTOR

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ABSTRACT

Development of industrial manufacturing and energy industry has an increasingly serious impact on environmental quality. Preservation of basic environmental elements is a necessary requirement for any organization intent on being competitive. By implementing ISO 14000 series of standards, management representatives express their interest not only in reducing the negative impact on the quality of water, air, and soil but also in applying the principles of eco-management.

Keywords: ISO 14000 requirements, water quality management, industry, energy

INTRODUCTION

Introduction of an environmental management system (EMS) is a necessity of modern business. All stakeholders should be familiarized with the organizational culture founded on ecological principles. By implementing the ISO 14001 standard, the management increases the organization's competitiveness but also encourages members of other organizations to do the same.[5] There is gradual emphasis on the need to cooperate with organizations that focus their attention on amounts of emitted pollutants, waste disposal, recycling practice, and increased energy efficiency.[4]

The EMS presented in this paper includes a proposed solution for the problems caused by the discharge of wastewater from industrial and energy facilities into the recipients, which are used as water supply by the populated areas. Disturbance of the groundwater regime is another warning sign that the problem should be solved promptly. [1]

IMPORTANCE OF WATER

The concept of sustainable water management is an attempt to manage water resources holistically, by considering the various factors that affect water utilization, including political, economic, social, and technological factors, as well as environmental considerations.[1] The basic prerequisite for obtaining good and reliable information required for a broad range of water quality management activities is timely and planned collection of reliable, well-systematized, and properly processed and verified data. A distinction can be made between the basic sets of data of different hierarchy: general-purpose data on current atmospheric, hydrospheric, surface, and subsurface processes; relevant data for water management and other branches of economy (agriculture, forestry, health care, etc.); data with primary relevance for certain water management systems (irrigation, water supply, etc.); and data with exclusive relevance for specific activities, such as evaluating and reducing the impact of some industrial or energy facilities on water quality. In the time of growing

concern for local and global influences on defining environmental strategies and of growing need to reduce the problem of channelling wastewater, either industrial or communal, it is even more necessary to develop ecologically responsible and appropriate system environments, such as environmental quality management systems, whose end results are a balanced living environment and socio-economic sustainability. [3]

IMPACT OF INDUSTRY AND ENERGY SECTOR ON WATER QUALITY

A dominant share of industrial wastewater is generated from industrial facilities after use of potable water from the water supply network or their own water supply source for manufacturing and raw material processing. A small portion of industrial wastewater is generated from equipment maintenance and air-conditioning or from sanitary-faecal waste created by employees. It is evident that there are many types of industrial wastewater differing both in quality and in quantity, which depends on the manufacturing technology and on the raw materials being processed; thus, industrial wastewater from food industry contains high concentrations of biodegradable organic matter whereas wastewater from energy facilities most commonly contains the so-called thermal pollution. There is truth to the predictions that the increased standard of living will increase product demand in general and, accordingly, increase the production of industrial wastewater, but even with such predictions it is necessary to acknowledge the needs of economic growth and meeting end-user needs but also the needs of efficient environmental quality management.[7] It must also be borne in mind that the interaction between industrial development and environmental quality is always at the centre of attention of many scientific research institutions. This results in a variety of strategies, which reconcile the needs for stronger competitiveness of organizations with the needs for improving environmental quality and which can be divided into three approximate categories, depending on their dominant approach: economic (promote competitiveness of organizations and also economic instruments in an EMS); ecological (promote reduction of environmental impact and ecologically responsible business); and technological (promote upgrading of technological processes primarily regarding product quality and then environmental quality).[1] Therefore, the actual cost of industrial and energy wastewater management can be determined only by acknowledging economic, technological, and environmental aspects. The most common mode of management implies reduced generation of wastewater from industry and energy industry, which is in keeping with the ISO 14000 requirements.[4]

NECESSITY FOR INTEGRATING WATER QUALITY MANAGEMENT INTO THE EMS

An EMS designed according to ISO 14000 guidelines allows management to harmonize their business with the principles of sustainable development.[3] Implementation of the standards binds the management to adhere to the legislation and internal regulations. One of the top priorities is to solve the problem of wastewater discharge. Adoption of environmental policy inevitably needs to include the aforementioned field. Activities dedicated to alleviating the consequences of the operation of industrial or energy facilities represent aims and objectives of an organization.[5] Management representatives in charge of environmental protection handle the implementation of protective measures, identify incompatibilities, and organize implementation of corrective protective measures. Assessment of competitiveness of a company based on preventive procedures and on actions to eliminate the consequences of work is fairly simple.[8] A detailed analysis of how the environmental department is organized to solve the problems of water pollution as well as an analysis of water monitoring results represents the starting point for establishing how the EMS is functioning. Realistic possibilities and availability of human and material resources affect the improvement of the EMS and public relations.[4] Water quality management based on: delineation of endangered and safety zones; water reuse; prevention of leachate draining from landfills to water intake structures; and wastewater treatment contributes to a company's level of competitiveness and to risk reduction.

ISO 14000 GUIDELINES

ISO 14000 series of standards addresses environmental management. The ISO 14001:1996 standard was technically revised in 2004 and 2005.[4] The ISO 14001:2005 standard allows organizations to easily adopt aims and implement the adopted environmental policy based on current legislation and regulation. The advantage of implementing the ISO 14001 standard is easier environmental management but also improved competitiveness and public relations. The use of Deming cycle planning in water quality management through the implementation of ISO 14001 is given in table T.1.[4]

Table 1: Comparative representation of the Deming cycle planning stages and ISO 14001 requirements

PDCA	ISO 14001:2004	Mark
P (Plan) - Planning Planning of goals and the manner of realizing work activities to preserve receiving water quality	Planning	4.3
	Identification of environmental aspects and impacts	4.3.1
	Legal and other requirements	4.3.2
	Aims and objectives of environmental protection and programs	4.3.3
D (Do) - Realization Implementation of adopted water quality management procedures	Application and implementation	4.4
	Resources, tasks, responsibilities, and authorizations	4.4.1
	Capacity, awareness, and training	4.4.2
	Communication	4.4.3
	Documents	4.4.4
	Document management	4.4.5
	Control of operations (operative control)	4.4.6
C (Check) - Control Organization of water monitoring system and reporting on the determined state	Preparedness for emergency response	4.4.7
	Checking	4.5
	Monitoring and measuring	4.5.1
	Assessment of compatibility	4.5.2
A (Act) - Action Wastewater treatment	Identification of incompatibility, corrective and preventive measures	4.5.3
	Re-examination by management	4.6
	Re-examination of the management system	4.6.1
	Identification of the areas to be improved	4.6.2

Implementation of the PDCA model and ISO 14001 guidelines in protection of wastewater from industrial and energy facilities, as shown in table T.1 is a part of the EMS. In order to ensure a positive attitude from the stakeholders, it is necessary to adhere to the legislation and to regularly issue reports to the public regarding the accomplished results.[8]

Assessment of an organization's competitiveness, the functioning of the EMS, and the implementation of ISO 14001 can be performed based on the analysis of responses to questions in the checklist for compliance with the basic requirements of water quality management procedure (table T.2).[4]

Analysis of responses to questions in table T.2 is used to reveal the characteristics of an organization's eco-management and to assess water protection within the EMS and the level of improvement of stakeholders' attitude towards the environment.[1]

Table 2: Checklist for compliance with the requirements of water quality management procedure

Questions about water quality management	Response	
Have management representatives of the mining and energy complex established a water quality management system within the EMS?	yes	no
Have management representatives of industrial or energy facilities established a way to comply with ISO 14001 requirements?	yes	no
Does the water quality management system in the industrial or energy facility function in compliance with ISO 14001 guidelines?	yes	no
Do management representatives of industrial or energy facilities maintain the water quality management system according to the EMS improvement measures?	yes	no
Do management representatives of industrial or energy facilities improve the water quality management system?	yes	no
Is the environmental policy of industrial or energy facilities in compliance with legal requirements of environmental law?	yes	no
Does the environmental policy of industrial or energy facilities encourage construction of new water treatment systems and increased efficiency of the existing treatment systems?	yes	no
Has a proposal on new environmental protection measures been prepared for a new environmental policy version in order to improve competitiveness?	yes	no

CONCLUSION

Simultaneous development of industrial and eco-management is a necessary requirement for the development and improvement of an EMS and a water quality management system.[6] Management representatives of industrial and energy facilities, within their financial and technical abilities, define the directions in which environmental and water quality preservation plans and goals are to develop. Preparedness of management to tackle environmental problems can be assessed based on their performance, i.e. based on water quality indicators.[6] Collected data can also be used to assess an organization's competitiveness as it is the duty of management to make the data accessible to the stakeholders. ISO 14001 standard prescribes that reports on environmental policy content can and should be available to the public and business associates. Water quality management is one of the functional priorities of an EMS. Management representatives of industrial and energy facilities are tasked with taking every measure at their disposal to maintain water quality and environmental quality as a whole at a satisfactory level.

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STUDYING THE ECOLOGICAL IMPACTS OF LIGHT POLLUTION ON WILDLIFE: AMPHIBIANS AS MODELS

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ABSTRACT

With the expansion of human habitation near and within natural habitats, fragile ecosystems are increasingly exposed to artificial night lighting. Amphibians (particularly frogs and salamanders) are important components of many forest and aquatic ecosystems. Amphibians are particularly sensitive to environmental changes and, thus, are important indicators of the health of ecosystems. Amphibian populations have been declining world-wide as a result of environmental perturbations including increases in UV -B radiation (due to ozone depletion), global warming and climatic change, habitat loss and destruction, and acidification caused by acid rain. Light pollution may also contribute to global decline of amphibians, because many amphibians are nocturnally active or have biological rhythms regulated by light. This paper will summarize methods of conducting research designed to determine the impact of light pollution on amphibians, including laboratory experiments, field experiments, and natural (observational) studies. Results of all these studies demonstrate that artificial night lighting has the potential to affect foraging and breeding as well as growth and development of frogs and salamanders. Thus, artificial night lighting should be considered an additional factor that negatively impacts amphibian populations.

Keyword: Light pollution, amphibian, ecosystems

INTRODUCTION

Ecosystem refers to a community of living organisms and their interactions with the environment. Most human activities, such as agriculture, industry, fishing and mining affect the ecosystem in a negative way, especially when performed in an excessive and unsustainable way. Global warming, pollution and extinction of species are some of the consequences of such human behavior.

Until just three decades ago Western Morava River was one of the cleanest rivers in Serbia. The ecosystem has been so healthy, that could drink the water directly from the river. The ecosystem of the West Morava river was full of crabs, mussels, amphibians and fish. Walking down the river in the summer could be heard croaking frog, the local fishermen have fished for river trout gudgeon, while their children and grandchildren caught crabs, clams extracted and playing with tadpoles. Today the situation is different. Expansion of settlements around the river's ecosystem and threatened habitats of river species. The discharge of waste water from the plant into the river, lighting up almost the entire river incandescent lighting, have led to the river trout gudgeon extinct and no longer exists in this river, crustaceans and molluscs is gone, while amphibians is rare two found.

Light pollution seems to have a widespread, negative impact on many different species. The evidence for the impact of light pollution in migratory birds hatchling sea turtles, and insects is striking, because of the large-scale mortality that has occurred as a result of artificial night lighting. Such mortality makes the impact of light pollution on these species more obvious and quantifiable. However, for other taxa, the impact of light pollution on populations may be more subtle, yet equally important. In such species, light pollution may affect such aspects of the biology of these species as physiology (e.g. growth and

metabolism) and behavior (e.g. reproduction and foraging activity) causing stress that negatively affects populations exposed to this environmental pollutant. In this case study we take amphibians, including river frogs and salamanders, as good models for examining the impact of light pollution on wildlife for several reasons. First, many species are nocturnally active, such that reproduction and activity primarily occur during dark periods. Secondly, amphibian species are widespread, abundant, and important components of terrestrial and aquatic ecosystems as both predators and prey. Third, many amphibians are sensitive to changes in habitat and thus are considered indicator species, such that amphibian populations are often among the first to show declines in degrading habitats. Finally, amphibians are undergoing global decline for a variety of reasons including habitat loss, ultraviolet radiation (UV-B), acid rain, water pollution, exploitation, climate change, and infection. However, a combination of these factors may be the cause of population declines in some species. Light pollution is a potential stressor that may exacerbate declines in populations of river amphibians.

Light pollution increases ambient illumination, disrupts photoperiod, and changes spectral properties of night light that may affect the physiology, behavior, ecology, and evolution of river frog and salamander populations. The focus of this paper is to (1) discuss ways in which the impact of light pollution can be studied and monitored on amphibians in West Morava river, especially when direct mortality is not a likely outcome; and (2) provide a multilevel, or multidisciplinary, approach when studying the impacts of light pollution on West Morava river. This approach should include laboratory and field experiments, as well as natural (observational) studies. Each methodological approach has its benefits and limitations, such that a combined approach will allow us to understand 1) the mechanisms by which light pollution affects species, and 2) the overall effect on populations. Laboratory experiments are conducted using controlled environmental conditions in the laboratory in which only the ambient illumination is manipulated between control (dark conditions) and experimental treatments (lighted conditions), while all other environmental factors such as temperature, food, and humidity can be kept constant between treatments. However, laboratory experiments lack the realism of the natural world, and may only provide information about the potential effects of the variable on natural populations and specific effects of light at night on the physiology or behavior of the study organism. In field experiments, the ambient illumination in lighted treatments, but not in unlighted control treatments, whereas other environmental factors are allowed to vary naturally. However, field experiments lack the very high level of control that is characteristic of laboratory experiments because the organisms are also exposed to variable environmental conditions.

The benefit of field experiments over laboratory experiments is that the results are more representative of the effects of night lighting under natural conditions. Natural (observational) studies are conducted using existing sites that differ in light levels (e.g. naturally dark habitats and artificially lighted habitats). There is no control over ambient illumination or other environmental factors by the researcher (the researcher can only measure existing levels). Thus, in natural studies, there is very little control over the variable of interest or other environmental factors, but the results are much more likely to reflect what is occurring under field conditions.

Using a multi-level, combined approach involving all three types of studies will allow us to understand 1) the mechanisms by which artificial night lighting affects organisms (e.g. the cellular, physiological, and behavioral effects of light on organisms) and 2) the overall effect of artificial light at night on population size and structure in West Morava river. Laboratory experiments examining cellular physiology, including cell division, cellular function, and periodicity (i.e. melatonin production and the natural rhythms of cells) will allow us to understand the effect of light at the most fundamental level of the organism. Laboratory and field experiments, using controlled conditions, and natural studies can be used to examine the effects of light at night on systems physiology, such as hormonal and metabolic changes as the result of artificial light and the effects on growth and reproductive development (i.e. day length has a widespread effect on timing of gonadal maturation in a wide variety of organisms). Additionally, these methodologies can be used to determine the effect of lights at night on behavior, such as activity patterns, aggression, foraging, and reproduction, and ecology such as population distribution (e.g. avoidance of or attraction to light), population size, and species interactions (e.g. competition and predation). In this paper, we will provide laboratory experiments, field experiments, and natural studies for river frogs and salamanders. The examples we have included in this paper are provided as generalizations of the types of research done at each level, and are not meant to be a

comprehensive review of the field. For each example, we will explain the methods used to examine the impact of light at night, the variables that were measured, the results, and the implications for the impact of artificial light at night for amphibians in West Morava river.

LABORATORU EXPERIMENTS

In laboratory experiments we examining the effects of light on physiology and behavior of amphibians were conducted to determine the extent to which light acted as an environmental cue for circadian or seasonal changes in hormone levels, growth, metabolism, and reproduction. Researchers often examined such effects by exposing animals to constant light, constant dark, or varying photoperiods. These researchers often did not report detailed information about the spectral properties or illuminations used during these studies. These experiments are simple in that the intensity of light at night is not varied (and in many studies light intensities at night were the same as those used during daylight hours), but the number of hours per day these amphibians are exposed to light is varied. Varying the intensity of light at night to levels similar to those produced by artificial night lighting (directly or from sky glow), will allow for extrapolation to a variety of potential artificial lighting conditions. These experiments have provided information about the impact of light at night on the physiology and behavior of frogs and salamanders. We are investigating directly the effect of artificial night lighting on physiology and behavior, and include more sophisticated measurements of light intensity and spectral characteristics of light, as well as treatments that vary light intensities. Such experiments are important in determining the direct impact of artificial night lighting on physiology and behavior in controlled conditions. The results of these experiments provide predictions for the effects we might see in natural habitats, where controlled conditions are not possible to create and causal factors may be more difficult to determine.



Figure 1: Tadpoles of the same age exposed to different nocturnal illuminations. The tadpole in A, from the darkest lighting treatment, is metamorphosing. The tadpole in B still retains the larval body form and is not yet ready to metamorphose.

Melatonin is a master hormone that is regulated by photoperiod (production occurs during dark periods and is inhibited by light¹⁶). As part of a larger study, we examined the effect of continuous light or a 12L:12D photoperiod (lighted during the day and complete darkness at night) on plasma melatonin concentrations. We found higher plasma melatonin concentrations during the dark cycle of the 12L:12D photoperiod than during the daylight period, but when in constant light, there was no difference in melatonin levels over the 24-hr period. Melatonin production was lowered in salamanders kept under constant light. In amphibians, melatonin is important in the regulation of thyroid hormones (involved in metamorphosis of frog tadpoles), gonadal development, reproductive behavior, skin coloration, thermoregulation, and ability to adapt visually to darkness.

Also, we measure variety of nocturnal illuminations were used to effect of light at night on growth and metamorphosis in tadpoles of the frogs. These researchers exposed tadpoles to a 12L:12D photoperiod, with daytime light levels of 100 lx (comparable to bright room lighting) and varying nocturnal illuminations of 0.0001 lx (very dark night), 0.01 lx (comparable to bright moonlight), 1 lx (comparable to dawn or dusk), and 100 lx. We found that the tadpoles differed in amount of growth in the different nocturnal light treatments; at the end of the experiment, a greater proportion of frogs in the darkest lighting treatment metamorphosed than in the other lighting treatments (Fig. 1). Even small amounts of light at night (comparable to bright moonlight, or artificial lights from anthropogenic sources) may delay metamorphosis. Also, tadpoles in the territory are much higher than in other, less polluted areas, on the other hand, the adults were, on average, were much smaller than those that live in normal conditions. So, mutation has been observed in pups and adult animals, and that the morphological, cytological and chromosomal level. Changes were observed in liver, spleen and speed of metabolic processes. Reproduction was significantly reduced, and increased mortality cubs. All these changes in

the development and survival of marsh frogs are the result of its lack of ability to adapt to unusual conditions of habitat.

If this finding applies to other species of frogs that are limited in the length of the larval stage by drying (such as those in temporary ponds) or temperature (those in vernal pools), such delayed metamorphosis may decrease the chance of escaping a pool before it dries or cools and may increase mortality in tadpoles exposed to artificial light at night.

FIELD EXPERIMENTS

In these experiments, artificial illumination under the control is introduced into natural habitats. The control treatment, no artificial light, is an important additional treatment that must be present in such designs. However, this control it was difficult to achieve in light-polluted habitats, particularly where sky-glow is a problem, there for examining the effect of artificial light on amphibian behavior, reproduction, and population distribution over longer periods of time (e.g. a season or a year) need to be done.

We examined the reproductive behavior and movement activity of male river frogs, in West Morava river that were exposed to artificial light (flashlight) or a control (no artificial light) on moonlit nights (higher natural ambient illumination) or darker nights (new moon or cloudy nights, lower natural ambient illumination). In the artificial light treatment, frogs were illuminated using the flashlight for 5 min before observations began (habituation period, so that the eyes of the frogs could partially adapt to the rapid increase in illumination). Observations were made using an infrared (IR) viewer, because frogs cannot use IR light for vision. In the control treatment, behavioral observations were made using the IR viewer under natural ambient illumination after a 5-min habituation period. We found a reduction in number of calls and an increase in movements by males in the artificially lighted treatment compared to the control treatment, regardless of the natural ambient illumination (moonlight or no moonlight). A reduction in the number of calls by males may affect selection of mates (mate choice) by females. If such an effect is long-term and widespread, the result may be changes in the population dynamics of frogs exposed to artificial night lighting.

We also conducted a field study examining the short-term effect of artificial night lighting on the foraging activity of the river salamander. These salamanders occupy the leaf litter in Ovcar Banja forests, maintaining territories under cover objects (rocks and logs) that provide protection from predation and desiccation. Their above-ground foraging activity is limited by moisture during rainy or humid nights, these salamanders emerge from under the leaf litter and cover objects to forage on the forest floor. To determine the effect of artificial night lighting on foraging activity of salamanders, transects were established in forested areas at the Mountain Lake Zlatarsko in Zlatar, Serbia. Half were lighted by strings of white minilamps placed in the transects (Fig. 2), whereas the other control transects were not lighted by minilamps. Light levels were 0.01 lx (comparable to bright moonlight) on the forest floor in the lighted areas and 0.0001 lx in the control areas. The researchers systematically walked each transect in random order beginning 1 hr after dark (2200-2310 h) and counted the number of salamanders found on the forest surface. There were significantly more salamanders active on the forest floor in the dark transects than in the lighted transects. This field experiment demonstrated a short-term reduction in activity of salamanders that were exposed to artificial night lighting. These salamanders, like many other species, are limited to foraging on the forest floor during moist periods at night. The introduction of light at night reduced this activity. If chronic exposure to artificial night lighting has similar long-term effects on salamanders, artificial night lighting has the potential to limit foraging opportunities, which may ultimately reduce growth and reproductive output, survival during winter hibernation (during which salamanders presumably do not feed and must rely on stored fat for energy²³), and population size and distribution.

NATURAL STUDIES

Natural studies provide information about the impacts of existing artificial light on wild amphibian populations.



Figure 2: Transects used for field experiment by Wise and Buchanan (unpublished). These transects, placed in forested areas (A), were either lighted with strings of minilights (B) or were left dark (as controls).

However, in natural studies experimental and environmental factors are not controlled and other factors, besides artificial light, may be responsible for detected differences in lighted and unlighted areas. For example, artificial lighting often occurs in areas where there is habitat destruction or fragmentation. Thus, for as was very important to have a control treatment (dark areas) that is similar in as many ways as possible to the habitat in lighted areas. Additionally, light levels were measured when was possible, although natural studies are valuable even without such information. Natural studies can be used to study short-term and long-term effects of artificial night lighting on populations, and may provide especially valuable evidence for the impact of chronic artificial night lighting on amphibian populations over seasons or years in West Morava river.

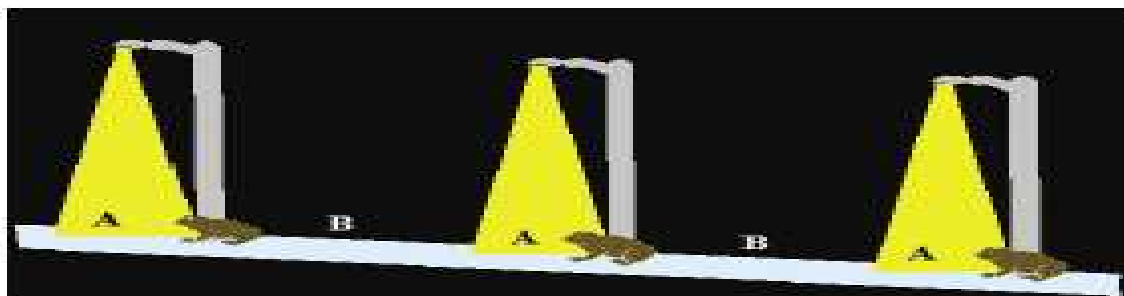


Figure 3: Baker counted the number of newly metamorphosed toads aggregating in lighted areas under street lamps (A) or in unlighted (control) areas in between the lighted areas (B).

Baker examined the impact of artificial night lighting on distributions of common (European) toads, at Walton Lake, Milton Keynes, U.K. Tadpoles of this species often metamorphose into juvenile frogs simultaneously; thus, there is often a mass emigration of newly metamorphosed toads away from their aquatic environments. During one of these mass emigrations, Baker counted the number of young toads aggregating in lighted areas under street lamps and in darker control areas between these lamps (Fig. 3). He found more toads under lighted areas than in unlit areas. Baker hypothesized that toads aggregated under street lamps because of the increased insect abundance (prey for toads) found there. Although such aggregations may be beneficial in providing toads with an abundant, conspicuous food source, Baker hypothesized that such aggregations may also make toads more susceptible to mortality as a result of bicycle or automobile traffic. However, this hypothesis is partly true. In our study, we performed the same experiment with and without the presence of nocturnal insects that are an easy source of food for the frogs. Number of frogs in both cases was the same. The frogs and other amphibians that live in the water, sunlight is necessary for regulation of body temperature. Artificial lighting is confused and disoriented frogs, they lost their orientation of day and night, and at night they gathered under the street lamps, believing to represent the sunlight that they required for regulation of the body temperature. Also that demonstrated, that amphibians are vulnerable to mortality by automobile traffic, and lights, such as headlamps may increase the risk of mortality in some species of amphibians.

CONCLUSION

The ecological impact of light pollution on wildlife is a relatively new field of study, especially for taxa other than insects, sea turtles, and birds. The effect of light pollution on amphibians is only beginning to be intensely examined. In studying the effect of artificial night lighting on amphibians as well as other taxa, it is important to use a multi-level approach that includes the use of laboratory experiments, field experiments, and natural (observational) studies. For amphibians, most information about the potential effects of artificial night lighting comes from laboratory studies that have examined the effects of variation of photoperiod or continuous lighting on hormone levels, growth, metabolism, activity, and foraging. These studies demonstrate that light at night affects basic physiological and behavioral biology of a wide variety of amphibians. Studies also show intensity-specific effects of different nocturnal light levels (from relatively dark to relatively bright) on growth and development of frogs. However, such complex, controlled studies need to be done on a variety of species before making generalizations about the potential impacts of artificial night lighting on all amphibians.

Field experiments are conducted in more natural settings under controlled conditions, i.e. the researcher should have the ability to manipulate light levels and include appropriate dark control conditions. To date, field experiments include this study have examined the short-term effect of artificial night lighting on amphibian behavior such as reproduction, activity, and foraging. Long-term field experiments are needed to examine the chronic impact of artificial night lighting on aspects of amphibian populations such as foraging behavior, reproductive behavior, reproductive output, population distribution, and population size. Natural studies was important and providing evidence of the effect of light pollution on populations under existing conditions. These studies are often difficult to conduct, because lighted habitats must be matched with unlighted habitats (control) to make appropriate comparisons.

Currently, there is no comprehensive research incorporating laboratory experiments, field experiments, and natural studies for any single species of amphibians. This lack of intensive study at multiple levels may be because the potential importance of artificial night lighting as an environmental pollutant has only recently become a concern in the amphibian ecological and conservation literature. In order to understand the widespread impact of artificial lighting on amphibians and other taxa, more comprehensive research needs to be conducted. Regardless, the limited information we have indicates that artificial light at night negatively impacts a wide variety of amphibian species.

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UTILIZATION OF RENEWABLE ENERGY IN SERBIA AND EUROPIAN UNION

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ABSTRACT

The condition in the world economy, energy crisis and the increasing topicality of renewable energy sources are closely linked. At the beginning of the 21st century, there was a sudden increase in oil prices in international markets. Therefore, many countries around the world have view to alternative energy sources as strategic in terms of developing their economies. In order to overcome the crisis and minimize its consequences, many countries have adopted a number of strategic decisions that involve more or less radical changes in many areas of the economy. Thus, to increase energy security, economic competitiveness, as well as reduce the negative environmental impact, the European Union is making significant efforts to promote and use renewable energy sources and improving energy efficiency in all energy sectors. This paper will be committed to this.

Keywords: renewable energy, energy security, energy efficiency, dependence on imported fossil fuels, incentive measures.

INTRODUCTION

The policy of renewable energy sources use has become more and more important in the recent years. Although attention has been paid to the policy of alternative energy sources use in the last three decades, since the onset of the economic and energy crisis in 2008, alternative energy sources, particularly the renewable ones, have been gaining in importance. On the other hand, oil, as a primary energy source, causes big problems with its price in the international market to many import dependant economies. From the mid 80s to September 2003, average oil price (inflation adjusted) was relatively stable. Having in mind that the circumstances have changed in the meantime, today we cannot say that the price of "black gold", which most economies in the world depend on, is stable and low. During 2003, the price of oil rose from about \$ 25 to \$ 30 per barrel, reaching the price of \$ 60 in August 2005. The highest ever recorded value of a barrel of crude oil on the "NYMEX" market was reached in early July 2008, of \$ 144.22 per barrel. This kind of development was not affected by one factor only, but by different causes as various sources suggest. (Organization of Petroleum, 2011)

As one of the main reasons for the increase in oil prices during this period, slow growth of oil supply is stated. Since oil production surpassed newly discovered sources in 1980, its supply has been slow in responding to the demand growth. The fact that world oil production will be reduced and/or stopped at a certain level in relation to demand indicates that the lower offer represents a fundamental cause of the sudden increase in oil prices. As statistic data show, it is believed that the world production of oil is facing "peak oil" and that in some countries it has already been reached (U.S., UK). Even if the total supply of oil is not reduced in relation to demand, a growing number of experts agree that easily accessible sources of oil are dying and that, in the future, global economy will depend on non-conventional oil reserves and 'heavy' oil as well as on renewable

energy sources as oil substitutes.¹ On the other hand, substitutes for oil and global warming may limit demand for it before its reserves are exhausted, so that prices cannot grow indefinitely. In this context, we can say that the increase in oil prices since 2003 has additionally increased the attention to the use of renewable energy sources, primarily because high oil prices enable their competitiveness in the international market. Therefore the European Union (hereinafter EU) is making significant efforts to promote the use of renewable sources.

"The importance of *renewable energy sources* (hereinafter referred to as RES), as factors of oil price is that they affect it by changing the supply and demand ratio in the long run. As the use of RES increases, the demand for oil drops which ultimately affects the decrease of its price. In other words, the price of oil would be much higher today if the RES did not exist (were not used)." (Stosic Mihajlovic, 2008).

RENEWABLE ENERGY IN EUROPEAN UNION

As the EU still depend from imported energy, oil and gas, its policy goes in two directions:

- 1) Saving and rational use of energy through the application of energy efficiency measures
- 2) Reduce the use of fossil fuels and replace them with renewable energy sources

Saving and rational use of energy through the application of energy efficiency measures

"Saving and rational use of energy through the application of energy efficiency measures are aimed at many industrial sectors such as transport (26%), construction (27%), industrial and communal energy (25%) and so on. It is estimated that the total final energy saving can reach 30% until 2020. That way, up to 390 Mtoe / year, or about 100 billion Euros can be saved annually until 2020. Also, it is estimated that through these savings, emissions of carbon dioxide would be reduced by 780 million tonnes a year." (Dzereg et al., 2011). The European Union included the goal of reducing energy consumption by an average of 20% until 2020 in its *Action Plan for Energy Efficiency* (2007-2012). This plan included an array of short-term and medium-term measures for the purpose of achieving this goal, ranging from raising awareness among consumers on energy conservation, application of certain energy efficiency standards for appliances, development of new technologies, financial and fiscal incentives, to distribution of electricity and heating. To achieve this goal it was necessary to develop new technologies, products and services, and change the behaviour of consumers. Although the goals and investments for the observed period were not fully implemented, what has been done until today is commendable since the goals are really ambitious as practice has shown. Regulatory frameworks regarding consumption, investment, taxation and development of consumers' awareness have been set. Taking into account the complexity of the problem, their application is not simple and requires time.

The largest energy consumer is the transport sector (20%). With the fastest growth rate in consumption, traffic is the major risk to the environment and is one of the main factors of import dependence on fossil fuels (oil). The EU Commission has set a threshold of 130g/km CO₂ (rather than planned 120g/km) to reduce emissions of polluting matters from cars. Steps have been taken to promote "clean" alternative transportation in order to influence the public awareness about clean and saving energy. Many EU member states are still largely trying to procure vehicles for public transport which use "clean" energy, to adopt and implement legal regulations which promote "eco" cars, as well as to regulate pressure and resistance in vehicle tyres. Reducing energy consumption in the EU is turned to other modes of transport as well, such as rail, air and water transportation.

Producing high-quality building materials in the industry and its installation in the construction according to the prescribed standards will enable energy savings of 45% by 2020. The so-called

¹ An example of investment in non-conventional energy sources is seen in the Canadian tar sand. Tar sand is far to exploit cost effective in relations to "heavy" oil when the oil price goes above \$ 60 per barrel. Then it becomes attractive for exploration and production companies.

"ecological buildings" are buildings of the future in the European Union. The implementation of these projects requires large investments, high expertise and developed technology. Today, realizing projects which use renewable energy sources is a real hit in modern building.

On the other hand, the whole process inevitably involves both domestic and foreign financial factors which support many projects by their financing arrangements. Private banking sector, IMF, European Bank for Reconstruction and Development, European Investment Bank and other financial institutions can facilitate the achievement of such goals. The banking sector across the EU already offers favourable financial packages to small and medium enterprises in order to increase energy efficiency and savings. Everyone can gain some benefits from this kind of business: companies have reduced taxes and favourable loans, banks have reduced taxes, states have energy savings and reduced dependence on imports.

Reduce the use of fossil fuels and replace them with renewable energy sources

Another direction taken by the EU energetic policy is to **reduce the use of fossil fuels and replace them with RES**, which are available on the EU territory. This approach helps to reduce import dependence, protect environment (reduce gas emissions), apply and export new technologies, make investments and open new job positions, or so-called 3E effect (Energetic, Ecology, Economy). The plan is to achieve a positive effect by using RES in ratio 3x20% in all segments (3E) until 2020. The whole approach is based on specific Directives: *Directive 2001/77/EC*, *Directive 2003/30/EC*, *Directive 2001/80/EC*, *Directive 96/61/EC* and *Directive 1999/32/EC*.² The European legislation is aimed at promoting RES and energy efficiency, security of supply, environmental protection and strengthening of the common market. Each member of the EU is obliged to increase the share of RES in its own production of electricity by 2020 and to set a goal regarding the scope of RES participation in the total consumption. Producing energy from RES, Germany and other EU members (Belgium, Austria, etc.) are slowly turning away from nuclear power plants since the adopted measures of the members (e.g. preferential tariffs) have begun to give good results over time, especially when speaking about electricity produced from wind and sun energy.

A significant step towards achieving the objectives of the EU member states is the introduction of economic instruments to encourage investment in RES. Some of these instruments are: **the privileged price system** (known as "feed in" tariffs) and **the green certificate trade system in combination with mandatory quotas**.

Within **the green certificates trading system**, each manufacturer is issued a green certificate for each MWh produced from RES which can be used for trading in the market, so that each manufacturer can meet the quota set by the state. This approach is applied in the United Kingdom, Romania and the Czech Republic. It is based on the selection and implementation of commitments to produce a minimal part of electricity from RS. "In the event of not complying to the obligations and for the purpose of more efficient use of quota system, programmes of issuing green certificates for the purpose of trading are applied. Such an approach can be supplemented by adding other measures if a positive outcome is expected. Thus, a dual support system was adopted in the Czech Republic, by means of which producers of electricity from RS can choose between traditional fixed preferential prices or market prices complemented by fixed ecological (green) grants based on the Kyoto Protocol. Ecological grants are fixed for the next year depending on the RS (determined annually), so that the total amount of compensation up to the amount of expected average selling price is higher than the fixed selling price, which is consistent with an increased risk." (Dzereg et al., 2008).

² 2001/77/EC Directive - Promotion of electricity production from Renewable Energy Sources in the international electricity market; Directive 2003/30/EC – Promotion of use bio fuels or other renewable fuels for transport; Directive 2001/80/EC – Limitation of emissions to air from large combustion plants; Directive 1999/32/EC – Reducing sulfur content of liquid fuels; Directive 1996/61/EC – About Integrated pollution Prevention and Control.

Within the **system of privileged prices**, a purchase price for electricity obtained from each renewable source is determined. The system of privileged prices is often applied, which does not mean that it is economically more efficient in the approach, but it is recognized by investors as a sign of security because it is transparent, easy to administer and flexible. The fact that it is an effective instrument for achieving sustainable goals quickly can be illustrated by an example of Germany in the field of wind power generation. By applying the law on privileged prices in 2007, Germany produced 14.2% of electricity from RES, and German government calculated that 57 million tonnes of SO₂ was saved in the same year. The aim was to encourage investment and achieve savings from technical progress. Germany has achieved great success in the development of power generation using the RES, especially wind and sun energy, not only by introducing preferential tariffs, but also by the will of consumers to accept such a cost, as well as by the gradual equalization of the price of electricity from various sources of redistribution, with the burden being born by manufacturers themselves. The following table (Table 1) shows the German system of preferential tariffs. Price per KWh of electricity is fixed for the companies belonging to the system, but it is determined by the year when they commenced work. The longer a company is connected to the system, the lower the price is, in accordance with the shown decline rate. Tariffs are obtained on the basis of cost estimates. For example, the tariff for wind power production is estimated by the following costs: capital costs (equipment - 895 Euros per KW, the location - about 30% of a plant's value), the operating costs in the first two years (4.8% of a plant's value in the first and 6% in the second), inflation (20% in 20 years), the ratio of debt and equity capital (70:30), the interest rate 5,5%, the rate of return 12%. The costs of tariffs for other forms of power generation from RES are estimated in a similar way.

Table 1: Germanium system of privileged prices

	Eurocents per KWh	In decline % - annual
Biomass	8,27-17,33	1,5
Hidrocentrale (up to 20 MW)	6,65-9,67	0
Geothermal wells (to MW)	7,16-15,00	1
Wind (coastal)	5,39-8,53	2
Wind (interior)	6,19-9,10	3
Solar Enrgy	43,42-59,54	5

Source: Centre for Ecology and Sustainable Development, Renewable Energy (Dzereg et al., 2008)

The price then varies depending on the degree of load and amount of compensation for producers of electricity (wind, solar energy, hydro-energy, etc.). The less attractive the location, the higher the price is, and vice versa. This ration of price rate calculation is legally introduced in order to harmonize the conditions for balanced development of energy production from RES on the whole territory.

Except on the European Union territory, investment in other regions of the world is a challenge and great opportunity for reducing the use of fossil fuels and their replacement with the same RES. In Brazil, the method for producing bio fuels is developed, which is supposedly more efficient than the existing methods. According to the sources "IEA" (International Energy Agency), one litre of diesel can produce 25 litres of bio fuel. This is possible because production of bio ethanol is the most cost-effective in Brazil, where it is obtained from sugar cane. According to the London scientist Dr. Mae –Wan Ho, Brazilian bio ethanol program was initiated during the big oil crisis of the seventies, and has been the most important market of bio fuels in the world for decades. In Brazil, 300 refineries of bio ethanol operate, 60 and more are under construction and biodiesel is manufactured from soybeans. About 50% of the total yield of sugar cane is processed into ethanol and more than 30 thousand bio ethanol stations are opened. Brazil currently produces around 15.9 billion litres of bio ethanol. This is an opportunity which the EU wants to use in order to replace fossil fuels with RES. However, the financial crisis in the EU has postponed these plans for the near future.

By creating the environment for the exploitation of RES for energetic purposes, the tendency is to make the market of the energy produced from RES transparent. Due to the stock market disturbance of solar panel producers and non-adaptive preferential tariffs in Italy, many countries have had to change their policy and make new projects and instruments so as to create better conditions to invest in RES. This is the reason why positive experiences of some countries can certainly come in handy. So in the U.S., the "California's Renewable Standard" tends to have 33% of energy from RES. The "Go Solar California", also in the U.S., promotes and financially supports the project participants who build solar roofs (million roofs in total). On the other hand, the biogas project, whose creator is David Albers (USA), aims to produce electricity for 1,200 homes annually in the U.S. David Albers is also a co-owner of a dairy farm of 5000 livestock and president of the company "Bio energy Solutions". In accordance with the U.S. Directive on energy saving and switching to alternative sources in the next 30 years, he has invested several million dollars in building a complex with a huge tank (the size of several football fields) which will collect and filter cow dung. After multiple filtrations, process of evaporation starts and 99% of pure methane biogas is produced which is then shipped through pipeline to the nearest power plant in California, where David's farm is. (Zdravkovic et al., 2011).

The following graph (Figure 3) presents the state up to the present and the expected increase of application of solar collectors in the world market. However, the data shown in this figure are now slightly modified, since the data prediction was done in the last decade.

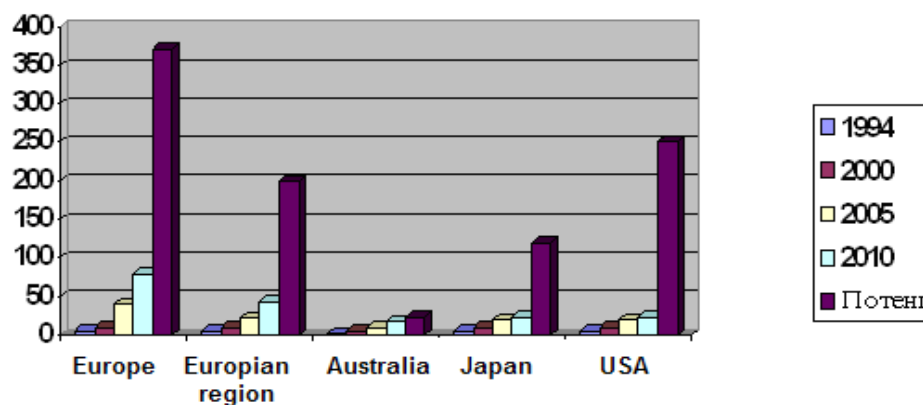


Figure 3: Currently shape and expected increase of solar collectors (10^6) on world market: Source: www.iea.com

To date, about 15 million m^2 of solar thermal collectors has been installed in the European Union, and about 15 million m^2 has been installed only in China during the last year. Experimental macro-solar plants have been tested during the last 15 years in numerous countries (Spain, France, Japan, Italy, Russia, USA etc.). The growth rate of installed solar thermal collectors in some European countries is over 25%!

CONCLUSION

The need for bypassing the problem of exhaustion of non-renewable natural resources, especially when it comes to fossil fuels, is evident, and operating materials, which do not require modification of existing power machines, are becoming more and more important. This particularly applies to the period when there were significant impacts on the market of liquid fossil fuels as was the case in 2008. In the last decade, in addition to solar and wind energy, the production and use of alternative, ecological operating fuels has been intensified significantly. In all the regions of the world, more attention is paid to the production of bio alcohol and biodiesel as well as other alternative operating fuels. The choice of materials is extended to all substances that contain carbohydrates or fats of any vegetable or animal origin. Recycling waste fat is especially becoming important given the potential danger of its uncontrolled discharge into watercourse or of its use as animal feed, which was even banned in many countries. Unlike fossil energy sources, one does not

have to wait a million years for this source of energy to become coal or oil. The organic matter that occurs during the growing season can immediately be converted back into energy, and this can be repeated every year. When burning biomass, carbon-dioxide is released into the atmosphere as much as it is absorbed in organic matter during the growing season, not a gram more. On the other hand, the occurrence of oil substitutes and their increased exploitation has largely been influenced by unstable and increasing price of crude oil on the market. Thus, we can say that there is interdependence between oil prices and the emergence of its substitutes. The efforts of many countries to switch to more appropriate sources of energy are there to prove it.

Although EU countries have had favourable conditions and time to implement regulations concerning the use of renewable energy sources for energetic purposes, ranging from a stable economic and political system, investments, technological advantages, up to a greater level of awareness of the benefits of renewable energy sources in relation to the non-renewable ones, many members have not completely succeeded in realizing the set goals. Certainly this is not for criticism and not surprising, given the complexity of the issue and the level of the set objectives.

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ENVIRONMENTAL PROTECTION AS AN ELEMENT OF ORGANIZATION'S SOCIAL RESPONSIBILITY

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ABSTRACT

This paper points at the significance of socially responsible behaviour of an organization in modern society, especially in the field of environmental protection. The following issues have been analysed: elements of organization's social responsibility, social responsibility in environmental protection, business effects of social responsibility, public relations and social responsibility. Organizations and individuals have to take care of environmental protection – in this way they respect the most important element of social responsibility. PR service is considerably involved in realization and presentation of the results of organization's socially responsible behaviour. It is necessary that organizations apply the concept of sustainable development in their permanent tendency to make optimum balance between technological development and environmental protection.

Keywords: environmental protection, social responsibility, public relations, sustainable development.

INTRODUCTION

Organization's social responsibility is also called Corporative responsibility - CR. According to (Gordon, 2011), corporative responsibility represents public opinion about social and ecological influence of business operations as well as voluntary contribution of organization to local community and the society as a whole.

Publicity is paying more and more attention to organizations expecting them to do something for the community in return. Stakeholders evaluate organizations according to their relations towards ethical issues, decisions concerning environment and wider social community. This situation is present all around the world. Organizations are becoming responsible for the society and environmental protection. Organizations themselves recognize these tendencies and are becoming aware of their ethical, economic, ecological and social influence.

Many organizations give regular reports about their corporative responsibility. It is not enough that organizations do not act harmfully but it is necessary that they improve the quality of life. Simply, modern society requires responsibility and contribution (Đorđević, Bešić, 2005).

Organizations should take care of the interests of consumers and the society and not only of their profit. However, profit is important as well because it represents a condition for longterm life of the organization which is also significant for consumers and publicity. The solution is in sustainable development. The concept of sustainable development is based on achieving strong economic development without endangering future projects and the environment. Sustainable development makes the balance between the aims of economic development on one side and the need for improvement and protection of the environment on the other side.

Corporate responsibility enforces organizations to think about risks of their business performance and the influences on the environment. Organizations are the part of the society and they have to take responsibility for their influence on the society. Responsibility is related to all activities and acts towards all stakeholders and the employees within organizations. While ethics represents individual attitude of every participant, corporate responsibility is related to organization's influence on the society.

There have been many changes considering business requirements that are set before organizations. By the 70s it was enough that organizations satisfied the basic economic aim – profit. Such organizations were considered successful if they provided growth and development. Since the 70s, the more significant business aim has become satisfaction of customers' requirements. Organizations had to research their customers' needs and to find ways to satisfy them. Since the 90s it has not been enough to satisfy customers' needs and make profit but along with that organizations have to satisfy general interests of the society (Đorđević, Bešić, 2005).

Development of IT plays a great role in the concept of corporate responsibility. Many data are transparent, easily and fast available and the public more IT educated. Communication between organizations and publicity therefore is becoming more dynamic. Corporate responsibility will be even more important in the future thanks to improved IT literacy of publicity and the use of Internet in everyday life.

ELEMENTS OF CORPORATIVE RESPONSIBILITY

Organization's influence is reflected on climatic changes, safety and humans' health, education, culture, etc. Environmental protection is becoming one of the most important issues of general interest. Environmental protection and business based on the principle of sustainable development is now the issue of common responsibility of the government, organizations and individuals.

Elements of corporate responsibility can be summed in the following way: (Nikolić, 2012)

- Protection of health and safety of employees.
- Protection of health and safety of consumers and all humans in the environment.
- Environmental protection and preservation of quality of life.
- Behaviour harmonized with principles of sustainable development.
- Help to local entrepreneurship.
- Encouragement and help to education of the young.
- Help to different artistic and cultural events.
- Help in "goods". For example, organizations producing building materials, paints and varnishes for the local school, or extra computers, etc.
- Encouraging employees for voluntary work in local community, charitable organizations(allowed leave from work if necessary).
- Organization of the "Day of open door". On that day citizens can enter the offices and production halls which contributes to development of loyalty, better understanding, recruiting of future employees, motivation, etc.

Because of numerous elements of corporate responsibility and possibilities in which organizations express their own corporate responsibility it is necessary that organizations approach to this issue rationally. It is important to find the best way, time and place for corporate responsible activities. It is also necessary to estimate what a community needs, what is of special interest, etc. Sometimes these activities are not financially demanding but benefits may be huge both for community and organization.

In other words, corporate responsible behaviour isn't only what management considers but more important what is beneficial for the community. In the reference, (Blek, 2003), some recommendations for directing activities of corporate responsibility are cited:

- Choose high ranking issues on local or national level.
- Concentrate on fields in which contribution is visible and significant.

- Use marketing skills for advertising successful programs of corporate responsibility.
- Minimize or totally eliminate certain business aims which can be characterized as small benefits or selfishness of the organization.

Corporate responsibility is not related only to big organizations. Small organizations can also take some corporate responsible activities. These activities can be financially and time limited but they can be effective. In fact, good will is here more important than real contribution to the society. In the case of small organizations it is usually local community.

It is important that the whole organization supports activities of corporate responsibility. Support and engagement on the level of whole organization can often be the difference between more and less successful activities of corporate responsibility.

ENVIRONMENTAL PROTECTION AND CORPORATIVE RESPONSIBILITY

Environmental protection care takes a significant place in all national and international programs of planning and development. Environmental protection represents common responsibility of the government, companies and individuals. Public relations services in many companies are directly connected to corporate responsibility and in this way to different problems in the field of environmental protection.

Ethical issues are of great significance for Public relations as a profession. PR professionals are expected to be responsible, sincere and reliable when they perform their activities. PR practitioners can potentially be in contact with a wide audience (sometimes in millions) so it is necessary to control such power that would not be misused. Ethical codes in the field of Public relations represent a kind of protection of publicity from irresponsible behaviour of PR practitioners or PR agencies. Apart from codes for general practice of PR there are also codes for specific situations and problems such as: financial information, reporting news, using Internet, ecological issues, business practice, etc. (Wilcox, Cameron, 2009)

Speaking about environmental protection it is necessary to mention Communication code about development and environmental protection which was accepted by the International Public Relations Association (IPRA). This code is related to the members of the Association and it has nine points: (according to Black, 2003)

1. Members of IPRA accept responsibility to give information and advices about products and services within the framework of sustainable responsibility.
2. Members will try to strenghten consciousness of their organizations and clients in relation to uncontrolled use of natural resources and inadequate care of environmental protection which can cause slowdown of economic development, serious social disturbance and severe threat of human health.
3. Members will give advice to their organizations and clients to carry out ecological evaluation of products and their business regularly. They will write ecological codes and instructions for environmental protection for their employees.
4. Members will not advertise products, organizations or services as if they contibute to environmental protection if protection cannot be proved by modern scientific achievements.
5. Members will try to promote openness and dialogue considering development and protection of the environment.
6. Members will not encourage unrealistic ecological expectations but they will support organizations, products and services which take measures for improving environmental protection.
7. Members will work on development of programs which give advice and information about balanced care of ecological, economic and social development factors.
8. Members will try to secure free flow of information via IPRA if they are related to ecological and development issues on international level.
9. Members should be connected to other international organizations such as United Nations and International Chamber of Commerce and they should encourage their companies to give support and respect their codes.

Ethical and socially responsible behaviour in the field of environmental protection can be viewed from three different aspects: (Pavlović, 2011)

- Ecological ethics as human health. Destroying the environment is an unethical act because it endangers human health (pollution of water, air and sl.).
- Ecological ethics as conservation and prevention. There has been a need and a wish recently to conserve and protect the nature because the environment is valuable for humans and its destruction makes the life for future generation poorer.
- Ecological ethics as a care for the environment. Environmental destruction is an unethical act because it prevents us from enjoying in nature. For example, some people are keen on fishing, walking by the river, through the woods...

BUSINESS EFFECTS OF CORPORATIVE RESPONSIBILITY

Care about corporative responsibility is becoming more significant factor of organization's competitiveness. Consumers are paying attention to the extent of corporative responsibility. Building attitudes and opinions about corporative responsible behaviour of certain organizations often represents a motif for consumers' behaviour when they choose and buy certain products.

If the society is not able to do so then competitors make the organization behave in corporative responsible manner. Business results are rarely good when organizations are not responsible to the society. Situation is even worse if competitors carry out successful activities of corporative responsibility.

Corporative responsibility does not represent investment in small benefits. On the contrary, effects can be really big. Benefits are not guaranteed but there are numerous examples which show that corporative responsibility helps in creating favourable business ambience (Davis, 2005). Furthermore, organizations which do business in a friendly surroundings have better chances for business success.

When an organization behaves in accordance to the principles of corporative responsibility it is good and beneficial for the society. However, corporative responsible behaviour is becoming more and more the interest of organization itself. Many organizations see corporative responsible behaviour as the part of their own strategy. According to (Davis, 2005), humanity is commendable but corporative responsibility should certainly have its commercial side as well.

Corporative responsibility brings the following benefits to organization: (Nikolić, 2012)

- Improving corporative image,
- Greater loyalty and favour of customers,
- Greater competitiveness,
- Greater motivation of employees,
- Employing quality staff (quality recruiting),
- Better business results in total.

Corporative responsibility may be an indicator of the future work and future business results of organizations.

PUBLIC RELATIONS AND CORPORATIVE RESPONSIBILITY

The issues of corporative responsibility are closely connected to top management and also to PR department. Namely, PR profession is a communication activity which is mainly directed towards making, maintaining and improving comprehension between organization and publicity. For all these reasons PR is naturally and directly connected to realization of corporative responsibility elements.

PR department should identify, explain and predict all changes in the environment which are in some way connected to the elements of corporative responsibility. In order to satisfy the

requirements in the society PR should often consult experts from other fields, for example: doctors, ecologists, nutritionists, lawyers, engineers of agriculture, etc. In the same time, PR should provide infrastructure which will support activities of corporate responsibility.

In order to answer to all ethical requirements and challenges numerous regulations, suggestions and principles for behaviour of PR practitioners, PR departments and agencies have been defined. According to (Wilcox, Cameron, 2009), PR practitioners should have:

- Feeling of independence,
- Feeling of responsibility for the society and public interest,
- Feeling of care for honesty and reputation of their profession,
- High loyalty towards standards of PR profession and their colleagues.

In accordance to the said above, PR department must answer all the questions related to the influence of organization on the environment. If this influence is positive, it is useful to inform publicity about it. If the influence is negative, it is necessary to tell truth and report about all organization's activities which are carried out in order to prevent future negative influences. Serious ecological problems belong to crisis situations in which PR have important role.

Implementation of corporate responsibility concept often has strategic character for organization. Taking into account a great role of PR department in realization of corporate responsibility principle it can be concluded that public relations have strategic significance for every organization. Besides, it mustn't be forgotten that strategic significance of public relations is reflected through other activities of PR as well.

CONCLUSION

Corporate responsibility is reflected, first of all, through the relation of a company towards ecological issues and environmental protection. It is necessary that organizations and individuals behave responsible and to take care about environmental protection and the significance of these issues. PR departments have a great influence on corporate responsible behaviour of their organizations.

However, a dilemma often appears: Where is the limit of technological development, building of new plants, roads, etc.? All these facilities pollute the environment but they bring new employment, development, new products....The solution of this ethical dilemma is in implementation of the concept of sustainable development. Sustainable development tends to satisfy the needs of current time but, in the same time, not to jeopardize future generations and prevent them from satisfying their own needs.

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Session H: MANAGEMENT INFORMATION SYSTEMS

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Session Editor's Preface

In information society, knowledge is the only meaningful economic resource, which allows the other three traditional resources, labor, capital and land (natural resources) to be productive. They can be easily obtained, provided there is knowledge. This means that in modern economy, it is almost impossible to achieve the significant business success (especially at the international level) through production and distribution of goods and commodities, or by managing money, but only by possession of information and increasing the productivity of knowledge. The main goal of contemporary economy is achieving business excellence and reaching the world –class products and services. This can be attained only by the continual improvement of quality of business, which is based on increasing productivity and knowledge of each individual employee in the organization. Comprehensive development of information technology creates the conditions for permanent improvement of productivity and operations of modern business organizations.

*The paper titled “**Logistics information systems**”, deals with the analysis of the process of management information systems. Logistics is the management system and an insight into what pieces of work from their source to the user, or the procurement of raw materials to delivery of finished products. To accomplish these tasks, it is necessary to define types and sources of information and communications in logistics system.*

*“**The role of information systems in Human Resource Management in Serbia**” analyzes the importance of the information systems application in the field of HRM (HRIS) that enables systematic processes for collecting, storing, maintaining, and recovering data required by the organizations about their human resources, their activities and organizational characteristics. In this paper the author made analysis of HRIS from theoretical point of view, accompanied by empirical data analysis of Cranet data for Serbia, from research period 2008/2010. Main goal of this research is to emphasize the importance, advantages and some limitations of HRIS, but also the usage of HRIS for main HR practices in Serbian companies. Methodology used in the research included exploration of the Cranet questionnaire, sample of Serbian companies and statistic techniques, through the application of the program SPSS Version 17.*

*In the paper “**Accounting information system in order to improve management efficiency of enterprises**”, the authors emphasize that under present conditions of information society and the existence of real information revolution, accounting information is one of the most important resources of contemporary organizations and the inputs on the basis of which managers make management decisions and take the right actions. In the process of raising the efficiency of the target business operations, management undertakes a range of planning and control activities and establishes a proper system of accounting information in the exchange of accounting information with the environment and the company's employees. Proper Structure of accounting information systems and adequate quality control of its operation are the basis for quality financial reporting and increase the efficiency of business management.*

*In the paper titled “**Application of information technology in electronic business travel companies**”, the authors highlight the importance of information technology in tourism, especially of the WWW, that has increased tremendously over the past years. Since the technology itself is now available to almost everyone, its use alone does not necessarily bring competitive advantage anymore. Integration of IT into organizational material means that technology, advertising strategy and overall organizational mission/goals are coordinated to achieve the desired effectiveness. Traditional advertising strategies should be reconfigured to reflect the new realities (i.e., availability, interactivity, and research capabilities) of Internet technologies and of the rapidly changing business environment.*

*In the paper “**ICT impacts on reverse logistics: framework and opportunities**”, the focus is sited on reverse logistics (RL) and Information and Communication Technologies (ICT) as the main pillar of constant progress. From RL perspectives ICT provides multiple benefits, including cost and time reduction, processes improvement through increased efficiency and performance and system transparency. The objective of this paper is to identify, describe and analyze integration and application of different kind of ICT and RL into a unique system. Research scope indicates that multiple benefits can be achieved for all participants in closed-loop supply chains. Also, various opportunities and different types of RL-ICT integration and application are presented, and many more are possible, which facilitates RL-ICT framework.*

*“**The impact of information technologies on general ledger accounting**” analyzes the impact of information and communication technologies on general ledger accounting. Information and communication technologies have caused numerous changes in accounting procedures, internal control and tools, especially in the general ledger. In the last decade virtual close of the books, gained in importance due to the increasing use of modern software applications that enabled accounting systems to produce financial statements at any time, on demand. Modern tools for financial analysis greatly facilitate the traditional routine analytical tasks, but they paved the way to the new analytical procedures as well. Planning and Budget have also suffered a strong influence of development of information technology, and one of the features of contemporary planning and budgeting is the web functionality. To crown the application of information technology in modern accounting, Web portals emerged, which provide a consistent interface, intuitive and easy to use and which can be accessed from the intranet, the Internet or through mobile devices, enabling interactivity, which is often referred to as two-way flow of information.*

*The paper titled “**Multi-criteria multi-expert ranking method**”, presents the method for decision making as a consequence of previous ranking process. Multiple alternatives are characterized by multiple criterion attributes. The values of criterions are normalized in the process. The method also includes multiple domain experts. Each expert gives his or her opinion about each criterion and, consequently opinion about each alternative. Similarity relation is used in the ranking process. Top-ranked alternatives are considered first in decision making procedure. The paper also includes a case study.*

The papers covered by this session deal with topical issues of contemporary business, from the aspect of management information systems. The presented topics answer some very important questions related to application of information systems in modern business in order to improve organizational productivity.

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LOGISTICS INFORMATION SYSTEMS

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ABSTRACT

Logistics, scientific and educational discipline, comes from the Greek word "logistikos" meaning skilled and experienced in assessing all the elements needed to make optimal strategic and tactical decisions. Specifically refers to the strategy of accommodation and provision of military and paramilitary forces in the field. Military logistics includes transport, accommodation and the provision of troops and transport, storage and maintenance of military goods and technology. So that skill transforms to the field of operations and transport, where logistics is defined as the total activity in setting up, securing and improving the availability of people and resources that assumption, supporting or providing assistance for the flows within a system. Logistics is the management system and an insight into what pieces of work from their source to the user, or the procurement of raw materials to delivery of finished products. To accomplish these tasks, it is necessary to define types and sources of informations and communications in logistics system.

Keywords: informations and communications; files, folders, banks and databases; types of communication in logistics system

ABOUT INFORMATION SYSTEMS

Enterprise information system is a set of people, programs, methods and other elements, practical and related organized in order to perform information activities. Information system is the activity of collecting, processing, storing and distribution of relevant scientific, technological, statistical and other information necessary to conduct present and the company's development strategy.

Tasks of information system are:

- collection and storage of data and information,
- setting goals and monitoring their execution,
- defining decisions necessary to achieve objectives,
- defining concrete decisions,
- control to achieve the set goals and tasks and,
- defining specific decisions to achieve the objectives and goals of the redefinition.

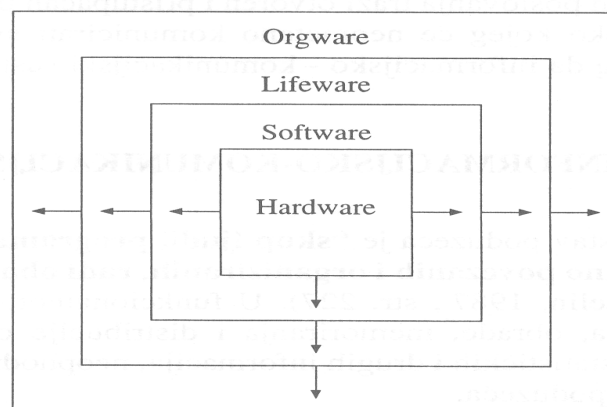


Figure 1: Elements of the information system

In the most general sense, the structure of information systems are essential four main elements, namely:

1. hardware - refers to the mechanical and electronic devices that are used in the information system (computer, monitor, keyboard, printer, etc.),
2. software - the intangible element of information system, which refers to the various programs that the system uses,
3. lifeware - people who use information technology,
4. orgware - organizational solutions for all elements of the system.

PROCESSES IN THE LOGISTICS INFORMATION SUBSYSTEMS

Under logistical information subsystems implies the totality of information relationships within the business logistics system.

If the logistics system is seen as a series of interrelated elements within an ensemble, it can be seen that the process takes place between the parts of matter and information exchange.

Logistics subsystem enables the operation of logistics and distribution system. Thus, timely information about problems that have occurred in a given market, the company can provide the leadership that the time to take corrective measures and actions to be any difficulties that might arise in connection with that eliminate or mitigate.

Efficiency of business logistics systems, which consists of a series of specific tasks, depends not only on the expertise and capabilities of the perpetrator, but also on the quality and quantity of information at its disposal. The logistics information subsystem information exchange processes, as a rule, precede, run concurrently or subsequently to the physical processes of work.

Logistics subsystem must be operational occurrence and control the flow of cases in the distribution process. It means that based on the information subsystem of logistics information science logistics business decision making.

At the present time, it is easy to get to the computer equipment and software that can be used in information logistics system. There are various possibilities of application softwares - and in the distribution of merchandise. They are especially useful in making business decisions and planning logistics strategies. The software program or can be purchased in the market or specially ordered for the company.

As for the choice of software or programs for logistics and distribution system should be carefully selected. Since multiple choice program, choose three or four potential, some of which are based on the comparison, by certain elements, choosing appropriate.

Elements to compare the selection of bidders for the software may be:

- previous work of bidders
- security, the bidder will execute the program at the time of the necessary changes and additions to the program,
- other users' experience in working with a specific program and bidder program,
- assurance that the price of the program includes all the costs of its production and installation.

Given the variety of storage options and moving goods within the distribution system, it is necessary to estimate the costs of different options that are offered in the programs. They depend on the price of the primary transportation, local delivery, storage and holding stocks.

Generally, the main objectives of the program are the logistics in giving you accurate answers to questions relating to:

- number, size and location of the warehouse
- quantity and location of stocks in a given stock
- of the type most appropriate means of transport for transport
- selection of the optimal route selection and vehicles to transport goods from place to place delivery receipt

FILES, DATA FILES, DATA BASES AND DATA BANKS

Data collected for the logistics system are so numerous and diverse that it is sometimes required great skill in their selecting.

Any information system must interact with their environment using a communication system. Business communication is an integral part of the enterprise information system, involves a two-way exchange of data between different levels of decision-making in the company, between the company and its environment.

If the company is an integrated information system, then all functions in the company entered the required information in computers, and to form a specific file. All data files are in a company data base. If multiple data bases are interrelate it is data bank.

Files and data files

If the records to make business decisions are kept in the books or cards called files, and if you keep using the computer, it is file. Therefore, the data file includes a set of these and similar data, included some common criteria placed in a special place in the computer, which allows processing data in the required information.

The need for the distribution of goods, a database usually consists of the following files:

- vendor files
- customer files
- file order
- files on purchase price
- input files account
- count of goods in stock
- file complaints
- files offer
- file packaging
- file transport vehicles etc.

The file suppliers are important data pertaining to:

1. name, position, address, zip code, phone number, address, e-mail, account number and other personal information necessary,
2. type, quantity, quality, price, delivery terms of individual products offered by some vendors
3. earlier agreements and experience.

The order file contains information on:

1. clients who have sent orders,
2. type, quantity, quality and prices of certain goods,
3. deliveries of goods (shipping, time, type, amount and method of delivery).

In stock file of stock data are given:

1. name of goods, unit, code specific goods,

2. stocks of goods,
3. arrangement of goods in a warehouse,
4. revolution of certain goods and so on.

The file customers are important information relating to:

1. name, position, address, zip code, phone number, e-mail, account number and other personal information required on the existing and potential customers,
2. previous business relationships with customers, such as: the number and date of the contract, the type, quantity and price of the contracted goods, delivery terms, payment, claims, demands on the issue of sending the goods, packages, discount prices and other information related to business relationships with certain customers.

Data bases and data banks

Interconnection of multiple files in a particular area of business create a data base. A data base is a collection of interrelated files supported common software, which creates data processing certain areas of the business, but also to program data base management performs automated update data in all related data sets.

Under the data base includes a set of interrelated data stored in computers in a way that allows its use for different purposes and different users regardless of the programs with which they possess.

If multiple databases with each other and connect logically or technically constitute "data bank". Overall, the data bank can be regarded as a collection of information resources that the system has an independent form, media and technology when it is used.

Data base and data bank are collected, processed and distributed on the basis of specially designed programs. To create and use databases and data banks used special programming languages (SQL, ALPHA, COBOL, BASIC, etc.). Data is entered into the computer via the keyboard or scanner, and shared with main memory using so-called off-line or on-line connectivity.

Known databases are: DATASTAR, DIALOG, Geniosa, IP SHARP, DATA RESURCES, REM, ECU, COMEXT, EUROSTAT, and others.

COMMUNICATING IN LOGISTIC INFORMATION SYSTEM

Communication within and between individual logistics information systems is one of the most important issues of which largely depends on labor productivity, efficiency and profitability in the logistics and distribution system.

Technological aspects - communication and information system had significant influence on the development of the logistics system. Change the analog to digital networks and the development of mobile technology, such as mobile phone systems in telecommunications and free access to radio and television, have increased the speed and quality of information systems.

Communication relationships between elements of the system can be made:

1. orally
2. writing
3. electronic

Oral communication

Oral communication in the logistics and distribution system is used in situations that require solving complex business problems related to:

- cost of logistics services (transport, storage, packaging, delivery of goods, etc.),

- mode of transport,
- complaints on the quality,
- similar questions and problems to be solved urgently.

In this type of communication, partners away from each other are communicating by telephone. In recent times, the world is used in business communication new communication technologies, such as video phones. If necessary, the oral interview will be documented, according to the paper, and oral and written communication makes one whole.

Written communication

In a written communication, the information is transmitted using paper disc, television text and video text. As a means of data transfer can be:

- personal or mail delivery
- telex
- fax

Written communication is suitable for the transmission of data to document some business events, and some of the documents, whose contents can later be disputed (contracts, orders, etc.), and should be placed in the archives.

Electronic communication

The emergence and development of electronic communications in business transactions due to the continuous development of information technology, which now, through the exchange of information within the company and between different information systems, seeks to improve the overall business performance of companies.

Under electronic communication implies the use of information - communication technology in business transactions. Elektronik communication enables faster, cheaper and easier flow of goods and information through the logistics system.

Electronic communication between business partners, especially prominent in the logistics system. Electronic connecting producers and customers provides a number of positive effects that manifest themselves through:

- lower distribution costs,
- gain competitive advantage in the market,
- reduce administration,
- faster flow of goods through the logistics and distribution system,
- improve logistics services,
- lower inventories of goods in stock,
- development partnerships.

Internet usage in the enterprise logistics system usually refers to:

- electronic mail (e - mail),
- electronic data and documents (EDI - Electronic Data Interchange),
- advertising and selling a product via Web site.

E-mail has many advantages over the conventional way of sending the business (and private) message, by letter or phone, and they are:

- messaging costs are lower,
- rate was significantly higher (faster message arrives),
- message delivery is convenient, because it can be delivered to the recipient after working hours.

Companies that have implemented EDI communication system in the logistics system, realizes many benefits, including:

- shortens delivery time,
- raises the level of services,
- reduces phone costs,
- increases security of supply,
- reduces the errors in the ordering process,
- reduces inventory costs and administration.

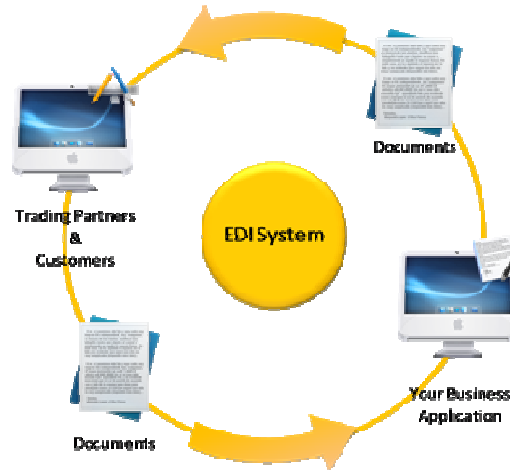


Figure 2: EDI system

The presentation of products through the Web (WWW - World Wide Web), care should be taken:

- presentation of product and services on the website are such as to express their desire to purchase,
- advertising messages on the website should be simple, understandable, informative, and imaginative,
- ads should always finished and filled with new content,
- advertise only products that are appropriate for that kind introduction and presentation,
- to provide customers maximum of indiscretions and possible fraud (particularly with regard to payment by credit card).

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THE ROLE OF INFORMATION SYSTEMS IN HUMAN RESOURCE MANAGEMENT IN SERBIA

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ABSTRACT

Human resource management (HRM) is becoming more and more important for the contemporary enterprises. Organizations that understand the importance of human capital apply very specific practices for managing people. One of these practices is the application of information system for HRM (HRIS) that enables systematic processes for collecting, storing, maintaining, and recovering data required by the organizations about their human resources, their activities and organizational characteristics. In this paper author made analysis of HRIS from the theoretical point of view, accompanied by empirical data analysis of Cranet data for Serbia, from research period 2008/2010. Main goal of this research was to emphasize the importance, advantages and some limitations of HRIS, but also the usage of HRIS for main HR practices in Serbian companies. Methodology used in the research included exploration of the Cranet questionnaire, sample of Serbian companies and statistic techniques, through the application of the program SPSS Version 17.

Keywords: human resource management, information system, Serbia, Cranet.

INTRODUCTION

HRM is becoming more and more important for the contemporary enterprises as it plays a vital role in implementing the strategic business objectives of the organization, and in running the daily operations/functions efficiently and effectively to improve the productivity and proficiency (Krishna and Bhaskar, 2011). Organizations that understand the importance of human capital perform different and very specific practices for managing people – planning, staffing, training and development, performance management, compensations and benefits, retiring, working conditions, health and safety, employee relations, retention and policies on work-life balance, etc. One of these practices is the application of information system for HRM. Nowadays studies attempted to identify the effectiveness and the importance of the use of HRIS on the HR functions in the organizations (Shiri, 2012; Parry and Tyson, 2011; Singh et al., 2011; Troshani et al., 2011).

In this paper author made analysis of HRIS from the theoretical point of view, accompanied by empirical data analysis of Cranet data for Serbia, from research period 2008/2010. Main goal of this research was to emphasize the importance, advantages and some limitations of HRIS, but also the usage of HRIS for main HR practices in Serbian companies. Methodology used in the research included exploration of the Cranet questionnaire, sample of Serbian companies and statistic techniques, through the application of the program SPSS Version 17.

THEORETHICAL BACKGROUND

At the beginning of the research authors gave several definitions of HR information system.

HRIS enables systematic procedure for collecting, storing, maintaining, and recovering data required by the organizations about their human resources, personnel activities and organizational characteristics (Kovach et al., 2002). Tannenbaum (1990) defines HRIS as a “technology-based system used to acquire, store, manipulate, analyze, retrieve, and distribute pertinent information regarding an organization’s human resources” while Broderick and Boudreau (1991) claim that HRIS is “the composite of data bases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver, present, and manipulate data for HR”.

Also, HRIS can be considered as a tool that provides strategic planners with the needed information enabling them to forecast future workforce demand and supply requirements. It can be considered as a “tool that helps employers in retaining the right employees. This can be done by paying them competitive salaries compared to the market, and training them to develop their skills and abilities to carry out their existing and future jobs” (Obeidat, 2012). Stone (2011) sees HRIS as more than just computerized records of employees – it is an integrated approach to procurement, storage, analysis, and control of the flow of information on human resources management throughout the organization. This system provides necessary information for planning HRM activities such as forecasting employees demand and supply, compensation system planning, and training and career development of employees.

When we talk about the role of HRIS in HRM, it is important to mention several researches made in the past that show how HRIS can facilitate and help HRM process. It is important to make differences between administrative and strategic role of HRIS (Kovach et al., 2002) in the HR fields. Lengnick-Hall and Moritz (2003) claims that HRIS can be implemented at three different levels: publishing of information, automation of transactions and transformation of HR into a strategic partner with the line business. Also, the role of HRIS varies among small and large organizations. Namely, in small organizations it tends to be informal while in large organizations it is more formal and coordinated (Singh et al., 2011).

HRIS can automate and devolve some traditionally routine administrative and compliance functions of HR departments and facilitate the HR outsourcing (Barron et al., 2004). Other authors stated that HRIS increases the administrative efficiency in terms of faster information processing, employee communications and greater information accuracy (Beadles, et al., 2005; Overman, 1992), lower HR costs and improvement of the HR productivity (Troshani et al., 2011; Wiblen et al., 2010).

HRIS also provides some contribution to the strategic direction of the firm since it provides HR professionals with the time needed to direct their attention towards more critical and strategic level tasks – leadership development or talent management (Lawler and Mohrman, 2003) and makes an opportunity for HRM to play a role as a support in strategic decision making (Troshani et al., 2011; Dery et al., 2009; Lawler et al., 2004; Hendrickson, 2003; Lengnick-Hall and Moritz, 2003). In the study in the UK it has been examined whether the goals stated by organizations for the introduction of e-HRM were actually achieved. The results demonstrated that e-HRM is introduced in order to improve efficiency, service delivery, standardization and organizational image, to empower managers and transform HR into a more strategic function. Efficiency, service delivery and standardization goals were commonly realized but no evidence was found of an actual increased involvement of HR in business decision making (Parry and Tyson, 2011).

Organizations perform different and very specific practices for managing people – planning, staffing, training and development, performance management, compensations and benefits, retiring, working conditions, health and safety, employee relations, retention and policies on work-life balance, etc. To get the maximum HRIS advantages it is necessary that technology is integrated with each HRM function in the company. The integrated HRIS is presented in Figure 1.

At the end of theoretical background it is also important to present main obstacles and challenges in HRIS implementation. According Stone (2011) the most important challenges of HRIS are

flexibility, confidentiality and legal problems. On the other hand, Singh et al. (2011) in case of banking industry founded that implementation of HRIS has to be accompanied with the process reengineering. One of the most overlooked implementation issues is organizational inertia: getting the staff to adopt and adapt to a new system, which is actually a new business process for them (Kovach et al., 2002, p. 46).

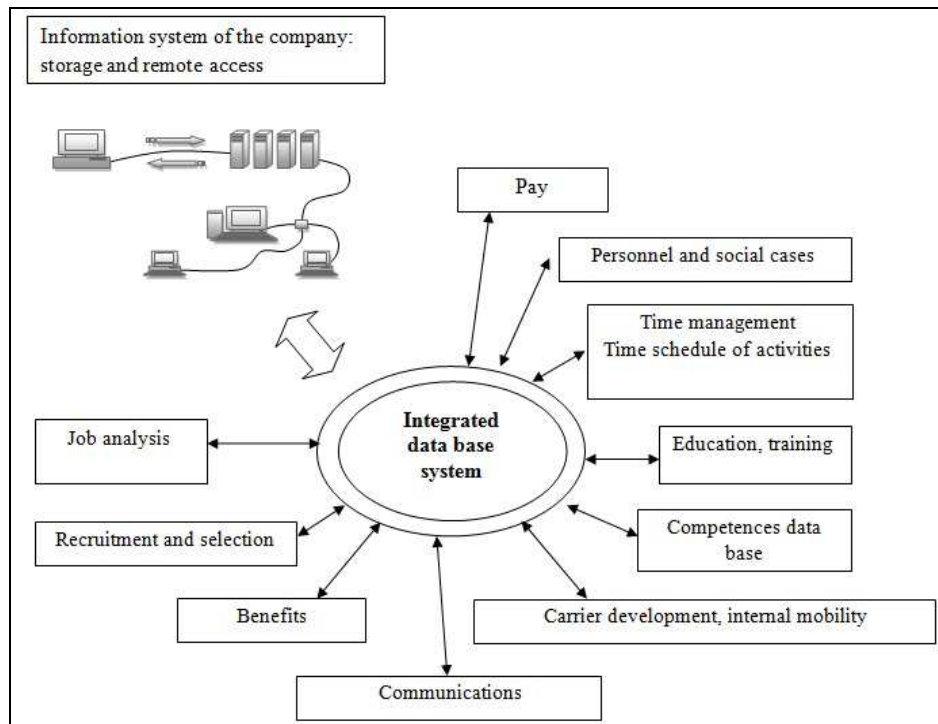


Figure 1: Integrated human resource information system (Karoliny and Poór, 2010, 457)

METHODOLOGY

In this paper CRANET methodology (www.cranet.org) has been used and data to identify the level of usage of HRIS in organizations from Serbia. This international organization under the patronate of the Cranfield School of Management organizes comparative researches on the policies and practices of human resource management, using a standardized questionnaire. The survey is undertaken approximately every four years. The purpose of the research is to provide high quality data for academics, public and private sector organizations, as well as HRM students, and to create new knowledge about human resource management practice in different countries of the world. In CRANET research period from 2008 until 2010 there were involved 32 countries, but for this analysis authors decided to explore only data for Serbian organizations.

CRANET methodology and data were also used in research of Russian HRM practice (Gurkov et al. 2012) and often discussed in scientific papers worldwide on many other HR activities such as compensations and benefits (Štangl-Šušnjar and Leković, 2009; Štangl-Šušnjar and Slavić), HRM outsourcing (Susomrith and Brown, 2013), training and development (Leković and Štangl-Šušnjar, 2010; McNamara, Parry, Lee and Pitt-Catsoupes, 2012). Methodology included the application of the program SPSS Version 17. The objectives of this analysis were to:

- Find out the kind of the HRIS that organizations in Serbia use;
- Find out the level of usage of HRIS for HR activities in Serbian organizations;
- Find out whether HRIS in Serbian companies have managers' and employees' self-service options.

RESULTS AND DISSCUSION

First part of the analysis was dedicated to the exploration of the kind of HRIS used in Serbian companies. According Figure 2 it can be concluded that Serbian organizations usually do not use HRIS (36.2% of total number of organizations), and if there is HRIS, then that is a system that is included in wider MIS (29.8% of organizations). Beside these, in Serbian companies HRIS is in use as a single independent system (25.5%) but also as a number of separate tools for HR functions (8.5%).

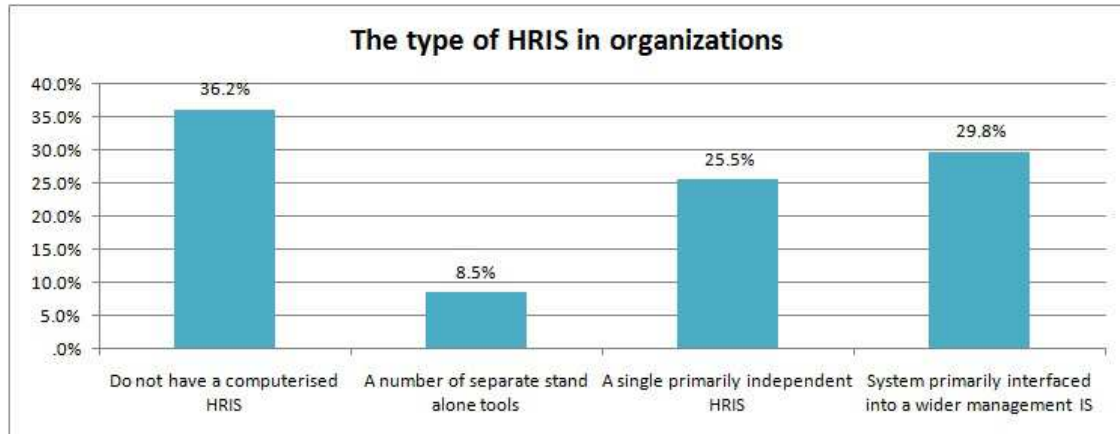


Figure 2: The type of HRIS in Serbian companies
Source: Authors' research

In Figure 3 there are presented data of the usage of HRIS for each HR activity in Serbian organizations. It can be concluded that HRIS is used mostly for administrative activities such as HR information and procedures (52.2% of all organizations), time registration and attendance (70.4%) and personnel records (100%). Also, HRIS is commonly used for compensations – 83.3% of organizations use IS for payroll and 57.7% for benefits. Generally, in Serbian organizations HRIS is still used at low level. This usage is very low for HR performance measurement (only 13.6% of organizations), career planning (9.1%), performance management (18.2%), training and development (50%), staffing (26.1%), health and safety (26.1%), etc.

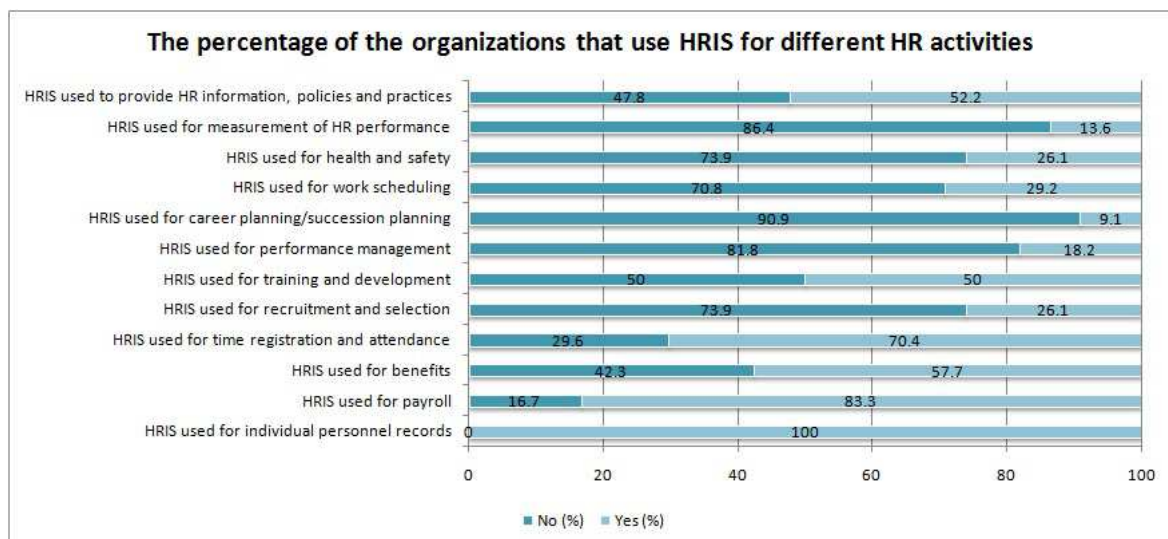


Figure 3: The percentage of the organizations that use HRIS for different HR activities
Source: Authors' research

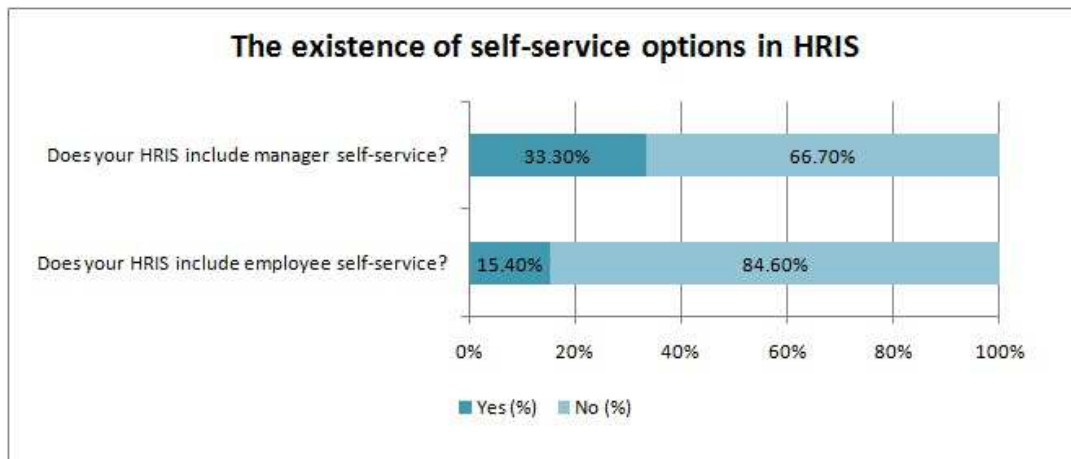


Figure 4: The existence of self-service options in HRIS

Source: Authors' research

The last objective of the analysis was to explore whether HRIS allow self service options for employees and managers. From Figure 4 it is seen that in Serbian organizations there is no self service options. Namely, self – service options for managers as online tools whereby managers can complete HR processes exists only in 33.3% of all organizations. In case of employees this self – service options, as online tools whereby employees can access personal information and perform simple HR tasks such as maintaining personal data, exists only in 15.4% of all organizations. Generally, self service options are not included in HRIS in Serbian organizations.

CONCLUSION

HRIS, as computerized tool that enables systematic procedure for collecting, storing, maintaining, and recovering data about human resources, personnel activities and organizational characteristics, was explored and analyzed trough theoretical and empirical studies in the past, but also presents novelty for many organizations which have recognized all the advantages of mentioned system. Benefits of integrated HRIS include improvement of administrative but also and strategic HR activities (leadership, decision making).

In this paper authors made the analysis of the usage of HRIS in Serbian companies. The main conclusions derived from the analysis are:

- In 36.2% of all Serbian companies HRIS is not used at all, and in 29.8% of organizations HRIS is used as a part of integrated MIS. HRIS is in use as a single independent system in case of 25.5% of organizations but also as a number of separate tools for HR functions (8.5%).
- HRIS is used mostly for administrative activities such as HR information and procedures (52.2% of all organizations), time registration and attendance (70.4%) and personnel records (100%). Also, HRIS is commonly used for compensations – 83.3% of organizations use IS for payroll and 57.7% for benefits. Usage of HRIS is very low for HR performance measurement (only 13.6% of organizations), career planning (9.1%), performance management (18.2%), training and development (50%), staffing (26.1%), and health and safety (26.1%).
- Self – service options for managers as online tools whereby managers can complete HR processes exists only in 33.3% of all organizations. In case of employees this self – service options, as online tools whereby employees can access personal information and perform simple HR tasks such as maintaining personal data, exists only in 15.4% of all organizations.
- Generally, HRIS is at the low level of usage in Serbian organizations.

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ACCOUNTING INFORMATION SYSTEM IN ORDER TO IMPROVE MANAGEMENT EFFICIENCY OF ENTERPRISES

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ABSTRACT

The global market in crisis, a troubled and unstable environment as a condition for survival, growth and development, the company requires a rapid response to the challenges. Actual time required powerful companies, to feel smart, wise to respond to the challenges of modern, fast and powerful that the plans, taking into account modern principles of effective governance. Under present conditions of the information society and the existence of real information revolution, accounting information is one of the most important resources of contemporary organizations and the inputs on the basis of which managers make management decisions and take the right actions. In the process of raising the efficiency of the target business operations, management undertakes a range of planning and control activities and establishing a proper system of accounting information in the exchange accounting information with the environment and the company's employees. Proper Structure of accounting information systems and adequate quality control of its operation are the basis for quality financial reporting and increase the efficiency of business management.

Key words: accounting information systems, databases, enterprise management, efficiency.

INTRODUCTION

Studying and reviewing the literature and practice of the management companies on the basis of accounting information, we have confirmed the premise that the accounting information in organizations similar to the blood in the body. The importance of accounting information is growing due to increasing changes in the environment, and increasing sensitivity to these organizations. Daily growing number of information sources and information. We can safely say that there is overproduction of information, where the decision-makers and organizations swamped abundance as needed, as extra information. Therefore, the managers would not be burdened with unnecessary one hand, and on the other hand denied the relevant accounting information must approach the design and implementation of the appropriate accounting information system. Under present conditions there is no real information revolution. It is the result of the increasing rate of change in the environment, and technological development. It is considered to have a perfect information reduces uncertainty and helps predict the future. Accounting information must be accurate, timely and relevant to decision making in the accounting information system.

Accounting information is present in all stages of the management process and as such contribute to the efficient use of increasing the efficiency of the management of the company. An effective accounting information system can be created if the company accounting function properly positioned and adequately incorporated into the overall control system. The basic research hypothesis reads: Adequately designed, well-organized and implemented timely accounting information system significantly improves the efficiency of business management. "Main objective of this paper is to highlight the importance and role, as well as the advantages and disadvantages of creating and implementing accounting information systems function of effective governance. elaborated in this paper is the analysis and modeling of signifi accounting information system in

order to increase the efficiency of business management. As a result, an analysis should highlight the importance and benefits of accounting information system in order to increase the efficiency of business management.

FUNDAMENTALLY, THE ACCOUNTING INFORMATION SYSTEM

The needs of individual users for information that generates accounting information system may be different, and depend primarily on the nature and types of decisions that the information will be taken. Analyzing practice, we have come to the conclusion that there are a number of internal and external users of accounting information. Among the most important are: a) and internal stakeholders (management and employees of the company) and b) and external stakeholders (owners of capital - current and potential investors, creditors and other lenders, suppliers, customers, the government, its agencies and institutions; union; consumers, other public). The main hypothesis for the construction of high-quality accounting information system is adequate planning and organization of the accounting function in-house. In the process of raising the efficiency of enterprise management, plays a key role accounting information system.

Accounting information system integrates four subsystems, namely (Žager, 2008):

- subsystem relating to the recording of daily business operations, and that the aimed at making everyday routine decisions;
- subsystem ledger and financial reporting produced by traditional financial reports such as balance sheet, statement of income, statement of cash flows and the like.;
- subsystem of fixed assets and capital investments (expenses) that processes transactions relating to fixed assets;
- Reporting subsystem management that is focused on different levels of management and preparing the information in a form acceptable to management.

So organized accounting information system to support the management and implementation of various decision-making, because the information it produces a "data presented in a form which is suitable for users with significant value in current or future activities and decisions." (Davis and Olson, 1985) The fundamental reason why there is a general accounting prepares adequate information management. The role of accounting information systems, and can be represented graphically, Figure 1.

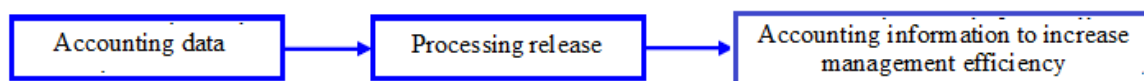


Figure 1: Transforming accounting data into the accounting information in order to increase the efficiency of enterprise management

Source: Authors

Accounting information system is the support of various levels of management in making different decisions in their everyday performance. "Under present conditions of accounting information system is part of a computerized information system (computer-based information system - CBIS), and usually consists of the following four apps (applications): 1) data collection (data collection), 2) data processing (data processing) , 3) database management (data base management), and 4) generating information (information generation) (Hali, 1995). The basic elements and operation of accounting information systems, and we present a graphic, Figure 2.

Based on the previous graph, we can see the basic relationship between the individual elements of the accounting information system. The objective of accounting information systems in the business system is that all employees have the accounting information they need in business decision-making, planning, execution and control. Today it is a growing need for an effective information system for the management of all activities of the companies. Since these factors are

directly related to the final product of accounting - financial statements, they should be viewed as the primary factors that affect the quality of financial reporting.

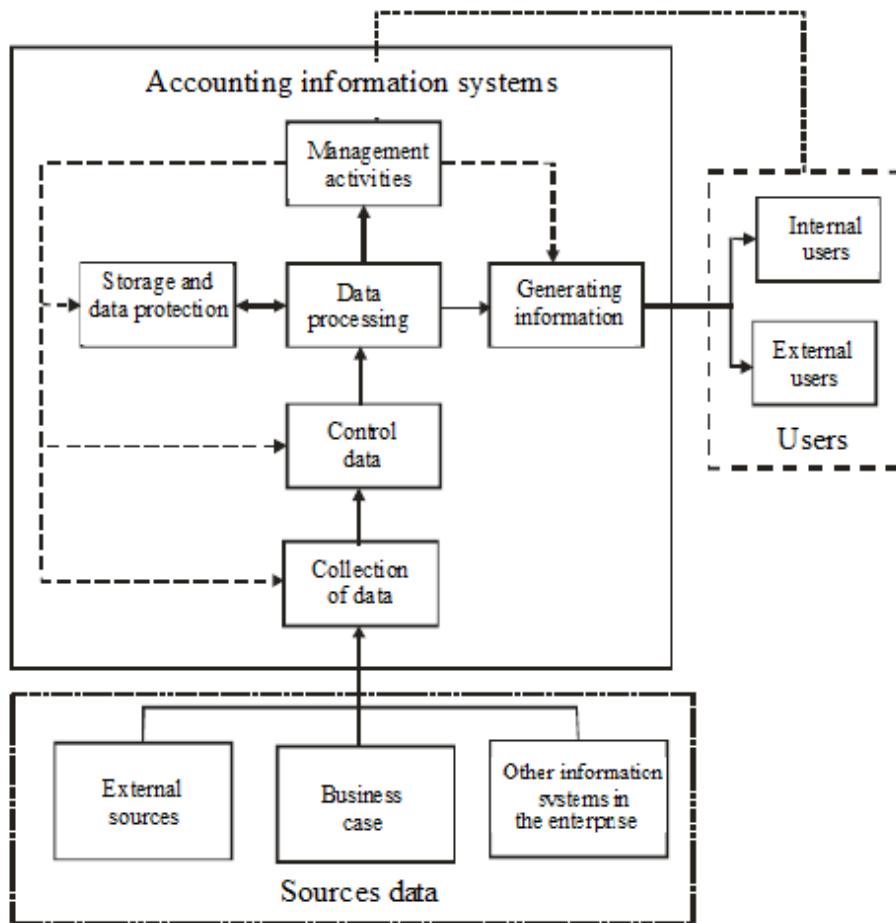


Figure 2: The functioning of the accounting information system (Wilkinson, 1993, 241).

DATABASE AS A DIMENSION OF ACCOUNTING INFORMATION SYSTEMS

Databases are used to collect, store and manipulate data by which new information is obtained in various organizations. Many organizations today made a special database called "data warehouse" that are used for applications for decision support. The study of databases and database management are the basis for the study of information systems. Basically a database of accounting information system is a set of data that are organized according to user needs, which is maintained and used to obtain accounting information. Types of databases vary from those tailored for a single user PC to bases that are located on the main computer (mainframe) and whom access to thousands of users. The database covers the entire organization organization or more of its divisions. This type of database is designed to support all the processes of the organization and the decision-making process.

Accounting information should contribute to improving business efficiency through process control, business planning and management decision-making, the product of management accounting. Financial accounting as part of the accounting information system creates and presents information on the financial condition, liquidity and earning capacity of companies that are relevant to decision-making championship external users, but also the management.

Enough of management accounting information are in fact financial accounting information rearranged to suit a particular purpose control. Therefore, you should not expect that RIS are still separate companies and financial accounting and part of that is pure management accounting. The

term "storage accounting data" means data collection accounting isolated from the operational database and stored in a separate database or accounting data warehouses. Data Warehouse accounting is now considered the comprehensive architecture that combines all the existing concepts and sub-accounting information systems. The essential philosophy of DW is based on the concept of integration of accounting data. The integrity of accounting information is more valuable than the sum of the parts data. Accounting Data Warehouse is a single, integrated accounting Weapon Storage infrastructure provides data on all applications in an organization. The main characteristic that determines the storage of accounting data related to its purpose. In stock accounting, data is collected and organized so as to be readily available to management could be a quick and easy way to take advantage of the needs analysis of your business.

DECISIONS BASED ON ACCOUNTING INFORMATION SYSTEM

One of the most important principles in any business is the principle of efficiency which consists in the creation of greater economic effects (outputs) with as little economic sacrifice (included). In classical economic theory efficiency is measured as the ratio of an output and an input. The manager needs easily accessible and consistent accounting data presented so at the same time, provide accurate and concise overview of the organization as a whole and its environment. On the other hand, complex conditions generated a growing body of business events across the enterprise and beyond, and obtained accounting data are usually stored in the operational bases of accounting data. Target system of accounting information system must have a connection with the accounting aspects of the assets and liabilities of the company, results of operations that result in revenue and the aspects of financial reporting.

So organized accounting information system to support the management and implementation of various decision-making, because the information it produces a "data presented in a form which is suitable for users with significant value in current or future activities and decisions." (Davis and Olson, 1985) Depending on who the user is and what purpose it is used, accounting data can be divided into those that are of interest to the operator, financial accounting (Antić, 1999).

The information system is different from other types of systems in that it is his goal to record and document the operation of any other system. Accounting information system is a permanent part of the daily operations of the company. Each transaction must be marked in order to make the financial statements or any kind of unofficial reports that management can use for the purpose of business analysis.

CONCLUSION

Decision support systems for collecting information managers who make decisions at the company. Information in some way enhance their knowledge and also help them to make decisions about policy and strategy of the company adequate. A data warehouse is, therefore, designed specifically technological environment that enables integration of related data in a form suitable for analysis which facilitates decision-making process, which provides a new approach to decision support systems. For the strategic decisions are mainly used aggregate data on the operations of a specific time period.

Based on the above considerations in the work, we can confirm the research hypothesis that adequately designed, well-organized and implemented timely accounting information system significantly improves the efficiency of business management. Certainly it is difficult to say whether information technology had a decisive influence on social processes, or the other way around. In any case, we can say that there are very intensive interactive relationships. Today, the data is organized dimensionally, providing users a much more sophisticated methods for extracting data from the warehouse than they were querying transactional databases. Data warehouses are designed to meet the operational needs of the powerful analytics to make decisions on the basis of which to formulate strategic decisions. It stores the data in a multi-dimensional virtual space. Only

by setting metabase accounting data can move on to extract accounting data from a transactional database, and then summing, sorting and organizing DW. The accounting process includes the collection, processing and presentation of data. All these activities are now covered by the relevant information and a software package that automatically carry out registration, transfer, calculation, clustering, analysis, control plans, deviations from the plans and the preparation of financial statements. The introduction of this type of work in accounting there is a multiplicity of benefits that occur in the form of reduced workload, reducing the percentage of the problem, increase the timeliness of data, better clarity and dynamism.

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APPLICATION OF INFORMATION TECHNOLOGY IN ELECTRONIC BUSINESS TRAVEL COMPANIES

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ABSTRAKT

The importance of information technology in tourism, especially of the WWW, has increased tremendously over the past years and this trend will certainly continue. However, since the technology itself is now available to almost everyone, its use alone does not necessarily bring a competitive advantage anymore. The integration of IT into the organizational fabric means that technology, advertising strategy and overall organizational mission/goals are coordinated to achieve the desired effectiveness. Traditional advertising strategies should be reconfigured to reflect the new realities (i.e., availability, interactivity, and research capabilities) of Internet technologies and of the rapidly changing business environment.

Keywords: Information technology, tourism, tourism information systems, global distribution systems.

INTRODUCTION

It is difficult for most organizations to keep pace with the development of new technologies due to increasing globalization, the emergence of innovative strategies for advertising, changes in the consumer market and increased competition. They often have to struggle with limited financial and human resources, lack of technical expertise and time constraints.

Consequently, a variety of information and communication technologies are in use in the tourism industry worldwide. They are used for tourism product development, marketing, distribution and training of personnel in the tourism sector. These technologies are so necessary in order to satisfy client requests for travel products. One of the unique characteristics of tourism products is the use of so-called. travel agents who organize trips, travel agencies, organize conferences and so on.

Travel agencies perform this task required the use of computers and computer reservation systems (CRS). Global distribution system (GDS) are those systems that distribute the book outlets around the world. Unlike CRS is used exclusively by the airline or hotel chain. GDS were established as an important aspect of increasing tourist business. Facilitating coverage, visa, immigration and customs clearing certificate, while in the form of lack of proper management.

While there are many definitions for tourism, it can be simply defined as "travel and stay abroad." For example, a person can travel for leisure, business, visiting friends and relatives, health, education and so on., The traveler selects a destination for one reason or another. So, as the tourism industry has three major components: time, accommodation and transport. In the developed world today, all of these components have reached their peak in meeting the needs of its customers by

using modern technology. These components are also last a long time that offers a wide range of products to suit the needs of many tourists around the world.

Tourism is the top ranking ahead of all other categories of international trade. The growth of tourism activity clearly marks tourism as one of the most remarkable economic and social phenomena in the world.

TOURIST INDUSTRY - tourist requests

As already mentioned, the tourism industry is made up of three main components:

- Department of Natural Beauty - which is being developed to meet the educational, recreational and aesthetic needs of visitors.
- Advertising Sector - includes advertising through the mass media and the Internet.
- The accommodation sector - covers all types of facilities offered to visitors for accommodation (hotel, motel, houses, trailers, etc.).
- Transport sector - includes travel by air, by water and road transport.

Department of Natural Beauty

In the case of natural beauty, owners should inform their clients and potential clients about their services. Information on the type of natural beauty where it is and how to get there is vital. To attract clients owners especially need to use information technology as the quickest and cheapest way of presentation of their offers. Information through promotional videos, web sites internet, television and commercials are the main attributes of information.

Sector Advertising

Travel and tourism in particular fit with interactive media. The definition of interactive media can be invoked as a call for interactive marketing. "The essence of interactive marketing is the use of more information than the buyer about the customer." It is different from traditional marketing because it is based on dialogue rather than one-way communication, and dealing with individual customers rather than mass markets. According to Parsons, the factors of success in marketing on the Internet are:

- Attracting users,
- Engaging user's interest and participation;
- Maintaining users and tend to return
- Introduction to user preferences, and
- Business relationships with customers and provide customized interactions



Figure 1: Interactive marketing framework

Table 1: Explanation of Figure 1 (Interactive Marketing Framework)

Activity	What	How
Attract	Attract consumers to the application	Audience creation Mnemonic branding “Piggy-back “advertising
Engage	Generate interest and participation	Intuitive interface or navigation Interactive content User-generated content
Retain	Make sure costumers come back	Dynamic content Transaction capabilities Online Communities
Learn	Learn about consumers’ preferences	Information capture Continuous preference learning
Relate	Customize interaction and value delivery	Personalized/customized communications and products/services Real-time interactions Linkage to core business

The accommodation sector

In the accommodation sector, the importance of information technology is very important. Any individual or group that wants to travel to any part of the world now have easy access to providers of accommodation services. Visitors can access information on the type of hotel in the desired destination, their range of products, prices and other relevant information without leaving your office or home. What needs to be done, is to invite the travel agency to get expert advice. Using information technology agency will help any visitor if they have any problems during the implementation of their arrangements, wherever they were during their journey. To the desired destination also relaxed the visitors during their stay in every way, they can get information about your business, information and weather forecasts, information on family or other information from home.

Transport Sector

Transport provides an essential link between tourist destination and origin areas and facilitate the movement of tourists, business travelers, people visiting friends and relatives. Before you decide to travel, each traveler inform the transportation company that has the best information and communication infrastructure and security measures.

In this sense, the transport by air, bus, and even taxis are equipped with good communication equipment. Flights flying with modern equipment for information and communication technology, which provides information ranging from weather, altitude and other information.

In the case of bus transport and taxis, in many countries with developed tourism business, they are equipped with radio communication systems used for different purposes. For example, a driver or guide update important data of the tourism potential of the visiting tourist attractions. This communication ensures the safety of tourists. Quick and easy flow of information is essential to build confidence in travel and security companies providing tourist services.

GLOBAL DISTRIBUTION SYSTEMS

Global Distribution Systems (GDS) have evolved over the years and played a major role in creating the online travel possible. The global distribution system (GDS) is the information and communication system for the sale of services in the tourism industry, linking the one hand service providers in the tourism industry, and on the other sellers of these services, i.e. travel agencies.

GDS are neutral because they all give their views fully recognizing precisely defined criteria, and it achieved a global presence in the global supply side and the demand side. On the supply side GDS includes all segments of the tourism industry that are offered in global markets: aviation, hotels, rent-a-car, rail, and so on.

The application of ICT tourism industry began to air. Today, most airlines fully automated its business in reservations, ticketing, pricing, service and transportation.

On the demand side of services in the tourism industry, airline GDS provides:

- Reservation terminal with supporting software
- Printer message
- Printer for issuing air tickets and other document
- Communication network
- Training of operators, i.e. Users of the system
- Technical and commercial support.

Information technology is becoming the basis of their activities, so that the successful operation and development of the participants in the tourism industry is increasingly dependent on the successful implementation of ICT in business. The development of ICT has had a great impact on the dynamic development of the overall tourism industry.

Computer Reservation System (CRS) is used to store and retrieve information and conduct transactions related to travel. They were originally developed by the airlines, but was later extended to travel agents as a sales channel. The major CRS operations and ticket sales for the airline known as GDS. Many airlines have decided to get rid of most of its traditional branches, where with the help of global distribution systems are available to consumers via the Internet.

GIS application in tourism planning

Geographic Information Systems (GIS) is now widely recognized as a valuable tool for managing, analyzing, and displaying large amounts of disparate information related to many local and regional activities. Due to the complex nature of the work, the issues of tourism planning, the potential of GIS in addressing all of these issues is more established. Generally, GIS applications in tourism are limited to objects of type recreational, tourism-based land management, environmental impact assessment and that they are limited by lack of resources, inconsistent and inadequate procedures for data collection.

3.2. Application of GIS

Three different functions are usually characterized destinations:

- Points
- Lines
- Polygons.

Points characterize individual tourist attractions, such as camping in the park, or historic sites along the highway. Coastal beaches and resorts often follow a linear model, while the large amusement parks or nature parks are the characteristics of the polygon tool. These locations are the essential attributes of a geographic information system. It is obvious that GIS has great potential for application in tourism. However, due to the general lack of tourism databases and inconsistencies in the data, its applications are limited. For example, there are very few sites that have specific information about the sources and destinations of origin visitors, travel motivations, the spatial patterns of recreation and tourism, as well as the suitability of sites for recreation / tourism development - all of which are suitable for the applications of GIS.

EXAMPLES OF APPLICATION OF E-BUSINESS IN TOURIST AGENCIES IN SERBIA

In our country's Internet usage increased slightly. According to the 2012th in Serbia, on a sample of 1239 respondents, by several well-known Serbian portals and blogs, and social networks on Facebook and Twitter. The survey showed that the average respondent is an active user of the internet age between 18 and 39 years (75.7%), including 27% of the students, and the rest are mostly employed the average monthly income of up to 35,000 dinars. The vast majority, even 88% live in urban areas.

The average of the survey conducted on the internet more than three hours a day even 74.4%, equal to the job and at home. Internet mainly used to monitor current news (63%), information on various issues and education. A large number of respondents spends considerable time on social networks, but it is interesting that this small number of popular internet games play - as much as 47% of respondents had never played any of those games.

In the area of e-governance and communication with politicians, the results showed that people see these things very different from the politicians. 80% of respondents considered very important communication and information sharing with state institutions over the Internet, the same percentage of respondents want to have all the jobs you can end up with the state of the Internet, 68% also considered equally important to be done over the internet publishing information of public importance to control of the institutions. In our country, the level of use Internet agencies in the initial phase, a period of more intensive application is pending.

It is certain that in the future we have to come to the reorientation of the electronic and on-line business, and that will change the distribution channels in the tourism market. Our travel agency in this regard late for developed countries. This type of trade is new and is a great challenge and a threat because it inevitably leads to the disappearance of traditional intermediaries in the tourism market. In the future we should expect an expansion of new "electronic agents". A condition in the market is such that tourist agencies in Serbia mainly rely on the use of global distribution systems applications.

The long unfavorable political and economic situation in Serbia was a limiting factor in the development of travel agencies. Major foreign tour operators, travel agencies, airlines, especially low-cost (low-cost) await a more favorable environment to enter our market. It is probable that this will come soon. When these multinational tourism companies to penetrate our market, small agencies will be in a very unfavorable position. Therefore, it is necessary to closer relations between the small travel agencies, both regional and national levels and intensive introduction of information technologies (especially the Internet) in the business. For small agencies for information technology will represent an investment that will pay off very quickly. It is in this way will result in cost reduction, strengthening the competitive position in the market, providing quality services and ultimately higher profits.

In early 2011. global leader in the travel company Amadeus began with the implementation of new technological solutions to enhance the services of travel agencies in Serbia. The domestic markets of tourist services are rapidly changing and new technology solutions under the influence of changes in the world are rapidly implemented. Although the domestic market is not yet ready for the changes that occur in the environment Serbian Amadeus is always trying to offer new solutions, not far behind the developed world. Earlier these years there were a solution that provides local travel agencies to promote their business and keep up with new trends in the travel industry. Although for years we can read about the imminent disappearance of traditional travel agencies, a leading technology company in the field of travel industry continues to invest heavily in new solutions for this segment distribution services. Agencies continue to comprise a significant part of the market, and it is no longer perceived as competition, but as a tool to promote services and acquire new customers.

CONCLUSION

The paper discusses the areas related to tourism and different information technologies that are available to us to improve the existing infrastructure. Information technology is mainly applied and used in advertising and attracting customers. Using modern technology, the present situation in the tourism industry can be highly improved through the implementation of information and communication technologies in the tourism sector.

Travel agencies have access to the fundamental reorganization of business activities and the introduction of information and communication technologies. Internet and online business are the best options for improving relations with tourists and businesses. Certainly there are many risks and threats in the market. Because it takes a constructive approach to improving competitive position.

Travel agencies still have not taken full advantage of business over the Internet. One reason for this is that most of the travel agencies small business entities that are managed by owner-managers, we will have to move the initiative to reorganize the business processes using modern technology.

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ICT IMPACTS ON REVERSE LOGISTICS: FRAMEWORK AND OPPORTUNITIES

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ABSTRACT

Closed-loop supply chains and contemporary logistics systems have to provide answers to a wide range of issues including planning optimization, organization, managing and controlling the flow of materials, people, energy and information, and thus logistics systems are constantly being developed and changed. Therefore, it is very important to point out which factors contribute most to the constant improvement of logistics systems. In this paper the focus is sited on reverse logistics (RL) and Information and Communication Technologies (ICT) as the main pillar of constant progress. From RL perspectives ICT provides multiple benefits, including cost and time reduction, processes improvement through increased efficiency and performance and system transparency. The objective of this paper is to identify, describe and analyze the integration and application of different kind of ICT and RL into a unique system. Research scope indicates that multiple benefits can be achieved for all participants in closed-loop supply chains. Also, various opportunities and different types of RL-ICT integration and application are presented, and many more are possible, which facilitates RL-ICT framework.

Keywords: reverse logistics, ICT, RL-ICT integration and application, RL-ICT framework

INTRODUCTION

Nowadays, globalization becomes inevitable, and logistics companies that are isolated and are not ready for global cooperation are convicted to business failure (Ilin & Simić, 2012). Globalization drives a higher level of complexity in the logistics supply network, highlighting the important role of forward and reverse logistics. Reverse Logistics (RL) is a growing and significant area of strategic importance of closed-loop supply chain. RL has been defined as the process of moving goods from their typical final destination for the purpose of capturing the value or proper disposal (Rogers & Tibben- Lembke 1999). Basically, it is the process of planning, implementing and controlling flows of raw materials, in process inventory, and finished goods, from a manufacturing, distribution or use point, to a point of recovery or point of proper disposal (de Brito & Dekker, 2002). Consumers and retailers return products due to a variety of reasons: customers' expectation, defective products, excess inventory, end of life products, etc. The type and extent of related RL activities strongly depend on enterprise characteristics - industry, core competency, size, market etc. (Ilin et al., 2012).

Implementing different kind of Information and Communication Technologies (ICT) into logistics management can successfully improve and redesign logistics system, as whole, and also change

customer's view on logistics. Modern logistics systems require new approaches and change of perception of logistics experts in order to provide prompt responses to customer's requirements (Ilin & Simić, 2012).

The purpose of this paper is to explore the main opportunities of integrating modern ICT technologies and RL networks (RL-ICT), focusing on four different ICT systems: transaction, planning, management and control. The integration and application of ICT and RL shows how ICT, RL, market and global environment are permeated into one frame. Primary, ICT technologies reduce costs, improve processes and enable data transparency which facilitates supply chain management as whole. Also, ICT opportunities and benefits provide a good basis for RL-ICT framework.

RESEARCH FRAMEWORK

Supply Chain Management (SCM)

The Council of Supply Chain Management Professionals (CSCMP) is the most well-known organization regarding SCM. CSCMP define SCM as:

“...planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies.”

(CSCMP)

Within the organization, the supply chain refers to a wide range of functional areas. These include SCM-related activities such as inbound and outbound transportation, warehousing and inventory control, sourcing, procurement, and supply management. Forecasting, production planning and scheduling, order processing, and customer service are part of the main RL flow as well. Importantly, it also embodies the information systems which emphasize necessity to monitor all of these activities. Originally, supply chains have been designed to manage forward logistics. RL management makes new challenges and opportunities for companies, especially with the ICT support. Logistics processes and phases are thus constantly improved and transformed, which enables design of contemporary RL-ICT framework.

Reverse logistics issues

In recent years, traditional supply chain is being improved, expanded and upgraded by less traditional, but topical trends in environmental protection and contemporary ICT impacts. The most important change represents the inclusion of reverse product flows and consequently forming the closed-loop supply chain (Figure 1).

For practical implementation of this model there must be more drivers, in addition to corporate social responsibility (CSR), which motivates company managers to reconsider managing of reverse flows and merging them into traditional (forward) supply chain. International standards or law enforcement and economic benefits (Figure 2) represent key drivers for inclusion of RL activities in the company's strategy.

Return forecasting represents a starting point and a key for successful operation of RL activities in a company. Advanced forecasting and planning methodologies improve inventory management and reduce costs and increase customer satisfaction, where RL-ICT integration and application takes place. A good return forecast is followed by four main RL processes (de Brito & Dekker, 2002) that enables RL-ICT integration and application:

- Collection;
- Inspection/selection/sorting process;
- Re-processing or direct recovery;

- Redistribution.

Also, it is important to notice RL activities that generate costs in order to perceive which ICT technologies can provide multiple benefits. Main activities that generate costs in RL and drives RL-ICT framework are:

- Product location (investment and operating costs);
- Transportation;
- Product collection (customers – retailers – plant);
- Disposal (plant – suppliers / disposal);
- Refilling, repairs, refurbishing, remanufacturing, recycling;
- Documentation (for product tracking and tracing during entry, exit and flow in the system).

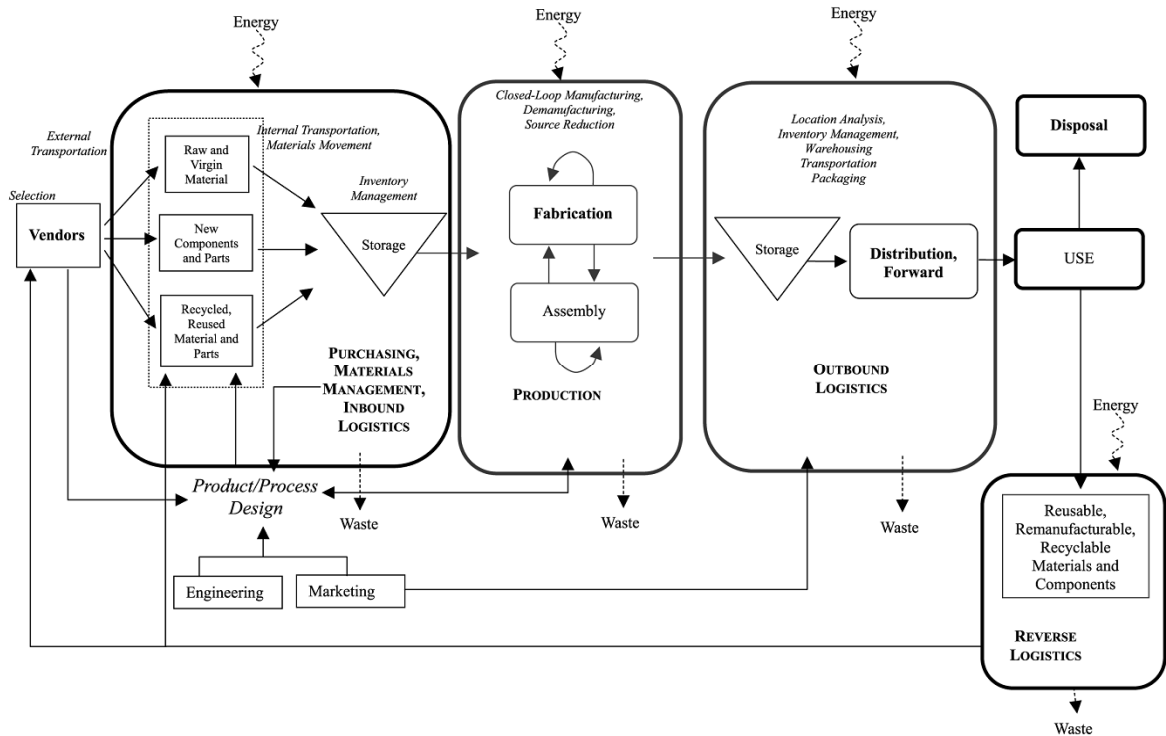


Figure 1: Material and information flows in closed-loop supply chain (Sarkis et al., 2004)

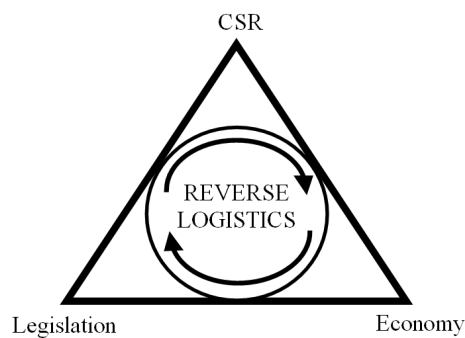


Figure 2: The main reasons for the inclusion of the company in process of reverse logistics (Regodić, 2011)

REVIEW OF ICT TECHNOLOGIES

There are many different types of ICT which have application in logistics (Ilin & Simić, 2012). Four basic systems can be distinguished considering closed-loop supply chain: transaction systems, planning systems, management systems, and control systems. These systems may be computer mediated (extranets, intranets) or based on Internet or web technology (Somuyiwa & Adewoye, 2010).

Transaction system involves new solutions in business transactions:

- 1) Electronic Data Interchange (EDI) is a technology that enables inter-organizational information and documents exchange among partners without human intervention using structured and agreed-upon national and international message standards (Ngai et al., 2008).
- 2) E-commerce generally refers to Business-to-Business (B2B) and Business-to-Consumer (B2C) transaction systems. B2B and B2C models are very dominant in nowadays business. Logistics and the SCM is one of the key areas of e-commerce systems (Bucki & Suchánek, 2012).

Planning system involves all types of logistics decision support and route planning software:

- 1) Advanced Planning and Scheduling (APS) refers to a manufacturing management process by which raw materials and production capacity are optimally allocated to meet customer demands (Lee et al., 2002).
- 2) Enterprises Resources Planning (ERP) is a transaction management system that integrates several types of information and places them into a single database, which eliminates distorted information, increases the speed of information exchange and enables the access to information throughout the organization (Akkermans et al., 2003).

Management system involves processes and procedures used to enhance realization of the objectives:

- 1) Transportation Management System (TMS) is used for optimization of transportation routes and transportation decision making processes. The use of TMS enables the automation of administrative tasks and the distribution planning (Gilmore & Tompkins, 2000).
- 2) Warehouse Management System (WMS) provides optimization of warehouse activities and improvement of inventory management. The purpose of a WMS is to manage and optimize operational and administrative activities along the warehousing process, which involves receiving, inspecting, labelling, storing, sorting, packing, loading, shipping, issuing documents and managing inventory (Banzato, 1998).

Control system involves different technologies used in logistics system:

- 1) Radio Frequency IDentification (RFID) and barcode. Barcode technology consists of assigning computer-readable codes to items, boxes, containers and even wagons. A scanner reads the bar codes and converts them into usable information (Dawe, 1994). RFID is one of the most promising, rapidly developing and easy-to-use technology, which use radio-frequency signals for automatic identification of objects and items. RFID is not a replacement for the bar coding, but a complement for distant reading of codes. The components of RFID technology are: software and support infrastructure, RFID readers and RFID tags (Amit, 2009).
- 2) Global System for Mobile communications (GSM) is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for the second generation (2G) digital cellular networks. GSM has important role in closed-loop supply chain (Xing-zhi, 2013).
- 3) Global Positioning System (GPS) is a space-based satellite navigation system that provides information about location and time, anywhere on/or near the Earth, where there is an open line of sight to four or more GPS satellites. The use of GPS in logistics aims at routing and tracking vehicles, which becomes even more important when delivery routes are unpredictable and change frequently (Chien-Yu, 2007).

ICT OPPORTUNITIES IN REVERSE LOGISTICS

One of the most serious problems that companies face in the execution of a RL operation is the lack of good information systems. Nowadays, very few companies have successfully automated the information surrounding in the return process (Rogers & Tibben- Lembke, 1999). ICT integration and application requires great investment, thorough training sessions and constant learning. On the other hand, ICT provides multiple benefits (Table 1). In order to function efficiently and effectively reverse flow need to be flexible. The new trend of globalization causes RL to reshape its usual ways for solving many different problems and to define new strategic directions of development. Integration of ICT with traditional supply chain provides new perspectives and possibilities in business. All this effort is needed in order to provide prompt responses to customer's requirements.

In order to identify RL-ICT framework operations and phases in RL with appropriate ICT systems and adequate examples are emphasized (Figure 3). Focus is on following RL phases: (1) forecast, (2) product location, (3) collection and transportation, (4) testing, sorting and decomposing (5) storing and (6) reusing and disposing. Understanding of these activities is crucial when managing the overall RL network and establishing RL-ICT framework.

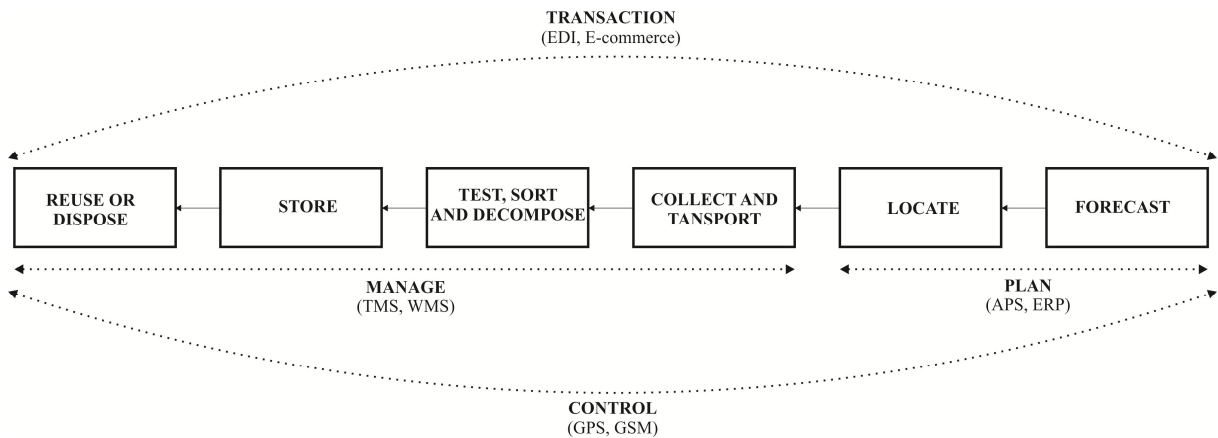


Figure 3: Interpretation of RL-ICT framework

Figure 3 shows opportunities and potential of RL and ICT integration and application. Detailed benefits are described in Table 1. Each of four identified logistics systems contributes with specific savings. Thus, RL network has the opportunity to reshape its traditional way of doing business with the help of decision support systems. New breakthrough offers new possibilities which add one strategic advantage to RL companies – flexibility in execution and management.

Table 1: Benefits of RL-ICT integration and application

ICT systems	Technologies	Benefits and opportunities in RL network
Transaction system	EDI	reduce bureaucracy, streamlining and logistics costs;
	E-commerce	reduce prices, increase investments, facilitate marketing decisions, enable safety rules;
Planning system	APS	reduce costs, improve product margins, lower inventories and increase manufacturing throughput;
	ERP	improve productivity and transparency, integrate strategies and operations, reduce costs and risks, enable immediate access to enterprise information, improve financial management and corporate governance;
Management system	TMS	facilitate tasks as transportation planning, performance measurement, control over vehicle loading and management of routes, distances and freight payments;
	WMS	manage and optimize operational and administrative activities along the warehousing process, which involves receiving, inspecting, labelling, storing, sorting, packing, loading, shipping, issuing documents and managing inventory;
Control system	Barcode, RFID	support various logistics activities, such as picking, vehicle loading and unloading, order tracking and optimization of distribution routes;
	GSM	support maintenance of connections between subjects in logistics processes;
	GPS	support routing and tracking;

CONCLUSION AND FUTURE RESEARCH

Utilization of ICT advantages is imposed as a priority in forward and reverse logistics systems. However, RL is still insufficiently researched field in comparison with traditional logistics.

Therefore, RL-ICT framework is still in a forming stage. Thus, ICT should be considered as important factor when forming any RL strategy due to multiple opportunities and benefits.

RL-ICT integration and application provides flexibility in RL network, reducing uncertainties and increasing transparency during process execution. New perspective offers advanced knowledge of how supply chain can be redesigned to more efficiently and effectively satisfy customer requirements and at the same time to emphasize sustainable and green logistics.

The implications and relationships between ICT and RL still require further study and development. In order to propose comprehensive RL-ICT framework further research is required. Nevertheless, this research is important due to summarized review of ICT benefits in RL flows and proposed basis for RL-ICT framework. Future research can be extended in direction of (1) natural environment relationships issues, (2) better defining the types of resources needed to impact RL performance and consequently ICT selection, (3) expanding the list of possible ICT solutions in RL network, (4) assessment of practical RL-ICT implementation based on quantitative research.

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THE IMPACT OF THE INFORMATION TECHNOLOGIES ON GENERAL LEDGER ACCOUNTING

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ABSTRACT

The paper analyzes the impact of the information and communication technologies on general ledger accounting. Information and communication technologies have caused numerous changes in accounting procedures, internal control and tools, especially in the general ledger. In the last decade virtual close of the books, gained in importance due to the increasing use of modern software applications that enabled accounting systems to produce financial statements at any time, on demand. Modern tools for financial analysis greatly facilitate the traditional routine analytical tasks, but they paved the way to the new analytical procedures as well. Planning and Budget have also suffered a strong influence of the development of information technology, and one of the features of contemporary planning and budgeting is the web functionality. To crown the application of information technology in modern accounting, Web portals emerged, which provide a consistent interface, intuitive and easy to use and which can be accessed from the intranet, the Internet or through mobile devices, enabling interactivity, which is often referred to as two-way flow of information.

Keywords: information technology, general ledger accounting.

INTRODUCTION

Changes that the introduction of digital accounting caused to the general ledger cycle can be systematized in several steps: 1) re-engineering process of closing the books in order to shorten the time required for their close, which is commonly known as a virtual close, 2) the emergence of new tools of financial analysis, 3) changes in the planning and budgeting capabilities caused by simulation and of "what if" analysis, (4) corporate portals, as well as the advantages and disadvantages that these tools provide (Deshmukh, 2005).

CLOSING OF BUSINESS BOOKS

For the purposes of financial reporting, based on all ledger accounts, the final list is compiled, which is preceded by the closure of business books. After all the entries relating to the financial year have been made, financial accounts balances are calculated and by counter posting their transfer into the next fiscal year is indicated, which is a legal requirement and is also preparing of the books for binding and storage (Crnkovic et al. 2008). Books from the previous year are concluded, ie computerized accounts are locked and can not be changed, what used to be called hard close. The organization transfers the final trial balance in the new year and the process starts over again. Books can also be closed for quarterly reporting and publication of quarterly financial reports, which is called soft close, since the accounting records are not locked and can be modified.

The primary purpose of the closing is to obtain financial results. If the process of closing is not completed, the financial result can not be clearly seen. This result is compared with the projected results, and, if necessary, corrective actions are taken. The initial impetus to accelerate the closure of the books is given over the last decade of the twentieth century, when the market reacted negatively to the companies that did not make visible to their financial reports (Deshmukh, 2005). Then there comes a decline in significance of the virtual closure of the book, as a lot of companies encountered great difficulties in these attempts. However, lately the virtual close of the books regained the importance that it deserves.

Benefits from the functionality of the virtual closure are tangible thanks to improvements in the accounting system, not only by the mere fact that the books can be quickly closed. For example, Microsoft recognized the multiple benefits of a virtual book close. They significantly reduced transaction processing in large packs, reduced the postings based on estimates and deferred entries, the accounting process is compliant with accounting systems, users see the system as usable and like to use it, while the financial sector is seen as a partner with added value, and not as a mechanism for processing transactions.

Virtual close is not something all the organizations are pursuing, and there are good reasons for this attitude. First, the cost-benefit analysis can show that the costs exceed the benefits of virtual close. Costs caused by problems such as disruptions in work, new work processes, new systems and standardized accounting procedures, may be greater than the benefits from the possibility of obtaining financial reports in real time. Second, the quality of accounting information can suffer because of virtual close. Many companies were inclined to virtual close of the books at the cost of the detailed verification and control, and the resulting financial information was unreliable. Finally, the business added value arising out of such efforts may be negligible.

FINANCIAL ANALYSIS

Financial analysis refers to the analysis of financial data while financial analysis tools ie software applications, are the instruments that are used in the analysis of financial data. General Ledger, as a repository of financial data, has always been the mine where the information was drawn from. Before computers were introduced in accounting, the trial balance was compiled and financial statements prepared on paper, which was a painstaking process.. The era of personal computers and the emergence of spreadsheets put to the fore the end user. There were different types of tools to explore the financial database and data warehouse, and thus obtaining many financial reports is enabled.

The financial analysis tool that has withstood the test of time is - the spreadsheet. There are currently dozens of software packages with spreadsheets on the market, and on that front Microsoft Excel is leading. Spreadsheets are used for the preparation of financial reports and budgets, ad hoc analysis, and even for the consolidation. Functionality of spreadsheets have steadily improved, so that now the spreadsheet include data management, statistical analysis, language macros and add-ins. Spreadsheets have evolved into sophisticated tools for statistical analysis. Original descriptive statistical features have been replaced by advanced statistical techniques such as variance analysis, forecasting, and Fourier analysis, etc.

It is certain that spreadsheets have been used for a long time in the financial analysis. However, they also have their limitations. They can not manage large amounts of data, as is the case in an environment of large corporations with terabytes of data. Interface between spreadsheets and ERP accounting systems must be programmed and configured, because, otherwise, data have to be entered manually. Due to these limitations, there have been a number of alternatives to these programs.

As client-server applications and relational databases began to gain terrain, so the use of tools to query databases were in a proportional increase. Databases can be tested using the SQL language, which is relatively easy to learn and use. Initially, the databases had supporting tools for creating reports that enabled perform vital accounting functions, formatting documents such as checks and invoices, collect the necessary data from the database and creating and formatting of the Financial and special reports.

These tools were quickly overcome by specialized tools for compiling reports and analytical tools that have already evolved into a new category of business intelligence (BI) tools. BI software is used for the preparation of reports, analyzing and consolidating the data and provides support for ad hoc queries. This software pulls data from different sources: relational databases, legacy systems, or text files. Extracted data can have a different structure, but they are transformed in accordance with the requirements of BI software tools, or business rules defined by the systems administrator. The data are then organized into subsets of data warehouse focused on specific criteria, so-called data marts, after which they can be used in reporting or analytical purposes. Business intelligence software has a Web functionality and can be set to interact with a variety of ERP systems. In fact, BI software vendors have entered into strategic alliances with manufacturers of ERP systems, although there are also many independent software vendors that support the ETL process, creating reports and analyzing data for BI.

Reports can be saved and exported in different formats and can be sent to authorized users over the Internet in predetermined intervals. Some reporting packages offer a functionality called report streaming by means of which reports are forwarded to a user's Web browser in real time. Reports can be delivered at periodic intervals according to a plan. The user is able to interact with and modify reports using ad hoc queries. Reports can be delivered to users on the basis of events, called event driven reporting.

OLAP processing provides multidimensional data analysis. The ETL process creates a data structure within which data can be explored by dimensions. In Cognos they call such data PowerCubes. What is the meaning of dimensions? In the data warehouse terminology a dimension can be time (week, month, or year), product (product groups or individual product), or location (country, city, region, etc.). Dimensional analysis refers to the linking of separate dimensions in order to get answers to questions like: "How much was the sale of the state X in March for product Y? What seller in the region of Z sold the largest amount of product Y? "To answer to such questions is extremely difficult using only the general ledger. The information organized in multidimensional cubes can be managed in different ways. In other words, in order to better understand the data, the user may place different queries. To get a specific data, we can drill down, for example, if the sales in a particular area is below the target value, then we can examine the sales for each product. If by doing so we do not get an answer to the question, then we can investigate sales by retailers or territories in the region. Data can be split up or arrange into the cubes in the sense that the dimensions can be changed so that data can be viewed from different angles. For ease of understanding data can be presented graphically. The capacity of data in OLAP tools is far greater than with spreadsheets and is measured in billions of rows and columns. Data can be displayed on the Web or in a Windows environment, or can be imported into Microsoft Excel, which allows direct reading of OLAP cubes and managing multidimensional data packets using a pivot table. OLAP tools can automate business calculations (ie the change in revenue and market share). Users have the possibility to design warnings: for example, if the sales revenue in the region of Z falls more than 1%, a notice is created and sent to the address of the appropriate manager (<http://www.oracle.com/us/products/database/options/OLAP/index.htm>, 25.11.2010).

Analysis. Users are not interested just to look at data, but, if necessary, to crush them for the purpose of analysis. Analytical tools provide these opportunities through mathematical functions and statistical procedures, which are similar to those in Microsoft Excel. There are also data mining tools enabling the automatic analysis of data and detection of hidden information. This analysis can be performed on multidimensional cubes and other data structures, depending on the options provided by the software.

Business intelligence software collects data from different sources and manipulates them using, integrated, mathematical and statistical functionality. These capabilities can be easily adapted to perform calculations, consolidation, financial analysis and as support to cost accounting or management-based activities.

Management dashboard, metrics based management, management information systems. The concept of a dashboard is not a new one, because earlier accounting systems applied executive information systems (EIS) as well, which were similar to dashboards. Dashboards commonly utilize user interface based on a Web browser, and provide pre-defined key performance measures or

indicators (KPM/ KPI). The performance criteria are established by management and are related to the industry benchmarking and best practices. Data can be viewed grouped by levels or displayed numerically or as a graph. Some dashboards can even look like a fuel or speed gauge on the car dashboard, where the performance can be compared with the planned values or standards.

Dashboards are not reserved only for top management. BI software has further perfected the concept of dashboards. Managers of the highest rank have balanced scorecards, critical business parameters and the possibility of visualizing the required data. Mid-level managers can receive more detailed information, chopped and shaped into cubes for analysis. Operating data can be distributed to the direct operators. Reports can be detailed or summarized on a single sheet. In literature there are lots of arguments for and against dashboards. But they are as good as are the managers who make decisions based on them.

Just as the skills of using spreadsheets such as Microsoft Excel have become a necessity at the present time, so will the business intelligence skills become indispensable in accounting practice of the near future (Deshmukh, 2005). Financial analysis and business analysis indicate that the requirements that are placed in front of reporting and analysis in an era that is coming are going to be much more complex than in the era of spreadsheets. Accountants are being involved in a number of reporting issues, including the design and creation of reports. ABC and ABM models operate with the necessary assumption of the existence of a data warehouse. In order to be able to investigate data warehouse for reporting in the domain of cost calculation, it is necessary to understand the terms and definitions of the constituent elements of a data warehouse. In order to form a subset of the data, it is necessary to define the areas of interest, where, again, we need an understanding of terminology of a data warehouse. Accountants need to understand what can be achieved by using these tools, otherwise they will be far from able to use their great features to the full.

PLANNING AND BUDGET

Budget has already been used for decades as a means of control. In environments of companies with a slow and steady rise the concept of budget was developed primarily as a means of controlling costs. Budget goals and measuring performance came to the fore in the modern age, where the business is more dynamic and budgets are not limited by long-term timeframes. The budget does not measure only cash costs and net income, but it is also used for more creative purposes. Research shows that at the present time the annual cost of planning and budgeting makes from 1.5% to 3% of total revenue, and that managers and controllers spend between 20% and 50% of the time on the tasks of planning and budgeting. Cost of budgeting and planning is therefore significant. Are the benefits worth the cost? The answer depends on how you manage the process of the budgeting. Internet, data warehouse, multidimensional analysis and the like, have a significant role in the planning and budgeting.

If the budget process is managed using spreadsheets and calculation, then this process will be inefficient, ineffective and expensive, even in the case of corporations of medium format. Spreadsheets, usually, multiply very quickly for purposes of observation from different angles, such as products, segments, departments, locations and regions, so that number of views can grow uncontrollably. Consolidating display in the form of spreadsheets can take weeks, and not to mention verification, validation, and their revision. Research conducted by the International Association of Financial Executives Institutes (IAFE), showed that the process of data collection and validation, consolidation of information and preparation of major reports took a lot of time, because of which the budget figures quickly got obsolete. Financial management has also been concerned about the inability to connect business strategy with operating plans and budgets.

Software manufacturers have recognized the need for planners and budget operators and the market offered software applications for planning and budgeting. These software solutions appear as separate tools for simulation and design, integrated tools offered by vendors of ERP software or separate tools that are offered in the same package with the ERP systems. New systems of planning and budgeting are characterized by vertical movement, Web functionality, integration with other modules of the system, flexibility, OLAP and security.

Budgets need to have the ability to easily shift towards the top and the interpolation of corporate financial benchmarks that reflect the goals and strategies of the business. You ought to allow easy movement down to the level of line managers or departments.

Budgeting tools based on the Web browser enable participatory budgeting. Thus the budget can very easily incorporate forecast from the bottom up or from the top down, operational information in real time, review the objectives and changes in business strategies, etc.

Software for planning and budgeting should not be integrated only with the accounting system, but also with many other applications, such as CRM and SCM. Most important applications for budgeting use data and information organized in data warehouses.

Software for Planning and Budget should have built analytic applications that enable analysis across multiple dimensions. Consolidation should be immediately executed, and the revision of the budget should be facilitated. Users should be able to see changes throughout the budget resulting from the changes in the parts of the budget or the expected, planned budget.

OLAP environment allows multidimensional analysis, and, therefore, represents an indispensable prerequisite for the functioning of quality software for budgeting.

Budgets are sensitive by nature, so that security measures should be introduced at the level of users, departments, and each manager. The input data should be checked, user activities reviewed, and a system administrator should be in position to monitor and manage security from a centralized location.

Required features are similar to those offered by BI software, so it is not surprising that most manufacturers of BI software offer software for planning and budgeting. The primary requirement to be placed before the software is the ability to perform budget planning. Budget planning is not limited to financial planning, though that is its most important part. Planning module must allow participatory planning. Tasks of the personnel involved in planning, timelines and specific work processes should be visible to all participants in the planning, while in larger corporations it is necessary that the process of planning has a Web functionality, since the processes based on the browser can be used independently of the software and hardware platforms.

Planning module should be able to simulate and to support variations of the plan, multiple scenarios, changes in external factors, economic growth, as well as the *what if* analysis. Budgets are no more of static nature, and simulations are especially useful for forecasts in case of budget revisions. Plans for the income statement, balance sheet, profit centers or cost centers should have the ability to be set independently, and to stay in mutual relationship. Plans and budgets should have the option of aggregating, parsing and so called drilling down in order to obtain more detailed information. If an integrated supply chain, plans need to be visible to all authorized participants in the chain.

CORPORATE PORTALS

Vendors and software consultants have offered multiple interpretations and definitions of corporate portals, and these definitions are mainly related to the organization of information, collaboration between users, technical infrastructure and business intelligence capabilities. Corporate portals provide the interface that is consistent, intuitive and easy to use and which can be accessed from the intranet, the Internet or via mobile devices. Corporate portals offer new opportunities for information technology (push-and-pull) for the distribution of information. Users can pull the information through the portal, a portal to send information to users based on pre-programmed criteria, which is similar to the process that is used when sending alerts. Corporate portals, unlike the public, provide interactivity, which, often referred to as two-way flow of information. Users can not only drill to information, but they can analyze, format and transmit information.

In a white paper of SAP company the use of corporate portal by sales managers is described as follows: *"Sales Manager receives a warning from the portal regarding undelivered orders. He simply pulls the thumbnail of an order from the warning zone to the Web component of the ERP*

application to see the details of the order. To check its progress, the manager then drag the icon of the order to the icon of the supplier, after which the status of the order is automatically displayed." (SAP White Paper, 2003). The sales manager in the said case does not need to think about what system he will use, do not have to log in as user in a variety of systems and manually synthesize information. Corporate portal in one place combines all the necessary information from various sources, such as CRM, EDI, data warehouse, document management on the Internet, etc. If a sales manager needs to analyze data, he has at his disposal the embedded data mining and analytical tools. Corporate portals pull information from different sources and combine them in one place, which in the best way reflects the need for the existence of this type of software solutions.

CONCLUSION

As the accounting systems computerized, so the general ledger cycle undergone a change. Closing of the books, which used to require weeks or months of work, is now redesigned. The process of closing is reduced thanks to standardized accounting procedures, integrated and automated financial systems, connecting with operating systems for enterprise resource planning in real time, using the Internet and automating work processes. Financial analysis has greatly surpassed the former standards of financial, managerial and reporting routines of accounting services. New business intelligence tools for data mining, and financial information and consequently the preparation of financial reports have been developed. These tools extract data from various sources, transform it according to the rules of business logic and place in data marts. The same data can be formatted using reporting tools, processed with the help of analytical tools to mine your data and export in spreadsheets for analysis in a familiar environment. Tools for Planning and Budgeting have changed the traditional budgeting process. New software solutions have the functionality of designing the budget with the help of the Internet, integration with back-end systems, the flexibility, the use of data warehouses and tight security. One of the most advanced technologies for financial reporting is the Internet-portal of the organization. These portals provide a friendly environment for the user (user-friendly), drag-and-Push technology (push-and-pull) for the collection and dissemination of data and information, they connect the external and internal data sources, analytical capabilities and provide ready-made solutions for specific functions.

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MULTI-CRITERIA MULTI-EXPERT RANKING METHOD

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ABSTRACT

The paper presents the method for decision making as a consequence of previous ranking process. Multiple alternatives are characterized by multiple criterion attributes. The values of criteria are normalized in the process. The method also includes multiple domain experts. Each expert gives his or her opinion about each criterion and, consequently opinion about each alternative. Similarity relation is used in the ranking process. Top-ranked alternatives are considered first in decision making procedure. The paper also includes a case study.

Keywords: ranking of alternatives, decision making, similarity, expert knowledge.

INTRODUCTION

In many practical approaches, analysis of data is crucial for better applicability of domain knowledge. There are many positive reasons for application of data analysis results such as: optimization, feasibility estimation, insight to peculiar data instances, prediction, ranking of alternatives, etc. Data is usually represented in table-organized form, where columns represent attributes while rows represent objects (alternatives, cases, instances). This form of data organization is known as raw data and is produced by a relational database or simply acquired by sensors or questionnaire. Important fact for this paper is that each object or alternative is described by multiple attributes. If an object is e.g. student, then relevant attributes might be: name, surname, birth date, curriculum, average grade, etc. The ranking process described in this paper is based on criterion attributes rather than attributes in a general sense, meaning that the values of attributes must satisfy pre-defined relation. This relation is usually: " \leq " or " \geq ". Criterion attributes are unavoidable in this type of analysis because ranking procedure is based on criterion. Every object, or in this case every alternative is described by multiple criterion attributes. Some examples of criterion attributes are: distance, height, salary, soil quality, etc.

According to Zeleny (1998), any criterion is characterized by a score of performance that is most preferred by the decision maker within a given context. If process of ranking must be undertaken then existence of multiple criterion is regular in practice. Decision maker is able to perform the ranking task of many alternatives by many criteria so that best alternatives are top-ranked. In addition, the existence of multiple decision makers is possible. The decision makers are usually domain experts (experts within a given context), so we have Multi-Criterion Multi-Expert (MCME) decision making process (Triantaphyllou, et al. 1998).

The paper is organized as follows: Second chapter gives some theoretical background to ranking process based on similarity relation. Third chapter gives an simple case study of ranking process and consequent decision making, while final chapter contains conclusions and future work guidelines.

SIMILARITY RELATION

In general, similarity of objects x and y : xS_{AY} means that x is similar to y according to set of n criterions $A=\{c_1, \dots, c_n\}$. This means that every object is described by a vector of n elements. Similarity of two objects is calculated as an aggregation of similarities for each criterion involved.

Let $x=[0.5 \ 0.3 \dots 0.9]$ and
 $y=[0.3 \ 0.6 \ 0.8]$,

then similarity xS_{AY} is calculated as the aggregation of similarities: $S[0.5, 0.3]$, $S[0.3, 0.6]$, $S[0.9, 0.8]$, where $S[a, b]$ is the measure of similarity of a and b , for $n=3$.

Similarity is usually reflexive, symmetric and transitive relation: the reflexive property means that every object is similar to itself: xS_{Ax} ; symmetric property means if x is similar to y then y is similar to x : $xS_{AY} \Leftrightarrow yS_{Ax}$, while the property of transitivity means if x is similar to y and y is similar to z then x is similar to z : $(xS_{AY} \text{ and } yS_{Az}) \Rightarrow xS_{Az}$. Similarity relation which is not symmetric and transitive is possible but in this approach will be used similarity relation with reflexive and symmetric properties.

Suitable similarity relation that is very easy to understand and implement is based on minimum and maximum operators. The max-min similarity $S_{\max\text{-min}}(x, y)$ calculates the similarity of two n -element vectors and is defined as follows:

$$S_{\max\text{-min}}(x, y) = \max_i(\min(x_i, y_i)), i = 1, \dots, n.$$

Here x_i and y_i remark i -th element of corresponding vector.

Example.

For

$$x = [0.4 \ 0.6 \ 0.8 \ 1.0],$$

$$y = [0.2 \ 0.3 \ 0.7 \ 0.9],$$

we have:

$$\begin{aligned} S_{\max\text{-min}}(x, y) &= \max(\min(0.4, 0.2), \min(0.6, 0.3), \min(0.8, 0.7), \min(1.0, 0.9)) = \\ &= \max(0.2, 0.3, 0.7, 0.9) = \\ &= 0.9. \end{aligned}$$

This means that similarity of two n -element vectors is quantified as a measure: 0.9.

It is evident that vector values are numbers from interval $[0, 1]$. In practice, this is not limitation because any number can be scaled to interval $[0, 1]$. The normalization operation is used for this purpose. The normalization operation is defined as follows:

$$\text{norm}(x) = (x_i/\max(x_i)), i = 1, \dots, n.$$

Example.

Let $x = [3 \ 5 \ 8 \ 9 \ 6 \ 2]$.

As $\max(x_i) = 9$, we have:

$$\begin{aligned} \text{norm}(x) &= [3/9 \ 5/9 \ 8/9 \ 9/9 \ 6/9 \ 2/9] = \\ &= [0.33 \ 0.55 \ 0.88 \ 1.00 \ 0.66 \ 0.22]. \end{aligned}$$

The similarity measure takes value from interval $[0, 1]$ which means that there is a corresponding value in percents. This is very useful for practical applications.

RANKING PROCESS

Multi-criteria analysis is often important for risk assessment. Some recent developments of adaptive management based on multi-criteria analysis are given in Linkov et al., 2006. In this paper multi-criteria analysis is undertaken by employment of ranking process. This process evaluates every alternative which is described by many criterions, but the evaluation process is executed by more then one expert. So, many experts are involved in ranking process which results in Multi-Criterion Multi-Expert decision making. Criteria weights can be interpreted in many ways (Choo et al., 1999, Brugha, 1998) but, in this paper criteria weights are expressed as a percents or values from $[0, 1]$ interval. Furthermore, criteria weights are interpreted as optimal values of criterions; these values are given by experts which are involved in ranking process. The ranking process consists of the following steps:

1. Data acquisition – data are represented in table-organized form where alternatives are rows while criterion attributes are columns.
2. Selection of important attributes (criterions) by the experts.
3. Normalization of attribute values, after this step all attribute values are from $[0, 1]$ interval.
4. Each expert gives his opinion of optimal alternative by an example vector.
5. The measure of similarity is calculated for each opinion given by experts and for each alternative, which means that with each alternative are associated more measures of similarity. For m expert there will be m measures of similarity associated with each alternative.
6. Aggregation of the measures of similarity for every alternative.
7. Alternative ranking process.
8. Decision making according to top-ranked alternatives.

A Case Study.

Suppose that a company needs to buy a car. Two experts are involved with the task to make recommendations on the optimal vehicle. Each expert gives his recommendation of optimal characteristics of the vehicle.

For this case study the part of „1985 Auto Imports Database“ is used. This database is available via UCI Machine Learning Repository. In Table 1 are given selected criterion names and their value ranges.

Table 1: Criterions and their value ranges

No.	Attribute Name	Attribute Values
1.	wheel-base	continuous from 86.6 120.9.
2.	length	continuous from 141.1 to 208.1.
3.	width	continuous from 60.3 to 72.3.
4.	horsepower	continuous from 48 to 288.
5.	price	continuous from 5118 to 45400.

Table 2 contains data sample, five cars characterized by criterion values, as well as normalized values.

Table 2: Data sample, real values and normalized values (bold)

No.	wheel-base	length	width	horsepower	price
1.	88.60 0.84	168.80 0.87	64.10 0.90	111 0.72	13495 0.56
2.	94.50 0.61	171.20 0.89	65.50 0.92	154 1.00	16500 0.69
3.	99.80 0.94	176.60 0.92	66.20 0.93	102 0.66	13950 0.58
4.	105.80 1.00	192.70 1.00	71.40 1.00	110 0.71	18920 0.79
5.	105.80 1.00	192.70 1.00	71.40 1.00	140 0.91	23875 1.00

Each expert gives his/her opinion on what are the characteristics of optimal vehicle. These opinions are given in [0, 1] interval (or percents) according to maximal values of the criterions. For example: wheel-base width is very important for first expert (0.92), while it is not so important for second expert (0.5). Experts opinions are given in Table 3.

Table 3: Expert's opinions

Expert	wheel-base	length	width	horsepower	price
1.	0.92	0.8	0.9	0.5	0.8
2.	0.50	0.7	0.7	0.8	0.8

The ranking process is undertaken by max-min similarity calculation for each expert (see Table 3) and each alternative (see Table 2 – normalized values). In Table 4 column “Expert 1 max-min” contains opinion of first expert for each alternative, while column “Expert 2 max-min” contains opinion of second expert for each alternative.

Table 4: Ranking process

No.	wheel-base	length	width	horsepower	price	Expert 1 max-min	Expert 2 max-min	Cumulative min
1.	0.84	0.87	0.90	0.72	0.56	0.9	0.72	0.72
2.	0.61	0.89	0.92	1.00	0.69	0.9	0.8	0.8
3.	0.94	0.92	0.93	0.66	0.58	0.92	0.7	0.7
4.	1.00	1.00	1.00	0.71	0.79	0.92	0.79	0.79
5.	1.00	1.00	1.00	0.91	1.00	0.8	0.8	0.8

Cumulative decision is the intersection of similarity measures for all experts (in this case two experts). The intersection is implemented as a min operator. According to Table 4, most suitable alternatives are alternatives number 2 and number 5 because cumulative measure of similarity is maximal (0.8). So, top-ranked alternatives are: 2 and 5.

CONCLUSION

This paper presents decision making procedure based of the process of ranking alternatives. Top-ranked alternatives are most suitable. Each alternative is described by means of multiple criterion attributes. Values of the criterion attributes are normalized (scaled to interval [0, 1]). Ranking procedure evolves multiple experts who give their opinion about every criterion in percents (or in interval [0, 1]). Presented ranking procedure calculates rank of each alternative by max-min operators. Cumulative rank of each alternative is calculated as the intersection (min) of expert's scores for each alternative.

The decision making procedure is described theoretically and by simple case study. Possible benefits of this procedure are:

- It is possible to include more than one expert.
- Opinion of each expert is equally important.
- Ranking process and consequent decision making procedure is easy to implement.
- It is relatively easy to implement multiple variations of the procedure.

Future work will include software implementation of presented method, as well as the assessment of method by domain expert themselves. Some possible variations of methods will be investigated in the future.

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Session H: STUDENT PAPERS

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Session Editor's Preface

Every year International Symposium Engineering Management and Competitiveness (EMC) pays special attention to student papers. We recognize that young people are interested in scientific research and that they are the main driving force which contributes to the development of science and the wider society. Therefore, we encourage them to actively participate in the Symposium. This year the students' interest was great, we received 19 student papers, dealing with different actual themes concerning modern business.

“Ethics in leadership” is the next paper which tries to explain how important it is for a leader to have in his practice well rooted habits of ethical principles on which to act. In some cases it is extremely difficult if the company leader feels great or he feels economic pressure and if he has to choose between respect, ethical principles and welfare of the company. But, when being led by ethical principles from the founding of the company, a true leader has little likelihood to be found in such a situation.

The paper entitled **“Leadership Skills”** indicates characteristics that leaders must possess in order to successfully motivate people and manage them. This paper highlights the most successful leaders are those that drive others to achieve their own success.

In the paper **“The role of Managers in an organization”** the authors focused on the role of managers in companies. A manager has a clear role in an organization. He must keep the company running. He must influence his team members to work together and to finish their tasks, as effectively as possible.

The paper **“Value co-creation: implications on business”** investigates the current achievements in this field and it tries to predict future trends. Achieving and sustaining competitive advantage in contemporary economy has become extremely difficult, given that many strategies have already been used to a great extent. One of modern strives is to create differentiation which cannot be imitated – and at this point adding value comes into focus. The way of creating this added value is experiencing great change – it has no longer a place exclusively inside the company, but is opened towards customers, both individual and business. In this way, greater efficiency of business is achieved, together with lowered costs, customers' greater satisfaction as well as risk share.

The paper titled **“Corporate social responsibility – Coca-Cola”** takes a look into one of the world largest companies - Coca-Cola, a titan on the soda beverage market. The authors took a look into its corporate culture, its history and decide where the company has stood by its claims of responsible behavior. Corporate social responsibility is an obligation for an organization to solve problems and take measures to promote best interests of the company and the organization itself. In this paper, the authors analyze the corporate culture of one of the most famous soft drink companies - Coca-Cola.

“Offensive business strategies” is the title of the next paper. This paper presents offensive business strategies, which can be implemented by the enterprise. These are the following strategies: Generic strategies (total cost leadership, differentiation strategy, focus strategy) and Growth Strategies (Strategy for market penetration, market development strategy, product development strategy, diversification strategy, the strategy of vertical integration, strategy of mergers and acquisitions).

The paper titled **“Public relations and other disciplines”** points out the similarities and differences between public relations and other related disciplines. The authors analyzed similarities and differences between public relations and marketing, as well as the similarities and differences

between public relations and promotion and propaganda. They also point out the relationship of public relations and journalism. Such analyses have theoretical importance for a better understanding of the essence of public relations, and their role and place in the mix of total communication activities of the organization.

The paper titled **“Positive and negative effects of employee blogging”** points out that the expansion of the web blogosphere has significantly empowered employees and has provided a dynamic new medium used to communicate with a variety of internal and external audiences. Some companies realize the potential of blogs, recognizing that those written by their employees can be valuable assets: ways to communicate in a human voice within or outside the organization, to find previously undocumented expertise, and to create unexpected connections between people and ideas. Others are skeptical about losing control over to this new media, fearing that employees may make disparaging remarks about their companies, reveal trade secrets, or simply embarrass their companies and thus bring significant reputation loss. The aim of this paper is to analyze the phenomenon of weblog itself, its credibility, understanding its usefulness in PR practice, companies’ response to this new form of consumer generated communication, positive/negative aspects of employee blogging, recommendation guidelines and examples of ethic issues related to this subject.

“Expert systems – management application” is the next paper which describes how this system works. Expert system programs enable access to information and knowledge, thus facilitating the decision making process. An expert system can be the first tool for any human expert when solving a problem, and on the account of entered data and built-in logic algorithm (which makes the basis of knowledge) is able to help the user during the decision making process.

In the paper **“Developing management skills”** the authors write about the need of every manager to improve his skills. Developing ones abilities is not an easy task. There must be a lot of will power. The main skills that a manager should develop are self-awareness, time management and stress management. Also a manager needs to possess skills such as effective communicating, planning and most of all leadership.

The paper **“Role of leaders in an organization”** is a wide ranged subject. Firstly, leaders have to acquire a set of skills. The main function of a leader is to lead, motivate, achieve goals which are in his, and in the organization’s interests. In this paper the authors present the crucial functions, skills, abilities, styles which a leader has to possess so he could effectively lead a group to achieve their common goals.

In the paper **“Developing leadership skills”** some of the crucial elements and actions are explained which one leader has to upgrade so he could be effective in leading a company. A leader needs knowledge, understanding and most of all he needs experience. Although knowledge is a fundamental key to leadership, there is much more than that. Starting from organizing, planning, briefing all to controlling and understanding, leadership is a skill which can be constantly upgraded, and it needs to be developed.

“Leadership strengths” is the theme of the next paper that emphasizes the abilities of leaders, also the hidden strengths in every person. Developing and acknowledging these strengths have major influence on the leader’s style of managing, organizing and influencing other group members. Along with leaders’ strength there is the 4E’s set which combined with strengths represents and creates a great leader who can manage and face every problem.

The paper titled **“Project management”** deals with tasks of project manager. Project manager is naturally the key person within the project organisation and has the overall responsibility for meeting project requirements within the agreed time, cost, scope and quality. Project managers report to the steering committee, which has delegated its authority to the project manager.

“Environmental protection in the Port of Kotor in accordance with the requirements of the international standards” is the next paper pointing out that the Bay of Kotor, as one of the most interesting bays in Europe, is a destination that each year attracts a large number of cruise ships, and that it requires a special protection of its marine ecosystem. It is necessary to coordinate all the activities and management of the port with international standards, therefore, the introduction of international standards in ports is obligatory. Port of Kotor, through QMS which is in accordance with ISO standards 9001:2008 and 14001:2004, emphasizes the environmental protection of the territory and waters of the harbor.

The paper titled *“Importance of leadership in modern business”* points out that the process of globalization is affecting all aspects of human life and activity. The changes that have occurred had an impact to the fact that many of the rules lose their meaning and application, while theories are becoming part of history. In the modern business, we have a new organization, based on knowledge and innovation, which requires management approach from a new perspective.

The next paper is *“Knowledge management”*. This paper defines a process of knowledge management in an organization, as well as sources, forms and carriers of that knowledge. It also represents the relationship between knowledge and strategic management in modern business.

The paper *“Emotional intelligence of employees in companies in Serbia”* is aimed at determining the state of Emotional Intelligence of employees in companies in Serbia, shown through state-owned and private enterprises. This kind of research shows an additional importance in light of transitional conditions, existence of state and private owned companies, and the recently increasing number of foreign companies operating in Serbia.

The aim of the paper titled *“Creativity in Public Relations”* is to highlight the importance of creativity in PR practice and to provide a theoretical view of this subject. Despite the belief that PR industry suffers from creativity deficit, the paper presents positive examples of PR campaigns of companies and organizations that, thanks to their creative efforts, demonstrated the ability of public relations not only to contribute to important corporate objectives and connect consumers to corporate brand but also to facilitate positive social change. By expressing an enormous creative potential they made significant contributions to the continuing development of the PR profession.

Papers that are covered in the session deal with various thematic areas related to leadership, marketing, management, public relations and others. We hope that the interest of students while writing papers and taking part in the Symposium will grow from year to year.

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ENVIRONMENTAL PROTECTION IN THE PORT OF KOTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE INTERNATIONAL STANDARDAS

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ABSTRACT

This paper points that the Bay of Kotor as one of the most interesting bays in Europe, as a destination that each year attracts a large number of cruise ships, requires a special relationship to protect the marine ecosystem. It is necessary to coordinate all the activities and management of the port with international standards, therefore, the introduction of international standards in ports is obligatory. Port of Kotor, through QMS which is in accordance with ISO standards 9001:2008 and 14001:2004, emphasizes the environmental protection of the territory and waters of the harbor. All procedures related to environmental protection which adheres Port of Kotor are in accordance with the recommendations of the IMO and that are based on the international conventions, such as the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL).

Keywords: MARPOL, SOLAS, Environmental protection in port, QMS, Safety and Environmental Policy.

INTRODUCTION

The modern study of business management companies requires understanding, acceptance, development and continuous improvement of modern practical (professional) and theoretical (scientific) achievements that as a base have a systemic (rather than analytical) observation of comprehensive business structures and processes. Starting from the already obtained results and defined contemporary operating systems (as well as their management processes), the focus is on the practice in the collaborative strategy and adaptive organizational culture with foreign companies. The paper highlights scientific results based on a systemic approach (system analysis and system synthesis).

These results are important because comprehensive quality management (Total Quality Management-TQM) was used in the study. New scientific information is interdisciplinary and give the focus on the absence of complementary operational and management functions. The need appeared to define a new (innovative) methodologies, not only operational, but all the modernized systems.

The quality management system encourages organizations to analyze customer requirements, define processes that contribute to the achievement of the product that is acceptable to the customer and to keep these processes under control. Management system with its quality can provide a framework for continuous improvement to increase customer satisfaction and satisfaction of the other stakeholders. The requirements for quality management systems are specified in the ISO 9001 standard. (Đurović, 2002)

The ISO 9001 made it possible to establish a simple communication between companies around the world, having provided the common platform and the common language. In the maritime industry, standard ISO 9001 is the "most popular", but the question is to what extent it is consistent with binding international conventions (e.g. SOLAS, MARPOL and LOAD LINE) and principles of the ISM Code. (Dulić, 2003)

Quality sector of Port of Kotor on the basis of their research suggests that:

- a) framework for the creation of new policies by monitoring the implementation of certain measures and their effects should be established in order to provide better protection against environmental pollution in the long term;
- b) cause and effect relations of polluting activities should be identified and protection measures defined
- c) procedures, processes and measures that include all necessary monitoring, measurement processes and activities related to environmental protection should be specified.

TOTAL QUALITY MANAGEMENT

Implementation of total quality management has his strategic character – relatively short-time investments with long-time innovations and improvements of managerial operations in ecological protection of the Company. TQM represents a new philosophy of excellence in operational management (avoiding traditionally defined operational philosophy characteristics), and this implies: integration of interior environment and external surroundings by mean of environment connectivity, spirit of continuous improvement with a significant impact on quality and productivity, emphasize of the flow of work, emphasize of the processes and management of the processes at all levels (Popović, 2011).

Modern management, complementarity with conventions and compliance with the rules of the Company

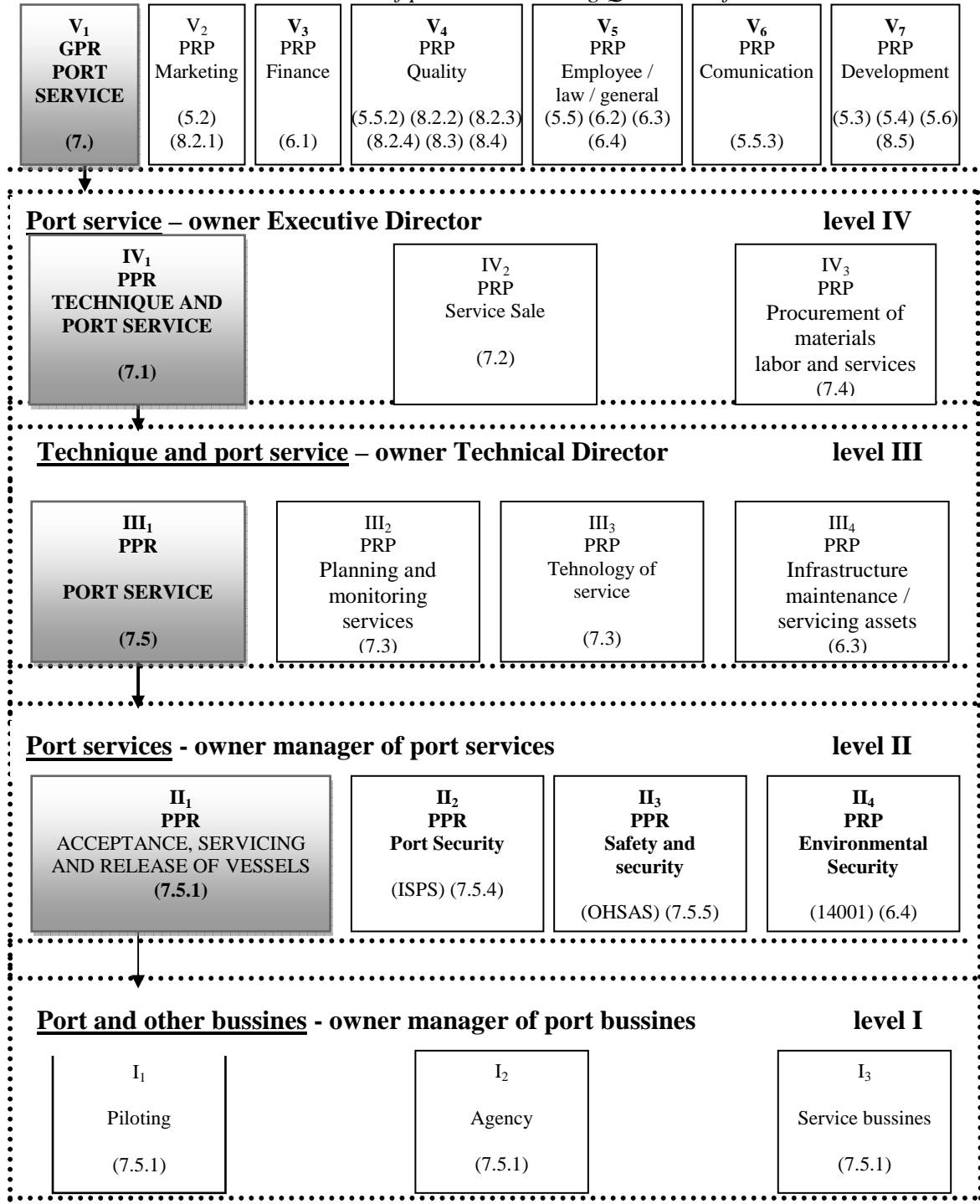
Innovating the traditional and advanced management processes by systematic approach, needs to pass through the operating system (or through its "general model"), first from the bottom to the top, and then, and from the top to the bottom of a certain type (operational or strategic) management and to finishes on processed offers from port service users (Popović, 2012).

Example of process owner responsibility, achieving goals, defining objectives and processes to comply with the objectives of the company are given in the example of Luka Kotor. Management of the Company has not completed all operational activities for realisation of ecological protection process, so the responsibility for certain processes are given to others.

To provide in the Company the complementary requirements of ISO 9001, the projection of QMS is done with the international conventions based on standards demand 5.4.2 defined in Company Quality Manual – documented with "Planning QMS - 5.4.2." process whose owner is the chairman of the Board of Directors.

Identified processes of bussines system in organizational structure and connection with the requirements stated in the Product Quality - The structure of the process, "Planning QMS - 5.4.2"

Table 1: Structure of process – Planning QMS Port of Kotor



Analysis of results of the process (basic, advanced tools and techniques of quality)

The aim of the research is to suggest the application of quality tools in practice and to define the level of comparative advantage in relation to other companies. The use of quality tools includes ensuring the realization of competitive services, whose quality meets service users, while reducing costs and increasing the efficiency of work processes related to environmental protection.

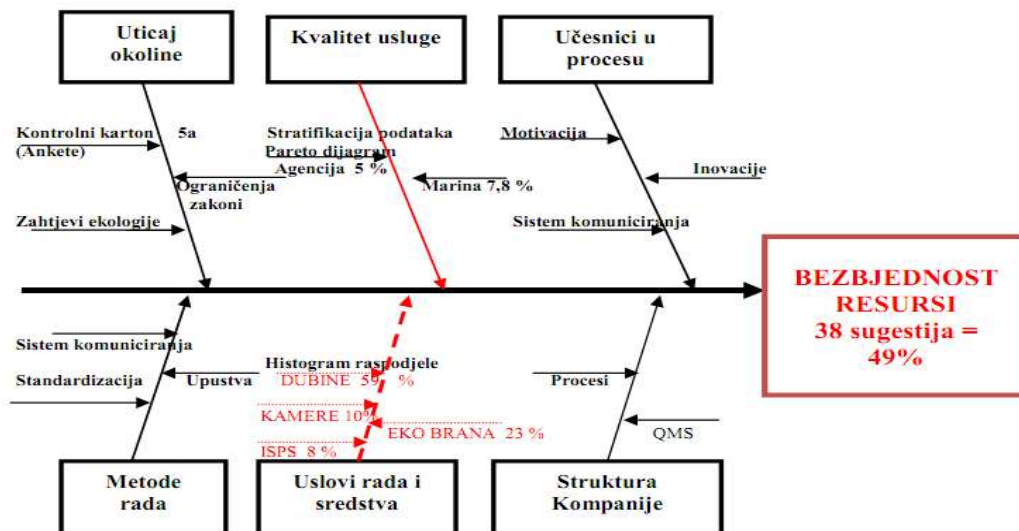


Figure 2: Ishikawa diagram

To estimate the effects of performances of business processes, today in practice are used methods and techniques classified in the group of advanced tools and techniques of quality. Taking into consideration the recommendations of IMO committees, here is an example of application of Benchmarking in Port of Kotor, which we defined as a comparison our own services and processes in relation to the biggest competitive and leading companies in the maritime industry.

It is known that Benchmarking is two-dimensional process that takes place as internal and external benchmarking. In practice there are four basic types of benchmarking: competitive (external), functional, internal and generic (non-specific) benchmarking.

Table 3: Phases of benchmarking process

planning	choice of the benchmarking object ← Mediterranean port
	choice of the lider compny Port of Dubrovnik
	data collection method form for collecting data (basic tool quality) [1]
analizing	Determination of current performances (scheme-21;38;40;41;42;43;44;45;46;47;48;49; 50;93 i 94; prilozi 3-3a;3b-3c;3d-3g;3f-3g;4d; 5-5b) [9]
	Determination of future performances - scheme.3a;4;10;11;12;14; 15;16;17;19;20;22;23;24;25;27;28;29;31;33;6[12]
integrat	Comparison with the lider offer best results (scheme 3.1.2; 3.1.3.; 3.1.4; 4.8; 4.10); [1]
	Establishing of functional goals (scheme 3.2; 3.3.) [11] [13]
action	Preparation of activity plan Activity plan IMO (resolution A.1011 (26)); MARPOL, Annex VI,Regulations for the prevention of air pollution from ships. Charter 1 - General - Regulation 4 Documentation. IMO,London,(2011). [11]
↓ ↑ ACHIEVED LEADERSHIP POSITION	

CONCLUSIONS

Approximation of Montenegrin legislation with those of the European Union

In addition to national legislation, Montenegro is also bound by the international standards and agreements entered into. Following the relevant international agreements, Ministry of Sustainable Development and Tourism of Montenegro with its expert teams and co-workers developed a number of projects. One of the most important is the project "National Strategy for Air Quality Management."

The process of European integration and transition societies require much strategic planning and restructuring of national policies.

This approach leads to a balanced solution which can reconcile the different interests and priorities.

The restructuring of national policies

The process of European integrations raises a number of commitments in this area and concisely relates to:

- reporting on the condition of the environment;
- necessity of complying with international standards and complementarity requirements of ISO 9001 and 14001 with the conventions (SOLAS, MARPOL and Load Line);
- improvement of the application of law through a precise legal framework;
- improvement of the implementation, monitoring and enforcement of regulations to improve the application of sanctions;
- revision of the existing legislation in the field of air and summarize the existing merger provisions of the existing regulations, international standards ISO 9001 and 14001 with the conventions (SOLAS, MARPOL and Load Line) and 2008/50/EC.

The proposal of measures for the improvement of institutional framework

Deficiencies of the institutional framework were recognized with the SWOT analysis and the suggestion of measures for improvement was given:

- 1) the jurisdiction of state institutes in the field of air quality;
- 2) regulations on keeping inventory of pollutant emissions and GHG monitoring mechanism;
- 3) improve the legal framework for the quality control of the ship's fuel and reducing air pollution from vessels after the signing of the Protocol VI of the MARPOL Convention;
- 4) adopt and monitor the implementation of air quality plans in areas where air quality does not comply with the prescribed standards.
- 5) the establishment of emission standards for specific sources such as vehicles (boats), etc. and maintenance of an inventory emissions (Nikolić et al., 2011).

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2. This research is a continuation of " IMO Workshop on the Implementation and Enforcement of the Marpol Convention-Bar - November (**2012**). Maritime safety department Government of Montenegro and Marine Environment Div.

ETHICS IN LEADERSHIP

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ABSTRACT

In this paper, I will try to explain how important is for a leader to have in his practice well rooted habits of ethical principles on which to act. In some cases it is extremely difficult if the company leader feels great, economic pressure and has to choose between respect, ethical principles and welfare of the company. But, when being led by ethical principles from the founding of the company, a true leader has little likelihood to be found in such a situation.

Keywords: Leader, Ethics, Transformational leadership, Altruism.

INTRODUCTION

When it comes to leadership, first thing that springs to mind is: Leader, the one that influences people and leads them to a common goal. Ethical behavior of the leader is somehow implied and rarely questioned. As a proof we have very limited researches which question the amount of ethics leaders show in their work. But, before I delve deeper into this thematic, I believe that it would be good to define these two concepts up to a point.

Ethics studies moral. Ethics represents the existence of morality, as existence of morale person who distinct right from wrong and most often act on norms which they accept and expect the others to accept them too. Without approved morality there would not be a stable society in which business or any other realistic, productive activity could be carried out in a relative peace and fastness. Ethics is systematical striving that our individual and social moral experiences make sense by determining rules which are supposed to govern human behavior, values worthy of aspiration and personage lines deserve to come to expression further in life (Di George, 1999).

From these few lines, we can presume that the issue of ethics is very serious, whether or not it neglected, on purpose or accidentally, it is the basic of the responsible society in general. It is a factual state that majority of people, of any social status, start noticing ethics only after feeling the cold burn of deficiency of the same on their own skin. It is uncomfortable feeling, indeed. And even in the form of sense of ethics in people is the most present one. Most cannot accurately define moral norms. Never-the-less, they distinct right from wrong and are usually led by that contradistinction. But no one wishes to suffer injustice, and even when they suffer that same injustice, people want to assure that that kind of injustice does not happen to any other. It is a form of performed retaliation and justice.

Leadership is a process in which an individual gains influence on a group in order to achieve common goal (Northouse, 2007).

This is just one of the definitions, but, according to Northouse's researches it is the one containing all the necessary elements that are present in every other theories: leadership is a process, by leadership influence is gained, leadership is occurred in a context of a group, with leadership, that is expected the achieving the goal. Why do I say all others? Because it is proved that that leadership, besides being an ancient craft, has as many definitions as the number of people that

tried to define it. We all have an idea, intuitively we can determine what a leader is, and furthermore who the leader is, but only after the series of descriptions referring a leader has shrunk, and became more explicit.

Leader represents a role model, or at least should, to the people under his leadership. And they follow leader because they have confidence in leader to lead them to a common goal. People who do not want to be leaders and those who have felt the power of a “True” leader are greatly relieved by having beside them someone who will take the initiative and responsibility, up to a reasonable point, that is. And that is why ethics in leadership has to find a place in its definition.

Leaders are expected to possess certain skills and characteristics on which they can be distinct from the others. Some people are born with a natural talent of leadership, while the others are required to master certain skills in order to catch hold of properties of a leader and teach how to think as leaders. Anyone can be a leader. When there is any kind of discomfort in groups, the leaders are pointed out themselves naturally. But, in the modern world the winner is the team which is composed of leaders.

ETHICS AND LEADERSHIP

Leadership, in its purest form is appeared through respect and application of ethical principles and with that, with all moral principles of social behavior, as in intern, so on international level.

Northouse speaks of a theory in context of studying ethics and leadership and separates them into two sections: Theory of behavior and theory of leaders’ character.

When we are dealing with behavior of the leader, we cannot disregard the question: “Which action is right?” But, the gages do not stop there are also perplexities of which action is more appropriate, and which is less appropriate, and which serves us better. This way, sway of consequences is dealt with.

Being in dilemma how much are we willing to pay attention on needs of others, not just our own, we differ three different approaches in making ethical decisions: ethical egoism, utilitarianism and altruism.

Leaders with the point of view of ethical egoism pay attention exclusively on themselves and their personal goals. Profiting comes first, and the way up to it is less important. Advancing no matter what is the basic initiator of this approach. This type of leader is less interested in interests of others and their fiery ambition may seem repellent, or rather repulsive to others. They are self-confident and have rather defined picture of what they wish to achieve and relentlessly strive forward. This ethical point of view is closely bonded with transactional theories of leadership.

From the utilitarian point of view, leaders tend on doing well to as many individuals possible. They are grounded, well aware of their and the needs of others, especially their teams’. Moving to a certain position does not mean doing it fast, but rather fulfilling. Think of prevention of problems that might occur, leader question details of a certain plan. This kind of leader reduces expenditure of the company, not allowing problems to ensue lightly.

Point of view of altruism is an absolute contrast of ethical egoism. That is, because from this point of view, leaders pay attention more to others than to themselves. Altruistic leaders are to act in interest of others, even when it contradicts their interests. Transformational leadership is based on these principles (Northouse, 2007). But, using this approach is luxury. One ready to take on this approach is capable of sacrificing swiftness of achieving the goal, because having to pay attention to numerous needs of others. This type of leader acts bold and deliberate.

Eventually, all leaders which act from their point of view are respected among their successors, because this type of ethical leadership is the most praised one. With paying attention to his successors, the leader gains ultimate respect for making their journey easier. Great example of this is Mother Teresa.

Obligations and rules must be highlighted! Achieving the goal is not enough. The road to success is as important as succeeding itself is. We can achieve various things in various ways, but only if the way is right can we fulfill our moral obligations and responsibilities. One of the things certain is that man should tell the truth. Meeting with one expression made me think: "Destructive truth". As much as people want to head truth only, sometimes it can be hurtful. Leader that tends on maintaining his moral principles has to estimate when the time is right for the "White lie".

Character of the leader is also very significant. It is widely believed that virtue and moral capabilities can be thought and gained. Theory of history of making decisions, which stands that most of the people cannot know better or worse, as long as they keep their continual string of procedure, stands for this statement. So, with telling the truth, people become veracious by giving the poor, people become benefactor, and by being righteous to others, they become just (Northouse, 2007).

The key is that children are thought at young age, not to become leaders, but trustworthy men and women. From this point of view, anything is easily rewarded. But this sort of leader is the most needed in society.

Instead of telling people what to do, attention should be focused on telling people what to be. Based on Aristotle's scripts a person expresses virtues such as courage, generosity, self-control, honesty, righteousness, exactness and moderation (Northouse, 2007). There are also characteristics that differ from others, and those are open mindedness, quick adjustment to the environment, ambitiousness, acuteness, decisiveness, reliability, readiness to take on any responsibility and initiative (Jevtić, 2007).

TRANSFORMATIONAL LEADERSHIP

Transformational leadership represents a proces in which people change. It regards emotions, values, ethics, standards and long term goals and it involves making impression that questions successors' motives, meeting with their needs, and their threatment as human beings. Transformational leadership means an extraordinary form of making an impression by which the successors are motivated to achieve more than they are expected to. That is a proces which binds charismatic and visionary leadership (Northouse, 2007).

As a person matures, it learn on its mistakes and is constantly in some sort of transition. Transition from one state to another can be a hard task. But, transformational leader is the one who is cappable of supporting all those changes in each of his accessors, and help him on the way. Efforts of this type are easily notable, because that kind of team is always ready for new chalanges. The company „Google“ is a great example, where, Lary Page and Sergry Brin have founded a company in such a short period of time, a company which is statistically among leaders in 2006 in category of „To-work-for“ by „Fortune“ magazine.

A difference has been made between transformational and transactional leadership. Transactional leadership is related to a great number of leadership models, which focus on exchange among leaders and their successors. Scales of exchange in transactional leadership is commonly viewed on many levels in every type of organisations (Northouse, 2007). Transactional leadership is based on leading without any closer incounter, where everyone know their place and their task for making progress. In this type of leadership, the leader does not incourage the successors in the way they can accept their task with more enthusiasm and work harded than usual.

Factors of transformational, transactional and liberal leadership are significant for studying. There are four factors that separate transformational from classical form of leadership, two factors that separate transactional leadership from classical and one that separates liberal from classical form of leadership. Transformational leadership has idealised influence or charisma, inspirational motivation, intellectual stimulation and individual appreciation. The shortcoming is that there is no steady boundary between these factors, and because of that, transformational leadership often finds itself a target of critics. Transactional leadership has potential reward- constructive transactions and management through exceptions- corrective transactions, while liberal form of leadership has only one factor: laissez-faire.

Idealised influence or charisma is possessed by a leader that has strong influence on his successors and such leaders have high standards of moral and ethical behavior which are transmitted to their successors. Charisma is like a magnet that attracts people and instils confidence and positive energy, so the leaders that possess it have a lot easier job of maintaining contact and order among successors, also motivating them.

Inspirational motivation helps the leader that controls it to motivate and raise expectations of his workers, and so stimulate them to achieve more. It is widely used to encourage the team to increase productivity and efficiency.

Intellectual stimulation of transformational leader encourages successors' creativity and innovations. Understanding the necessity for this type of factor has led many companies to a better position. Not only because of the innovations which are responsible for the advantage among competition, but also for the feeling of importance for the company and the respect their employees get.

Individual appreciation is enjoyed by successors of leader that wants to make an atmosphere in which he helps them individually and in a specific way to overcome obstacles and achieve full potential. With those whose potential is great, even little time invested can lead to major improvement in results.

Potential reward represents a factor of transactional leader which promises certain reward for achieving certain goal. This represents fair relationship professor- student, where students get adequate mark for demonstrated knowledge.

Management through exceptions may be passive or active, and represents one or more fail measures that are taken even if the student has not demonstrated level of knowledge required. Active and passive form differ in a way that in active form, the professor will point out students' mistakes and justifies them, while in passive form, that is not the case. Communication in passive form is one directional and without any further justification.

Laissez-faire represents absence of leadership where things stand by current without anyone's supervision. There is often one "Leader" which has responsibilities towards the company and its employees, but does not stimulate the application of ethical principles.

These factors clearly define differences between classical leadership and presented forms of it. It still needs to be pointed out that factors of transformational leadership are active and effective according to the frequency of it. Factor of potential reward is somewhat lower in the ladder of frequency and not as active and effective, while the active management through exceptions is somewhere in between effective and not effective, and passive management through exceptions is moderately ineffective on ladder of frequency and laissez-faire is very ineffective and passive factor of leadership (Northouse, 2007).

„Good“ examples of misuse of transformational leadership are Adolf Hitler and Saddam Hussein (Northouse, 2007). When it comes to misuse of transformational leadership, it is called pseudo-transformational leadership, to highlight its distorted form. Using skills and influence of

transformational leader, they led their subordinates to the wrong path that contrasts to their moral principles and gives distorted image of ethics. This also shows power of transformational leadership and its potential. Even though it is on a bad example, it clearly shows to leaders and leaders to be the amount of power they can wield if they master it.

CONCLUSION

Does ethics represents an advantage or disadvantage to leadership? This question is dealt with in the text above. How much does the leader advocates himself and others and the amount of selflessness he shows, and how much the leader respect the successors, that much will the foundation of organisation be stabile, and effectivity and efficiency higher. Key word is RESPECT. That is where everithing starts and progresses from. Ethics and leadership are like body and soul, and together they represent the perfect being.

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LEADERSHIP SKILLS

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ABSTRACT

When we talk about leadership skills, what exactly do we mean? Leadership skills are the tools, behaviors, and capabilities that a person needs in order to be successful at motivating and directing others. Yet true leadership skills involve something more; the ability to help people grow in their own abilities. It can be said that the most successful leaders are those that drive other to achieve their own success.

Keywords: leadership, leader, skills, people, motivation, success, ability, successful, leaders, work, business, leadership role, capability,

A BORN LEADER?

You've certainly heard the phrase. Who do you think of when you hear it? Martin Luther King, Jr., Mahatma Gandhi or other world-famous leaders in history? Or perhaps there are leaders in your own life that have had a positive impact on you. What skills did all of these people have that made them effective leaders? Here are a few, but there certainly other:

- Is Committed to a Vision or Mission
- Understands His or Her Role
- Demonstrates Integrity
- Sets and Example
- Understands How to Motivate the Behavior of Others
- Communicates Effectively
- Is Willing to Take Risks
- Is Adept at Problem-Solving

Where as many leaders may be so committed to a vision that they naturally find ways to pull others along with them, most of us cannot claim to have been born with that level of leadership ability. We certainly may have grown over time and learned many effective skills by experience. There is good news for anyone who doesn't consider themselves a born leader or who has specific areas of leadership skills that need work; leadership skills can be learned. All that is required is an open mind, patience with yourself as you learn these skills, and the commitment to put what you learn into action.

THREE TRAITS EVERY SUCCESSFUL LEADER MUST HAVE

Without exception, there are three traits that every leader must have in order to be successful. You can attempt to lead without them, but at least one of four things will eventually happen if you do:

- You will be so miserable that you will burnout
- Your team will fail in completing their work

- Your team member will leave
- Your team will lose respect for you

So what are these three required traits? First is the desire to lead. Without it, you will never be comfortable in the leader role. You will struggle everyday with the basics, and your team members will sense it in everything you do. If you don't burn out first, you'll find that work suffers and your team is frustrated because they can't do their work without you doing yours. They may eventually leave – if you don't first.

The second trait of successful leaders is commitment to the mission and vision of the organization where they work. Imagine trying to convince others to give their best in order to accomplish something they don't believe in. That's difficult. But trying to convert them to believing in the mission and vision of an organization when you don't believe it yourself? That's simply impossible.

The final trait every successful leader must have is integrity. Integrity in this sense has a simple meaning; doing what you say you will do and behaving the way that you expect your team to behave. At first place, that may sound simple enough. But if you can truly master integrity, you will find that it changes whole teams and even whole organizations for the better. There are three key areas that you can concentrate on developing.

Sincerity-also called authenticity, leaders with his facet of integrity:

- Do not put up a false front
- Accept responsibility for their commitments and strive to meet them
- Are honest about their own limitations
- Accept responsibility for their mistakes
- Tell the truth

Consistency-leaders demonstrate this facet of integrity by:

- Treating employees equally as much as possible
- Following through on promises
- Working as hard or harder than their employees
- Having the same expectations or rules for themselves as for their employees

Substance-refers to integrity becoming a part of who you are being in all your work relationships by:

- Keeping private employee information private
- Not gossiping or complaining about team members to other team members
- Doing what's best for the team and not just yourself
- Giving credit where credit is due
- Caring about the development of your employees
- Making it a priority to maintain clear communications and resolve conflicts

If you realize that you have not always acted with integrity in the workplace, you are certainly not alone. But going forward, you can now recognize that integrity can be built one action at a time. As you get more practiced at it, you will find that it becomes a habit. And once you start seeing results that come from practicing integrity, you will want to keep going.

UNDERSTANDING YOUR ROLE: LEADING VS MANAGING

„*Manager is an administrator, leader is and inovator*“ (Bennis, 2003)

„*Menager is a copy, leader is the original*“ (Bennis, 2003)

„*Menager sustains, leader developes*“ (Bennis, 2003)

Management and leadership skills sets are both important in guiding the development and success of any organization. Yet we often confuse the two. Managers may fail to lead and then wonder why they are having difficulty getting people to work at their best ability. Or leaders may fail to manage and then not understand why they can't seem to get jobs done on schedule or on budget. In many cases your role requires both skills sets in equal frequency. In others, you might concentrate on one skill set and only need to adapt the other in specific circumstances.

You can learn to discern the two different types of skills, as well as when to put them into use in order to perform at your best. Some of the questions that will be answered in this chapter are:

- What is the difference between being a manager and being a leader?
- How do I know what role I have, no matter what my job title says?
- How can I determine what skills are appropriate in my role and for the task at hand?

Differentiating Between Management Skills and Leadership Skills

What do you think of when you hear the terms 'management skills' as opposed to 'leadership skills'? Undoubtedly you have at least a general notion of each term. Yet when it comes to articulating the difference, it can be difficult to separate specific skills into one set or the other. Don't the two have aspects in common? Certainly. However, to develop into the best leader you can be, you need to understand how they are different as well.

Here's one way to differentiate between the two skill sets:

- Management skills - the skills required to manage resources in order to deliver a task, product, or service.
- Leadership skills – the skills required to engage with, motivate, and persuade people to buy-In to a vision, objective, or goal.

Table 1: Managers vs. Leaders

A Manager....	A Leader...
Thinks short term	Thinks long term
Thinks tactics	Thinks strategy
Plans how and when	Asks what and why
Looks at the bottom line	Looks to the horizon
Knows the day-to-day business	Knows the customer
Focuses on improving existing products and processes	Focuses on new products and breakthrough processes
Builds success through quality	Builds success through employees
Supervises	Influences
Gains authority from his/her position	Gains authority by his/her mindset and behavior

After reading Table 1, you should be beginning to see the difference between managing and leading. And of course, there are times when your role and your behavior will cross over between the two.

Here's another way of looking at it: when your management hat is on, you are focusing on how you are going to complete the tasks that are necessary to get a job done. You see the deadline looming, and you organize yourself to meet it. When you put your leader hat on, you are influencing the others on your team to do their part to meet – or exceed that deadline or any other performance expectations you might have.

You know what to do as a manager and you know how to get others to help you do it as a leader. In fact, the best leaders will allow others to determine how they are going to contribute to the final product. These 'super leaders' are not afraid of taking the risk of allowing others to add some of their own thoughts on how they should perform their jobs. If you have led them well enough, they

will perform as you would have them perform. In other words, the most effective leaders are those who can successfully influence the way other people influence themselves.

HOW YOUR PERSONALITY STYLE AFFECTS YOUR ABILITY TO LEAD

All of us have a way that we interact with the world. Our habits, behaviors, and personalities all make us distinct from one another. Sometimes we work in an environment where we find that we are similar to other people in our preferences, our ideas, and our attitudes. These similarities make for an easy, comfortable working relationship – not to mention putting us in the position for making some lasting friendships.

Yet what happens when we work with people who are significantly different from us? They are quiet when you are talkative. They are outspoken when you are more hesitant to share your opinion. They laugh easily and tend to share their personal life regularly, while you are more reserved and prefer to keep your personal life out of the workplace. You work in order to enjoy your life, but they seem to have a life only in order to work. You want things planned and organized, but they tend to make changes at the last minute and then you end up frustrated.

Does any of this sound familiar? Unless you've only ever worked for yourself, chances are that you can relate. How do you feel about those other people that don't share your way of looking at the world? Do you see them as difficult, strange, or worse? Do they make you uncomfortable or even dread it when you have to work together? Do you ever change the way you act or speak around these people?

Most of us develop some way of 'handling' these different people. We might be polite, we might ignore them, we might dismiss their opinions, we might be loathe to express our own, or we might even, in the worst case, argue with them on a regular basis and speak badly of them when they aren't around. While this is bad enough when this situation exists between you and a coworker; it can be disastrous for your entire team when you have this type of interaction between you and someone that you are trying to lead.

The methods we've all developed for working with others become so natural that you might not even notice that you're doing it anymore. Particularly when we are talking about a person that you find it difficult to supervise, when we find a way of dealing with them that seems to work, we stick to it. Our patterns of behavior and our opinions about that other person cease to be a conscious choice – they become, in our mind, the reality of the situation.

This is an important point – and one you'll want to make an effort to identify in your own work situation. Where has your opinion of that other person stopped being an opinion, but instead has become something that you're treating as absolute fact? You no longer distinguish between 'I think Mark is difficult' and 'Mark is difficult.' Or 'I find Susan annoying' and 'Susan is annoying.' It is important to recognize that we have chosen to see this person in a certain way – but at the same time, that our perception of them as difficult, annoying, condescending, or anything else doesn't mean that they are inherently the embodiment of whatever we see in them.

By now you're certainly saying, 'but he IS a jerk' or 'but she really IS annoying' – and here comes the next response that will undoubtedly flow through your mind: 'everyone thinks so.' When we get affirmation of our own opinion from someone else, it reinforces this pattern of seeing our own perceptions of the person in question as 'the truth'. The more we have these affirming conversations about the person we find it hard to supervise, the more we think we are 'right' about him or her.

This is perfectly normal human behavior. But it is also very damaging behavior when you are trying to lead. How can you inspire someone when you see them as annoying? How can you get the best performance from someone when you see them as difficult? So here is another option. It's an

incredibly powerful tool that, when added to the others we've looked at so far, can literally transform and reinvent relationships.

Understand that each of us views the world through a type of 'lens' that is, in part, our personality style. When you and another person have similar lenses, you are seeing the world in a very similar way. You will likely find these people easy to lead. You'll know what will motivate them, what kind of instruction and guidance they need to perform at their best, and how to communicate with them when you need to get your point across.

But when you and someone else have very different lenses, or personality styles, everything becomes a bit more difficult. You both stand behind your lenses, looking at and perceiving the world, but your perception is very different. So when the other person acts according to what they see or perceive, and it's not what you see or perceive and not the actions you would have taken, their actions will seem strange (or difficult, or annoying) to you. You could go on forever this way, remaining frustrated and exasperated trying to lead.

LEADERSHIP STYLES

The Autocratic Leadership Style

The autocratic leader chooses to make the majority of decisions on his or her own. These leaders prefer to keep control and responsibility over the projects that they are assigned. This means that they aren't very likely to delegate decision making to others. They prefer a clear structure and set rigid expectations. These leaders rarely consult with others and aren't very interested in developing their own skills or those of their employees. This style of leadership is rather old-fashioned now, but it still exists because there are times when it still works best.

The Democratic Leadership Style

The democratic leadership style is just what you would think – it's all about making decisions as a group. The team shares the responsibility for making the decisions, making changes, and making deadlines. The leader delegates a great deal of the work, letting others have a say in what portion of the work they take on. The leader seeks continual feedback and looks for opportunities for development for both himself and his team. This is a popular style because when it is done well, it creates a harmonious, productive, evolving work force.

The Charismatic Leadership Style

With this style, the main characteristic is the leader's ability to inspire others. They do so through commitment to a vision which they are charged with communicating to their team. It is possible that the leader will actually have to create the vision as well, requiring the ability to generate excitement in others about new, possibly risky ideas. It takes a great deal of energy to be a charismatic leader because it requires taking advantage of every opportunity to 'sell' the team on the vision and mission of the organization. Some members of the team will be easy to inspire, while others will be 'sold' more slowly or, unfortunately, not at all. This style depends on the leader's ability to build trust with team members by demonstration personal integrity.

The Bureaucratic Leadership Style

In a bureaucratic leadership arrangement, the focus for the leader is on making certain that employees follow the rules with consistency. This style became very popular when the industrial era began because factory work requires specific rules and procedures in order to ensure consistent quality and to protect the health and safety of the workers. In this leadership situation, the leader gains

authority more from his position than for other reasons. Employees are rewarded for being able to follow the rules and producing consistently rather than for innovation or brainstorming. The environment tends to be more formal, with clear distinctions between the leaders and their employees. It's commonly found in older, larger organizations or in organizations that have not yet evolved their organizational structure for some reason.

CONCLUSION

Like the "nature versus nurture debate," the "born versus made" leadership debate is based upon a false dichotomy. Just as genes interact with the environment to express unique physical characteristics and capabilities, so too is the quality of leadership an expression of how innate personal characteristics interact with organizational factors.

Given this perspective, leadership is not regarded as the random occurrence of great men at moments in history, but rather as a network effect, the interaction of innate traits, themselves long nurtured and refined by evolutionary forces and the organizational context in which these traits are expressed. In other words, great leadership is the combination of individual traits and historical and institutional contexts. This is powerful knowledge if we can learn to identify the types of roles needed to guide a group or an organization in a certain situation, and then find the right person for the job. An important task in the coming years will be the training and testing of future leaders

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THE ROLE OF MANAGERS IN AN ORGANIZATION

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ABSTRACT

A manager has a clear role in an organization. He must keep the company running. He must influence his team members to work together and to finish their tasks, as effectively as possible. In this paper I will define the role of a manager in an organization and stick out the tasks of top-managers.

Key words: manager, leadership, organising, planning, skills

INTRODUCTION

First we need to clarify who leaders are and what leadership is. A leader is someone who can influence others and who has authority. Leadership is what leaders do. It represents a process of leading a group to achieve some common goals and interests. There is a question? Are all managers leaders? Well, leadership is one of the four management functions, so it would be good if all managers were leaders. Leaders and leadership were researched a lot. Just like motivation, organizational behaviors, leadership also has its ground in the researchers area. Most researchers are concentrating to answer the question of „What is an effective leader?„ (Robbins, Coulter, 2012)

LEADERSHIP SKILLS IN MANAGEMENT

People were interested in leadership since they started coming together in groups to accomplish their goals and fulfill their needs and interests. Researchers tried to isolate the skills which one leader should possess. As time passed by, they got to the conclusion that there is something unique in that what they did. The key was in their behavior. These skills are:

- *Drive*. Exhibition of high effort. Leaders have high desire for achievement, lot of energy, they are persistent, and leaders show initiative.
- *Desire to lead*. This is the desire to lead others and to make an influence on others. Leaders have willingness and responsibility.
- *Honesty and integrity*. A leader builds good relationships with his followers, by being truthful, and nondeceitful.
- *Self-confidence*. Leaders need to show self-confidence in order to convince followers of the rightness of their goals.
- *Intelligence*. Leaders need to be intelligent enough to gather, synthesize, and interpret large amounts of information. They also need to solve problems, and organize activities.
- *Job-relevant knowledge*. Leaders have a high degree of knowledge about the company and technical matters. Knowledge allows the leader to make good decisions and to understand the implications of those decisions.
- *Extraversion*. Leaders are energetic, lively people. They are sociable, assertive, and rarely silent or withdrawn. (Robbins, Coulter, 2012)

MANAGERS WORK

The work of a manager has five basic functions. Together they result in the integration of resources into homogenic organism that achieves goals without problems.

- In the first place a manager, **sets objectives**. He determines the objectives. He determines what the goals in each area those objectives are or should be. He decides what has to be done to reach these objectives. He makes the objectives effective by communicating with people with whom he works and presents them how the objectives should be completed.
- Second, a manager needs to **organize**. He must analyze the activities, decisions, and relations which are needed to achieve the goals of the company. He classifies the work that has to be done. He divides it into manageable activities and further divides the activities into manageable jobs. He integrates these jobs into a structure. He selects people for the jobs to be done.
- Third, a manager **motivates** and **communicates**. He makes a team, a group, out of people or team members that are responsible for various jobs. He does it to the men with whom he works. He does it through his decisions on pay, placement, and promotion. The manager also does it through constant communication, to and from his subordinates, and to and from his superior, and to and from his colleagues. The communication must be all-directional which means no one should be left out.
- The four basic element in the work of the manager is **measurement**. A manager sees to it that each man has measurements available to him which are focused on the performance of the whole organization and which, at the same time, focus on the work of the individual and help him do it, so the achievement of the companies goals can be executed. The manager analyzes, appraises, and interprets performance. He communicates in all areas of his work. The meaning of the measurements and their findings to his subordinates, to his superiors, and to colleagues. Finally, a manager develops people. (Drucker, 1986)

Setting objectives is a problem of balances. And which are these balances?

- balance between business results and the realization of the principles one believes in;
- balance between the immediate needs of the business and those of the future;
- balance between desirable ends and available means. (Drucker, 1986)

Setting objectives requires analytical and synthesizing ability. Organizing also requires analytical ability. The whole organizing proces deals with human beings, and therefore stands under the principle of justice and requires integrity. (Drucker, 1986)

Analytical ability and integrity are similarly required for development for people and also for the manager himself. (Drucker, 1986)

The nature of skills that are needed for succesful communication is strictly social, and instead of analysis, integration and synthesis are needed. Justice dominates as the main principle while economy is secondary. Integrity itself has much greater importance than analytical ability. (Drucker, 1986)

Measuring requires, first and foremost, analytical ability. It also demands that measurement be used to make self-control possible rather than abused to control people from the outside and above that is, to dominate them. It is the common violation of this principle that largely explains why measurement is the weakest area in the work of the manager today. (Drucker, 1986)

TOP - MANAGEMENT TASKS

The four managerial functions are:

- planning
- organizng and staffing

- leading
- controlling (Dubrin,2012)

The top-managements job is multidimensional. There is no topmanagement task; there are only top-management *tasks*. This is just as true for public service institutions as it is for businesses.

These tasks are:

- **Thinking** through the mission of the business. Asking the question “What is our business and what should it be?” leads to the setting of objectives, the development of strategies and plans, and the making of today’s decisions for tomorrow’s results.
- **Standard setting** is needed for the conscience functions. There is a need to be concerned with vision and values in the key areas. Again this can only be an organ of the enterprise that sees and comprehends the entire business which comprehends all the actions within an organisation.
- **Responsibility** is needed to build and maintain the organization. There is a need to work on developing the human resources for tomorrow, and especially for work on providing tomorrow’s top management. The spirit and atmosphere in a organisation is created by the people at the top. The standards of conduct, the values, the beliefs of the top managers set an example for the entire organization and determine its self-respect. It is also required to think through organization structure and organization design.

To focus on contribution is to focus on effectiveness. (Drucker, 2006)

Major relations are equally important, which only the people at the top of a business can establish and maintain. These relations can be:

- relations to customers or major suppliers
- industry relations or relations with bankers and the financial community
- relations to governments or other outside institutions

These relations are crucial and they affect the capacity of the business to perform. There are also relations that can be made only by somebody who represents the entire business and speaks for it, stands for it, commits it.

Countless “ceremonial” functions, dinners, civic events are actually more time-consuming and less easy to avoid for the top people in a small or medium- sized business, than they are for the heads of the very big companies.

Stand-by organ is ment for major crises, for somebody who is available to take over when things go seriously wrong. Here, the most experienced, the wisest, the most prominent people in an organization who have to roll up their sleeves and go to work. But there is also a responsibility of knowledge. (Drucker, 1986)

This is a partial list only. It should prove, however, that the top-management task will not get done unless it is recognized as a distinct function, a distinct kind of work, and organized as such. This list also shows that while there is a genuine top-management function there is no general formula for the top-management tasks. Every business, every institution, needs a top-management function and everyone has specific top-management tasks. The elements of the job are the same. (Drucker, 1986)

The elements have to be developed out of a specific analysis of the mission and purpose of the institution, its objectives, its strategies, and the key activities. (Drucker, 1986)

The ideal top management is the one that does the things that are right and proper for its enterprise. The specific application must be developed concretely, indeed pragmatically. It, must be tailored to

the individual enterprise. It must be developed from an analysis of the specific enterprise. It must, above all, follow the strategies of the enterprise and be in harmony with them. (Drucker, 1986)

CONCLUSION

Being a manager is not easy. It requires a set of skills that need constant improving. Along with organising, planning, controlling, a manager must know how to lead. Leadership represents the key function which allows achievement in an organization. A manager must have authority and also he must be an effective leader. His role is simple. Keep achieving goals, keep the company running.

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VALUE CO-CREATION: IMPLICATIONS ON BUSINESS

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ABSTRACT

Achieving and sustaining competitive advantage in contemporary economy has become extremely difficult, given that many strategies have already been used to a great extent. One of modern strives is to create differentiation which cannot be imitated – and at this point adding value comes into focus. The way of creating this added value is experiencing great change – it has no longer a place exclusively inside company, but is opened towards customers, both individual and business. In this way, greater efficiency of business is achieved, together with lowered costs, customers' greater satisfaction as well as risk share. The aim of this paper is to investigate the current achievements in this field and to predict its future trends.

Keywords: customer co-creation, added value, improving efficiency, B2B, competitiveness.

INTRODUCTION

Contemporary conditions brought upon by new trends in economy pose a completely new way of thinking and business conception. Market relations have changed radically, since their bases are completely different nowadays. With growing competition and new world order of strengths, existing strategies proved incompatible to strive for a better market position.

Paradoxically, although consumers have a range of products and services available, they are everless satisfied with it. On the other hand, companies invest into greater variety of products, yet they find it more and more difficult to differentiate from their competition. The main managers' concern is how to attain sustainable growth and creation of value. One of possible solutions to this problem is greater effectiveness of value co-creation on producer-business customer relation.

Well-informed, engaged, empowered and active customers increasingly communicate with producers, forming a new relation. Therefore, business customer is invited to participate in creating the product/service which he will buy (so-called Customer Co-Creation). This paper's aim is to show the implications of two-way innovation of this B2B relation, which adds value for the end consumers and brings various positive effects for the entire value chain.

THEORY

The phenomenon of globalization has enabled making business worldwide, fostering the growth of international business networks and relations, and bringing greater interdependence of companies throughout the world. Big companies increasingly run their units locally, which diminishes the dependence of local production on these companies' mother countries, whereas global trade loses its significance in international corporations.

The trend of co-creation of product is more and more present in contemporary business on B2C relation (Business-to-Customer). Somewhat less known, but nothing less powerful, is the B2B product co-creation, where companies start and design operational processes selectively, significantly influencing their activity effectiveness. Actually, today co-creation is a new open-

business model which opens a new chapter in attaining competitive advantage, through integration of companies' competences and individual customer preferences in a single network.

Adding value has become one of the most important strategies for providing the customers with a distinct, differentiated product. While traditional market view sees offer and demand as opposed, a new, still challenging view places them 'in one basket' – allowing consumers and/or customers to participate in creating the products and/or services they will buy, and therefore resulting in greater satisfaction, lower costs and better competitive place. Practically, value creation is increasingly becoming the thing of cooperation between the producers, intermediate companies and consumers (business and private).

METHODS

As this is a conceptual work on current development of value co-creation on the global level, the method employed here is desk research of papers written on the topic so far. Later on, several suggestions by the author herself will be given.

FINDINGS

The new business paradigm is extremely focused on interaction between customers and companies, which completely changes the traditional market perception. Instead of a set of individuals to whom everything can be offered, today market is viewed as certain forum where customers and customer communities intensively communicate with companies and company chains. This transformation can be seen in Table 1, based on Prahalad et al., 2004.

Table 1: Transformation of relationship between companies and customers

Traditional paradigm	Value co-creation paradigm
One-way communication	Two-way communication
Communication direction: from company towards customer	Communication direction: from customer towards company
Company holds the control	Customers hold the control
Customers are 'prey'	Customers 'can hunt'
Customers' choice: buy or do not buy	Customers want to and can express their opinion
Companies segment and target the customers, who have to fit into companies' offer	Customers want to and can co-construct a personalized experience alongside with the company, in the environment offered by the company

As the same authors note, roles of companies and customers increasingly converge. This means that these two market actors are collaborators and competitors at the same time – since they cooperate on value co-creation, but compete over sharing the benefits of that value.

Gustafsson et al. (2012) also state that an intensive communication with customers is exactly what brings success to new products or services. Moreover, the analysis of papers written on this topic so far shows that, even though there is a general opinion that value co-creation brings various benefits, little is known about the reason for this and about the way this should be done. Basically, as these authors state, value co-creation is mostly the appropriate communication with the customers, so as to understand their future needs.

Vargo and Lusch (2006) have developed a comprehensive conception, with the customer co-creation as its main logic. Therefore, they stress the customer-producer relationship through interaction and dialogue. The main point is that the value occurs on the place of customer's consumption of the product, not the place of output production. Even so, the same authors state that it is still relatively unknown how the customers are actually engaged into mutual creation of value.

So, apart from knowing *what* should be done, it is also necessary to be more precise in terms of *how* it should be done in order to successfully manage the process of value co-creation.

Payne, Storbacka and Frow (2007) formed a conceptual framework of value co-creation, in which centre there is the process. Since then, more and more authors show their interest for the significance of process. They have divided this framework into three basic components:

- The final consumers' value creation process – B2C relation and processes, resources and practices used by consumers in order to manage their activities.
- The producers' value creation process – B2B relation with the stress on processes, resources and practices used by the producer in order to manage their business and relationship with consumers and other stakeholders.
- The encounter process – processes and activities of interaction and exchange which occur within interaction between consumers and producers and which need to be managed in order to develop possibilities of successful value co-creation.

Actually, one of the earliest references to creating value is producing an offer that will, in their words, set the customers in motion. In fact, the logic presented in this section considers the customers as active participants who can have various roles: buyer, consumer, certain competence provider, quality controller, collaborator in production, sales and advertising. Therefore, customers actively participate in activities, willing to convey them continuously in the agreed way.

DISCUSSION

Deep, interactive and active dialogue between offer and demand side is something extremely unlikely to be given up today – more and more companies strive to offer a personalized experience to their existing and potential customers as much as possible. Even further step is actually the topic of this paper – personalization of value co-creation. The view on market is also changed from a set of customers to whom practically everything can be offered, to a set of actively engaged participants who need to be thoroughly analyzed in order to gain a better insight and predict their needs in the best possible way. Thus, the approach is proactive – and combined with the customers' experience personalization it can potentially bring competitive advantage. This is the reason why it is being used more and more often.

The literature review showed that this topic is still only vaguely researched and partially covered, so it comes as no surprise that the practice is still relatively unknown to the science. Thus, the possibilities of implementing value co-creation are yet to be explored. They can occur from any reason, but the distinguished ones are: technological innovations, change of logic in an industry, as well as change of customers' needs and lifestyle.

Value co-creation is a powerful paradigm if conveyed properly. It can significantly influence the following business aspects:

- Competitiveness – since numerous strategies for achieving competitive advantage are already 'worn out', the new strive is to offer something to the market, that cannot be imitated. This is where adding value comes into practice. An even newer idea is to add value which the customer himself shall create in accordance with his own preferences.
- Company management – the value co-creation management paradigm requires the management infrastructure change, which switches from the inside view to the outside view. In this way, difficulties to create sustainable competitive advantage, are avoided. Therefore, contemporary market will pertain only the ones who can successfully create unique customer experience, together with the customers themselves.
- Interactive marketing – given that the new paradigm places focus on co-creation experience as a basis for value, the fundamental interaction between company and customers change their character and significance. Namely, interaction becomes the place of value creation, and it can occur at any place in the system, not only the traditional point of sales – and both

sides participate in it. Thus companies need to offer the infrastructure for dialogue, and invest into managerial training in order to be open for communication. Finally, companies are becoming increasingly aware of the fact that the customers are more and more educated, informed and that they will choose a product or service according to their preferences and possibilities. Surely, not only companies are responsible for the possible risks brought upon by cooperation on creating the products or services.

- Industrial design – as networked innovations are more and more present, designers' profession is beginning to feel double effects – positive and negative. Although companies are still the ones who have the leading role in including the customers into the process of product designing, there is an increasing number of informally well-educated final users. This, as well as simplification of programs like CAD, can arise expectations that the collection of ideas will be done over global network, and not from design professionals, as it is the case now. This trend is called 'crowdsourcing' – which poses the question what shall happen to all other company functions – will they remain within the company borders, or they will be opened up to the wide population present on the Internet and therefore change the way of conducting business present until now. The advantage here is the lowered idea-collecting costs compared to hiring professionals, greater pool of available knowledge and possibility of adjusting to local preferences and needs, given that the collaboration is done directly with the localities. It is obvious that this type of cooperation can function only due to information technologies.

The main challenge of B2B value co-creation is the fact that not only the producer is the one who makes decisions or choice which product or service should be offered. So, the 'inside-out' view shall be changed into 'outside-in', switching from understanding the company's current inner strengths and competencies to understanding the process of company's collaboration with the customer in order to produce the offer which will satisfy the latter's needs to the maximum extent – and therefore bring the former competitive advantage and sustainable development, which is the ultimate goal. In order to do so, great understanding should be developed between these two, through intensive two-way communication and adjustment of functions between them.

Some researchers proposed so-called 'process mapping', which main idea is to identify the opportunities for value co-creation, possible weak spots and places of incremental improvement or even process reengineering.

CONCLUSIONS AND IMPLICATIONS

All things considered, one must say that the contemporary trend of opening and merging business functions between companies bring numerous benefits and influences great change in the way business is run today. Innovating B2B processes, introducing business customers into process of mutual creation of products or services that will be bought by their co-creator himself, increases business effectiveness and improves competitive position on market. Even the conditions brought by world economic crisis, which reduced the access to various resources, cannot influence this move; moreover, faster delivery of products and services of greater quality compared to the competitors influences the improved company running very positively, along with bringing the better competitive position.

Buying the product in which creation he has participated, business customer will be more satisfied. Since today market sees the customer as the first and the last link in the value chain, and loyal customer as one of the main goals of contemporary business, it is clear that fulfilling the business customers' needs bears great potential for improving competitive advantage. Therefore, companies should open up towards cooperation with them, developing deep understanding through active two-way dialogue, in order to become able to identify and fulfill all their needs and hence achieve better competitive position and sustainable development.

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CORPORATE SOCIAL RESPONSIBILITY - COCA-COLA

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ABSTRACT

It's one thing to claim that a company values ideals of corporate responsibility, but to uphold it is a whole other story. This paper takes a look into one of the world largest companies - Coca-cola. A titan on the soda beverage market. We take a look into its corporate culture, its history and decide where the company has stood by its claims of responsible behavior.

Keywords: corporate responsibility, Coca-Cola, the ideals of corporate social responsibility,

INTRODUCTION

Corporate social responsibility is an obligation of an organization to solve problems and take measures to promote best interests of the company and the organization itself. In this paper, we analyze the corporate culture of one of the most famous soft drink companies - Coca-Cola. The company began its history 125 years ago, precisely in 1886 in Atlanta where Dr. John Pemberton came up with a secret formula of a completely new drink. Then, Coke was sold (only) in fountains, until two innovative gentleman realized that bottling this new product would help it sell more efficiently. And they were right, in 1819 began mass production of carbonated beverages, and not just in America. Bottling firms were opening up all over the world. Thus, Coca-Cola became the first global trend that sold its products in more than 200 countries.

What is it that has allowed Coca-Cola have such a success, in addition to its innovative formula-good marketing and positive image that is provided through their positive corporate culture. Before we present the detailed principles of this famous company, one thing needs to be understood. The importance of the idea of social responsibility. Corporate social responsibility is a company's philosophy of efficiency in operation. It creates a positive atmosphere for work and motivation that results in continuous improvement of work. The success experienced by the Coca-Cola company can only point to its good management and leadership.

VISION 2020 - THE POWER OF DIVERSITY AND COLABORATION

With more than 500 brands and 3500 products, it is not surprising that Coca-Cola in the United States earns over 15 billion dollars. Truly a magnificent success. Coca-Cola argues that the key reason for this success because of the diversity of their employees. As a worldwide company, it is only logical that their workforce will be diverse, in cultural and national sense. The Coca-Cola company has no room for intolerance (and not just on the basis of origin and skin color). In the past year, 50% of new workers were women, and 36% belonged to ethnic minorities.

Success that was provided by a diverse workforce insured innovation, a proper business policy of fairness in the workplace for all employees and tolerance.

Coca-Cola has seven core values:

- Leadership
- Passion
- Integrity
- Diversity
- Cooperation
- Quality
- Responsibility

To ensure an apparently perfect 'policy', the company holds regular training seminars on diversity with main priorities:

- Training their managers to maintain appropriate working environment
- Training individual contributors and teams
- Expanding understanding of diversity

All this is done to achieve the ability to understand other cultures and exploiting it to sell globally. Words of one of the leading human resources managers in Coca-Cola: "Human resources policies and collective work can only result in success."

Realizing that the company could not be held without the innovation and partnerships in its history, Coca-Cola worked with many different organizations and companies. Coca-Cola has invested more than \$ 22.2 million in a multinational human organization in order to express their philanthropic principles. Very noble but many believe that this is a good marketing move in the sense that the big amount for such a company does not mean anything but positive publicity that makes even more money in return. Especially in today's world where there is less and less of a fixed place for companies to publicly demonstrate their greed.

In the previously mentioned area, Coca-Cola holds the right to manufacture over 3,500 products, including energy drinks, non-carbonated bottled water, coffee, tea and the like. How did it come to this? When you pay attention to the history of the company you can see that Coca-Cola had its problems which will be discussed later. Some countries did not want an American product, some felt that Coca-Cola offends the culture of other countries ... the list goes on and on. Since one product cannot grow forever, managers of Coca-Cola decided to begin buying rights to the production of other products, such as Fanta, Alpina, Guarana, Schweppes, Sprite and others.

GLOBALIZATION

Coca-Cola in India -The first visit to India was not so successful, a better word would have been scandalous. Because of its immoderate water consumption in its production, Coca-Cola experienced a negative reputation. It seems that the company was not concerned with the protection of the environment like it should have. Since it took 9 liters of water to produce one liter of beverage, it is no wonder that the company met with disapproval by the Indians, whose country suffers from chronic water shortages. Taking 1.5 liters of drinking water a day, what else could be expected then a ban Coca-Cola production by the government of India in 1977.

However, this did not stop the famous company. Coca-Colas returned to India in 1993, and 7 years later opened a factory in Plachimada, a village in the state of Kerala. Apparently Coca-Cola was determined to conquer the Indian market, even if it meant using illegal purposes. The state then approved the use of motorized pumps, but for the company that was not enough. Coca-Cola drilled 6 more wells in protected areas of the country. That does not sound very legal for a company that supposedly cares about the environment.

To make matters even worse, Coca-Cola's improper disposing of waste created a large number of serious health problems for the natives. Very soon the company got a warning and an order to stop their illegal behavior.

How then did Coca-Cola survived in a country that had such a negative view of the company. It is because of the exploitation of diminishing water resources. During worst periods of the summer, when there is a drought, sales of this drink achieved tremendous success, which led to the opening of another plant in Kala Dera. It seems that the ultimate goal does justify the means. This caused a harder life for the local farmers and it directly affected their children who had to abandon their studies in order to assist their parents.

The situation got so dire that there were organized public protests. Very soon, Coca-Cola received an ultimatum. If it wanted to stay in India, it had to follow certain requirements:

- To transport the water from the surrounding areas that are not at risk of shortages
- To storage water during the rainy season
- To move somewhere where the company and the local community had water for all their needs
- To shut down their production plants

Local community of Kala Dera approved this procedure and expecting a response. Coca-Cola rejected the accusations and declared themselves as environmentally conscious and a socially responsible company. During the next period, a campaign was launched in which they wanted to show that their water supplies came from warehouse that collected and stored rainwater. This was nothing more than a bluff. When Coca-Cola was asked to prove their claims about their water usage, the company simply refused to cooperate.

Sharad Haksar, a photographer in India issued a billboard with a picture that the company did not approve of. Very soon, Coca-Cola demanded a public apology from Mr. Haksar and a specific amount to pay for damages. All requests from Coca-Cola, Mr. Haksar refused saying he did not do anything wrong.



Figure 1: Sharad Haksar's billboard

Coca-Cola in Asia - in China, Coca-Cola existed for about 80 years. In 2010, the company launched a campaign in order to win the Chinese market. Realistically, the first step was back in 2008 when they tried to buy one of the most popular drinks in China. They were rejected, the reason was that China did not want any foreign domination with its own domestic market. They started with a new strategy. So how did the company get the top position as the most popular soft drink? Coca-Cola decide to open two new factories in the 2009, also it became a sponsor to a lot of events in China. They were one of the main sponsors of the Beijing Olympics and also one of the official sponsors of the World Expo in Shanghai.

Coca-Cola could not have chosen a better time to enter the Japanese market. After the capitulation, Japan became fascinated by American culture. Jazz, style of dress and American movies were common in Japan. It is logical that Coca-Cola (which represented the American spirit) will be as widely accepted. Although Coca-Cola does not have a dominant position in Japan, but it does have an exceptional profit in the land of the rising sun.

Coca-Cola in France - Coca-Cola was not welcomed in France with open arms. The first appearance of Coca-Cola was after World War II and the French were not delighted to see in their stores a new drink, especially as it was of American origin. For them, Coca-Cola was nothing more than a threat to wine and French pride. At that time there was a ruling principle of national drinks. Wine in France and Coca-Cola in America. No wonder the French people opposed the U.S. beverage. Pretty soon, French government submitted a ban on Coca-Cola. Of course, the company did not give up and fought legally against the ban. Even though the court removed the ban, they still needed to win the affinity of French society. Thirty years later, the French organized the protests, where they burned all Coca-Cola products and publicly expressed their negation and rejection of American products. America and Coca-Cola became synonymous.

Coca-Cola become a threat because it represented colonized way of thinking, changing attitudes and principles and so on. People around the world became more and more obsessed with Americanism. Which meant that Coca-Cola mentally deprived people of their own national identity. It became a representative of imperial consumerism.

A STORY BEHIND THE STORY

Until in 1905, Coca-Colas advertised itself as a cure for headaches as well as other diseases, and not only as a refreshing drink. Interesting? Coca-Cola was also advertised as a tonic drink with cocaine. Very interesting and scandalous. When this was found out, Coca-Cola company was requested to change the composition of its primary products. Of course, Coca-Cola had no choice. At that time it was not known that the majority of Coca-Cola products contained substances that should not be consumed by vegetarians and Muslims, a sizable number also contained alcohol.

The media displayed philanthropic behavior, one that is ready to give pleasure and satisfaction to the people without compromising human rights and the environment. History provides facts and shows the brutal and almost "slaveholding" culture, of companies that are ready to resort to any means. While employees and former employees talk about dissatisfaction and utilization of human resources. Which side is true? Whom to believe? Topics to be debated for decades, not only for Coca-Cola but for other global company.

Coca-Cola FOR:

- Operates by ISO standards and laws
- Sponsor's great cultural events
- Collaborates with many humanitarian organizations

Coca-Cola VS:

- Deprives NACIONAL identity
- Wider mass consumer culture
- Polluting the environment
- Exploits workers
- Dry and excessively uses less water resources

Behind every story there is another, all we have to do is just take a good look for it!

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OFFENSIVE BUSINESS STRATEGIES

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ABSTRACT

This paper presents offensive business strategies, which can be implemented by the enterprise. These are the following strategies: Generic strategies (total cost leadership, differentiation strategy, focus strategy) and Growth Strategies (Strategy for market penetration, market development strategy, product development strategy, diversification strategy, the strategy of vertical integration, strategy of mergers and acquisitions).

Keywords: offensive strategies, generic strategies, growth strategies.

INTRODUCTION

According to (Ansoff, McDonnell, 1990), strategic planning is a logical, analytical process for the selection of the future position of the company in the relation to the environment. Similarly, in (Masic, 1996), the author states that strategic planning focuses on strategic decision-making, related to the nature of the relationship between organization and its environment. Group of authors (Steiner, Miner, Gray, 1986) argues that strategic planning is an essential part of strategic management.

Strategic planning is planning in the long term and refers to the organization as a whole. As part of strategic planning, the task of managers is to determine what the organization should be doing to be successful in the future, usually 3-5 years. Here, we distinguish the difference between strategic planning and long-term planning. In fact, any long-term plan is not at the same time a strategic plan. Most long-term plans, refer to a simple extrapolation of past situations in the future. On the other hand, strategic planning involves decisions about which jobs should be developed further, which jobs should only be maintained, which should be eliminated, and which new jobs should be introduced and developed. Therefore, we conclude that strategic planning is much more complex and that it requires more time, compared to the long-term planning.

While operating, the company may opt for one strategy or combining several strategies simultaneously. In order to select an appropriate strategy, it is necessary first of all to consider as many options available for strategic action.

TYPES OF OFFENSIVE STRATEGIES

Offensive strategies include: (Nikolic, 2007)

1. Generic strategies (total cost leadership, differentiation strategy, focus strategy) and
2. Growth Strategies (Strategy for market penetration, market development strategy, product development strategy, diversification strategy, the strategy of vertical integration, strategy of mergers and acquisitions).

GENERIC STRATEGIES

Professor Michael Porter believes that, in its formulation, strategy requires analysis of the industry (i.e., its attractiveness) and the position of the company within that industry. This analysis is the basis for the selection of some of the generic strategies. (Porter, 1979)

In an analysis of the industry, Porter identified five forces: (1) competition between the companies, (2) the threat of new companies entering the market, (3) the ability to use substitutive products or services, (4) the bargaining power of suppliers, and (5) the bargaining power of customers. Based on analysis of the industry and its position in the industry, the company can and should adopt a generic strategy. These strategies are generic as they can be suitable for a wide range of different types of organizations.

STRATEGY OF COMPLETE COST LEADERSHIP

This strategic approach is aimed at reducing costs, and is based largely on experience. The focus may be on careful monitoring of costs in areas such as research and development, sales and service. The company aims to have a low cost structure compared to competitors. Central to this strategy is usually required relatively large market share and efficient production.

The strategy of cost leadership does not mean that the company has in its offer products / services at the lowest prices in the industry (usually companies with the lowest prices in the industry are considered inferior). In addition, there is insufficient benefit from this strategy if the company is only one among many that has low costs. The advantage is achieved with superior management, concentrating on the possibility of reducing costs without innovation and product improvement.

DIFERENTIATION STRATEGY

A company that follows the differentiation strategy seeks to offer a unique product or service, compared to an industry in which it operates. The goal is to get products / services more attractive, original, valuable to customers compared to competitor's products. The automotive industry is rich with examples of differentiation strategies: Mercedes, BMW, Porsche, Ferrari, Jaguar and Rolls Royce in particular. Among the brands of scotch Chivas Regal stands out, among Rolex watches, etc..

Companies that implement differentiation strategy do not ignore the costs, and gain a major competitive advantage through differentiation. Product characteristics, which are important to consumers, are differentiated. Therefore, depending on the type and use of the product, we can differentiate size, shape, color, weight, design, materials, etc. Also very important are the intangible product characteristics, such as social, psychological, sociological, aesthetic aspects of the products, the desire for status, exclusivity, individuality and safety, etc.

The main advantages of this strategy could be summarized in the following: creates loyalty, can achieve higher prices, it allows the acquisition of direct competitive advantage. However, there are several dangers in differentiating. Porter (Porter, 1985) indicates a risk that the company does not consider all of the possibilities for differentiation. In addition, you should avoid the attractiveness and uniqueness that have no meaning for the consumer, too much differentiation, too high or too low prices, high cost of differentiation etc.

THE STRATEGY OF FOCUSING

A company that adopts strategy of focusing concentrates on the particular group of customers, a special line of products, specific geographical area or other aspects that become the focus of its interest. Instead of serving the whole market with its products or services, the company focuses on a specific segment of the market, which may be served well. It is the basic assumption of this

strategy that the company can serve, more effectively and efficiently, a narrow market than the companies, which are offering their services in multiple markets, or across the market.

For the strategic of focusing of particular importance is the proper choice of the market. In addition, among other things, take care of following:

- Select market segments that are less sensitive to substitute,
- Selected segments must be attractive to the size and growth rate,
- There must be consistency between the capability of the company, and the needs of the segment,
- Selected segment is not of particular importance for the competition, or the competition is weak.

According to Porter (1985) the company should definitely opt for one of these generic strategies after analyzing the industry and consideration of its position within the industry. It is possible to combine multiple strategies at once. It is also possible that the large companies in different sectors simultaneously apply different generic strategies. In theory and practice, companies often combine the strategy of low cost and differentiation strategies. Some authors believe that between these two strategies there is no sharp border. This is one of the most important reasons, why Porter's view of generic strategies, suffered remarks, but it is still dominant.

GROWTH STRATEGIES

Growth strategies are based on the ratio of product - Market. Specifically, it is important that the top management of the company examine fully the potential of its products, as well as the needs and demands of the market. On this basis, a decision is made, about the choice of one or more growth strategies.

Companies that pursue growth strategies have some common characteristics: these companies have to grow faster than their markets, these companies tend to generate above-average profits in their respective fields, these companies can innovate and quickly adapt to changes.

STRATEGY OF MARKET PENETRATION

The market penetration strategy seeks to capture the existing market with existing product. This is typically the initial strategy of small businesses or new businesses. All resources of the company are concentrated on one business area. This may be a safe strategy in a turbulent environment: companies are advised to focus on tasks that they know best to do.

According to (David, 1986), market penetration strategy is useful in the following situations:

- Existing market is not saturated with existing products and services,
- Rate of use of the products to existing customers could significantly increase,
- Market shares of major competitors is reduced, and the total sales in the industry increases,
- Correlation between the income and marketing costs has historically been high, increase the size of the economy is the basis for a competitive advantage.

According to (Kotler, 1984), market penetration is achieved through:

- increased utilization rates of existing customers,
- attracting consumers from competitors,
- Attracting people who previously did not use the product.

According to (Thompson, 1990), there are three limitations in the strategy of market penetration:

1. Company growth is gradual, not explosive. However, a gradual increase is not necessarily a disadvantage.

2. The company becomes sensitive to changes in the attractiveness of the product, and / or branches.
3. Particular importance of this strategy is for small businesses, which are limited to the niche markets (specific customer needs).

MARKET DEVELOPMENT STRATEGY

The market development strategy aims to conquer a new market with an existing product. It is achieved by finding new market segments in the domestic or international market. A prerequisite for the success of this strategy is the quality analysis of the attractiveness of a potential new market segments. It is also important to identify the segments that are not covered by the existing product. Similar to the market penetration strategy, market development strategy carries low risk, because it goes on the related markets with existing or slightly modified product. Promotion and distribution play an important role in support of this strategy.

According to (David, 1986), market development strategy is useful in the following situations:

- New distribution channels are more reliable, economical and qualitative,
- Company is satisfied with the achieved results of operations,
- There is uncovered or unsaturated market,
- Company has sufficient capital and personnel to carry out the expansion of the market,
- Company has a surplus of unused capacity,
- Enterprise in basic business becomes global.

PRODUCT DEVELOPMENT STRATEGY

Product development strategy aims to capture existing market with a new product. The aim is to attract new customers, and those who own the old product are stimulated to buy the new model. The new product includes the following categories: a brand new products for the world (creation of new products), new products for the company (new product) or improved existing products (innovation of products). The first option is the most risky because customers may not accept the new product. The last option is the least risky and easiest, and most companies just opt for the innovation of products. In any case, the product development strategy requires a good estimate of the demand, significant support from the research - development function of the company, as well as the marketing support.

According to (David, 1986), product development strategy is useful in the following situations:

- Consumers have a positive experience with existing products of the company, which gives them the confidence that the new products are at least as good,
- Company operates in the industry with rapid technological developments,
- Company operates in the sector of high-growth,
- Main competitors offer a better product at similar prices,
- Company has high-quality research - development function.

DIVERSIFICATION STRATEGY

Diversification strategy aims to conquer a new market with a new product. The aim of the company is to reduce its dependence on existing operations, which reduces the attractiveness, and to focus more on the new, attractive business areas. Companies that perform well in the terms of its existing business, rarely decide on the choice of diversification strategies.

Diversification strategy is applied in the following situations:

1. The company cannot achieve their business goals with the existing width of product - market ratio. The reasons for this may be a drop in demand, market saturation, increased competition, obsolescence of products, rapid changes in the consumer needs and others.

2. The company wants to invest in cost-effective and rational use of its profits. These are situations in which the company is due to its good results, can afford the "luxury" to deal with the diversification, although it still did not use other, less demanding and less ambitious growth strategy.
3. Diversification provides a higher return from the expansion of existing business. These may be situations, where the research - development function of the company is coming up with new products that do not fit into existing business orientation of the company.

There are two general approaches to enterprise diversification: related and unrelated diversification. Which approach will be applied in a particular case depends on the degree of correlation (similarity) of a new product to other areas of business. The connection is reflected in the similarity of the following factors: using the same technology, staff expertise, common distribution channels, common suppliers and sources of raw materials, the similarity of manufacturing operations, logistics and others. In the case of related diversification, these factors have a greater familiarity with the existing areas of business. In the unrelated diversification, this closeness is significantly lower.

THE STRATEGY OF VERTICAL INTEGRATION

The strategy of vertical integration expands the scope of the organization. This can be achieved in two ways:

1. Expansion of activities goes upstream to the sources of supply. This means that the company can build a long drive or incorporate an independent company for the production of raw materials and certain components and parts. Practically, the company remains in the same branch, but there are two stages in the chain of the total activity in the industry.
2. Expansion of activities goes downstream to the final users of the product. This means that the company can build or merge a number of retail outlets. Within this company is expanding its activities, but remains in the same branch.

Advantages of the strategy of vertical integration are: reduction in costs due to the elimination of certain phases, improving coordination of activities to reduce inventory; saves time which is spent on shopping, bargaining and so on. Disadvantages of the strategy of vertical integration: increased overhead costs due to the need for coordination of vertical activities, excess capacity which results if there is no optimization of the size of the drive (technology dependent); possible weaknesses in the organization of vertical activity, which can cause lack of synergistic effect.

The main problem in the vertically integrated company is the system of internal prices, which should operate on market principles. The security of the internal market is not enough to stimulate organizational units to provide the maximum in its activities. In addition, the danger is in the cost of bureaucracy.

Due to these weaknesses, it is possible that the company strategy in a controlled extent, uses some aspects of vertical integration. One option is that the company entered into long-term contracts with suppliers. Long-term contracts are a substitute for vertical integration. In this way, the company takes advantage of this type of vertical integration, while protects itself from the numerous bureaucratic costs.

STRATEGY OF MERGERS AND ACQUISITIONS

Merging is a transaction that includes two or more companies whose stocks are exchanged, during which a new company is created.. The connection is usually carried out between companies of similar size and success, with a process that is "friendly". The resulting company will be called, which combines the names of businesses that have merged (integrated).

Acquisition is a transaction in which one company buys another, usually smaller company. Bought the company is absorbed and, thus, becomes an organizational unit of the company that bought it. Acquisition can be "friendly" or "hostile." Friendly acquisition is similar to the merger, and usually begins with the negotiation of the merger between the management teams. Hostile acquisition is also called takeover. In that kind of situation, company who takes over, buys stocks until it acquires major of stocks. Company that has been bought is defending itself by buying its own stocks, looking for friendly acquisitions with another company or looking for protection from the state.

CONCLUSION

The average successful or successful companies can only apply offensive strategies. These strategies require a certain level of business performance and development of the company. It is not easy to follow the growth strategy. It demands that the company is at least average successful, and makes continual efforts in terms of growth and development. However, the company has to choose a strategy that is appropriate in the circumstances of the environment. This strategy should take into account the current state of the company, its strength and its weakness.

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PUBLIC RELATIONS AND OTHER DISCIPLINES

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ABSTRACT

The paper points out the similarities and differences between public relations and other related disciplines. We analyzed similarities and differences between public relations and marketing, as well as the similarities and differences between public relations and promotion and propaganda. We also point out the relationship of public relations and journalism. Such analyzes have theoretical importance for a better understanding of the essence of public relations, and their role and place in the mix of total communication activities of the organization.

Keywords: public relations, marketing, promotion, propaganda, journalism.

INTRODUCTION

Public relations, marketing, promotion and propaganda (advertising) are disciplines that have much in common, but among them, there are also significant differences. Their objectives are similar: change of ingrained opinions, to impact on the public or individually opinion, and encouraging the purchase of products / services. However, the observed disciplines are using a variety of methods and ideologies to achieve these goals. Given the variety of concerns when it comes to these similarities and differences, it is useful to review this particular topic.

PUBLIC RELATIONS AND MARKETING

According to (Gordon, 2011), The Chartered Institute of Marketing, a leading international institute of marketing, defines marketing as “The management process of identifying, anticipating and satisfying customer requirements profitably“. Marketing is focused on products (services), pricing the products (services), concerned on the best way to sell products (services), how best to meet the needs and desires of consumers, how to make the product (service) available in the right place, and how to inform people about the existence of a product (service). Marketing mix concept has been developed in this way. Marketing mix is a combination of marketing tools used by the company in order to achieve an optimal level of sales. These instruments of marketing are product, price, promotion and place (the four Ps). It is important that the elements of the marketing mix are well balanced and focused on the consumer.

The boundaries between marketing and public relations are often not clear which leads to frequent overlapping between these two disciplines. General similarities between marketing and PR can be summarized as follows (Wilcox, Cameron, 2009):

- Both the marketing and PR deal with relationships and use similar communication tools in addressing the public.
- Both the marketing and PR have main task is to ensure the success of the organization and its economic survival.

The basic difference is this: marketing is focused on customers and sell products and services, PR cares about building relationships, and creating goodwill for the organization in public (Wilcox, Cameron, 2009).

Similarly, according to (Grunig, 1992) there is a clear difference between marketing and PR: Marketing needs to communicate to the markets regarding the products and services of the organization; while PR needs to take care of all audiences. The main aim of marketing is to generate money for the organization through increased demand for goods and services. The main goal of public relations is to save money for the organization by building relationships with the public, which will improve the organization's ability to achieve its mission.

Some other differences of marketing and PR include: (Davis, 2005)

- Marketing is only interested in their customers (consumers), while PR is interested in creating the most favorable conditions for the overall organization.
- Marketing is focused on sales and development strategy; while PR follows the entire business environment.
- Marketing seeks to identify, anticipate and satisfy the needs of customers in a profitable manner, while PR includes all types of communication designed to serve the best interests of the organization.
- Marketing focuses its energy to external markets, while PR acts inside and outside the organization.

Based on previous, it can be concluded that public relations have a much wider range of work than marketing. This is also supported by the observation that, public relations, among other things, cover the following activities, which are not in the domain of marketing: internal employee relations, establish contacts with governmental structures, social relations, crisis, corporate social responsibility, environmental aspects of production and business operations, participating in strategic planning (Blek, 2003).

PUBLIC RELATIONS, PROMOTION AND ADVERTISING

Promotion is one of the four marketing mix instruments. According to (Vračar, 1997), the promotion has five types of activities: economic propaganda (advertising), personal sales, sales promotion, publicity and public relations. In addition, there are also popular new forms of promotion: sponsorship and direct marketing. It is important that organizations achieve optimal combination of the elements of the promotional mix. This method gives the maximum demand for the products (services) and the maximum effects of the business. The optimal combination of forms of promotion depends on the nature of the product, the stages during the life cycle of the product, company size, market characteristics, promotion budget, and others. (Kotler, Armstrong, 1996).

From the above we can see that public relations represent a form of promotion. In this part of the objectives of public relations are consistent with the objectives of promoting: to win the trust of the public, customers, partners and other target groups in the region. Therefore, in practice, sometimes it is difficult to distinguish the activities of promotion from the public relations activities. However, public relations are not only promotion; they have other activities and goals (Nikolic, 2012).

Because of some similarities, comparison of advertising and public relations are often made. In common for advertising and public relations is that they strive to get to know potential customers to new or existing values of the organization, especially with products and services.

According to (Filipovic, Kostic, Prohaska, 2003), the main difference between commercial advertising and public relations is the following: economic propaganda is aimed at persuading people to purchasing, on the other hand, public relations aim to persuading in order to create potential users. Although the global objective is the same, there is a significant difference in the organization's way of communicating with targeted groups. Economic propaganda is almost exclusively focused on consumers, and the main goal is the sale of products and services. Public relations have a much wider

range of activities and significantly higher number of groups to which they address, and the main goal is to create a positive image of the organization in an environment.

Based on several references (Gordon, 2011; Wilcox, Cameron, 2009; Blek, 2003), it is possible to summarize the other differences of advertising and public relations:

- Propaganda is buying time and space in the media. In fact, all mass media generate the largest revenue precisely in this way. In this case, it is controlled precisely and completely by the Department of Propaganda: message content, manner of presentation of the message, broadcast time, place of broadcasting, the number of broadcasting etc. On the other hand, public relations rely on gaining media attention. This is often done through publicity. PR practitioners have the task of preparing certain materials, but the decision about what will be announced, when and how they will be announced and whether it will be published at all, is made by the editors of mass media.
- Propaganda relies almost exclusively on mass media. Public relations use a number of other communication tools: brochures, various publications, slides, special events, public speeches, publishing news, articles, etc.
- Propaganda is focused exclusively externally (toward customers), and public relations are oriented and externally (toward the media, the community, government agencies, etc.) and internally (toward employees).
- Propaganda has relatively short-term objectives while public relations have both short- and long-term objectives.
- Propaganda is oriented towards the market and sales, and public relations are oriented towards attitude or situation.
- Propaganda often relies on the elements of self-praise, so that commercial messages are often not entirely trustworthy. The aim is to provide uncritical acceptance. Public relations, do not hide the truth and do not decorate the reality, they only speak the truth. If public relations, by any means, deviate from this principle, it will eventually have a negative impact on the organization.
- Propaganda executes one-way communication: from companies toward consumers. Public relations perform two-way communication: dialogue, understanding, trust and harmonious relations through discussions and arguments

PUBLIC RELATIONS AND JOURNALISM

Between journalism and public relations, as well as between journalists and PR practitioners, there are numerous connections. These links are natural since the PR practitioners referred for journalists. The algorithm of this connection is usually as follows: PR practitioners are generally proactive in trying to attract the attention of selected journalists, in order to offer them something interesting. Contacts initiated in this way can develop after a certain time, journalists become the ones who initiate meetings and discussions.

In considering the relationship between the journalists and PR managers, it is impossible to exclude the following fact: Journalists often have no respect for the PR profession, as well as for the PR practitioners. Based on research (Nikolic, Savic, Vukonjanski, 2009), it can be said that a similar situation exists in Serbia. In this study, the journalists, the number of comments, pointed out that a number of PR practitioners in the workplace is set for a good physical appearance and / or political affiliation and in fact that they have a modest knowledge and skills, and a bad attitude and bad behavior. Of course, they always emphasized that there are positive exceptions. There is an opinion (Davis, 2005) that it is actually dishonest of journalists and their fear of the growing importance PR profession gets. Journalists concerned that, in certain circumstances, PR practitioners become more recognized as a reliable source of news than the journalists, and calls into question their own *raison d'être*. Encouragingly, recently, journalists are starting to appreciate the PR profession and PR practitioners.

It is absurd (or maybe not) that many journalists after a certain number of years in journalism began to engage with the public. Some believe that every good PR practitioner has previously worked as a journalist. However, this does not mean anything: Journalism and PR practice, significantly, requiring different skills. For example, some journalists who have become PR practitioners at some point realize that PR is too demanding practice and then return to journalism.

Anyway, journalism and PR have many similarities and differences. The similarities can be summarized as following: interviewing people, gathering and synthesis of large amounts of information, writing in a journalistic style, delivering high-quality text on time.

While using some of the same techniques, journalism and PR are different in the following: (Wilcox, Cameron, 2009)

- The scope of work. Public relations, as it was mentioned, have a much broader scope of work and write in a journalistic style and media relations, although very important, are only two of these elements. Among other things, PR requires strategic thinking, problem-solving ability and other management skills.
- The objectives. Journalists gather and select data with the primary goal to inform the public with news and information. PR practitioners do the same, but have other goals: changing people's attitudes and their behavior in line with current and future interests and goals of the organization.
- The audience. Journalists primarily write for a wide audience - readers, listeners or viewers, depending on the type of media. By definition, the mass audience is not clearly defined and generally refers to the public. In contrast, the PR practitioners carefully select segments of the audience to whom they address. Messages are adapted to the needs, concerns and interests of target audiences. In that way, PR achieves maximum effect for the organization.
- The communication channels. The majority of journalists use only one channel (medium) and it is the one on which he is employed (newspapers, radio, television). PR practitioners use a number of different media in their work (newspapers, radio, television, e-mail, brochures, posters, trade journals, blogs, websites, etc.).

CONCLUSION

Between public relations and marketing, there are significant similarities and differences. The situation is similar when comparing relations with promotion and advertising. Generally, public relations have a greater activity and their main task is to establish good relationships with target audiences, creating a positive image of the organization to the public, as well as building and strengthening good corporate image of the organization. The analysis, recognizing a the place and role of public relations within the overall communications activities of the organization, have a great theoretical and practical significance for a better understanding of the essence of public relations.

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POSITIVE AND NEGATIVE EFFECTS OF EMPLOYEE BLOGGING

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ABSTRACT

The expansion of the web blogosphere has significantly empowered employees and has provided a dynamic new medium used to communicate with a variety of internal and external audiences. Some companies realize the potential of blogs, recognizing that those written by their employees can be valuable assets: ways to communicate in a human voice within or outside the organization, to find previously undocumented expertise, and to create unexpected connections between people and ideas. Others are skeptical about losing control over to this new media, fearing that employees may make disparaging remarks about their companies, reveal trade secrets, or simply embarrass their companies and thus bring significant reputation loss. The aim of this paper is to analyze the phenomenon of weblog itself, its credibility, understanding its usefulness in PR practice, companies' response to this new form of consumer generated communication, positive/negative aspects of employee blogging, recommendation guidelines and examples of ethic issues related to this subject.

Keywords: blog, employee blog, effects of employee blogging, employee blogging policies.

INTRODUCTION

The term "blogs", abbreviation of "weblogs" are "created in minutes (Key, 2005), easily published, personal web sites that serve as sources of commentary, opinion, links, and uncensored, unfiltered sources of information on a variety of topics" (Edelman & Intelliseek, 2005) began sporadically. It is believed there are millions of blogs in existence nowadays (100,000 new blogs are created every day). Because the blog can be used to convey various types of information, such as personal, public, commercial, and political, it has become an effective communication tool over the internet. Weber (2007) points out that the communications world is dramatically moving in a digital direction and those who understand this transformation will communicate much more effectively than those who do not. One of the coolest things about the Web is that when an idea takes off it can propel a brand or a company to seemingly instant fame and fortune (Scott, 2008). Web blogging, particularly employee blogging, has already changed many aspects of employee communication. The phenomenon of employee blogging is nothing less than revolutionary (Winer, 2005), so a growing number of organizations, now look for ways to accommodate this blogging phenomenon.

The potential impact of blogs on public relations and corporate communications is also phenomenal. Public relations in the digital age requires understanding how company's key constituents are gathering and sharing information and then influencing them at key points (Key, 2005). Doing so requires strategies that embrace the digital age in this light, and knowing the reasons why employees are blogging. Some of them include: positioning the employee as a thought leader, testing ideas to encourage audience feedback or to see if they generate interest, building communities and personalizing relationships with other employees and members of other strategic publics (Wacka, 2005, Backbone Media, 2005). Employee blogs have "massive, almost unlimited

potential to share knowledge, foster dialogue, market goods and services, and open up two-way channels of communication” and so they empowered employees as never before (Crescenzo, 2005).

POZITIVE AND NEGATIVE EFFECTS OF EMPLOYEE BLOGGING

Blogs, as well as other modern media, have the potential to help companies in increasing the visibility of their products and quality without spending huge amounts of money in advertising sponsorships, etc. Ideally, employee blogs can be an effective means for an organization to tap into its employees’ latent potential and let them act as online evangelists whose word of mouth will bring added value to the customer (Lee, Hwang, Lee, 2006). Despite many potential benefits, organizations do not appear to embrace blogs with open arms because of their skepticism about losing control over to this new media, fearing that by writing negative things (criticize the firm or its products, say embarrassing things about coworkers, or promote competitors, exchange confidential information), employees may bring significant reputation loss to the company. Overall, companies show mixed response towards blogging – from complete aversion, strong control over negative posts, to complete encouraging. Jonathan Schwartz, former CEO at Sun Microsystems, says: *“If you want to lead, blog... We talk about our successes - and our mistakes. That may seem risky. But it’s riskier not to have a blog.”* (Schwartz 2005). The “risky” nature of blogs has resulted in disputes between employee bloggers and management over what is appropriate blogging content. It seems that the ethical and legal rules about this were not sufficiently analyzed.

Ethics is a virtue that could be identified and practiced. It focuses on what is *good* and what is bad, opposing to the law questions of right and wrong. Societies make and change laws, but ethical principles, theoretically at least, remain constant over time. Ethics deals with questions of moral behavior and is similar to a set of principles or a code of moral conduct. “a person determines what is right or wrong, fair or unfair, just or unjust. It is expressed through moral behavior in specific situations. It is necessary to stress the importance of individuals and individual actions and opinions in public relations ethics, and few aspects of public relations ethics focus more upon the individual than those surrounding employee blogs. Authors of weblogs have unlimited control over their content and as such can choose how ethical they want to be as they communicate via the web. The final arbiter in judging in contemporary ethic study in public relations, is the decision maker, all of which places a considerable amount of responsibility upon the many authors of employee weblogs.

There are conflicting viewpoints regarding whether employee blogs are good or bad. Companies such as Microsoft, Dell, Hewlett-Packard, Honeywell International, IBM, Sun Microsystems, Viacom and Xerox have encouraged their employees to blog citing these benefits: (Conlin, Park, 2004)

- Employees’ online diaries can be a seductive way to lure customers into conversations.
- They’re sticky – readers check back several times a day. And posts get linked to other sites amplifying their impact.
- They’re efficient. Employees can post questions about their work and get instant, mass feedback.
- They’re free. Blogs can serve as a global focus group, letting employees know exactly what customers want.
- Done well, they can humanize faceless behemoths.

On the other hand, this form of online employee activity raises a host of concerns for both employers and employees, such as: (Brown, 2005)

- Reduced productivity - if employees are blogging during company time (and using company resources).
- Disparagement issues - disgruntled employees have been fired for their blog postings. A 33-year old employee was terminated from his Canadian law firm in 2003 for venting his frustrations about his law firm on a blog. These postings may have a disparaging effect on a

company and its products, services, goodwill, or overall image (sometimes known as “cyber smearing”).

- Harassment issues - employers also may face liability for sexual or other forms of harassment and defamatory, offensive, or inappropriate comments as a result of employee blogging.
- Privacy issues - Employers need to realize the vulnerability in their computer systems. It just takes one employee to take advantage of the system and try to steal client or employee information. In addition, external hackers test server after server at various businesses to find one that has not been “locked” — thus, threats come from both inside and outside the company.
- Trade secret issues - disgruntled employees sometimes intentionally or inadvertently disclose company trade secrets or confidential information on a blog for all to see. An employee might reveal an internal list of bugs for an important product, or reveal information about an unlaunched product in an effort to seek fame.

As can be seen from mentioned above, companies are understandably concerned that negative blog postings by employees may adversely impact their reputation. A typical reaction may therefore be to either completely forbid blogging by employees, or forbid any negative posting whatsoever. But there is an alternative view about negative posts on employee blogs. Michael Wiley, Global Chief Social Media Officer at VivaKi, former Director of Communications GM, suggests: *“Don’t shy from posting negative comments from consumers. A lot of what blogging is about is authenticity, getting beyond corporate speak and PR, and really creating a conversation. Not being thin skinned and accepting the negatives, that’s key”*, (Brian, 2005).

EMPLOYEE BLOGGING POLICY

Blogging has tremendous potential to shift the balance of power from employers to employees, as employees gain the ability to communicate their concerns to other employees, customers, neighbors, stockholders, and other parties interested in the employer.

To maximize the protection from possible negative effects of employee blogging activity, employers should adopt clear policies governing employee conduct and obligations and directly address the issue of harmful or embarrassing Internet activity and content. The policies should let employees know that their personal pages, blogs, and posts could get them in trouble at work, and explain the types of content that could create problems.

Here are some topics Lisa Guerin, an editor and author specializing in employment law, suggests for companies that look for ways to accommodate employee blogging phenomenon should cover: (Guerin, L)

- Use of company resources. The policy should prohibit employees from using the company's equipment or network to write or publish personal content, or from doing so on company time.
- Company policies apply online. Employees should be reminded that company policies prohibiting harassment, protecting trade secrets, and so on apply whether an employee makes these statements online or in the bricks and mortar world.
- Company name and marks. Company’s blogging policy should prohibit employees from using the company's trademarks, logos, or other images, and should also prohibit employees from making false statements about the company. If employees choose to identify themselves as employees of the company in an online post, they should be required to clearly state that the views they express online are their own and that they do not speak for the company.
- Inappropriate disclosures. Employees should be reminded that the company may have a legal duty to keep certain facts confidential, such as information on stock offerings. If employees

have concerns about whether something they plan to post falls into this category, they should raise the issue with a manager.

- Inappropriate comments. Employees should be informed that it is inappropriate to make embarrassing or unkind comments about employees, customers, clients, or competitors because personal posts can be read by virtually anyone, and that they should use common sense when deciding what types of content are appropriate.

In response to employer fears that employee bloggers will make disparaging remarks about the company, divulge trade secrets, or simply embarrass the company, many companies have begun instituting policies to regulate employee blogging activity.

The Ragan Report (article by Sarah McAdams, February 20, 2006) advises companies to “address blogging head-on with a written policy” and cites IBM for setting a good example with its document that “demonstrates the best way to balance open communication and legal protection”

In 1997, when many companies were trying to restrict their employees' Internet access, IBM did just the opposite. At present, this company management let any employee whether he will publish his discussion online or not. However, the company continues to recommend IBMers' a responsible involvement in this new, rapidly growing space of relationship, learning and collaboration, having on mind that it can contribute directly or indirectly to the improvement of IBM's products, processes and policies. Some of the basic instructions are:

- Knowing and following IBM's Business Conduct Guidelines
- Awareness that blog it is not corporate communication so IBMers are personally responsible for their posts.
- Necessity of identifying the author and writing in the first person, with recommendation of disclaiming that opinions are your own
- Importance of the respect of copyright, financial disclosure laws, confidential or other proprietary information
- Citations should not be included without approval.
- Emphasizing the respect of the audience; cautious of the risk of religious, racial, sexual and political intolerance.
- Concern for argumentative reasoning and care to correct writer's own mistakes by himself.
- It is essential to add value to the post and to provide worthwhile information and perspective, and to maintain trust and personal responsibility in all relationships.
- One should make sure that blogging does not interfere with his own job or commitments to customers.

EMPLOYEE BLOGGING IN MICROSOFT

Some companies, motivated by the positive assets of blogging, engage with this media, sometimes providing support to maximize positive effects or setting boundaries to minimize risks. However, for employees, the activity of authoring a weblog, even when clearly work-related, often feels outside the corporate sphere of influence. So, in order to successfully exploit weblogs, a business must understand the personal interests and concerns of bloggers and create an appropriate environment.

Microsoft blogging is well established among the thousands of employees (including executives) as a legitimate activity. It is supported by the company with external and internal servers, blog services, and MSN space platforms. Employees are not obliged to use official company servers, to report that they are starting a weblog, neither to identify themselves or their affiliation. There are no exact guidelines for weblog practice, except the general rules about proprietary or sensitive information. The formula is “to be smart” when blogging, and careful while “swimming” in the grey area between the clearly confidential and the clearly publishable. For most of the authors, blog is a challenging experimental activity, which needs reflection on internal and external feedback, to

find what is comfortable for blogger, readers, and the company, trying to balance conflicting interests, constantly considering limits and consequences.

Three broad categories of work-related weblog use are visible: (Efimova, Grudin, 2005)

- Direct communication with others inside and outside the organization. A weblog is an easy way to provide information or help, share tips, to engage in direct interaction with peers or with consumers of one's work, to learn about the reception of a product, or to become visible as an expert in a specific area. Company encouragement to interact with customers and communities provides a supportive atmosphere and eliminates potential barriers, but do not directly induce blogging.
- Documenting and organizing work. A weblog can serve as a personal archive enhanced by feedback from readers. Some bloggers reuse old blog entries in drafting more formal documents or providing a link for answering a frequently asked question. Also they can avoid "spamming" others with experiences and ideas by placing them in a personal post.
- Showing a human side of the company. Blogging is a way to demonstrate that people in the organization care and are passionate about their work. Bloggers could recount stories behind products to help people understand why particular choices were made, or to share details of daily routines to give outsiders a sense of their work context. Weblogs can also change the company's image in the eyes of potential employees; can provide insight into selection or promotion procedures.

Microsoft bloggers themselves underlined two key personal effects of blogging – time and visibility. In employee weblogs, ideas that were unarticulated or hidden in personal archives become visible to others, interlinked and searchable. Blogging saves time for reusing entries, quickly helping others or learning, getting answers to questions, receiving feedback on ideas, finding people inside or outside the company with similar interests or needs. Sometimes, external weblog posts can help in connecting to a competent person or relevant information inside the organization and an idea can result in a prototype developing in another part of the company. A weblog also gives visibility to its author. Through writing, a blogger's expertise becomes exposed beyond his nearest circle of colleagues. Being recognized externally as an expert gives blogger more negotiating power or security, a customer positive feedback gives his idea more validity, which can accelerate his carrier advancement.

CONCLUSION

From the previous experience it can be concluded that every company aspiring to success needs employee blogging. Some of them are recognizing that weblogs written by their employees can be valuable assets: ways to communicate in a human voice within or outside the organization, to find previously undocumented expertise, and to create unexpected connections between people and ideas. Like most modern inventions, this medium has its positive and negative aspects, which increase or diminish its importance as a tool, as well as the achievements of the company that are acquired through it. It can also be assumed that there is no universal recipe for precise routing and demarcation of good and bad blogging, but, based on the successful examples, appropriate guidelines to start can be set.

Each participant in this process, in turn, has a share in formatting a frame for a good blog. Employers should first create a completely adequate working environment - positive atmosphere, collegiality, working conditions for employee satisfaction, commitment to the job etc., and then should formally set and regulate the rules of blogging policies. What is appropriate policy varies depending on the culture and needs of the employer. Some of the messages that employers should send by blogging policy are: respect yourself, your coworkers and your company, and do not publish anything that will embarrass, insult, demean, or damage the company's reputation, its employees, products and customers. These guidelines are meant to be necessary if company wants to extract the maximum benefit from blogging such as: the accelerated information flow, increased

productivity, improved reputation and customer engagement. It seems that, in contrast, for employees this activity is an individual thing, above all, and it is based on personal responsibility, largely depending on the employer's previously mentioned actions. Employees should keep in mind the positive aspects of blogging that will be of personal benefits such as: providing a space to share passion for work, to document and organize ideas and work practices, to find and engage others inside and outside the organization.

Over time, with proper guidance, blogging will prosper, but it will continually set new challenges for employers and employees; their responsibilities will change, as well as their mutual relationship - experience and feedback change a blog. In this overall process personal judgment and responsibility are inescapable elements of employee blogging.

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EXPERT SYSTEMS - MANAGEMENT APPLICATION

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ABSTRACT

Understanding that expert systems are computer programs which emulate problem solving as an expert would, we can conclude that these systems solve realistic problems. Though, these systems are not able to give concrete answers to any of the questions in any given situation. Because of that, the goal of expert systems is that the computer is able to provide adequate help for a manager when deciding. But how does one such system work? These programs enable access to information and knowledge, thus facilitating the decision making process. An expert system can be the first tool for any human expert when solving a problem, and on the account of entered data and built-in logic algorithm (which make the basis of knowledge) is able to help the user during the decision making process.

Keywords: expert systems, expert systems in management.

INTRODUCTION

Firstly to explain what an expert system is. It consists of computer programs which includes expert knowledge. The inclusion of expert knowledge via computer programs can be realized by many means in which two fundamental concepts are underlying and combined:

1. The knowledge of experts in a field, which is not algorithmically organized, is stored in a special database system and is accessed from there by the use of specially devised procedures.
2. The knowledge of experts is built in the system's procedures (procedure knowledge), it enables the system to form modify the database knowledge system with user interaction.

From the aspect of the user of expert systems it seems like an intelligent consultant - an advisor in a field. Seeing that it contains knowledge and experience of one or more experts, such a system enables a user to solve certain problems and get answers or advice on how to act in certain situations. That way, and without the presence of an expert, the needs of a user can be fulfilled by consulting the expert system. If combined with the computer's ability to store and process a large number of different information and data, then it is evident that with the development of expert systems a new quality is produced, which by far surpasses the capabilities of individual experts (Hotomski, 2006).

The basic properties of experts are to:

- apply, in an optimal way, knowledge in problem solving. In doing so involves taking into account facts and predictable relevant consequences;
- explain and justify decisions and suggestions;

- communicate with other experts and broaden knowledge, restructure and reorganize understanding and knowledge;
- form and abandon some conclusions, which proves the protruding into the essence of certain phenomena and finding new governing laws among them;
- determines the fastest way of coming up with a solution and its practical use;
- intuitively (heuristically) decide where the solution to a problem lies in specific situations, based on gathered experience so far.

Though it is possible to have an expert besides during decision making at any given moment if needed, today's informatics technology can allow expert services at any time. When we talk about expert services, of course we mean expert systems (further on known as ES). It is a kind of program support which in a way substitutes humans, that is, in this case an expert. Whenever you have a type of informatics technology besides, it is as if an expert ready to solve your problem is next to you.

The building of an ES involves a collaboration of a team of experts and consists of a number of phases presented on the figure 1.

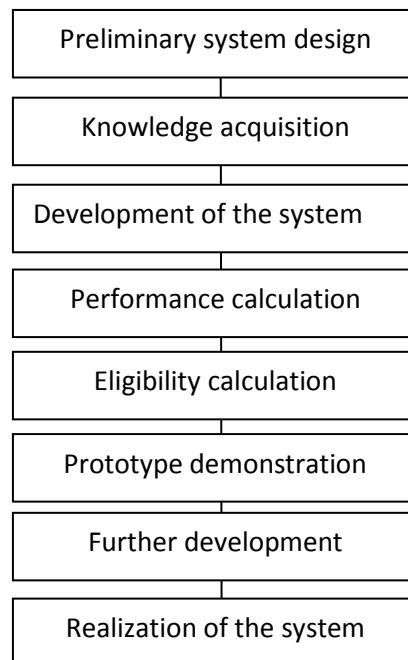


Figure 1: Classification of expert systems

Besides the concept of ES the following notions are applied: a system based on knowledge, intelligent information system, an intelligent system based on knowledge and the knowledge system. Expertise is defined as knowledge, understanding and a problem solving skill in a certain field.

The British Computer Association has given the fullest possible definition of expert systems, which is the following: "An expert system is understood as a realization of computer based skills of some expert whose base is in knowledge and in such a form that the system can offer intelligent advice or make and intelligent move about a function in process." Systematically observed under the category of ES we can take subsystems of the field of artificial intelligence. Such a field is also known as Knowledge Engineering.

ES an attempt to incorporate thinking processes into computer programs, as well as decision processes within experts. Table 1 shows their classification.

Table 1: Expert systems classification

ES activities	Problem indication	Field of application
Interpretation	Systems interpret observed data, and attribute symbolic meaning and describe situations and states	Chemistry Geology Medicine Army
Diagnosis	Diagnose systems define system malfunction based on observed data	Computers Electronics Geology Medicine
Prediction	Systems for predicting consequences (prognosis) from models and parameters	Computers Army
Shaping	Design systems configure objects in given limitations	Computers Chemistry Electronics
Planning	Planning systems shape actions and objects as models of behaviour for the goal of effect behaviour	Chemistry Computers Electronics
Control	Control systems adaptively control system behaviour based on interpretation, prognosis, diagnosis	

EXPERT SYSTEM COMPONENTS

The main components of expert systems are:

1. *Knowledge database*
2. *Operating database (database)*
3. *Conclusion mechanism*
4. *Relation with the user*

Knowledge database contains in a certain way structured knowledge from a problematic field. Usually it is declaratively presented knowledge in the form of rules, implicit type, "if... then...", frame structure or semantic networks.

Operating database (database) contains starting (initial) information, ongoing data and various facts about objects from the field in question.

Conclusion mechanism is a system of program procedures which are in accordance with a certain strategy that controls concluding, based on elements from knowledge database and data from operating database. The conclusion mechanism includes two vital parts: the mechanism of carrying out and control mechanism, which makes contact with the knowledge database and controls its updates, organization and fact selection that are relevant for the process of conclusion. Moreover, it is worth mentioning that this particular components makes the ES intelligent. Without it, this system would be a simple, standard database. This component tries to prove the hypothesis based on rules and knowledge and facts from the operating database.

Relation with the user (user interface) is a program package which enables the user to conduct a dialogue with the expert system.

Figure 2 shows the scheme of an expert system with indication of connection between all components. (Including main components).

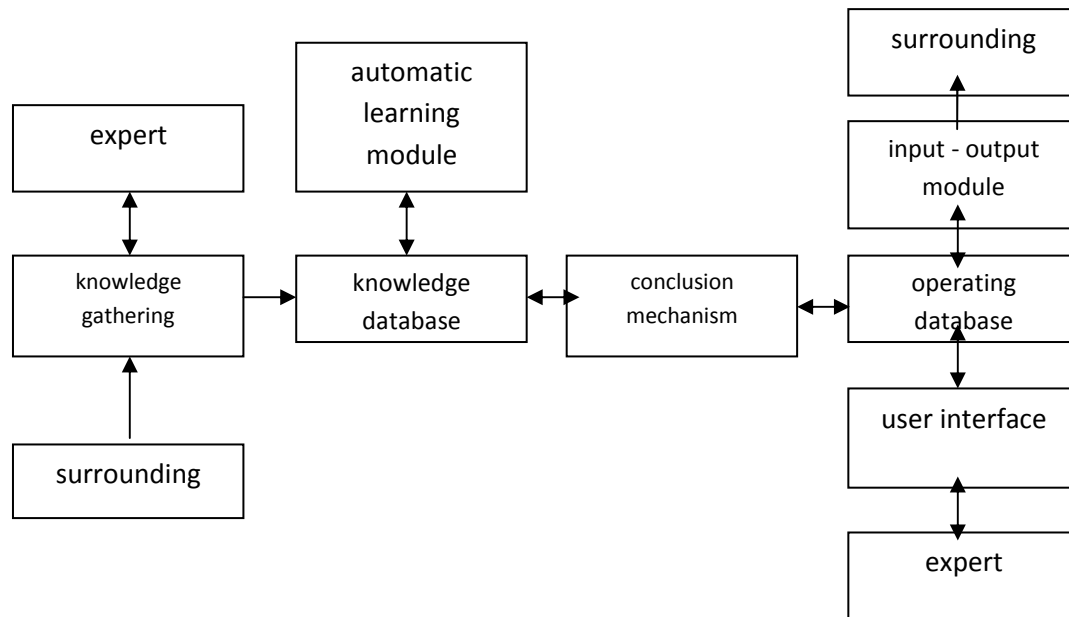


Figure 2: ES components

Expressing expert knowledge in the database via the rule "if...then..." is very widespread because of the flexibility of accepting various theoretic, heuristic and experience knowledge of experts. Besides, such structured knowledge allows easy modification and the adding of new knowledge into already formed databases. (Hotomski, 2006.)

FEATURES OF EXPERT SYSTEMS

In the heart of every expert system is the accumulated knowledge from the process of making one. "Knowledge" of expert systems is made up of facts and heuristics (experience and the sense of choosing a solution).

Facts make the main part of data about the nature of the system, its activities and goals which the system makes through those activities. Certain phenomena and manifestations of regular or irregular states in the system have their causes and consequences and are also described with sets of data. All of these data can be generally available, documented and verified in the domain of expert systems.

Heuristics are rules of personal judgment and skill in selecting and making decisions that affect the change of state of systems. It is generally poorly documented and the property of top specialists in the field that the ES covers. The level of performance of expert systems is above all the function of the size and quality of database knowledge of that system in which the integrated facts and heuristics are, and not a determined formalism of conclusion and actions which are used to search for facts.

Two types of knowledge exist:

- ***Explicit knowledge*** - written or other type of knowledge, we find it in books, periodicals and similar. This kind of knowledge is generally accepted as universally true.
- ***Implicit knowledge*** - heuristic knowledge, a type which an expert builds upon experience and which, when combined with the first type of knowledge, makes a man an expert. Knowledge is accessible and can be transferred via books or lectures.

The ability to predict is a property which originates from the possibility that an ES can be used as a model for solving problems in a given field, which as such will give answers to assigned problems and show how those answers will change depending on new situations.

All knowledge embedded in an ES is gathered via interaction with key staff found in service, department or field, so that it pictures the ongoing policy and the way the group works. That way, that collection of knowledge becomes a permanent record of coordinated best methods and practices which those people use when solving problems. When those people quit a certain firm, their knowledge will be preserved. That is very important in business systems, and critical in the army and government institutions because of frequent moving and transfer of staff. That way, acquired knowledge has become *institutional memory*, which reduces (although never able to remove it) disadvantages resulting from frequent people fluctuation.

Another important property of each ES is the *possibility of training*. ES can be sculpted so that it can provide training for newcomer personnel. They already possess certain knowledge and abilities so it is required to transfer knowledge and experience gathered and stored in databases as a means of institutional memory. It is imperative that the program possesses the ability for a fluent, friendly dialogue with a human being, as well as built-in method of learning. ES can set up for training professionals, as well as for introducing newcomers to business.

BUILDING EXPERT SYSTEMS

In expert systems knowledge is separated from the algorithms used. The knowledge database is dependent on the problem domain while the conclusion mechanism and interface are independent. However, those two independent modules together are called the **expert system shell**. With adding new databases we get expert systems. The shells are welcomed tools for making ES.

For quality shell development the following is needed:

- Selecting the formality in which knowledge will be presented
- Developing the formality for presenting knowledge adequate to that of the conclusion mechanism
- Developing the interface with which the system will explain its decisions and provide answers to questions
- Developing a method for working with unreliable and incomplete information

Automatic learning is an automatic learning process of acquiring knowledge based on information from teachers or some joint process or self-observation, that is experimenting. Results of those studies are formulas, theories, rules and concept descriptions in top quality forms. The types of learning can be classified according to many criteria.

According to the degree of inductive conclusion in students during the process of learning: direct or routine studying, learning based on speech, based on explanation, based on analogy, based on examples, independent discovery learning. The most effective type of automatic learning is based on examples.

IMPLEMENTATION OF EXPERT SYSTEMS

The goal of ES is to secure an answer to problems which require reasoning, recognition and shape comparison, acquisition of new concepts, conclusion, in short, it gives answers to questions which require intelligence. ES cannot be effectively used in fields where problem solving is basically logical conclusion, and not calculation, and where every step in process solving has a high number of alternative possibilities.

Three basic ways to use ES exist:

- The first way, where the user looks for an answer to a given problem,
- The second way, where the user is the instructor who provides knowledge into the existing ES
- The third way, where the user who learns from the ES thereby increasing knowledge

CONCLUSION

ES secure universal and permanent availability, better put, an expert is always available. There is also impartiality, because once organized ES are practical and practically consistent. ES have perfect memory and take all relevant factors into consideration. Quality times of experts are free from routine works, because ES do the given tasks and gain economic justification.

ES contains facts which an expert takes into account and practical rules which are being used when solving problems. One of the biggest benefits of expert systems is shorter decision time, routine decisions which take up a lot of time ES can handle easily and experts will have more time for creative work.

ES have a few limitations in several problem areas. Firstly, making decision in a dynamic setting with many unstructured problems, experience is not enough, that is the empiric approach. In accordance the conclusion mechanism will probably not be sufficient. ES is limited to a very narrow area because building and maintaining a big knowledge database is very hard. The system will not give a good quality answer if the problem is not restricted to specific area. Then the problem of decisions connected to a wide interdisciplinary knowledge arises.

When collecting and organizing a knowledge database, certain types of knowledge are not easily translated into the IF-THEN rules. Moreover, there is also the difficulty of heuristic knowledge specification of the manager, which is important for proper decision making.

The system interface should be realized via "natural" dialogue. However, a dialogue is not real natural language. Users need to describe problems in a defined formal language in which words and their combination have a very specific meaning.

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DEVELOPING MANAGEMENT SKILLS

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ABSTRACT

Every manager needs to improve his skills. Developing ones abilities is not an easy task. There must be a lot of will power. The main skills that manager should develop is self-awareness, time management and stress management. Also a manager needs to possess skills such as effective communicating, planning and most of all leadership. In this paper I will represent you details of these skills and how can they get developed.

Keywords: manager, develop, skill, effectiveness.

INTRODUCTION

Every manager needs to improve his skills. Developing them means learning and accepting knowledge from all around sources. Management skills are behavioral. They don't represent personality attributes or stylistic tendencies. Manager skills consist of very particular set of actions that an individual performs and which lead to a certain outcome. Skills can be observed, unlike attributes that are purely mental. Management skills are controllable. Also, management skills are developable. Performance can be improved. Unlike IQ or certain personality traits, managers can improve their skill performance through practice. There are four management skills and they are difficult to isolate one from the other. An effective manager must rely on a set of skills which are combined and applied in various occasions. (Whetten, 2011)

There are four managerial functions which can be improved by developing management skills. These functions are:

- Planning
- Organizing and Staffing
- Leading
- Controlling (Dubrin, 2012)

APPROACH TO SKILL DEVELOPMENT

To successfully develop management skills, there must more than just reading a book about it. Managerial skills are:

- linked to a more complex knowledge base than other types of skills
- inherently connected to interaction with other individuals, (Whetten, 2011)

The best method to develop managerial skills is through social learning theory. This method includes opportunities to practice and apply observable behaviors. This method relies on cognitive work as well as behavioral work. There is one thing. An individual must be aware of his current

level of skill competency and be motivated to improve himself upon that level so could benefit from the learning process. Most people find change uncomfortable and therefore they avoid taking the risk of developing their skills and new behavioral patterns. Once facing their own weaknesses, can go through the process of developing new skills a become a better manager. When developing skills the individual must apply his newly learned skills so he can become comfortable using them, and improving them more if needed. (Whetten, 2011)

A Model for Developing Management Skills		
Components	Contents	Objectives
1. Skill assessment	Survey instruments Role plays	Assess current level of skill competence and knowledge; create readiness to change.
2. Skill learning	Written text Behavioral guidelines	Teach correct principles and present a rationale for behavioral guidelines.
3. Skill analysis	Cases	Provide examples of appropriate and inappropriate skill performance. Analyze behavioral principles and reasons they work.
4. Skill practice	Exercises Simulations Role plays	Practice behavioral guidelines. Adapt principles to personal style. Receive feedback and assistance.
5. Skill application	Assignments (behavioral and written)	Transfer classroom learning to real-life situations. Foster ongoing personal development.

Figure 1: The model of developing management skills

Source: Whetten, D:A., Cameron, K.S. (2011). Developing Management skills. Prentice Hall, New Jersey

PERSONAL SKILLS

1) Developing self- awareness: Self-awareness lies in the heart of every manager. Many management skills are closely linked to self-awareness. Developing self-control and clarifying priorities and goals, help managers to create a direction in their own lives, and also in their role of managing. A manager cannot acquire new skills if he doesn't know the current capability he possesses. Self knowledge helps in the path of self-improvement and also heightens the level of one's self-respect. In order to know oneself, no amount of introspection or self-examination will suffice. You can analyze yourself for weeks, or meditate for months and you will have no progress. First you must be open to other person before you catch a view of yourself. Our self-reflection in a mirror does not tell us what we are like, only our reflection in other people does. We are essentially social creatures, and our personality resides in association, nit in isolation. (Whetten, 2011)

- **Emotional intelligence** is the ability to manage oneself and to manage relationships with others. It has been identified as among the most important factors in accounting for success in leaders and managers. In particular, self-awareness has been identified as a crucial aspect of emotional intelligence, and it is more powerful than IQ in predicting success in life. (Whetten, 2011)
- **Personal values** are included here because they are “the core of the dynamics of behavior, and play so large a part in unifying personality. (Whetten, 2011)
- The third area of self-awareness is **cognitive style**, which refers to the manner in which individuals gather and process information. Researchers have found that individual differences in cognitive style influence perception, learning, problem solving, decision making, communication, and creativity. (Whetten, 2011)
- Fourth, **orientation toward change** which focuses on the methods people use to cope with change in their environment. (Whetten, 2011)
- Fifth, **core self-evaluation** is a recently developed construct that captures the essential aspects of personality. (Whetten, 2011)

2) Managing personal stress: Managing stress and time is one of the most crucial, yet neglected management skills in a manager's set of abilities. Feelings of stress are a product of certain stressors inside and outside an individual. Unrestrained, these forces can lead to anxiety, heart disease, and mental breakdown.

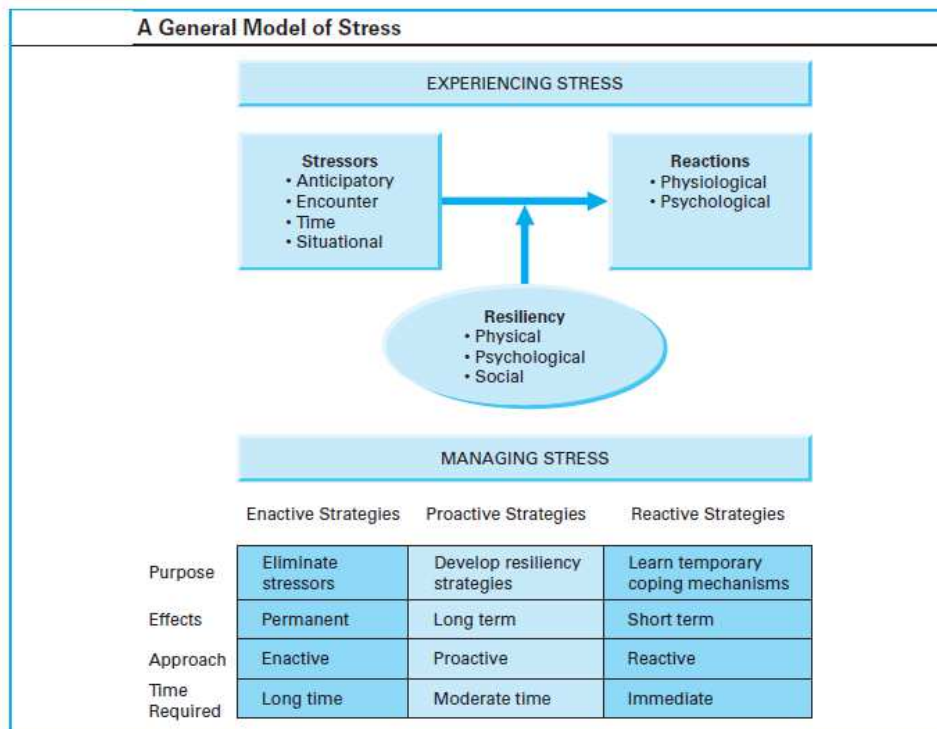


Figure 2: General model of stress and managing it

Source: Whetten, D:A., Cameron, K.S. (2011). Developing Management skills. Prentice Hall, New Jersey

Management Strategies for Eliminating Stressors	
TYPE OF STRESSOR	ELIMINATION STRATEGY
Time	Effective time management Efficient time management Delegating
Encounter	Collaboration and team building Emotional intelligence
Situational	Work redesign
Anticipatory	Goal setting Small wins

Figure 3: Eliminating stress, Source: Whetten, 2011

3) Solving problems analytically and creatively:

A Model of Problem Solving	
STEP	CHARACTERISTICS
1. Define the problem.	<ul style="list-style-type: none"> • Differentiate fact from opinion. • Specify underlying causes. • Tap everyone involved for information. • State the problem explicitly. • Identify what standard is violated. • Determine whose problem it is. • Avoid stating the problem as a disguised solution.
2. Generate alternative solutions.	<ul style="list-style-type: none"> • Postpone evaluating alternatives. • Be sure all involved individuals generate alternatives. • Specify alternatives that are consistent with goals. • Specify both short-term and long-term alternatives. • Build on others' ideas. • Specify alternatives that solve the problem.
3. Evaluate and select an alternative.	<ul style="list-style-type: none"> • Evaluate relative to an optimal standard. • Evaluate systematically. • Evaluate relative to goals. • Evaluate main effects and side effects. • State the selected alternative explicitly.
4. Implement and follow up on the solution.	<ul style="list-style-type: none"> • Implement at the proper time and in the right sequence. • Provide opportunities for feedback. • Engender acceptance of those who are affected. • Establish an ongoing monitoring system. • Evaluate based on problem solution.

Figure 4: Model of solving problems

Source: Whetten, D:A., Cameron, K.S. (2011). Developing Management skills. Prentice Hall, New Jersey

After developing these crucial three skills a manager will become more efficient. The main things that a manager needs development as a person even more than he needs development as a manager. (Drucker, 1986)

Beside developing these skills a manager must have responsibility for communicating, he must focus on opportunities and also to make meetings productive. (Drucker, 2006)

Along these skills there is the question of planning. A manager must know how to plan effectively. He must analyze, research, gather information which are important for achieving his goals. (Richman, 2012)

One the “must have” ability of a manager is leadership. Leadership is defined as whole other concept, but it also represents a crucial function of a manager. (Sajfert, 2009)

CONCLUSION

A manager has personal abilities, and these can't be developed. But there are skills which can make a big difference if they are acquired with learning and applying them to achieve goals in an organization. There are some crucial elements and skills that have to be implemented in the core of every individual who fills in a manager position. Along developing self-awareness, time and stress management, there must be room for developing social and communicating skills and leadership must not be forgot either.

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ROLE OF LEADERS IN AN ORGANIZATION

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ABSTRACT

The role and function of a leader in an organization is a wide ranged subject. In the first line is that leaders have to acquire a set of skills, abilities which will help him lead his followers. The main function of a leader is to lead, motivate, achieve goals which are in his, and organization's interests. In this paper I will present you the crucial functions, skills, abilities, styles which a one has to possess so he could effectively lead a group to achieve their common goals.

Keywords: leader, function, influence, style.

INTRODUCTION

“Treat people as if they were what they ought to be and you help them to become what they are capable of being.”

-Johann Wolfgang von Goethe (Pockell, 2007)

Leadership is an ability to bring people together to get remarkable things done. Humans are social species and natural hierarchies develop on their own, along with it leadership emerged. The main concept is that someone has to be in charge. He must share a vision, and lead other toward the goals. Leadership depends on many things, but first of all it depends on relationship-building. A leader can lead only if he develops relationships between his followers, workers, team members, customers, (Sprenger, 2010)

As time passes by, new theories of leadership arise, but agenda is much the same. It basically represents a role of one person directing other people. And there is a “clean” definition of leadership: *“Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes”*. (Rost, 1991)

LEADERSHIP QUALITIES

“One measure of leadership is the caliber of people who choose to follow you.”

- Dennis A. Peer (Pockell, 2007)

Leadership is broken down to 17 qualities which are the next:

- **Ability to make decisions** (a great leader has to make decisions in the name of the group)
- **Sense of duty** (a leader has to be aware of his duty)
- **Energy** (a leader without energy won't be able to lead effectively)
- **Calmness in crisis** (when a crisis occur and everyone panics a leader must stay calm and look for a solution)
- **Humour Assurance** (a leader has to develop great confidence)
- **Sense of justice** (when there are conflict, a leader has to make take the path of justice)

- **Ability to accept responsibility** (a leader has to accept responsibility of his actions and decisions)
- **Determination** (determination drives the leader through rough paths)
- **Human element** (every leader is only human, and must not forget that)
- **Example** (with his actions a leader has to make an example for his followers)
- **Initiative** (a leader has to initiate first any action and not wait for others)
- **Physically fit** (a leader has to look good, to be fit and healthy)
- **Resolute courage** (courage is a crucial element in the set of the leaders abilities)
- **Pride in command** (showing pride in command sends a strong message of confidence)
- **Enthusiasm** (Enthusiasm is important, because it is contagious and can improve productivity among the workers)
- **Loyalty** (every leader has to be loyal to his followers and organization), (Adair, 2005)

The main function of a leader is to lead. There are three basic styles of leading:

- **Authoritative** (these leaders have everything under control, their followers follow the leaders instructions without any complaints)
- **Democratic** (the leader motivates his followers to contribute to the solution of a problem that stands in the way of achieving the organization's goals)
- **Liberal** (the liberal leader gathers information, money, resources and leave all the for in the hand of his team members and followers), (Robbins, 2012)

The other leadership style is based on the innovativeness of the leader. From this aspect there are:

- **Ordinary leaders** (they tell old fashioned stories, not effective)
- **Innovative leaders** (adds a new "touch" to their stories and ideas)
- **Visionary leaders** (the rarest of them all, the visionary leader tells a whole new story with great ideas, his leading is very effective), (Sajfert, 2012)

UNDERSTANDING LEADERSHIP AND ITS FUNCTIONS

"A true leader has to have a genuine open-door policy so that his people are not afraid to approach him for any reason."

-Harold Geneen (Pockell, 2007)

The three overlapping core responsibilities of any leader are:

- achieving the task,
- building and maintaining the team,
- and developing the individual (Adair, 2011)

This model implies an understanding of the environment in which a leader works. To fulfil these responsibilities, a leader needs to know his business, and he needs to possess or develop the necessary qualities of personality, character and skills to provide the eight generic leadership functions:

- defining the task,
- planning,
- briefing,
- controlling,
- evaluating,
- supporting,
- motivating, and
- setting an example, (Adair, 2011)

The three circles of leadership functions integrate together and customarily it is called leadership and management, but these concepts do retain their own distinct overtones:



Figure 1: Leadership functions (Adair, 2011)

Leading represents giving direction, inspiring or motivating people to work willingly, building and maintaining teamwork. (Adair, 2011)

Managing is about running the business in steady-state conditions, day-to-day administration, organizing structures and establishing systems. (Adair, 2011)

These three needs (the task, the team and the individual) are the watchwords of leadership. (Adair, 2011)

LEADERSHIP FUNCTIONS

At whatever level of leadership the leader is, he must continually think about task, team and individual needs. To achieve the common task, maintain teamwork and satisfy individuals, certain functions have to be performed. A *function* is what leaders *do* as opposed to a *quality*, which is an aspect of what they *are*. (Adair, 2011)

These functions (the *functional approach* to leadership, also called *action-centred leadership* are:

- **Defining the task:** What are the purpose, aims and objectives? Why is this work worthwhile?
- **Planning:** A plan answers the question of *how* you are going to get from where you are now to where you want to be. There is nothing like a bad plan to break up a group or frustrate individuals.
- **Briefing:** The ability to communicate, to get across to people the task and the plan.
- **Controlling:** Making sure that all resources and energies are properly harnessed.
- **Supporting:** Setting and maintaining organizational and team values and standards.
- **Motivating:** Gaining the goodwill and wholehearted commitment of the team and each individual member.
- **Evaluating:** Establishing and applying the success criteria appropriate to the field.
- **Setting an example:** Leading from the front while exemplifying the qualities and behaviours expected in the team. (Adair, 2011)

Leadership functions in relation to task, team and individual can be represented by the following figure 2.

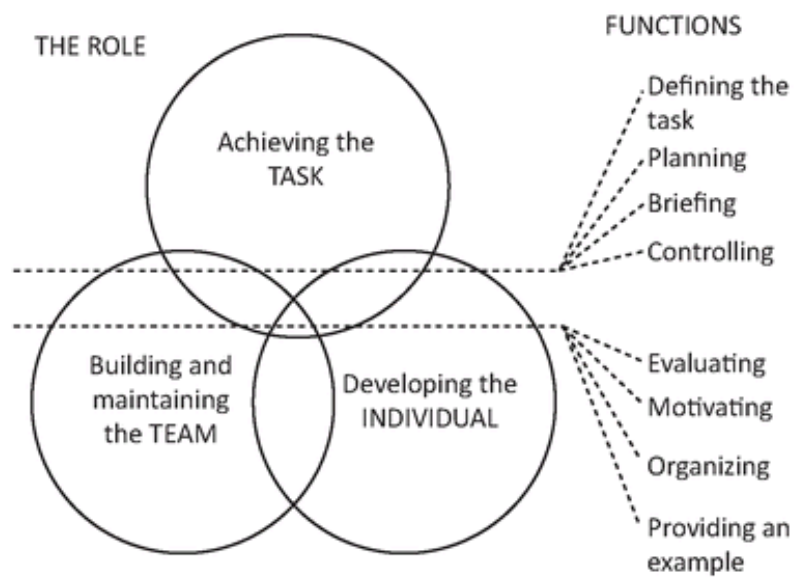


Figure 2: The role of leaders (Adair, 2011)

These leadership functions need to be completed with excellence. The leader needs to achieve this by performing the functions with increasing skill and also by regularly reviewing and reflecting on his performance. (Adair, 2011)

CONCLUSION

In every organization a leader must have a set of qualities and abilities which will ensure his effective leading. Planning, task management, motivating, organizing are the few of many functions of a leader in an organization. The main function of a leader and the simplest way to define it is: "Leaders' function is to lead, motivate and achieve".

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DEVELOPING LEADERSHIP SKILLS

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ABSTRACT

Leadership requires knowledge, understanding, influence and most of all it needs experience. The best way to learn leadership is with leadership. Although knowledge is a fundamental key to leadership, there is much more than that. Starting from organizing, planning, briefing all to controlling and understanding, leadership is a skill which can be constantly upgraded, and it needs to be developed. In this paper are some of the crucial elements and actions which one leader has to upgrade so he could be effective in leading a company.

Keywords: leader, leadership, organizing, skill.

INTRODUCTION

Leadership skills have been universally recognized as key function and ingredient in management. Today, a good manager is a good leader. Over time the two concepts merged into one. Leadership is a crucial skill which every manager in a big or small organization has to possess. With lack of leadership experience the manager could have problems controlling, guiding his workers to finish the work properly. In this paper, there will be given a complete framework for becoming an effective leader.

Leadership is not something that you can learn by teaching. No. Leadership is learned principally from experience. You must find out what makes people move, to tick, their desires, and wishes so you can have influence over them. Leadership is almost like mind reading with a big dose of empathy. But to be a successful leader, one must use what they know in their own advantage, so every person influenced by the leader would follow him, (Adair, 2007).

"The only real training for leadership is leadership." (Anthony Jay)

LEADERSHIP APPROACH

There is an idea that leadership depends on the situation. For example Winston Churchill was a great leader in wartime, but not so good in peace. The truth is little more complex than that. Some qualities are situation related, but others are found in widely different situations. The situational approach emphasizes the importance of knowledge, (Adair, 2007).

Knowledge is authority, and there are four forms of authority among people:

- The authority of position and rank
- The authority of knowledge
- The authority of personality
- Moral authority

However knowledge is not enough to be an effective leader. It is necessary but not sufficient. There is more to leadership than technical knowledge, (Adair, 2007).

The group approach

Leaders need to focus on the group too. It is crucial that we meet the groups need, and there are always three elements of variables:

- the leader - personality and character
- the situation - partly constant, partly varying
- the group - the followers, needs and values

Every group just as individuals is always different. As a group works together, it develops a unique group personality. There are three areas of overlapping needs that are important:

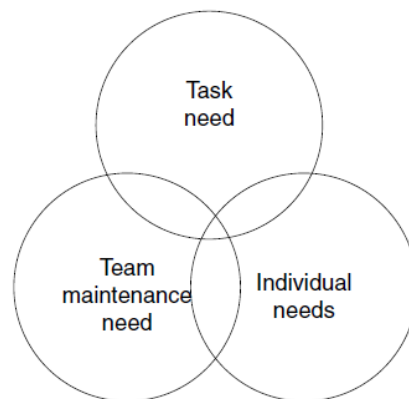


Figure 1. Overlapping needs

Task need represents a need to accomplish a task that is too big for one person and the same the task is common for every team participant.

Team maintenance need represents the need for an effective group with an enthusiastic atmosphere where written and unwritten rules ensure a balance between work and friendship.

Individual needs represent the needs of an individual. In first place there is recognition for a job well done, (Adair, 2007).

Individual development planning is the process of clarifying developmental gaps in the organization, including on-the-job work assignments, so success can be achieved, (Rothwell, 2010).

There will be no room for the mediocre supplier of products and services—the company in the middle of the pack, (Slater, 2003).

“Leaders must be close enough to relate to others, but far enough ahead to motivate them.”
(John Maxwell)

LEADERSHIP DEVELOPING AND LEADERSHIP ROLE

There are few skills or actions which leaders need to use.

Planning. Planning means building a mental bridge from where you are to where you want to be. There must be a line where the planning stops. Also there must be a border what parts of his plans

the leader share with other team members. Planning is the key activity for any team or organization. Planning requires answers on what, why, when, how, where and who, (Adair, 2007).

Briefing. Briefing is communicating with team member through which plans and objectives are informed.

When communicating with tea, member the leader must be:

- prepared
- clear
- simple
- vivid
- natural.

He must speak properly and clearly, (Adair, 2007).

Controlling. Controlling assures that the team's energy is focused on the objectives and goals, (Adair, 2007).

Evaluating. Evaluating defines the approach of the leader to its group. Evaluating involves communication, knowing the team members, (Adair, 2007).

Motivating. Motivating is a key principle in getting things done. Motivating workers has great benefits as higher productivity and overall respect, (Adair, 2007).

Everyone must be aligned with the company's goal of preparing for the worst and looking toward long-term success, (Charan, 2009).

Organizing. Organizing holds more than just structuring and restructuring teams and groups. Its function involves strategic, systematic and operational planning, instructions in an organization. A good leader knows how to organize, (Adair, 2007).

Time management. Leaders need time to thing, time for planning and organizing, and also time for the people around him including customers. Time management is a crucial skill and if escalated properly it can make a big difference in a company, (Adair, 2007).

"Leadership is action, not position." (Donald H. McGannon)

There is this question: **What can a leader do to develop himself and his skills?**

He can be:

- *Prepared.* Confidence is a leader's motto. A leader needs to have willingness to take charge. The more prepared a leader is, the more confident hi becomes.
- *Proactive.* Development of a leader is crucial because organizational need leaders. Everyone who wants to become someone that will lead a group or team, has to have ambitions, intentions hopes and dreams. And he must seize every opportunity.
- *Reflective.* Leadership is a self-learning skill. Every leader has to have imaginary receptors with which he can receive information and reflect them back, (Adair, 2007).

Achieving a task

Every leader has one goal, and that is to achieve a task as efficiently as possible. There is list which every leader should follow:

- Purpose - to be clear of the task
- Responsibilities - to be clear with the responsibilities

- Objectives - to agree with objectives with the superior
- Working conditions - need to be right for the group
- Resources - ensuring that there is enough money and material
- Targets - ensuring that every member clearly understands them
- Authority - ensuring that line authority is clear
- Training - check if there are gaps in the skills and knowledge of team members
- Priorities - planning with time
- Progress - checking regularly and evaluating
- Supervision - in case of absence, finding a person who cover the leaders
- Example - setting standards with behavior, (Adair, 2007).

CONCLUSION

Being a successful leader and developing leadership skills require time, learning, and the most important thing is leading itself. No book or seminar can substitute experience. Leaders are partially born, but that is not enough. Knowledge, understanding, influencing are very important and they represent the fundamentals of leadership.

"Have patience. All things are difficult before they become easy." (Saadi Shirazi)

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LEADERSHIP STRENGTHS

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ABSTRACT

A leader can develop abilities. But every leader also has hidden strengths which make a big difference when they are acknowledged. A leader's set of skills along with the 4E's set and of course with a great amount of confidence can make an organization's actions flow like a calm river with great effectiveness a minimum problems. In this paper I will represent you the significance of strengths and the 4E's set. You will also see how combining leader's strengths with the 4E's set and confidence can make a big difference in an organization.

Keywords: strength, leader, 4E, confidence.

INTRODUCTION

"There go my people. I must find out where they are going so I can lead them."
-Alexandre Auguste Ledru-Rollin- (Pockell, 2007)

The best leaders get to live on. Great leaders found their place in history because they seized the moment. They had an opportunity, they took it. They played their role right. There is a great chance that everyone will have some opportunities to lead a group. The question will you face your fears or skepticism and take role and obligations of a leader? In a Gallup Poll, people were asked if they could lead? 97% of them thought that they have above average leadership skills. Every person in his lifetime is likely to find himself leader at some point. After much research studies showed three key findings which emerged. The first one was that a leader is always investing in strength. The second, a true leader surrounds himself with the right people. The third, the effective leader understands their followers needs, (Rath, 2008).

FINDING YOUR LEADERSHIP STRENGTHS

"One of the tests of leadership is to recognize a problem before it becomes an emergency."
-Arnold Glasow (Pockell, 2007)

Every leader has to be aware of his strengths. Everyone leads in a different style which is almost always based on our abilities and talents. There is a problem when a leader thinks that imitating another leader will also give him the effectiveness of his actions. The key elements of every leader are his strengths. A leader must be aware of every flaw and every strength he possesses. A leader needs to know strengths as a carpenter knows his tools, or as a physician knows the instruments at her disposal. What great leaders have in common is that each truly knows his or her strengths - and can call on the right strength at the right time. This explains why there is no definitive list of characteristics that describes all leaders. Developing one's strengths is like a long-term investment. If a leader focuses on people weaknesses, they lose confidence. People need to be shown their strengths through tests.

Researches show that people gain a significant amount of self-esteem after acknowledging their positive traits or strengths. This affects their attitude, productivity and all around they become better workers. (Rath, 2008)

There are some qualities that a leader has to possess. Basically he needs to exemplify and personify his qualities as part of his strengths. (Adair, 2007)

THE FOUR DOMAINS OF LEADERSHIP STRENGTH

"You can use all the quantitative data you can get, but you still have to distrust it and use your own intelligence and judgment."
 -Alvin Toffler - (Pockell, 2007)

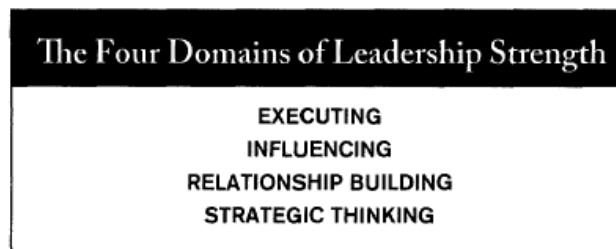


Figure 1: The four domains of leadership strength (Rath and Conchie, 2008)

Executing	Influencing	Relationship Building	Strategic Thinking
ACHIEVER	ACTIVATOR	ADAPTABILITY	ANALYTICAL
ARRANGER	COMMAND	DEVELOPER	CONTEXT
BELIEF	COMMUNICATION	CONNECTEDNESS	FUTURISTIC
CONSISTENCY	COMPETITION	EMPATHY	IDEATION
DELIBERATIVE	MAXIMIZER	HARMONY	INPUT
DISCIPLINE	SELF-ASSURANCE	INCLUDER	INTELLECTION
FOCUS	SIGNIFICANCE	INDIVIDUALIZATION	LEARNER
RESPONSIBILITY	WOO	POSITIVITY	STRATEGIC
RESTORATIVE		RELATOR	

Figure 2: Themes in the domains (Rath and Conchie, 2008)

Leaders with dominant strength in the *Executing* domain know how to make things happen. They can find solutions for problems, and they can “catch” an idea and make it a reality, (Rath, 2008).

A leader with a strength of *Influence* is someone who can take charge, speak up, and make sure that a group is heard. They are always selling their teams ideas inside and outside the organization, (Rath, 2008)

A *Relationship Building* leader represents an essential glue that holds the team together. They have a unique ability to create groups and organizations. He works hard to avoid distractions and keep the flow of work in peace and harmony. (Rath, 2008)

Leaders with great *Strategic Thinking* strengths are keeping the team members focused on what could be. They are constantly absorbing, analyzing, researching information which may have influence in their organization. They think about the future for the future, (Rath, 2008).

LEADERSHIP STRENGTHS AND THE 4E's

"A leader is one who sees more than others see, who sees farther than others see, and who sees before others see."

-Leroy Eimes - (Pockell, 2007)

A true leader must use his strength to motivate his team members. An adequate approach to the 4E set is somehow crucial to a leader. What is 4E? 4E represents 4 terms which are:

- *Envisioning*—to create an attractive picture of what can be achieved.
- *Enabling*—to equip, make able, and capacitate.
- *Energizing*—to enliven, stimulate, and charge up.
- *Ensuring*—to confirm, guarantee, and substantiate, (Stephan, 2002).

When motivating and encouraging others to unleash their potential through their acknowledgement of one's strengths the 4E implements itself so the newly skilled team members can express their own qualities and strengths, (Stephan, 2002).

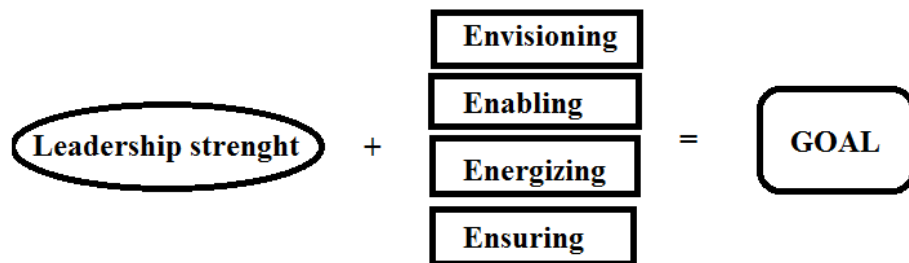


Figure 3: Achieving goals combining leadership strength and the 4E's (Stephan and Pace, 2002)

To help their team members to achieve bigger things, or to truly understand goals, the leader requires careful attention to the 4E's involvement. As a leader goes through a transformation by revealing or acknowledging his strength he must remember that his primary responsibility is to encourage and enable people in the organization to perform at their highest levels, (Stephan, 2002).

A leader can develop styles from the aspect of innovation in their "stories" which they send through the communication canals to their team members. These styles are:

- ordinary,
- innovative and
- visionary, (Sajfert, 2012).

The best leader is the visionary one, which has a great idea, a great vision, and along with his strengths and the 4E's he can achieve great things, (Sajfert, 2012).

Although the leaders need to develop and find out their strength there is one quality that every leader, manager, presenter must have. That is confidence. Great confidence can hide some lack of knowledge. Confidence is one's power, and if that confidence is great enough and strong enough it will inspire others, and they will believe in the leader as firmly as he believes in himself, (Adair, 2005).

CONCLUSION

Every leader can acquire some abilities, but there are also hidden strengths in every one of us. Developing and acknowledging these strengths have major influence on the leaders' style of managing, organizing and influencing other group members. Along with leaders strength there is the 4E's set which combined with strengths and a big bowl of confidence represents and creates a

great leader who can manage and face every problem he stumbles on his road to the organization's goal.

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PROJECT MANAGMENT

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ABSTRACT

Searching in any library for books on project management will definitely lead to success. Much seems to have been written about how to manage a project successfully. But why do most projects in real life still fail or end up exceeding the originally agreed upon budget, time or resources? The answer is quite easy: The project simply does not exist. Every project and as a consequence every project manager has to deal with different targets, different environments and, last but not least, with different people. Therefore, only the Know-how and the Do-how will transform a project manager into an excellent project manager.

Keywords: project, management, manager.

PROJECT ORGANISATIONS

“Trying to manage a project without project management is like trying to play a football game without a game plan.”

(K. Tate)

The ambition is to achieve technologically and economically the best results in the development of continuously more complex and organizational problem-solving strategies. Complex tasks in large organizations require the greatest possible co-operation between corporate divisions and specialists and require a great deal of multidisciplinary. The more project work becomes important for affected organizations, the less traditional management and organizational concepts will be successful. Traditional organizations are mainly characterized by a split-up between competence and management (leadership), which is focused on an efficient and effective job processing. Project management seems the ideal solution to maximize the possibility of the successful completion of a task, which is, by definition, time- limited.

But the implementation of project teams within the organizations can not only be challenging, but also dangerous, as the fulfillment of a project task has usually never been achieved before and therefore implies a lot of uncertainty, especially for the project member affected. Looking at the institutional side of project management - mainly structural aspects of the organization, the link with the parent organizations as well as Human Resources are considered. Questions concerning the best project organization, the (personnel) configuration of the project team and the decision powers also have to be answered. As a project is mainly run under time restrictions and therefore tolerance for adaption or failure-correction is hardly available, the set-up of the project organization is probably the largest obstacle to project success.

When deciding on a project organization it should be the aim to give the involved departments and project members a maximum degree of freedom in their decisions, to consider personnel restrictions and requirements of the organization and to avoid havoc caused by unclear job descriptions or an accumulation of co-ordination requirements. But also, simply choosing the best

position of a project organization - between a pure line organization and a pure project organization, won't necessarily be successful. By using such a standardized roadmap, opportunities and risks of different organizational structures can not be seen and "powercentres" and areas of conflict can not be identified.

The common understanding of project managers nowadays is that there is not a single best option for setting up a project organization. The chosen organizational structure has to reflect the requirements of the project and the organizations, has to fit the possible requirements as well as technological opportunities of the future and therefore is the best balance between technological and human-social factors. Project Management has to identify prior to a project start the internal and external requirements in order to give the best possible recommendation for a successful project.

PROJECT ORGANISATION AND RESPONSIBILITIES

The structural organisation is a static framework of an organisation that defines on one side the internal distribution of tasks to individuals or departments, and on the other side the relationship between the individuals / departments. While the structural organisation defines who has to do a job, the operational structure follows a more dynamic approach, namely when, where and how often something has to be done.

In Project Management, the structural organisation has to fulfil two tasks:

- Definition, how a project organisation is embedded within the parent organisation (organisational models, see discussion below).
- Definition, how the organisation is structured internally within the project team.

The project sponsor is the manager or executive within an organisation who is not directly involved in the operational work of the project but who can oversee a project, delegate authority to the Project Manager and can provide support as a trainer or coach to the Project Manager. The Project Sponsor has sufficient authority or influence to direct all the staff involved in a project – or as many as possible – and to get the co-operation of key stakeholders. He ensures that the project is aligned with the organizational strategy and compliant with policy. In larger projects, he has frequent contact with the Project Manager so as to monitor his effectiveness. Depending on the initial set-up of the project he can also chair the Steering Committee, approve final deliverables and communicate about the project inside the agency and with external stakeholders.

The steering committee is a group of senior managers responsible for business issues affecting the project. They usually have budget approval authority, make decisions about changes in goals and scope and are the highest authority to resolve issues or disputes. The steering committee assists with resolving strategic level issues and risks, can approve or reject changes to the project with a high impact on timelines and budget and has to assess project progress and report on the project to senior management and higher authorities. The steering committee provides advice and guidance on business issues facing the project and they use influence and authority to assist the project in achieving its outcomes.

Both the project sponsor and the steering committee also have to carry out the project governance of a project. As much as corporate governance is required nowadays not only in stock listed companies, project organisations also require compliance with certain rules. Governance in general can be described as all activities and processes which ensure that directors and managers act in the interests of the organisation and are accountable for their use of those assets.

Project governance is carried out by regular review of project documents, such as plans and status reports, looking for evidence that the project is in the interests of the organisation and uses assets responsibly. In discussions and decisions, the person responsible for the Project Governance has to vote for what he believes is best for the organisation and its stakeholders. To fulfill all these

requirements it is compulsory that the Project Manager and his team demonstrate competence, ethics, and compliance with organizational policy.

An advisory committee is a group of people that represents key project stakeholders and provides advice to the project. Like steering committees, advisory committees are generally recruited from senior management. Unlike steering committees, advisory committees can not make decisions regarding a project. Their role is to provide insights to the team regarding stakeholder interests, technical advice and other relevant initiatives. Parallel to the steering committee, they assist with resolving issues and risks and should use their influence and authority to assist the project in achieving its outcomes and to communicate about the project progress within their organizations.

The project manager is naturally the key person within the project organisation and has the overall responsibility for meeting project requirements within the agreed to time, cost, scope and quality constraints which form the framework of the project plan. Project managers report to the steering committee, which has delegated its authority to the project manager. The general tasks of a project manager are:

- Supervision and guidance to the project team
- Regular (weekly or monthly) project status reports to the project sponsor/ steering committee
- Chair risk and change control committees (if applicable for a project)
- Attend steering committee meetings and prepare supporting materials with the project sponsor
- Execute project management processes: risk, issues, change, quality, and document management
- Ensure project plan, schedule and budget are up-to-date; detect and manage variances

ORGANISATIONAL MODELS

There are two fundamentally different ways of organizing projects within the parent organisation:

- The project as part of the functional organisation or pure line organisation
- The project as a free-standing part of the parent organisation (project organisation)
- A third type, called a matrix organisation, is a hybrid of the two main types

The pure line organisation or functional organisation does not have a specific position for project managers. Project managers are specialist or line managers who are aligned to the project for a specific time. The project is divided into partial tasks and delegated to responsible departments. The team members continue to report to their line-directors and upper managers.

The advantages are:

- Reduced overhead, as no additional project team members have to be hired
- Provides clearly marked career paths for hiring and promotion
- Employees work alongside colleagues who share similar interests, therefore the expertise of the team members stays within their departments
- No structural change for running the project required
- Flexibility for changes in the project scope
- Easy post-project transition as the project team members simply continue doing their line job again

The disadvantages are:

- Co-ordination of functional tasks is difficult as little reward for co-operation with other departments is granted since authority resides with functional supervisor
- Provides scope for different department heads to pass off company project failures as being due to the failures of other departments
- Slow reaction time due to long communication lines within the project
- Within the pure project organisation („task-force“) the project manager is fully responsible

for a group of specialists, which have temporarily dedicated their entire workforce to the project.

The advantages are:

- Simple and fast, as the project manager has full line authority over the project and all members of the project team are reporting directly to the project manager
- The lines of communication are shortened; the ability to make a swift decision is enhanced
- A cross-functional integration is supported as a pure project organisation can maintain a permanent cadre of experts who develop skills in specific technologies
- A project team that has a strong and separate identity and develops a high level of commitment from its members
- The organizational structure tends to support a holistic approach to the project

The disadvantages are:

- Each project has to be fully staffed which can lead to a duplication of staff numbers
- Project managers tend to stockpile equipment and technical assistance as this represents the importance of their project within the organisation.
- Pure project groups seem to foster inconsistency in the way in which policies and procedures are carried out
- In a pure project organisation, the project takes on a life of its own, with own rules and processes
- The post-project transition is difficult as there tends to be concern among team members about career after the project ends

The matrix organisation is a combination of a functional and a pure project organisation. This organisational structure allows for participation on multiple projects while performing normal functional duties. A greater integration of expertise and project requirements can be achieved.

A matrix organisation can take on a wide variety of specific forms:

- “Project” or “strong” matrix organizations most closely resemble the pure project organisation. The project manager decides work- and personnel-progress, the line manager provides resources and consults the project manager as a specialist.
- The “co-ordination” or “functional” or “weak” matrix most closely resembles the functional form. The project manager only co-ordinates the contributions of the different departments, the authority stays with the department-directors.
- The “balanced” matrix lies in between the others. Project and line managers approximately have equal competence and agree upon a common decision.

The advantages are:

- The advantages of a functional organisation and project team structure are retained
- Resources can be co-ordinated in a way that applies them effectively to different projects
- Team Members can maintain contact with project teams as well as with their functional department colleagues, they can be chosen in-time, according to the needs of the project
- The project team will be more agile and able to view problems in a different way as specialists have been brought together in a new environment.
- Project managers are directly responsible for completing the project by a specific deadline and budget.
- Team members can return to their old line responsibility after finishing the project

The disadvantages are:

- Potential for conflict between functional vs. project groups due to unclear responsibilities as

- the principle of unity of command is violated with a matrix organisation
- A conflict of loyalty between line managers and project managers over the allocation of resources
- Costs can be increased if more (project) managers are created through the use of project teams
- The balance of power between the project and functional areas is very delicate
- The division of authority and responsibility in a matrix organisation is complex and uncomfortable for the project manager
- Project workers have at least two bosses, their functional heads and the project manager.

CONCLUSION

“Even if you are on the right track, you will get run over if you just sit there.”

(Will Rogers)

Starting with a good preparation is a must. Good documentation is an essential basic for all further steps in the management process. The audits are performed to ascertain the validity and reliability of information, and also to provide an assessment of a system's internal control. It gives any organisation the chance to prove its excellence and therefore the chance to generate profits e.g. by getting a big contract with a new customer.

The termination and closure process shows the significance of ending a project efficiently and under cost control aspects. Also, the learning benefits, even from a terminated project, may help to improve further projects. Project closure is the most often neglected process of all the project management processes.

The closure can be defined by four important aspects, which are:

- Checking the work for completeness and accuracy.
- Documenting formal acceptance.
- Disseminating project closure information.
- Archiving records and lessons learned.

Lessons learned documents the successes and failures of the project. Many times lessons learned are not documented because staff members do not want to assign their names to project errors or failures. Documenting these "learned from past" experiences can avoid the repetition of the same errors in new projects.

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IMPORTANCE OF LEADERSHIP IN MODERN BUSINESS

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ABSTRACT

The process of globalization is affecting all aspects of human life and activity. The changes that have occurred had an impact to the fact that many of the rules lose their meaning and application, while theories are becoming part of history. In the modern business, we have a new organization, based on knowledge and innovation, which requires management approach from a new perspective. The role of leaders in these organizations gone farther more than ever, therefore, we must approach this subject with greater care.

Keywords: leadership, modern business, globalization.

INTRODUCTION

The national framework and the traditional forms of management often represent limiting factor for the economic growth. The need to develop international business is increased. The challenge is primarily contained in the following factors (Sajfert., Đorđević. & Bešić, 2006):

- Most of the business is based on providing services,
- Success of an organization depends on the level of knowledge that exists in an organization and its management,
- Techno-economic changes are more distinct,
- Standardization and need for the development of quality business reduce the number of permissible errors.

In their book, Jonas Riderstrale and Kjell Nordstorm, presented the idea of a new organization that has the potential to achieve success in today's business environment. This paper presents the structure of the new organization, and the necessary leadership role in its management.

THE NEW ORGANIZATION

"The new organization" is an organization that is considered to be destined for success in the modern business. The organization is able to adapt to all circumstances and the unpredictability of business today. Its characteristics are "focusing", "influence," "innovativeness" and "heterarchy" (Ridestråle J., Nordstorm K, 2004). "Focusing" of the organization refers to the specifics of the market and the level of specialization of production. This means that the organization operates only in areas of the success. Its products are designed for a narrow group of selected customers. "Influence" of the organization includes knowledge management in an organization and creating of "the learning organization". In this way, organizations develop their employees and their competitiveness. "Innovation" is the foundation of a successful business. Degree of innovation affects the acquisition of competitive advantage. Innovation is contained in the organization's strategy, speed, intelligence, simultaneous listening, and ignoring consumers and combination of homogeneity and heterogeneity. Heterarchy of the new organization includes the following features:

- Smaller organization - "when you do not know the people you meet in the hallways, the company has become impersonal, and it's time to divide into smaller parts. "
- Flat organization - middle level of management loses importance and gradually disappears.
- Temporary organization - work is done in project groups and teams in order to increase results.
- Horizontal organization - refers to the work in processes.
- Circular organization - refers to the flow of information throughout the organization.
- Open organization - covers networking opportunities among companies.
- Measured organization - control does not disappear, only becomes subtler.

DEFINING OF LEADER

In theory, there are an immense number of definitions of leadership and leaders. From reviewing these definitions, we can conclude that leadership can be understood as a process of influencing other people to achieve the objectives of the organizations in the most efficient and effective manner. Inevitable presumption that arises from this conclusion is the importance of abilities to work different kinds of people for every manager who wants to be a leader. Styles of leadership are generally divided into autocratic, democratic, and liberal. Each of these styles has its own advantages and limitations. Organizations can choose any of these approaches, but their usage has shown that for the best results, we need to combine all three styles (Sajfert, 2009). Leaders develop a business strategy that will affect the survival, position, and success of the company.

When we talk about skills to deal with people, we can distinguish the following: skills to motivate and direct, struggle against the pessimism, the ability to increase confidence among employees, the ability to build trust among employees, the right attitude towards mistakes, etc. When we add to this list of characteristics of leaders such as strong will, persistence, initiatives, combativeness, ambitiousness, integrity, charismatic, confidence, and possessions of knowledge and expertise we get a true leader. Of course, there is no evidence of which the universal characteristics of leaders are. Nonetheless, the characteristics and capabilities of leaders, as well as their behavior in specific situations are the most critical category in the process of influencing followers. They condition the behavior of the employees and their attitude towards work (Ivetic, et al. 2012).

MODERN LEADERSHIP

History of leadership, tells us that for a long time, meaning of "leader" implied on myth of "Superman", which was created by natural selection. Today's dilemma about whether leadership can be learned no longer exists. The rejection of the previously mentioned assumptions contributed to the creation of an optimistic view of leadership, both by individuals and by of the organization. In terms of this view of leadership, researchers have developed many new theories. Directly related to the theory of the new organization is the theory of "Funky leader" whose authors are Jonas Ridderstrale and Kjelle Nordstorm. This will be explained in the following text.

The organization, as a temporary, unstable, and powerful fusion of people and ideas, exists to be a driving force for the creation of value. The centers of this force are the leaders. Today's business presents them with the new, unknown, demands. In the future prosperity of the organization, it is essential that the leader create such a work environment that encourages every employee to provide the best results. Recruitment and selection of human resources is no longer an easy task. Since the organization, in large part depends exactly on this activity, it is clear that it is the job for the leader. People do not "obey" as they used to, so they cannot be managed as they were before. In the Funky world, it is necessary to manage, but that does not include the traditional view of leaders. According to the authors of Funky Business, a leader, in the traditional sense, never existed except in the minds and hearts of those who believe in them.

Let us assume that the organization permanently loses their management. The result will not be a complete "corporate chaos" in their desperate need for a "firm hand". The only thing that will be achieved is a mere repetition and reproduction, without the basis for progress. Therefore, the role of the leader is not to make order from chaos, but rather to bring chaos into order. Leaders need to get people to abandon old patterns and destroy them in order to create new ones. Therefore, Funky leaders are creators of chaos but also a source of order!

Directionality of people is one of the major issues of leadership. It represents ways to encourage people to focus on what really matters. In a world of chaos, they simply cry out for individuals who will provide them with personal and business life meaning. This is where the vision of the organization comes into play. The definition says that vision is the directing force that channels the energy of the employees in a particular direction. In reality, this nicely presented wish list is very long and devoid of substance. Funky vision must be different from the others. Vision must be clear, consistent and durable, able to lead people to devote themselves to it. People should not get the impression that it is not important and that it can be replaced. This requires from the leader to be a master of the story, extremely generalized and at the same time extremely accurate, making his vision inspiring for employees.

Head of classical organization often coming up to dilemma - whether to punish or forgive mistakes in business. The answer to this question is related with the level of creativity of the staff. Business in organizations is mainly taking place around the occasional eruption of creativity followed by a long period of exploitation of the same. Funk does not tolerate this. By promoting the innovation, funk requires creativity. This also means occasional deviations from plan. However, we must highlight that creativity is not another name for anarchy. It is indisputable that true creativity rests on the path less traveled. Innovation requires experimentation, but experiments are risky - they can give you success, but not necessarily. Therefore, it is very important that the leader of innovative environment is tolerant of mistakes. In standard organizations, creativity is poorly represented because of the lack of tolerance and understanding, as well as the tendency towards forgiveness. Without exaggeration, the classic director sometimes acts as a corporate executioner, always ready to make a "death sentence." In such environment, it is not surprising that people are mostly averse of creativity, and the outcome of this practice is an organization opposed to innovation. Funky management requires the development of people willing to risk. This again does not say that the leader should promote risk for risk, but the risk resulting with the less risky business.

Successful companies for quite some time have a system that responds to complaints, demands, and whims of their customers. The results of this system significantly affect the organization's ability to retain its customers. The founder of Wal-Mart once noted that it takes only a few weeks for employee to begin to work towards the consumer regarding the manner in which the employer treats them. If you want to become Funky organization, ask yourself - are your company's employees treated as investors? Leader needs to know that the employees are the intellectual investors, who invest their knowledge and soul into the organization.

The availability of top management to employees is a powerful segment of motivation because it gives them a sense of belonging to the organization. When the employee know that he can go to the manager's office and to be treated with care and respect, employee work harder to make efforts to justify the trust that was given to him. Each person is different. In this spirit, to make the organization attract and retain the right people, they need to be treated as individuals. There are many ways to reward, motivate, and inspire people. Different things, in different ways, motivate people at different times. At the same time, money is not the main value - the motivation is increasingly based on spiritual values. The challenge for the organization and its leaders, which arises here, is that the values are far more complex than money. If people and their motivators are different, their award should be different too. The only way to find out which are the real prize is listening and understanding people as individuals. Funky leaders should try to get as diverse experience, and to approach them without prejudice. The power always lies in providing people with dreams! Development of a new generation of leaders is based on intelligence and knowledge.

The leader must continually renew forces that provide him with the best people. In a world where power belongs to the people, leaders must become humane managers. Many still believe in the old style of management, but it is certain that he is doomed.

Modern business requires continuous improvement and innovation. One of the requirements for innovation is knowledge. Organizations nowadays have enough knowledge. Their problem lies not in knowing the structure and characteristics of that knowledge. Carriers of knowledge are employees therefore monitoring of knowledge within an organization is the function of the leader. It is essential that the leader knows the limits of knowledge that exists in an organization, as well as to encourage a process to expand this knowledge from the individual level to the group and organizational level. The growth of this influence, however, is not only a question of knowledge transfer, but also its transformation into forms that enable the organization to manage them effectively. This is the beginning „the learning organization" creation process - the project that requires a lot of investment, both materialistic as well as spiritual, and the leader is the one who controls this process. As a way of successful development and continuous learning for employees within the organization, this method is becoming more common in organizations. Learning is treated as an activity for a lifetime, so it is clear that it cannot be restricted only to educational institutions and classrooms.

CHANGES IN ORGANIZATION

Application of modern management requires a complex and radical changes within organization. They are primarily related to structural changes and changes in employment. Structural changes include changing the organization as a whole organization, or a change in organizational units, departments, areas of activity, etc. This includes changes in organizational structure, strategy, policy, system of rewards and similar. When it comes to changing the staff, this refers to changes in the values, skills and attitudes of employees. These changes occur because of structural changes. In contrast to the structure of the organization, employees are very sensitive to the changes in the current "order of things" because they interfere with interpersonal relationships. This can be a serious obstacle to successful implementation of change. The successful management of change, the leader must take all necessary steps to ensure its implementation. The greatest attention is needed on resistance to change, which is a normal reaction of the employee. Resistance is mostly a result of the stress caused by changes among employees. Professional literature is, in detail, dealing with the problem of reducing the stress among employees. All the authors who deal with the problem of resistance to change advise to use the following strategies to reduce this problem (Sajfert , 2006):

- Avoiding surprises
- Supporting effective understanding of the changes
- Creation of conditions for the implementation of changes
- execution of test changes

Resistance to change can also be reduced by any of the following actions: provision of adequate information to employees, by supporting the employee participation, provision of guarantees against losses, by implementing only the necessary changes, by identifying useful practices and informal relationships, by consulting employees, with negotiation and confidence building among employees.

CONCLUSION

Success in the 21st century requires continuous innovation and the creation of greater and greater value and quality. Concern about intellectual capital within the organization is becoming imperative for a successful organization. Modern business imposes a constant need for change. The authors of "Funky Business", a Nordstrom and Riderstrale indicate a need to change the core of the organization, its structure and relationships with employees. The application of this innovative management concept may at first glance seem like mission built from unattainable goals, but

deeper analysis of the problem indicates the need for this kind of business innovation. A key role in this change belongs to leader. Their mission is to present the necessary change on the right way and to enable its implementation. They need to encourage people to change and to enable them to accept change as a positive step toward their individual success, which will result in the organizational success.

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KNOWLEDGE MANAGEMENT

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ABSTRACT

This paper defines a process of knowledge management in the organization, as well as sources, forms and carriers of that knowledge. It also represents the relationship between knowledge and strategic management in modern business.

Keywords: knowledge management, strategic management, management trends.

INTRODUCTION

The study of modern economic trends have indicated that they are increasingly based on the use of new ideas, information, and acquiring new knowledge and skills and less on materialistic resources. Therefore, knowledge arises as the main "generator of success." The idea of the importance of knowledge originates from the work of economists such as Adam Smith, Fredrik List, Schumpeter, Galbraith, Goodwin, Hirschman, etc.

When defining the very concept of knowledge, there is a disagreement among theorists, but one thing about which they all agree is that the knowledge can be understood as the mix of organizational experiences, values, information, and ideas. Intellectual capital consists of all knowledge that employees have within an organization.

Knowledge economy encourages the creation of knowledge by the employees in the organization and utilization of that knowledge in accordance with the objectives of the organization. The concept of the knowledge economy is not a novelty. Its origin is related to the work of Peter Drucker, in which he talks about the difference between traditional workers and intellectual workers. Traditional workers create the classic form of goods and services, and the mental effort of employees is manifested by the creation of new ideas, knowledge and information related to the production process. Investments in knowledge may lead to an increase in production capacity more than other factors (Sajfert, Đorđević, & Bešić, 2006).

DEFINITION OF KNOWLEDGE MANAGEMENT

Knowledge represents our belief and the system of values, based on organized information that we gain from the experience, communication and reasoning. The existence of knowledge itself has no great importance if it is not applied, because without usage it is nothing more than a dead capital. To apply knowledge appropriately, it is necessary to develop the theory of economics which could provide answers to the following questions (Senge, 1990):

- How to transform knowledge that would increase the value of the business results?
- How to gain knowledge and avoid unnecessary information?
- How to create an organization that supports knowledge in which employees are aware of its importance for the success?

- How to manage human resources so that they arise in to knowledge workers, motivated to acquire knowledge and develop their skills, but also to share their knowledge with others in the organization?

Management of the company is related to the long-term planning, directing, managing, organizing, coordinating and controlling all activities within the organization with the ultimate goal of achieving continuous business success. This definition of management applies when defining knowledge management. Management theory, which answers to the above questions is the foundation of organizational knowledge management. Knowledge management process, therefore, consists of identifying critical knowledge within the organization; collection, storage and organization of critical knowledge, knowledge sharing between users; and the use of existing knowledge to create new ones.

BASIS OF KNOWLEDGE MANAGEMENT IN THE ORGANIZATION

For the successful implementation of knowledge management program in an organization, it is necessary to identify all the sources of knowledge available to an organization. In general, we can identify two sources of knowledge: internal and external sources. Internal sources of knowledge are the "heads" of the staff members, and are expressed in the behavior of employees, procedures, software and equipment. Internal sources of knowledge can be recorded in various documents, or stored in databases. External knowledge sources include publications, universities, government agencies, consulting firms, professional associations, personal relationships, suppliers, etc.

Knowledge management includes the following categories of knowledge (Nikolić M, 2007):

- Explicitly written knowledge - information management,
- Implemented knowledge - process management,
- Implicit knowledge – management of human resources ,
- Redesigned knowledge - management innovation,
- Property Management - intellectual management.

Understanding the organization as a community of individuals, leads to the conclusion that organizational knowledge is equated with knowledge of the individuals who constitute the organization. Such views, however, leaves out an important component of organizational knowledge, which is a synergistic effect. Specifically, we are talking about that the successful cooperation between members of the organization is resulting in further improvement of knowledge. It is therefore important for organizations to possess workers who have various skills, as well as numerous experts in some specific areas.

Knowledge management is of great importance in key areas of management. These areas are referred to as carriers of knowledge. Carriers of knowledge are: leadership, organization, technology, and learning (Nikolić M., 2007).

Concern about intellectual capital within the organization is an imperative of an organization, which strives to achieve success. Modern business imposes constant need for gaining new knowledge. The leaders play a key role in this. Their task is to present the necessary changes and to enable implementation. Leaders also establish, implement and develop a strategy that provides factors for the survival of the company, based on the available knowledge. Organizational culture and climate in the organization are most dependent on the relationship between the leader and its surroundings. The organizational structure of the company is created to follow the strategic direction of the company. Business processes and performance of management systems are created so that they are strong enough to endure the turbulence of modern business, and at the same time flexible enough to adapt to the demands. The contribution of technology is reflected in the impact it has on management decisions, as well as the opportunities provided in the areas of information storage, communication etc. Ability to learn is the most important ability for the modern

organization. In this context, the learning does not indicate the acquisition of additional information, but expanding the capacity to create the results that we want in life. It represents a generic learning that lasts for a lifetime.

Organizational knowledge is responsible for improving the efficiency, effectiveness and innovativeness within the organization. Improving efficiency means to improve productivity and reduce operating costs. Improving the effectiveness, results in the minimization of errors and faster adaptation to changing environment. Development of innovation leads to productive brainstorming and better exploitation of ideas.

KNOWLEDGE MANAGEMENT STRATEGY

Strategic Management represents approach to managing the company that is based on clearly defined goals, adequate resources for their realization and use of opportunities that may not be related to the nature of the current business. It relies on the continuous use of information about the environment. If used in a strategic way, knowledge can bring significant profits. It is necessary to tell the difference between the knowledge in the function of strategy and strategic knowledge management. If knowledge is used to gain a competitive advantage, knowledge is in the function of strategy and therefore represents a strategic resource. In contrast, strategic knowledge management refers to the systematic and increasing specialization of knowledge, so it would be able to, at some point, meet the needs of the company and contribute to the implementation of appropriate strategies. Figure 1 shows the relationship between strategy and knowledge.

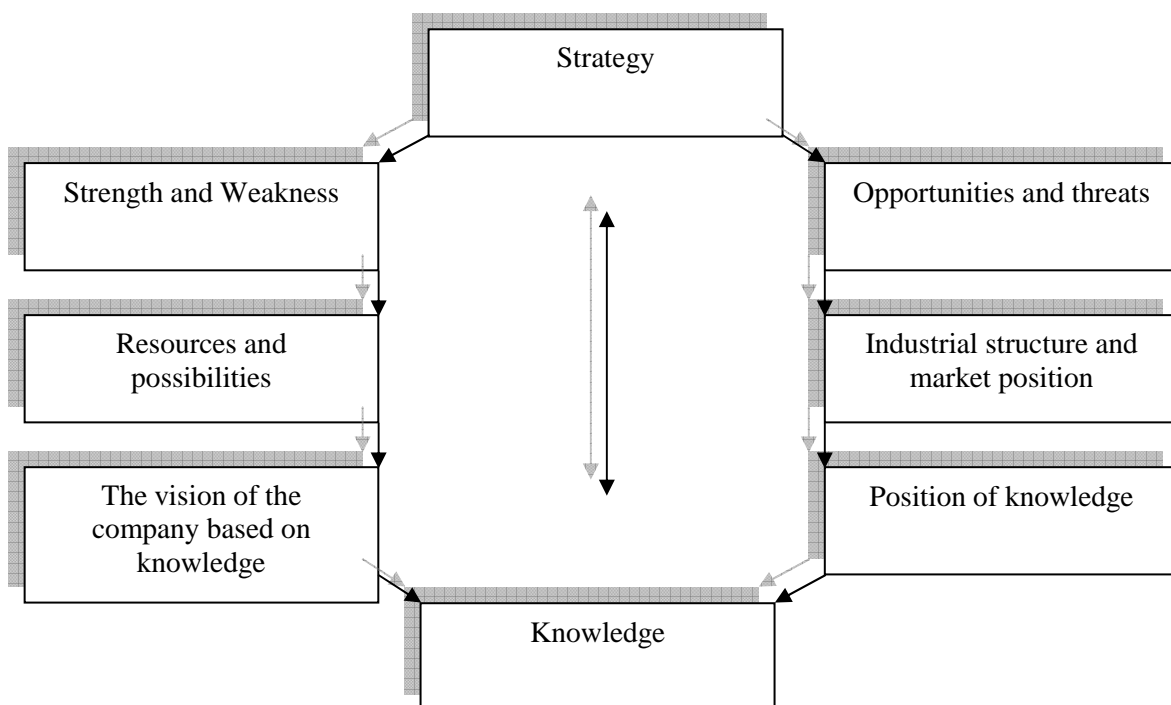


Figure 1: Relationship between strategy and knowledge (Zack, 2002).

According to (Skyrme, Amidson, 2000), there are six ways of action that contribute to the strategy based on knowledge management grows in to the advantage of the company:

1. Knowledge management is a dominant part of the business process - as a product and as a process.
2. Creation of knowledge and innovation - new product, rapid commercialization of a general knowledge and expertise by adjusting the time required for the reaction.
3. Transfer of knowledge and best practices - improving customer services by adjusting the time required for the reaction.
4. Knowledge focused on consumers.

5. Intellectual Asset Management - the importance of intellectual property.
6. Personal responsibility for learning - encouraging individual learning and development.

Differences between traditional and new ways of doing business briefly can be reduced to the following (Andrews, 2003):

- Knowledge is a critical factor of success for the business.
- The time for decision-making is getting shorter.
- The relations between the employees are much more complex.
- Information and communication technology is embedded in a large number of human interactions and business transactions.

THE LEARNING ORGANIZATION

Modern business requires continuous improvement and innovation. One of the predispositions of innovation is knowledge. Modern business requires continuous improvement and innovation. One of the requirements for innovation is knowledge. Organizations nowadays have enough knowledge. Their problem lies in not knowing the structure and characteristics of that knowledge (Ridderstrale & Nordstorm, 2002). Carriers of knowledge are employees therefore monitoring of knowledge within an organization is the function of the leader. It is essential that the leader knows the limits of knowledge that exists in an organization, as well as to encourage a process to expand this knowledge from the individual level to the group and organizational level. The growth of this influence, however, is not only a question of knowledge transfer, but also its transformation into forms that enable the organization to manage them effectively. This is the beginning of „the learning organization" creation process - the project that requires a lot of investment, both materialistic as well as spiritual, and the leader is the one who controls this process. As a way of successful development and continuous learning for employees within the organization, this method is becoming more common in organizations. Learning is treated as an activity for a lifetime, so it is clear that it cannot be restricted only to educational institutions and classrooms.

Peter Senge, in his book *The Fifth Discipline*, through theory and practice, presented a learning organization. In year 1990, when the book was published, it represented a possible example of revolutionary changes in organizational structure, as well as in the culture of the organization. Today, the application of the principles of this work is considered the necessity to operate the organization of any type.

The learning organization creates a model of organizational change that needs to be reached in order to use them to achieve the development, and thus gained an advantage in the marketplace. Implementation stages of this concept are: achieving knowledge through the collection of information, expanding knowledge, which becomes available to all employees; storage of acquired knowledge and use of that knowledge to modify the behavior in the organization (Sajfert Z., Vukonjanski J., 2008). Characteristics of organizational culture that are predisposed to the adoption of this model are: openness to the environment, market orientation, risk acceptance, tolerance of mistakes and learning from them, openness in communication, a positive attitude towards change.

IMPORTANCE OF KNOWLEDGE MANAGEMENT

The benefits of knowledge management concept are numerous. Unfortunately, the biggest problem is the quantification of the benefits that are conditioned on the implementation of the concept. This problem is further aggravated by the fact that there are both direct and indirect benefits. It is common practice for the benefits of knowledge management to be expressed by descriptive way.

Practitioners and theorists involved in knowledge management have attempted to quantify the contribution of knowledge management and enterprise business results through the ROI (return of investment) ratio of investment in knowledge management program in an organization, but a

consistent model has not yet been found, so the obtained results are mainly based on the greater or lesser probability of accuracy.

In general, knowledge management leads to reduced errors and redundancy, faster problem solving, better decision-making, reduced research and development costs, increased the independence of workers, improved relations with employees and improved products and services. In the knowledge era enterprise competitive advantage is based on knowledge and utilization of opportunities. The emphasis is on knowledge as a resource, and it should provide companies with the following:

- innovation by encouraging the free expression of ideas,
- improvement of services provided to consumers,
- increased revenue through better marketing of products and services on the market,
- reduced employee fluctuations by recognizing the value of employees' knowledge and rewarding them for activities related to knowledge management,
- Improved working operations and reduced costs by eliminating redundancy, or unwanted processes.

CONCLUSION

At a time when unpredictability is the only thing that can be predicted; theorists are forced to deal with issues of competition all over. The rise of the market and the number of competitors, is leading to the need for organization to change and adapt to the novelties that the market brings. As one of the main factors that influence organizational change, knowledge is emphasized. The big problem today is that knowledge becomes obsolete every day. Therefore, there is a need in the businesses to cherish more creativity, adaptability, namely, it is necessary to turn the organization in the “learning organization”. Replacing the traditional type of organization with the concept of “the learning organization” is a significant change, especially in the field of human resources and organizational culture. The implementation of these organizational changes may require significant investment and a lot of effort, but the results of successful implementation will be equally important.

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EMOTIONAL INTELLIGENCE OF EMPLOYEES IN COMPANIES IN SERBIA

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ABSTRACT

This research was aimed at determining the state of Emotional Intelligence of employees in companies in Serbia, shown through state-owned and private Enterprises. This kind of research shows an additional importance in light of transitional conditions, existence of state and private owned companies, and the recently increasing number of foreign companies operating in Serbia. The survey was conducted using interviews with respondents - middle management, in companies in Serbia. A total of N = 256 questionnaires was collected from 131 company.

Keywords: Emotional Intelligence, state and private owned companies, Serbia.

INTRODUCTION

Emotional intelligence is the ability to identify, use, understand, and manage emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges, and defuse conflict. Emotional intelligence (EQ) consists of five key skills, each building on the last:

- The ability to quickly reduce stress
- The ability to recognize and manage your emotions
- The ability to connect with others using nonverbal communication
- The ability to use humor and play to deal with challenges
- The ability to resolve conflicts positively and with confidence

Numerous studies in the field of management recognize the important role of emotional intelligence (EI) in achieving good business performances (Jordan, Ashkanasy, Härtel, & Hooper, 2002). Similarly, the reference (Antonakis, Ashkanasy, & Dasborough, 2009), says that in recent years interest for EI increased, which is reflected by the numerous studies in the fields of psychology and management. However, some argue that EI is given more importance than it really is important. For example, (Aghdasi, Kiamanesh, & Ebrahim, 2011) found that EI has no influence (directly or indirectly) to occupational stress, job satisfaction and organizational commitment. According to (Day & Carroll, 2004), there are many studies that confirm the generally accepted view that EI contributes to the improvement of tasks.

The impression is that, generally speaking, there is a significant number of studies which confirm the existence of EI influencing managers and employees on a number of aspects of organizational systems and management. For example, according to (Behbahani, 2011), there is a significant relationship between EI and managerial skills. The reference (Kilduff, Chiaburu, & Menges, 2010),

states that EI helps managers in organizations. According to (Dincer, Gencer, Orhan, & Sahinbas 2011), EI is of increasing importance in strategic decision making, and managers with high EI make better strategic decisions. In the same reference there was found a positive relationship between EI and Innovative work behavior. Research (Lyons & Schneider, 2005), suggests that some dimensions of EI influence performance and quality of performing strenuous and stressful task. EI is also important for teamwork: teams where a high average level of EI members initially achieved better results compared to teams with low EI average level members (Jordan, et. al. 2002). In addition, EI has a significant role in marketing.

According to (Esfahani & Soflu, 2011), there is a strong connection between EI and transformational leadership. Transformational leadership mediates the link between EI and leader effectiveness, as well as the link between EI and service climate (Hur, Van den Berg, & Wilderom, 2011). Similarly, according to (Cavazotte, Moreno, & Hickman, 2011), EI is associated with transformational leadership and transformational leadership is directly related to achieving a high level of organizational outcomes.

In some references the impact of EI and job satisfaction is considered. According to (Sy, Tram, & O'Hara, 2006), EI of employees have a positive effect on job satisfaction and performance. EI was significantly and positively related to job satisfaction and organizational commitment (Güleryüz, Güney, Aydın & Aşan, 2008). Positive and negative affect at work significantly mediate the relationship between EI and job satisfaction of teachers (Kafetsios & Zampetakis, 2008).

EI is a common subject of research in education. The reference (Ergur, 2009) pointed out the importance of EI for education professionals. According to (Khajehpour, 2011), there is a strong positive relationship between EI and academic achievement. In addition, EI can predict academic achievement in high school students.

EI is something you can train, teach and learn. In reference (Fletcher, Leadbetter, Curran & O'Sullivan, 2009), an example of medical students, it was confirmed that EI can be developed. According to (Behbahani, 2011), there is the possibility of training in order to develop EI, and thus leads to the development capabilities of the employees. Training programs related to EI may influence the EI project managers (Clarke, 2010).

METHOD

Survey instruments (measures)

EI is defined as the domain of performance consisting of four factors, "ability to perceive accurately, appraise, and express emotion; the ability to access and / or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth "(Mayer & Salovey, 1997, p. 10). In general, EI refers to competencies in identifying, understanding, expressing, and managing emotion, in both self and others, na primer (Matthews, Zeidner, & Roberts, 2005; Mayer, Caruso, & Salovey, 2000). Emotional intelligence (Goleman, 1996) refers to the ways in which people perceive, understand and manage emotions. According to (Blau, 1993), emotional intelligence is "the ability to monitor their own and others' emotions and compare the impact of the information obtained in thinking and behavior."

EI research domain is divided between those who believe that the EI measured by performance tests (Salovey & Mayer, 1990) and others on the questionnaire assessing EI, for example (Petrides & Furnham, 2001). The paper uses one of the tests given in the book (Weisinger, 1998). This questionnaire consists of 25 items covering 5 dimensions:

- 1) self-awareness;
- 2) managing emotions;
- 3) self-motivation;

- 4) empathy;
- 5) social skills;

Responses were measured using a 5-point Likert scale.

Participants and data collection

The subjects were middle-level managers, employees of companies in Serbia. The study included N = 256 respondents from 131 companies. What also is important for this study is that it included 142 men and 114 women. According to the national origin of companies in the sample are represented Serbian enterprises and foreign companies operating in Serbia.

According to the ownership structure of the sample the state and private companies were represented. The study comprised companies from different business areas. Those companies were chosen which are competitive on the market, in other words, companies that have long time stable market position and high levels of consumer confidence. Respondents were not leaders or owners of the companies, but they were certainly people in senior management positions in their companies (medium level managers). Therefore, the people who have access to the company's strategy are related to the company and others. It can be said that the respondents were generally the most competent people in their companies. According to the level of education, respondents generally have a B.Sc. and M.Sc degrees. Small businesses (up to 50 employees) were not included in the survey. The reason is that in the smaller companies there is a significant and direct effect of personal characteristics and preferences of the owner or the top management of the company to leadership. In Table 1. the number and structure of the respondents are presented.

Table 1: The number and structure of the respondents

	Distribution of respondents	Frequency	Percent
	Valid questionnaires (N)	256	100
Gender	Male	142	55.5
	Female	114	44.5
National origin of the companies	Serbian companies	173	67.6
	Foreign companies	83	32.4
Ownership Structure	State-owned enterprises	118	46.1
	Private companies	138	53.9

RESULTS

Data processing was performed through IBM SPSS Statistics 19. In Table 2, the results of descriptive statistics are presented for the dimensions of emotional intelligence. In this table, the names of dimensions, short name (label) for each dimension, the number of respondents, average values for domestic and foreign, as well as for public and private companies are given. The results of the average marks were compared for both domestic and foreign, as well as for public and private companies to evaluate the emotional intelligence.

Table 2. Descriptive Statistics

Dimensions	Short name	N	Min.	Max.	Average (together)	Average (Serbian)	Average (foreign)	Average (public)	Average (private)
Self-awareness	EI1	256	1.00	5.00	4.0116	4.0208	3.9707	3.9804	4.0377
Managing emotions	EI2	256	1.00	5.00	3.7911	3.7913	3.7902	3.6784	3.8852
Self-motivation	EI3	256	1.00	5.00	3.9929	4.0000	3.9610	3.9451	4.0328
Empathy	EI4	256	1.00	5.00	3.7393	3.7475	3.7024	3.6725	3.7951
Social skills	EI5	256	1.00	5.00	4.0571	4.0852	3.9317	4.0824	4.0361

Based on Table 2. we can see that workers are emotional intelligent in foreign and private owned companies just like in state owned and Serbian companies. There are no statistically significant differences between these categories.

From the dimensions of emotional intelligence social skills gained the best marks afterwards are self-awareness, self-motivation, managing emotions and the last is empathy.

CONCLUSION

If employees have a high level of emotional intelligence, it certainly helps them to recognize good and bad communication in the company. Such persons, in accordance with recognized situation easily take an objective attitude towards the quality of communication within the company. Today companies worldwide routinely look through the lens of EI in hiring, promoting, and developing their employees.

The limitation of this study is that the results are valid for companies in Serbia, but similar results can be extrapolated to other countries, especially in countries in transition. Recommendations for managers are to take care of the emotional intelligence of employees, particularly in the recruitment and selection of human resources.

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CREATIVITY IN PUBLIC RELATIONS

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ABSTRACT

Generally, studies on creativity in public relations indicate that the PR industry is not creative enough. There is a lack of big ideas and the gap between aspirations and working practices, resourcing is seen as key barrier to creativity, and PR practitioners describes themselves as creative but find creativity and creative process difficult to explain. The aim of the paper is to highlight the importance of creativity in PR practice and to provide a theoretical view of this subject. Despite the belief that PR industry suffers from creativity deficit, the paper presents positive examples of PR campaigns of companies and organizations that, thanks to their creative efforts, demonstrated the ability of public relations not only to contribute to important corporate objectives and connect consumers to corporate brand but also to facilitate positive social change. By expressing an enormous creative potential they made significant contributions to the continuing development of the PR profession.

Keywords: creativity, creativity in PR, managing creativity in PR, building creativity techniques.

INTRODUCTION

PR is building good relations with the company's various publics (consumers, investors, the media, and their communities) by obtaining favorable publicity, building up a good corporate image, and handling or heading off unfavorable rumors, stories, and events, (Kotler, Armstrong, 2011).

Professional organization Chartered Institute of Public Relations (CIPR) gives the following definition of public relations: *"It is the planned and sustained effort to establish and maintain goodwill and mutual understanding between an organization and its publics"*.

At the First World Assembly of Public Relations Associations held in Mexico City 1978 was formulated the following declaration of PR known as the Mexican statement: *"Public relations is the art and social science of analyzing trends, predicting their consequences, counseling organizational leaders and implementing planned programmes of action which will serve both the organization and the public interest"*, (Source: Kitchen, 1997).

Taking into account all these definitions of Public Relations, it raises the question of where creativity fits within Public Relations.

At its heart, creativity is simply the production of novel, appropriate ideas in *any* realm of human activity, from science, to the arts, to education, to everyday life, to business, (Amabile, 1997).

De Bono (1971), identifies creativity as the "competitive tool that matters most." Increasingly, competitive advantage depends on human capital and "especially on knowledge workers who

innovate intellectual goods (Mayfield & Mayfield, 2004). Cleggs and Birch, (2002), describe creativity as a “survival factor” believing it to be more important than mere competitive advantage.

It is obvious that creativity is now recognized as central to organizational performance. Since the business world is becoming more complex and competitive, many companies turn to developing creativity as relevant and permanent source of competitive advantage. Creativity can give businesses an edge in an increasingly competitive environment. For PR people, creativity does much the same thing. Creativity in Public Relation is that “x-factor” which can make a PR programme sparkle. A creatively written news release can seize a journalist’s attention or imagination. A creative stunt or photo opportunity can gain front page coverage. A creative message can communicate with a new audience, or engage an existing audience in a new way.

CREATIVITY AND PUBLIC RELATIONS

Creativity is said to play a leading role in the PR industry and in the work of PR practitioners who are paid millions by organizations or clients to be creative and to add the creative dimension to their work. However, the subject of creativity in public relations is still something of an enigma. Jay Conrad Levinson thinks that if “in art creativity is meant to cultivate, to enchant, to touch the soul”, creativity in public relations is supposed to “earn trust, to add value, to change the attitude, behavior and beliefs of the company’s publics” (Levinson, 2002).

Trying to fit creativity within public relations, Green (2001) provides following definition: creativity is the ability each of us has to create something new by bringing together two or more different elements in a new context, in order to provide added value to a task,(Green, 2010). A creative act consists of not only originating but also evaluating the added value it contributes. It is not novelty for its own sake, but it must produce some form of value that can be recognized by a third party. (Green, 2001) Added value is the fundamental element of anything that is defined as creative. The measure of this added value is determined by its context. The subsequent worth of added value is determined by the impact of the creative product on its marketplace, and the relative importance of that marketplace in the wider society. The added value will subsequently be affected by time and a shifting context. Rawel, (2003) also thinks that creativity can add something to the ‘nuts and bolts’ of a PR programme - a degree of ‘added value’. It is not only valuable but appropriate to its context and surroundings.

The creative function can be employed to extend or create new organizational or brand values. But creativity is bringing out qualities or issues inherent within the organization. Any fool can get publicity, but the mark of the creative public relations practitioner is to achieve this without compromising the brand or organizational values (Green, 2010).

Creativity won’t just happen. It must be nurtured and encouraged wherever possible. As public relations spread rapidly, PR practitioners have to bring elements of originality, to look for new perspectives and to prove with each campaign their creativity and professionalism. Every working day, public relations practitioners are faced with demands to come up with creative answers to problems. In order to engender creativity, they may apply the following creative techniques in their work: (Parker, Wayne & Kent Ltd., 2005)

- Artistic expression: drawing the problem can help in thinking about it in a fresh way.
- Brainstorms: group working with ideally between six and 12 participants from various functions for the mass generation of ideas.
- Checklist method: work individually or collectively through a predetermined list of criterion.
- An ideas sheet: circulated around the office with each person adding their own ideas and solution to a problem listed at the top of the page. Anonymity is a must to allow the free flow of ideas.
- Cognitive mapping: one or more people produce a diagram of their ideas, showing how these are interrelated.

- Creative pairs: group working with between two people harnesses synergy for the creative process.
- Distortion: assumptions can limit the solutions we generate. Distortion modifies the nature of the problem to begin to find new solutions. What is the prime assumption in someone's problem and what would happen if this weren't the case?
- Logic exercises: to get a group to think in a logical way.
- Mega-groups: utilize the creative potential of a large group working overtime to answer a predefined problem or issue.
- Networked groups: a team meeting regularly over the course of six months or a year to overcome a problem. Often the individuals involved in the networked groups will come from different functions of the company.
- Picture associations: generate ideas through the engaging 'right-brain' activities.
- Puzzles: challenge your brain to think around a problem and generate creative solution.
- Random words: random stimuli - in this case words - can kick-start the brain's thought processes.
- Role-plays: one of the best ways to generate new ideas is to develop solutions by seeing the problem through fresh eyes and someone else's perspective.
- Suggestion slips: allows the free and anonymous suggestion of ideas.
- Tested strategies: What has worked before, why did it work and can it be improved in any way? Apply previous ideas/solutions in a new way perhaps.
- Word associations/word plays: words are powerful and can stimulate the thought process.
- Working parties and task forces: team working with a clearly expressed aim.

Creativity will still be a fundamental skill for every practitioner to employ, and a challenge for organizations to manage in their employees. By identifying their position within the Creative Challenge, managers can adopt a number of strategies for seeking greater added value from their creative resources, through: (Green, 2010)

- *achieving greater balance between generating ideas and acting upon them*, by developing the skills of their team, putting additional resource in time, people or facilities in the areas of the Creative Challenge that are weak;
- *developing a tandem operation* in which the missing or weak skills are outsourced in some way;
- *recognizing that their strengths lie in just one area of the Creative Challenge* and focusing on this particular quality.

If an organization wants to achieve business excellence, defined as different publics' satisfaction and long-term business success, it must create an environment where the creativity of employees is nurtured, developed and sustained through education and training, involvement and teamwork. To manage creativity, one must understand the dangers and the pitfalls of creativity. De Bono (1971), identified that creativity was not a solution in itself, and contains a number of inherent dangers:

- creativity changes direction, and if business focus changes too often, it's inefficient, costly and you don't get anywhere.
- people own their creative ideas, and may be unwilling to give them up
- time may be wasted looking for that *ultimate* creative idea.
- if someone focuses too greatly on creativity, the danger is that she/he will undervalue a solid idea.

THE MOST CREATIVE PR CAMPAIGNS

The PR industry has a well-established series of professional awards, where individual projects of work are praised for their creativity and the creative dimension is often considered the crucial element.

“The Heart Truth”

In 2009, Ogilvy Public Relations' campaign for The National Heart Lung & Blood Institute won a Sabre Award and was awarded for the best campaign of the decade demonstrating the impressive breadth and depth of the work in the PR profession; the strategic thinking and the creativity that help clients cut through the communications clutter that defined the first ten years of the 21st century and capture the public's imagination.

With the help of Ogilvy Public Relations Worldwide, The National Heart Lung & Blood Institute (NHLBI) set out to “create a personal and urgent wakeup call to American women.” In 2002, it launched a national PR campaign—“The Heart Truth”—to raise awareness of heart disease among women and get women to discuss the issue with their doctors.

The centerpiece of the campaign is the Red Dress (fig 1), now the national symbol for women and heart disease awareness. The Red Dress icon became a social phenomenon, persuading celebrities, politicians and business women across America to don red dresses in an attempt to draw attention to the risk of heart disease—the number one killer of women—and create a national movement for improved female heart health, (www.designtaxi.com).

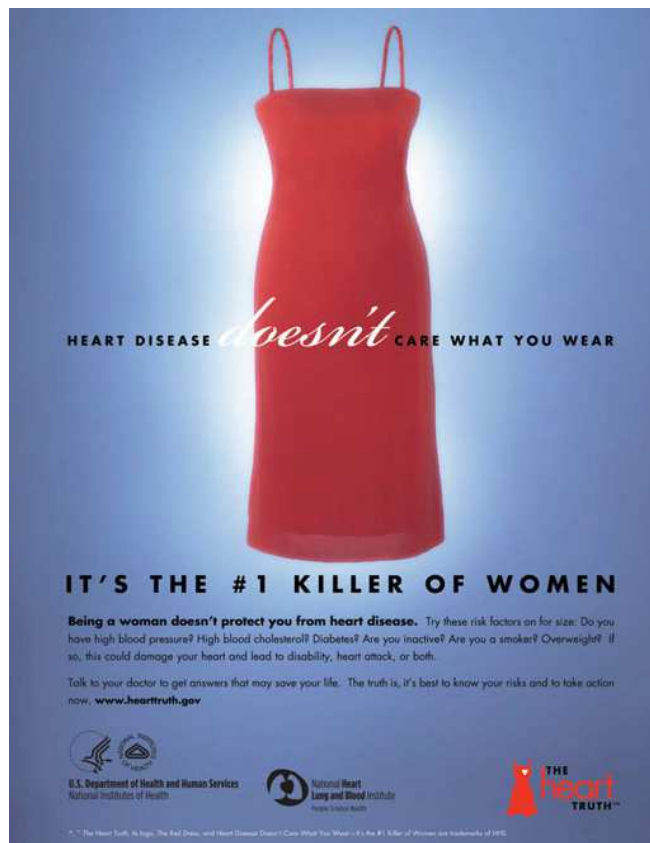


Figure 1: Public relations campaign: NHLBI's “The Heart Truth” (Kotler and Armstrong, 2011)

The campaign creates awareness through an interactive Web site, mass media placements, and campaign materials - everything from brochures, DVDs, and posters to speaker's kits and airport dioramas. It also sponsors several major national events, such as the National Wear Red Day, an annual Red Dress Collection Fashion Show, and The Heart Truth Road Show, featuring heart disease risk factor screenings in major U.S. cities. Finally, the campaign works with more than three-dozen corporate sponsors, such as Diet Coke, St. Joseph aspirin, Tylenol, Cheerios, CVS Pharmacy, Swarovski, and Bobbi Brown Cosmetics. So far, some 2.65 billion product packages have carried the Red Dress symbol. The results are impressive: Awareness among American women of heart disease as the number one killer of women has increased to 57 percent, and the

number of heart disease deaths in women has declined steadily from one in three women to one in four. The American Heart Association has also adopted the Red Dress symbol and introduced its own complementary campaign (Kotler, Armstrong, 2011).

Thank you, Mom

Wieden & Kennedy, Portland's 'Thank You Mom' campaign for Procter & Gamble and the P&G London 2012 Olympic Games was the Grand Ogilvy Winner demonstrating the most successful use of research in the creation of superior public relations campaign. Procter & Gamble's Olympic Games "Thank You, Mom" campaign in developing markets is part of the largest multi-brand commercial initiative in the Company's history. Launched as part of a global campaign in celebration of the London 2012 Olympic Games, "Thank You, Mom" spanned more than 50 nations and 27 brands in developing markets. At its heart is the belief that behind every Olympic and Paralympic athlete is an equally amazing mom. P&G thanked those moms, as well as all moms everywhere, for the great work they do in raising healthy, happy kids.

Centered around a dedicated Facebook page (fig. 2), P&G was celebrating the power behind the glory, success and dedication of many an Olympic athlete — his or her mother. On Twitter (via a ThankYouMom hashtag) and on a special Facebook tab, P&G was encouraging everyone (not just athletes) to take a moment and share why they are thankful to their own mothers. (www.brandchannel.com)



Figure 2: Facebook page of "Thank you, Mom" campaign

Source: www.brandchannel.com

Four months prior to the games, P&G posted "The Best Job," a two-minute film directed by the Oscar-nominated Alejandro González Iñárritu that shows the sacrifices parents make for their Olympians—aligning it directly to the P&G brand. The heartbreaking tribute got some 20 million views and was the most viral ad of the Olympics, getting shared more than 2 million times, according to Unruly Media and MediaCom's tracking. Other commercials included Olympic Hero spots highlighting specific athletes and P&G brands. In addition, P&G produced more than 60 "Raising an Olympian" videos shared via YouTube and other digital hubs, which tell the stories of Team Great Britain athletes — including Sir Chris Hoy, Jessica Ennis, Victoria Pendleton and Paula Radcliffe — through the eyes of their mothers. P&G even sponsored a venue - its "Family Home"—where moms and families of Olympians could spend time together as their children competed.

P&G's Olympics effort became a way to connect consumers with the corporate brand. "Thank you, Mom" campaign surely has set a new benchmark. It's one of those things that happen once or twice in a decade. It's the perfect amalgamation of creativity, purpose, and a great message.

CONCLUSION

It can be concluded that creativity in public relations is the "final touch" - that something extra that makes a good campaign great. What is promising is that creativity is not a divine or natural gift bestowed upon fortunate creative-types, but a skill that lies in every person and can be trained, practiced, developed and managed.

Although it seems that people in PR industry understand the importance of creativity, some companies are still reluctant to invest in building and encouraging creative potential. Fortunately, there are those (some of them mentioned in this paper) aware that creativity is worth investing in. Examining these positive examples it can be assumed that creativity is not only understanding how to stand out in the mind of audience but the ability to create new and fruitful links with the audience and inspire them on an emotional level.

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