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- *The European Integration Process in Romania* (author: Nedelea Alexandru), published in no. 1-2, 2005.
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A DIALECTICAL SYNTHESIS IN HOLISTIC BUSINESS STRATEGY FORMULATION

Slavica P. Petrović, PhD*

Abstract: *A myriad of perceptions and interpretations of management problem situations in organisations can be considered as one of their main features. Creative management of these pluralist problem contexts implies an employment of suitable interpretive systems methodologies. As a particular soft systems approach to management, Strategic Assumption Surfacing and Testing seeks - through a dialectical synthesis - to enable stakeholders to uncover and challenge the assumptions on which the proposed strategies are based as well as to provide a holistic formulation of such a business strategy, which is acceptable to stakeholders and whose implementation will improve the organisation functioning.*

Keywords: *pluralist context of management problem situations, the interpretive systems approach to management, Strategic Assumption Surfacing and Testing, synthesis, business strategy formulation*

Introduction

Under contemporary circumstances, relevant stakeholders indisputably represent the significant feature of management problem situations in organisations. It is about individuals and groups that are related to a particular problem area in an enterprise and interested in structuring the problem situation in question and solving the respective problems. Stakeholders - internal and external - can be characterised by different interests, value systems, opinions and beliefs, various goals and means of achieving them, different participation in formulating the problems and their solving, various participation in making the decisions and their implementation. It means that the key stakeholders of an enterprise can observe one management problem area from different perspectives and perceive

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and interpret it in different ways. Obviously, a *plurality* of possible perceptions and interpretations of the management problem situations in enterprises is one of their important dimensions (Petrovic 2008, 77).

Along with the possible differences in perceptions and interpretations of the management problem area under consideration, it is vitally important that between the relevant stakeholders, as a rule, there is - at least - the basic compatibility of their interests. A *compromise* - which is significant for the survival and development of the enterprise - on the key goals as well as the means and resources to achieve these goals can be reached through the debates and negotiations suitably guided.

Creative managing the pluralist problem contexts that have just determined implies a choice and employment of an appropriate systems methodology that belongs to the *interpretive* paradigm (Jackson 2000; Jackson 2003; Jackson 2006a, 868-878). *Strategic Assumption Surfacing and Testing* (SAST) is one of the relevant interpretive systems approaches to management (Mason 1969, B403-14; Mason and Mitroff 1981; Mitroff and Emshoff 1979, 1-12; Mitroff, Emshoff and Kilmann 1979, 583-593).

This methodology is primarily focused on the pluralist relationships between participants in management problem situations in organisations; at the same time, the systems dimension, that embraces and conceptualises the complexity of structure and function of the system in question, is abstracted from the research process. In other words, SAST-methodology selects the personal and political aspects of the organisation as the key ones, and seeks:

- to uncover the relevant a priori *assumptions* built into the opposing business strategies that are proposed, as well as
- through a process of *dialectical synthesis* of preliminarily conflicting opinions, to enable the formulation of creative business strategy, which will be accepted by the stakeholders and whose implementation will result in improving the enterprise functioning.

A comprehensive, scientifically based and practically useful dealing with SAST-methodology in managing the pluralist problem situations in enterprises, particularly in the processes of holistic development of their business strategies, implies, first of all, a *conceptual* and *theoretical* framework (of the methodology) that has to be determined. Then, the main dimensions of the *methodological* development of SAST should be specified and explored. Besides, this interpretive systems approach to management ought to be *critically* reviewed from the theoretical, methodological and applicative viewpoints. Finally, the conditions, manner and results of SAST-methodology *employment* should be verified through a suitably developed example.

Conceptual-Theoretical Framework

The philosophical ideas built into the theoretical foundation of SAST-methodology are, in fact, the postulates of the corresponding version of systems analysis (Churchman 1968, 231-232; Churchman 1971). First of all, complex, dynamic, interactive and ambiguous contemporary social reality results, as a rule, in the existence of many and various understanding and interpretations of every single part of that reality. Each of these understanding, i.e. readings of the social reality part under consideration is based on the corresponding a priori assumptions which are treated as facts. In other words, it is necessary to respect the following facts during the observation of a certain part of multidimensional social reality and thinking about it. Along with our observation, there are many different, *equally legitimate* perceptions and interpretations of one the same part of social reality, that are based on the alternative sets of a priori assumptions. Through recognition and respect of this idea, subjectivity is necessarily included into the systems thinking process. In tackling the management problem situations in organisations, there are, as a rule, different evaluations of, first of all, the goals, i.e. of what the stakeholders want to achieve through structuring the problem situations and solving the problems. In addition, different assessments of the current state of the system functioning are possible. Under such circumstances, observation of as many different perspectives as possible is the only way to encompass and comprehend as fully as possible the wholeness of the considered system. Relying on the presented, scientifically valid ideas, it can be concluded that this systems approach uncovers the limitations of every single world view. It means, subjectivity is no longer excluded. On the contrary, it should be included in any determination of the objectivity in order to overcome the restrictive nature of any world view. In sum, this systems approach provides a different comprehension of the objectivity. In addition, each world view is not only extremely limited, it is also, as a rule, highly resistant to change.

Accordingly, it is necessary to develop a corresponding approach to determining the objectivity:

- A world view that is dominant - *thesis*
- should be confronted with a different world view, which is based on different assumptions - *antithesis*
- in order to achieve a richer, conditionally more objective assessment of the management problem situation - *synthesis*.

This new, richer observation of the situation reflects the both positions - the thesis and the antithesis, but, at the same time, it is beyond them.

The following attitudes correspond to the developed ideas.

In the processes of designing the social systems, i.e. organisations, it is vitally important that the appropriate moral judgements have to be included in the

determination of their purposes, objectives and means for their achievement. It follows that this systems approach restricts the role of experts. Namely, the social system designers have to broaden the limited nature of their own world views by means of the perspectives and opinions of those involved in the system, i.e. those who are interested in the system functioning.

Decision making under conditions of existence of different interpretations of the same part of the social reality and participation in designing the social systems require to achieve a compromise, i.e. a consensus related to the identified world views. Thereby, the world view that is the basis of taking a decision has to be previously the subject of ambiguous reassessment in relation to the powerful alternative perspectives.

The most important aspect of the developed systems approach refers to change in understanding the objectivity. Namely, within the functionalist systems approaches, i.e. within the *hard* systems approaches as well as the approaches to designing complex and adaptive systems, objectivity is understood in relation to validity of a model of the system under consideration. The developed model represents the system in question (as, for example, in System Dynamics), or may - in accordance to the scientific arguments that embraces - point at the disturbances in the system structure as well as in its function (as, for example, Organisational Cybernetics). In both cases, the objectivity of models is shown, and the results of the system analysis are guaranteed, if the solutions - that are derived from the models - can be realised in practice.

On the other hand, within the interpretive, i.e. *soft* systems approaches, systems - regardless of whether they function or not - are as much in the real world as they are in the minds of researchers. Among many and various, possible perceptions of the nature of the problem situation, any model of any social or organisational system may include only one perception. Accordingly, objectivity can rely only on an open debate on numerous and various understanding of the problem area in the organisation. The outcomes of researching into as well as designing the system are guaranteed by the widest possible participation of different stakeholders in these processes.

The considered essential shift in understanding objectivity is respected within the interpretive, emancipatory, postmodern systems methodologies (such as Interactive Management, Strategic Assumption Surfacing and Testing, Soft Systems Methodology, Strategic Options Development and Analysis, Interactive Planning, Critical Systems Heuristics, Team Syntegrity, etc). In fact, the tools for better organising an open, free and participative debate on different aspects of the existing as well as the proposed designs of social, i.e. organisational systems need to be generated in the process of modelling a separate segment of social, i.e. economic reality.

A Dialectical Synthesis in Holistic Business Strategy Formulation

Relying on the presented ideas, the theoretical postulates relevant for SAST-methodology can be developed as follows (Jackson 2000, 226-227).

First of all, the methods and techniques of the traditional Management Science (MS) are appropriate to simpler, so called structured management problems. In contemporary organisations, however, strategic problems, as a rule, represent so called wicked problems of the organised complexity. The methodological approaches of traditional MS do not correspond to these unstructured, i.e. ill-defined management problems. SAST-methodology, as one of the interpretive systems approaches, is appropriate to these sets of ambiguous management problems.

Then, organisations do not often deal adequately with problem situations, just because of the difficulties to challenge the accepted ways of action. Actually, the policy options, that are significantly different from current practice, as a rule, are not the subject of systematic research. In contrast, SAST-methodology seeks to ensure that the alternative policies as well as the alternative procedures are continually reviewed.

Furthermore, the developed systems approach directly results in the knowledge that a prerequisite for challenging the current preferred policies is to generate the radically different policies, i.e. theories. This is because the data - which are interpreted in the terms of an existing theory - will not themselves lead the organisation to change its preferred way of action. Organisations are beginning to really learn only when the majority of the accepted assumptions challenged by the appropriate opposite assumptions. Therefore, a certain variety of perspectives on possible policies should be generated, and each of them is supported by the available data in the organisation. That is, the different strategies - based on the alternative world views - have to be developed; these strategies are opposed each other, and each one is able to interpret the data in a different manner.

Finally, implementation of the developed process brings about, as a rule, many and various tensions. This is because there are different groups in organisations strongly committed to the achievement of the special, established options of a policy. Hence, the fact is that the corresponding conflicts arise when we are addressing the unstructured management problems. Therefore, contemporary organisations should be treated as arenas of conflicts between different groups who advocate the different, alternative world views. The discussed process enables the alternative strategies and policies to be developed, but this process has to be managed in an appropriate manner. Striving to accomplish a certain authentic synthesis, SAST-methodology ensures the identification of conflicts as well as the management of them.

The following four relevant principles are derived from the ideas built into the theoretical foundation of SAST-methodology (Flood and Jackson 1991, 123-124):

First of all, *participation* is a particularly important feature of SAST-methodology. It is about the methodology that seeks to include the different groups and levels of an organisation into the process of dealing with the problem situations. This is because the knowledge and resources - necessary for researching the problem situations as well as implementing the solutions, as a rule, - are distributed between several groups and individuals in the organisation.

Then, *opposition* should be considered as one of the key characteristics of SAST-methodology. Namely, it is accepted that the judgements about the unstructured management problems can be most successfully made after consideration of the opposing perspectives.

Furthermore, *integration* is a significant attribute of SAST-methodology. Namely, it is assumed that the differences - which are highlighted through the process that is characterised by the opposition and participation - have to be again brought into the appropriate relationship, in a higher order of synthesis, so that a plan of action could be made.

Finally, SAST-methodology is characterised by *underpinning the managerial thinking*. It is believed that the exposure of managers to different assumptions enables the managers to acquire a deeper understanding of the organisation as well as its policies and problem situations.

Methodological Development

Taking into account the philosophical ideas and principles outlined above, the methodology of Strategic Assumption Surfacing and Testing can be developed through the following four main stages (Flood 1995, 199-203):

- I. Forming the groups
- II. Identifying the assumptions
- III. A dialectical debate
- IV. Synthesis

I. *The groups are formed* at the first stage in order to facilitate creative action during the later stages of the methodology. The groups are structured in such a manner that each group includes individuals who have a possible understanding of both the problem formulation and its proposed solution. As many possible perceptions of the management problem situation should be included as many can be uncovered. The individuals are classified in small groups according to one or several of the following criteria: proponents of particular strategies, common interest, type of personality, managers from different functional areas, managers at different organisational levels, time dimension (short/long-lasting perspective), etc.

In selecting the criteria that will be used, it is necessary to take into account:

A Dialectical Synthesis in Holistic Business Strategy Formulation

- maximising the similarity between perspectives inside the groups (in order to provide the groups to act in the coherent ways) as well as
- maximising the diversity of perspectives among the groups.

In doing so, each perspective will be strongly supported by the participants of the respective group, i.e. the perspective of every single group should be strongly challenged by at least one of the other groups. Each of the groups preliminarily formulates a clear and concise statement of its strategy.

II. Since the groups have developed their own strategies, i.e. alternatives, the next stage is *to identify assumptions*. The aim of this methodology stage is to help every single group to reveal and explore in detail the key assumptions on which its the strategy is based. The importance of this stage is vital; namely, although each group has a clear understanding of the alternative that must/should be selected - it is not clear, in most cases, on which assumptions the perspective is based. The invisible shortcomings of the developed strategy can often be uncovered only through surfacing the assumptions relevant to the respective perspective. Consequently, the following task of SAST-methodology is to reveal the assumptions which, then, should be tested.

Three simple, effective techniques can be employed in the assumption identification process:

- Analysis of the stakeholders
- Specifying the assumptions
- Assessment of the assumptions

Analysis of the stakeholders: The key stakeholders have to be identified in each of the selected groups. It is about individuals or subgroups who have some interest in the strategy, and, at the same time, the success of the strategy, i.e. its failure depends on them. The process of identifying the relevant stakeholders is underpinned by the following questions:

- Who is affected by the favoured strategy?
- Who is interested in such a strategy?
- Who can influence the choice, rejection or implementation of the preferred strategy?
- Who takes care of the respective strategy?etc.

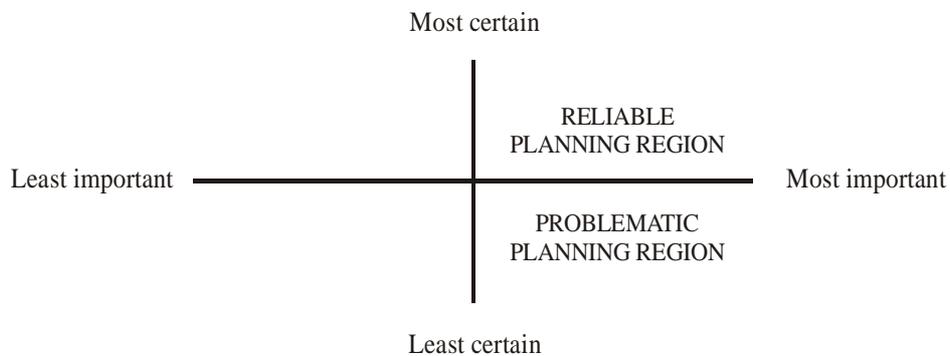
Specifying the assumptions: Each group draws up a list of assumptions that are made by the identified stakeholders who believe that their preferred strategy will be successful. Every single group should list all assumptions that result from the analysis of all stakeholders. The success of the strategies favoured by the groups depends on these assumptions. The number of assumptions that may be included in the list is not limited. However, in order to protect this process from an overloading with a large number of the assumptions, one deals initially with the five key assumptions. More than five assumptions may be included later.

Assessment of the assumptions: Each group has to rank each of the specified assumptions in accordance with the two following criteria:

- the importance of the assumption in the terms of its impact on the success or failure of the strategy - from the least important to the most important;
- the degree of certainty - i.e. reliability - whether the assumption is justifiable - from the least certain to the most certain.

The obtained results are drawn in an appropriate diagram: The assumption assessment chart - Figure 1.

Figure 1. The assumption assessment chart



Source: Flood and Romm 1996, 148

The assumptions that are located on the left side of the diagram - Figure 1 - due to the lack of their importance - are obviously of little significance for effective planning, i.e. for solving problems. At the same time, the assumptions that are placed in the upper right-hand quadrant are important and reliable - it is the reliable planning region. On the other hand, the assumptions in the lower right-hand quadrant are important, but not reliable - it is the problematic planning region. The assumptions from this quadrant belong to the class of the most critical; the full attention should be paid to them due to their significance and uncertainty.

With this assessment of the assumptions begins the process of testing their soundness, i.e. begins testing the every single alternative as a whole.

III. A *dialectical debate* is the next stage of the methodology. This stage can be successful if the most important assumptions are the subject of discussion. Therefore, each group should state the most significant assumptions on which its strategy relies. In this methodology stage, it is about the investigative debate in which each group, first of all, represents its own strategy. After that, the stakeholders discuss the results of identifying the assumptions. The aim is to enable each group to find out the key assumptions built into the strategies of the other groups. Although the discussion does not allow preliminarily, the debate facilitator has to take into account the certain points of clarification.

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When each group has finished with its initial presentation then the second round of thinking begins in which the logical critique of the strategies is encouraged. Each group has to defend its alternative from the strongest objections that other groups may have. A critique begins by highlighting one or more of the following objections:

- there are the stakeholders who have not been taken into consideration;
- there are the stakeholders' assumptions that have not been respected;
- there are the assumptions - shown on the the assumption assessment chart - which should be placed in the problematic planning region;
- some of the stakeholders have greater/less importance in relation to the others, and this should be clarified;
- certain assumptions have been differently assessed by the other groups, and this also needs to be clarified; etc.

When the debate - which is characterised by opposition - is over, the groups have to reconsider their own assumptions and alternatives. It is about the process of adjustments, i.e. modifications of the assumptions; this process lasts as long as some progress is being made.

IV. Since the modification has been completed, the groups begin further discussion - now in the form of *synthesis*. The aim of this methodology stage is to reach a compromise between groups about their alternatives and assumptions. Actually, negotiations - on the key assumptions and their modifications that have been made - are continuing. An appropriate list of the agreed assumptions should be a result of that process. By employing this list, a compromise between the opposing groups can be reached. The actual content of the list of the agreed assumptions determines the easiness with which a compromise will be reached. Namely, if this list is long enough, a strategy - which is implied by the list - can be developed. The new strategy should bridge the gap between the initial strategies and be beyond them. After the new strategy has been formulated, the assumptions built into it can be evaluated. If any synthesis can not be made then the disagreement points should be identified and the issue of further research - through which the identified differences should be eliminated - is addressed.

The relationship between this dialectical approach to strategy formulation, i.e. problem solving, and the two alternative approaches to planning is of an appropriate importance for the context of this consideration (Flood and Jackson 1991, 127-128). First of all, it is about the so-called *expert approach*, in which the planners' assumptions built into strategies, i.e. plans, remain to be hidden, and a possibility of generating the plans based on the different opinions is not exploited. On the other hand, there is an approach designated as *devil's advocate*, in which some of assumptions can be uncovered through a top management critique, but again there is no possibility of developing the alternative plans based on the different world views.

The dialectical development of the SAST-methodology enables the strategic alternatives - which are based on the different identified and tested assumptions - to be determined; in such a manner, this methodology overcomes the weaknesses of the two approaches mentioned above.

A Critical Review

As any other systems methodology for structuring the management problem situations in organisations, SAST-methodology can be critically evaluated from several different points of view (Flood and Jackson 1991, 133-135; Jackson 2000, 231-232; Jackson 2003, 151-153).

First of all, in accordance with the *theoretical* postulates that are built into SAST-methodology, this methodology is characterised by opposition, integration and an ambiguous underpinning the managerial thinking. At the same time, in suitable circumstances, SAST-methodology can support and properly direct the *participative* style of managing the problems. The participation of different groups and advocacy of the alternative positions not only allow the existence of a great diversity of opinions about any particular management problem area in an enterprise, but should facilitate the implementation of the proposed courses of action. Under certain circumstances, however, the advantages of SAST-methodology cannot be expressed due to the existence of the obstacles to broadening participation. Therefore, an important prerequisite for effective use of SAST-methodology is the provision of the authentic participation of the organisation's relevant stakeholders in the processes of business strategy formulation and its implementation.

SAST-methodology, according to its basic theoretical features, represents an interpretive systems approach corresponding to the appropriate unstructured problem situations. Concretely, it is about the pluralist and relatively simple management problem context; this context is primarily determined by pluralism of perceptions and interpretations of the problem area in the enterprise; at the same time, the systems dimension - concerning the complexity of the system structure and its functioning - is abstracted from the research process. This means, when SAST-methodology is used in the pluralist-complex problem contexts, then this methodology should help in dealing with the pluralist aspects of such problem contexts, but, on the other hand, it will be of a small usefulness in conceptualising, embracing and researching the complexity. Accordingly, the assumption that the difficulties - resulting from the complex nature of the problem domain under consideration - will disappear when the issues of pluralism are once resolved, is unjustifiable. Actually, the complex character of the management problem situations in organisations necessarily represents and has to be treated as a particular relevant dimension of contemporary organisations. SAST-methodology does not respect this fact because of the assumption that all difficulties result from

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pluralism. So, it can be justifiably concluded that SAST-methodology offers only the incomplete solutions to the pluralist-complex problem situations.

From the *methodological* point of view, the principles embedded into SAST- methodology are of the great significance. Striving to achieve a general synthesis can be seen as too ambitious, but, in principle, it is not necessarily a disadvantage of the methodology. For this context of consideration, it is important that implementing the participation principle in many organisations can be prevented by the certain circumstances. In such a case, the usefulness of SAST-methodology is limited, and its legitimacy has to be reexamined in the terms of its own theoretical foundations. Especially since, then it is only a particular type of expanded multi-group brainstorming, without any commitment to achieving the appropriate results.

The debate which is characterised by the properties of opposition and participation can not be developed in coercive management problem contexts in organisations. In fact, in such situations, an integration can be accomplished by using the power and domination, rather than through compromise, i.e. a consensual agreement. Therefore, SAST-methodology does not correspond to the *coercive* problem contexts, especially because - in the coercive problem situations - it is unlikely that those who have power will want to reveal their assumptions. When SAST-methodology is employed in the coercive problem contexts then it provides the benefits only to those who have the power in the respective organisation.

In the literature, there have been recorded the attempts to challenge SAST-methodology by using the certain empirical evidences (Cosier, Ruble and Alpin 1978, 1483-1490). It is about trying to show a greater effectiveness of a different approach to planning by employing the methodology for dialectical research systems in the appropriate management problems. However, there is no manner that can - relying on the empirical results - provide the certainty that the certain planning techniques (compared to the others) can produce better results. It means that it is necessary to begin from the theoretical basis of SAST-methodology and the developed manner in which these philosophical-theoretical postulates are operationalised within the methodology, as the only possible guarantee of effectiveness of this approach. If such judgements are seen as good enough then one may search for a suitable guarantee taking into account participation, support to a controlled conflict as well as providing challenge to the assumptions.

In accordance with the overall considerations presented above, it can be justifiably concluded that SAST-methodology may be adequately employed in the relatively simple-pluralist management problem context, i.e. in the problem situations which are represented by the metaphors of culture and coalition (Morgan 1997). In such management problem situations, SAST-methodology can help to structure the research into the different world views, i.e. to generate a dialectical synthesis, or at least an adjustment between the participants, in order to formulate and implement a creative strategy. In principle, SAST-methodology can be used in

any pluralist problem situation with the aim of contributing to the development of mutual understanding and learning about the participants' positions .

The validity of the philosophical and theoretical postulates on which SAST-methodology is based as well as its practical effectiveness in determining the appropriate synthesis, i.e. the strategy to be implemented have been confirmed by numerous *case studies* (Easton, Vogel, and Nunamaker 1989, 344-352; Easton, Vogel and Nunamaker 1992, 159-168; Flood 1995, 203-211; Flood and Romm 1996, 149-154; Jackson 2003, 147-150, etc.). In them, SAST-methodology helps seriously to challenge the accepted ways of acting in the respective organisations; i.e. this methodology promotes a rigorous analysis and comparison not only of the alternatives which are preliminarily determined, but also the identified assumptions on which these different perspectives are founded. So, through the methodological support to realise the relevance of the other participants' opinions, SAST-approach underpins the well-designed, dialectical process of structuring the pluralist management problem contexts in enterprises.

An Example of the Use

Conditions, way and results of immediate employment of SAST-methodology can be considered in the following example; it is about an enterprise X, whose main activity is the production and sale of the clothes (Petrović 2010a, 454-458). Over a longer period of time, the enterprise has been characterised by: decline in productivity, decrease in product quality, increase in stocks of finished goods, rise of average costs, increase in prices of own products compared to competitors, decline in profitability, insufficient engagement of employees - both manufacturers and sellers, underdeveloped network of suppliers, inadequate disposition of retail stores, unsuitable means of promoting, inappropriate communication between various levels of management, absence of the department for research and development, not meeting the latest trends in clothing, undeveloped IT support, decline in support of financial institutions, indifference to events in the local community, etc. Considering these relevant internal problems and external threats, it should be concluded that such enterprise is in crisis.

Development and implementation of a new policy - denoted as a comprehensive quality management program - represents a top management's response to the identified alarming state which threatens the enterprise's survival. It is about an appropriate strategy for an emergency stop of further deterioration of the enterprise as well as out of the crisis, that is, the strategy that implies the substantive and comprehensive changes in all relevant aspects of the enterprise - market research, procurement, manufacturing, sales, the employees' engagement, etc. - as well as at all levels. The conditions for more adaptive organisation, improving productivity, increasing profit, raising the interest of employees can be created through developing a strong corporate culture, focusing on quality, meeting market requirements.

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The following relevant facts are of crucial importance to the creative dealing with this problem situation:

a) The enterprise's top management believes that the success of the strategy determined preliminarily, i.e. going out of the crisis and the enterprise development depend essentially on the involvement of the key stakeholders of the enterprise in the strategy formulation and their commitment to its implementation. This further means that - in structuring the problem situation under consideration - the focus is on the *participants* dimension.

b) The enterprise is characterised by numerous and different - internal and external - stakeholders: manufacturers, sellers, managers, senior managers, shareholders, suppliers, customers, financial institutions, competition, local community, etc. In accordance with the fact that the different - first of all, internal - stakeholders of the enterprise are characterised by unequal interests and goals, different participation in problem solving and decision making, different power, it is justifiable to expect that these stakeholders differently understand and interpret the strategy, its necessity and effects. Therefore, a key feature of this ambiguous problem situation is *pluralism*.

c) Due to the radical changes that have intended and the extent of overall effects of the preliminarily formulated strategy, in the enterprise there is a disagreement about the desirability and feasibility of this strategy for going out of the crisis and recovering the enterprise. All - numerous and various - perceptions and interpretations of this strategy - first of all, by the internal stakeholders - may be preliminarily classified in two main, *mutually opposing groups* - one group includes those views that support the strategy, and the second group involves those opinions that challenge it.

d) Because of the urgency of a holistic addressing the identified disagreement among the internal stakeholders and the necessity of overcoming this disagreement, the complexity dimension of the problem situation is abstracted from the research process.

The identified pluralist management problem context indicates the validity of the top management's decision that SAST-methodology should be - with the consulting team assistance - used in managing the problem situation.

The research process was carried out through the following four stages.

I. Forming the groups

In accordance with the general criteria for forming the groups as well as the classifying all opinions about the strategy in two basic groups, the following two groups of the internal stakeholders are easily determined: the group FOR includes those stakeholders who support the preliminarily formulated strategy, and the group AGAINST involves those stakeholders who do not accept the strategy, i.e. those who object to it. A concrete selection of the enterprise's stakeholders in

the two groups is somewhat problematic; taking into account the understanding of the strategy, interests, personalities, belonging to the different organisational levels, i.e. the different functional areas, the representatives of the top management are classified in the group FOR, and the representatives of the manufacturers, sellers and lower levels of management are assigned in the group AGAINST.

The group AGAINST has formulated a clear and concise expression of its preferred alternative, alongside the strategy formulated preliminarily by the group FOR.

II. *Identifying the assumptions*

The hidden weaknesses of advocacy of an alternative may, in principle, be uncovered only when the assumptions - built into the opinions - are revealed; therefore, it is necessary that both groups - with the consultants' assistance - identify and explore in detail the key assumptions on which their alternative is based. The following three techniques are employed in the process of surfacing the assumptions on which the understanding of the strategy and its alternative is founded.

Analysis of the stakeholders: The relevant stakeholders - individuals and subgroups - who are interested in the particular alternative, and who decisively influence the success, i.e. failure of the alternative - have been identified in both groups. Taking into account who may influence the choice, rejection, implementation of the preferred alternative, who cares about the respective alternative, etc., in the group FOR - beside the representatives of top management - the key stakeholders are: the representatives of customers, suppliers and financial institutions; at the same time, in the group AGAINST - alongside the representatives of manufacturers, sellers, lower levels of management, the relevant stakeholders are the representatives of trade unions and local community.

Specifying the assumptions: The stakeholders of both groups draw up a lists of the important - not more than five - assumptions believing that their alternative will be successful. Some of the assumptions relevant to the stakeholders of the group FOR were: if the enterprise meets the new trends in clothing then an increase in demand, that is, in productivity, efficiency, profitability of the enterprise will be provided; the technological level of work will be raised through the new capital investment into the equipment; greater business results will influence the employees' morale, their higher work engagement as well as better rewarding; the enterprise - compared to its competitors - will improve its market position particularly by developing the appropriate promotional systems. Some of the key assumptions of the stakeholders belonging to the group AGAINST were: since the implementation of the respective alternative does not require new capital investment, the indebtedness of the enterprise will not rise; there is no need to introduce the new rigorous control procedures because the managers - by introducing a leadership style of management - will additionally motivate the

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employees to enhance their overall engagement; higher quality of goods, reducing waste/spoilage, increase in professionalism in communication with customers can be expected as a result of the appropriate motivation of producers and sellers; as a result of additional education and training of the employees, the overall quality of work will be improved and the usage of the available information technology will be better; the enterprise can improve its own overall position in the environment through better communication with the local government.

Assessment of the assumptions: In the process of testing the assumptions and the whole of each particular alternative, each group evaluates its own assumptions taking into account: a) the importance of each assumption in the terms of its impact on the success/failure of the alternative under consideration, and b) the degree of certainty that the assumption is justifiable. The obtained results are drawn in the assumption assessment chart, whose lower right-hand quadrant indicates the assumptions that are the most important and - at the same time - the riskiest. The developed chart also reveals the existence of - for further research - the significant overlap between the particular assumptions of the group FOR and the group AGAINST. At this stage of research, both groups were convinced - through rating their own assumptions - that they have been identified some vitally important and in addition justifiable assumptions. At the same time, each group has revealed some weaknesses in its own alternative, although, to this stage, both groups have stood firmly behind their own alternatives.

III. A Dialectical debate

The groups work together, with the consultants' assistance, during several meetings. First, each group presents its own alternative. Then, the stakeholders discuss the results of uncovering the assumptions, in order to both groups become familiar with the assumptions built into the other alternative. The following stage is a critique of the alternatives; at this stage, both groups strive to defend their own alternatives, and, at the same time, require to be clarified the different issues, for example: why weren't the particular stakeholders from the group FOR, i.e. the particular assumptions of the group AGAINST taken into account; why wasn't the assumption of the group FOR concerning the necessity of large capital investment ranked in the problematic planning region although it is highly risky; why do the particular stakeholders have greater/lesser importance compared to the others; why were the particular similar assumptions evaluated differently by the groups FOR and AGAINST; etc.

In the next step, through a reconsideration of their own assumptions and alternative, the groups - with the help of the consultants - have modified their assumptions; this procedure of assumptions adjustment, in principle, lasts while some progress is not made.

IV. *Synthesis*

A process of negotiation and further modifications was continued in order to reach a compromise between the groups FOR and AGAINST. A list of the adjusted assumptions was constructed; this list explicitly shows that a compromise - relevant to creative managing the problem situation - can be achieved between the two groups that have been initially strongly opposed. Namely, the debate has resulted in the corresponding synthesis, which is a valid basis for the dialectical reshaping the preliminarily formulated strategy for going out of the crisis into the new strategy which will be implemented in the enterprise. Some of the initially introduced ideas have been abandoned - for example, the ideas about large capital investment, about absence of reasons for introducing the new rigorous control procedures, and so on; the new strategy is focused on introducing a powerful corporate culture at all levels of the enterprise, improving the quality of all functions of the enterprise, meeting the relevant changes in the enterprise environment - particularly changes in customer requirements, underpinning the creativity and innovation, and so on; in this way, in the enterprise under consideration, the conditions for developing an adaptive organisation, improving productivity and efficiency, raising the employees' morale, increasing profitability can be created.

Conclusion

The pluralist contexts of management problem situations in organisations, in contemporary circumstances, indisputably represent a relevant expression of the relationships between organisational stakeholders. The appropriate interpretive systems approaches to management correspond to these contexts, in theoretical, methodological and practical sense. One of the important methodologies of *soft* systems thinking is Strategic Assumption Surfacing and Testing (SAST). In tackling the pluralist unstructured organisational problems, SAST-methodology enables the business strategy be formulated in a creative and holistic way. First of all, SAST-methodology seeks - through a process of dialectical synthesis - to enable uncovering, confronting and challenging the assumptions that are embedded in the proposed - often - opposing business strategies; then, this methodology strives - through a process of debate and reconciliation - to provide a creative business strategy formulation, which is acceptable to the different stakeholders and whose implementation should improve functioning of the enterprise.

As a particular interpretive systems approach to management, SAST-methodology is relied on the powerful conceptual and theoretical framework. On the other hand, in its own immediate application, this methodology provides a scientifically valid support to a practice of holistic managing the pluralist problem situations in organisations. Thereby, SAST-methodology explicitly confirms the relevance of the *dialectical relationship* between theory and practice (Rosenhead, 2009, S-S15) to further development of its own theoretical and methodological foundations as well as to enhancing the practice.

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At the same time, the following two key shortcomings of SAST-methodology are identified:

- abstracting the systems dimension, which embraces and conceptualise the *complexity* of the system's structure and its functioning, and
- inappropriateness to those management problem contexts in organisations, whose essential features are unequal distribution of resources and power, as well as the resulting conflict, contradiction and *coercion*.

These two weaknesses of SAST-methodology need to be carefully considered.

SAST-methodology can overcome these significant shortcomings by means of *critical* systems thinking and practice (Jackson 2000; Jackson 2006b, 647-657; Jackson 2010, 133-139; Petrovic 2010b, 59). Relying on the three main commitments to critical awareness, improvement and pluralism, critical systems thinking enables the systems methodologies - belonging to different paradigms - be employed in combination within the same intervention in the enterprise's problem area under consideration.

It means that SAST-methodology can be creatively combined with some of the structuralist, i.e. functionalist methodologies - for example, with Organisational Cybernetics, or with System Dynamics, in order to overcome its own shortcoming stemming from the exclusive focus on the relationships between the participants in the problem situation and non-research into the complexity of structure and functioning of the system in question.

Also, through suitable combined use of SAST-methodology with some of the systems methodologies within the emancipatory paradigm - for example, with Critical Systems Heuristics, or Team Syntegrity, the second recognised weakness of SAST-methodology can be resolved, especially in those management problem situations in which the sources of coercion can be uncovered.

For this consideration, it is of great importance that - taking into account the different understanding the paradigm incommensurability (Mingers 2006; Petrovic 2011, 154-161; Zhu 2010, 784-798) - the methodologies can be treated as the equal partners (Jackson 2011, 811-813) in the processes of combined employing the systems methodologies belonging to different paradigm in the same intervention.

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DIJALEKTIČKA SINTEZA U HOLISTIČKOM FORMULISANJU POSLOVNE STRATEGIJE

Rezime: Višestrukost percepcija i interpretacija upravljačkih problemskih situacija u organizacijama predstavlja jedno od njihovih ključnih određenja. Kreativno upravljanje tim pluralističkim problemskim kontekstima implicira korišćenje odgovarajućih interpretativnih sistemskih metodologija. Kao poseban soft sistemski pristup menadžmentu, identifikovanje i testiranje strategijskih pretpostavki nastoji da kroz dijalektičku sintezu omogući stejkholderima otkrivanje i osporavanje pretpostavki na kojima su utemeljene predložene strategije i obezbedi holističko formulisanje takve poslovne strategije koja je prihvatljiva stejkholderima i čijom će implementacijom biti unapređeno funkcionisanje organizacije.

Ključne reči: pluralistički kontekst upravljačkih problemskih situacija, interpretativni sistemski pristup menadžmentu, identifikovanje i testiranje strategijskih pretpostavki, sinteza, formulisanje poslovne strategije



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THE IMPACT OF ORGANISATIONAL CULTURE ON LEADERSHIP IN AN ORGANISATION

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Abstract: *This paper explains and operationalises the way in which organisational culture shapes leadership style in an organisation. Culture imposes a specific leadership style, since it creates a frame of reference in which all the members of organisation interpret and understand the world around them and in which they shape their behaviour. A leader must act within the culture and the frame of reference it imposes in order to be accepted and to be successful as a leader. Operationalisation within this impact is implemented by identifying typical leadership styles in an organisation, which will be accepted and efficient in certain types of organisational cultures.*

Keywords: *organisational culture, leadership, interpretation, meanings.*

Introduction

Leadership is probably the most studied concept in organisational behaviour field, and even in the field of management. It is also a component of organisational behavior, whose relationship with organisational culture has given rise to greatest interest and initialised the most research, but also the controversies as well. The relationship between leadership and organisational culture has been from the very beginnings particularly interesting and significant due to its bidirectional character (Schein, 2004; Alvesson, 2002). None other component of organisational behaviour, which is in a causal relationship with organisational culture, shows so obviously that those relationships are of bidirectional character. In addition, to make things more interesting, it is not at all clear which component in this relationship is independent, and which is dependent. The question: does organisational culture determine the leader and his/her style of leadership or does the leader define and shape the culture, is one of the most interesting and provoking controversies in management itself. This controversy has not yet been

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resolved to this very day, and it is questionable if it can ever be resolved. Namely, this controversy illustrates two views to the same relation from two very different perspectives of organisational culture: structural functionalism and interpretativism (Martin, 2002, Alvesson, 2002). Since from the perspective of structural functionalism organisation *has* a culture, which is treated as one of the management tools for achieving optimal performances, it is clear that in this perspective the leader shapes the culture and that leadership is “older” than culture. In the perspective of interpretivism, however, organisation *is* a culture, since everything in an organisation is the manifestation of its culture. From this perspective it is clear that culture is “older” than leadership, that is, the leadership itself is one of the manifestations or symbols of the culture in which it appears. Since these are two paradigms of culture which start from totally opposite axiomatic assumptions, it is clear that there cannot be discussions between them which would result in some kind of a compromise.

More researches can be found in literature in which organisational culture is studied from the perspective of structural functionalism than from the perspective of interpretativism. Consequently, the number of papers in which the leader shapes the culture is significantly larger than the number of papers in which the culture shapes the leader. There is a lack of both theoretical explanations of the nature of organisational culture’s impact on leadership in organisations, as well as of empirical confirmations of this impact. Therefore, the aim of this explorative paper is to give theoretical explanation of the mechanism through which organisational culture shapes the leader and his/her style, as well as to set, based on this explanation, empirically testable hypotheses of the impact the culture has on leadership.

In this paper, organisational culture will be defined first, and then its significance and content will be presented. Leadership will be defined next, and the main approaches in its research will be presented. Then a theoretical explanation of the ways in which organisational culture impacts the leader’s style will follow. And finally, the hypotheses of implications of specific types of organisational culture on specific styles of leadership will be set.

Organisational culture: concept, significance and content

Organisational culture is the most powerful device for understanding of human behaviour in organisations. For those interested in discovering the secret of causes of human action in organisations, whether being academic researchers of organisations or practicing managers, organisational culture is an indispensable tool. It enables a comprehensive understanding of behaviour and decisions made in organisations because it is itself essentially a collective system of meanings. One of the basic assumptions of contemporary social sciences is the interpretative character of social reality and human behaviour within it (Fiske, Taylor, 1991).

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People do not react to reality that surrounds them based on what it is, but based on their own interpretation of this reality. The interpretation of reality that surrounds us is done through giving meanings to phenomena, occurrences, actions and people, decisions, states and processes. People then react based on the meanings they gave to the object of their response.

The meanings people in organisations give to phenomena and occurrences in order to understand them and react to them are socially constructed (Geertz, 1973; Berger & Luckman, 1966). This means that meanings emerged in the process of social interactions of people and that they are mutually shared by people who participated in these interactions. Organisational culture can be understood as that part of the meanings which people in organisations create through their mutual interactions. This is why members of organisations interpret reality that surrounds them and act in this reality in the same or similar way. Of course, organisational culture mostly contains the meanings of phenomena and occurrences regarding living and working in an organisation, and it rarely contains meanings of phenomena in different contexts (e.g. family). To the extent in which organisational culture in an organisation exists and in which it is strong, the members of organisation will equally or similarly understand what surrounds them both outside the organisation and within it, but they will act upon what surrounds them in the same or similar way. The comprehensiveness of organisational culture influence on human behaviour in organisations comes from the fact that each individual action, reaction or decision of each member of organisation is conditioned by the meaning imposed by organisational culture to the people in an organisation.

Organisational culture is a kind of experience, which is accumulated in organisations and which helps its members to cope more easily in a complex and uncertain world surrounding them. Instead of contemplating on every situation they find themselves in order to make a decision or take action based on this contemplation, the members of organisation reach for the experience and knowledge which organisational culture offers, out of which they quickly and simply get not only the meaning of the specific situation, but also guidance for their behaviour.

Organisational culture still does not have a unique definition. Some definitions are more widely accepted and more often quoted than others, but it cannot be claimed that one of the definitions is generally accepted. By synthesising the experiences and elements of numerous authors and their definitions, we may reach a comprehensive, but also operational definition of the organisational culture concept. Organisational culture may be defined as a system of assumptions, values, norms and attitudes manifested through symbols, developed and adopted by the members of organisations through their mutual experience and which helps them to determine the meanings of the world that surrounds them and how to behave in it.

Understanding of organisational culture concept implies noticing some of its important and distinctive characteristics (Martin, 2002; Alvesson, 2002). First, organisational culture is a social phenomenon since it occurs through social interactions and reveals itself only at the level of a social group. Second, creation of organisational culture takes a lot of time, because it emerges through accumulating the experience of people in organisations. Therefore, culture changes slowly and with difficulty, and the fact that a part of its content is subconscious in character also contributes to it. Third, culture gives uniqueness to an organisation. It emerges as a combination of unique experiences of the members of organisation, due to which organisation differs from any other organisation in its environment. Fourth, organisational culture enables a sense of certainty, order and safety to the members of organisation, because it gives purpose to phenomena and occurrences in the organisation and around it by its own meaning.

There is a certain disagreement in literature not only regarding the definition of organisational culture, but also regarding its content. Different authors emphasise the significance of different elements of cultural content. Thus, a large group of authors, who have explored culture from structural functionalism paradigm, emphasise the significance of cognitive structures as elements of organisational culture, while they diminish the significance of symbols and reduce their role to a simple tool for discovering the real content of culture (Schein, 2004). Some authors even have gone so far as to treat symbols as external factors in relation to organisational culture and its (cognitive) content. In their view, symbols are the product of culture, but they are not elements of its content (Balthazard, Cooke, Potter, 2006; De Long, Fahey, 2000).

Focus on cognitive elements in organisational culture content implies that it is observed as accumulated knowledge of the members of organisation, which helps them interpret the reality surrounding them, reach decisions and take actions in this reality. Organisational culture cognitive content encompasses those elements of cognitive structures of the members of organisation which evolved as a product of their experience in joint solving of problems that they as members of organisation face, which help them understand the world around them and which significantly influence their behaviour. Cognitive elements of organisational culture content are, therefore, those components of individual structures of the members of organisation that are mutual to all or the most of the members of organisation and that make possible for all of them to perceive and interpret the world around them in the same way. Elements of cognitive structures (interpretative schemes) of the members of organisation can be classified in two large groups: descriptive and prescriptive.

Descriptive cognitive components of culture contain generalised and systematised knowledge and experience about the nature and causal relationship between things, people and phenomena in the real world. These components of cognitive structures contain ready-made explanations to all that is happening in the

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world around us; they help people answer the question “why”, i.e. understand the reality as it is. Descriptive cognitive components of culture include basic assumptions or beliefs.

Prescriptive cognitive components of organisational culture represent systematised and generalised knowledge and experience of people regarding the desirable ways of behaving and acting. This common layer of interpretative schemes of the members of organisation enables people to quickly and simply decide how they will behave in a given reality; it answers the question of how something *should be* done in a given situation. Prescriptive components of interpretative schemes include, above all, values, but also attitudes and norms as well.

Another group of authors, who have explored culture from interpretivism paradigm, finds that symbols are precisely the key element of organisational culture (Smirchich, 1983; Frost, 1991). This group of authors, smaller in number in comparison to the above mentioned group of authors, starts from a standpoint that the only thing that an external explorer may observe and with what one may communicate are, in fact, symbols. We cannot know what happens in people’s minds, neither can we in any way directly discover the content of cognitive structures of the members of organisation, nor can we conclude what meanings of the outside world do these cognitive structures produce. We can only make conclusions about it based on the symbols, which are some sort of a reservoir of meanings. It is only through the interpretation of the symbols that a researcher can conclude what meanings do the members of organisation assign to the world surrounding them, and thereby also discover what the content of organisational culture is actually like. For these researchers, symbols, and not cognitive structures, make the only content of organisational culture.

Symbols are the manifestations of meanings created in cognitive structures of the members of organisation through assumptions, beliefs, norms and attitudes. Symbols are objects, words or behaviour which reflect, strengthen and convey meanings which are created by cognitive elements of culture and which can initiate emotions or actions in members of organisations. Symbols are everything that can be seen, heard or touched in organisational context. Symbols are all those words, behaviour and things that reflect and convey a meaning greater and wider than the one these words, behaviour and things originally in themselves have. Therefore, symbols are not all the stories, objects or behaviour we can detect in the life of an organisation, but only the ones that gain some new, wider meaning than the one they originally had.

Symbols in an organisation are most often classified into three groups, according to their nature and character (Dandridge, Mitroff, Joyce, 1980). Since we have mentioned that symbols include those words, behaviour and things, as well as everything else that can be heard, seen or touched, they can be classified into three groups or types: semantic, behavioural and material symbols. Semantic symbols

include all that can be heard in an organisation, i.e. all language creations which carry some meanings. These include: jargon and expressions in an organisation, metaphors, stories, legends, anecdotes, humor, topics. Behavioural symbols include the symbolic behaviour of the members of organisation such as rituals, ceremonies and well-established behavioural patterns. Finally, material symbols or artifacts include all physical objects that carry some kind of a wider meaning than the one that they in their nature and function have, such as, for example, objects, clothes, logo, documents layout, office premises appearance, etc.

Leadership: Concept and Styles

Leadership has always been an interesting and controversial phenomenon for all those who have studied organisations, but also the societies as a whole. Let us start with the ancient question: Is the destiny of organisations and societies determined by the intentions and quality of their leaders or does every organisation and society bring to the surface the leaders that they themselves deserve? Let us move on with the question: Is a leader born or can one be educated to become a leader? And let us finish with current questions: Do organisations need managers or leaders, must every organisation have a leader, and how many leaders should one organisation have?

Leadership is most often defined in management as “a process through which one individual influences a group in order to achieve their mutual goals” (Northouse, 2007, pp. 24). As it may be observed in the definition itself, the essence of leadership is contained in the fact that the leader uses his/her influence on the followers – the members of organisation – in order to achieve the relevant goals of organisation. Leader defines organisational goals and thus sets the direction of collective action of the members of organisation (Bennis, Nanus, 1985). Leader must articulate the reality and create a vision of the future of the organisation containing ideal states to which should be strived for. Then, a leader must know how to lead the members of organisation to believe in this vision and to accept it as their own. But, a leader does more than that. As a rule, a leader inspires, motivates and leads the members of organisation towards accomplishment of these goals. An effective leader must know not only what is good for the organisation and its members, but also how to achieve that. A successful leader must know how to motivate the members of organisation and raise their energy level in order for them to be able to achieve his/her vision.

Leadership is often defined through interpretative perspective (Smirchich, Morgan, 1982). Namely, it is often said that a leader is a person who defines reality and imposes it to his/her followers. A leader is a leader precisely because his/her followers give him/her the legitimate right to, instead of them, articulate the meanings of things, occurrences and phenomena in the environment and shape actions that are to be taken regarding these occurrences. The leader determines the

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meaning and explains everything that happens in the organisation and around it, from which his/her primary influence on behaviour of all the members of organisation, but also of the organisation as a whole, also emerges. This means that a leader has interpretative power, which is obtained through the process of interpretation of reality. Some authors call this process a “picture framing” or just “framing”. Namely, by the use of speech, above all, but also of other aspects of verbal and nonverbal communication, a leader sets the frames for the picture of reality which is developed by his/her followers. The influence that the leader has on the members of organisation emerges precisely from the fact that the members of organisation see the world and interpret it through the leader’s view. This is why it is logical that their behaviour is shaped by the leader’s vision and desires. Leadership assumes that a relationship of dependence is created between the leader and his/her followers. This dependence is voluntary, which means that the followers believe that it is better for them that someone else interprets the reality and sets the course of action instead of them.

Defining the leadership as a relationship of dependence in the process of understanding the world and acting in it enables us to emphasise the difference between leadership and management. The following question engages the attention of many authors in the field of leadership: is a leader different than manager and in what does this difference show (Zaleznik, 1977). Interpretative perspective adds significant arguments to this discussion. Management includes, just as leadership does, a certain relationship of dependence and subordination. Within it, a manager shapes a collective action. However, unlike leader, a manager does not have the ability to articulate the meanings, nor to influence the understanding of the world by his/her subordinates. Manager’s right to influence the actions that subordinates will take emerges only from his/her hierarchical position. The relationship of subordinates’ dependence on managers is not voluntary. A leader and a manager essentially differ by the source of power they have. While a manager has the power based on formally defined role in a hierarchical structure, a leader has the power based on his/her own ability to mobilise the attention of his/her followers, to articulate the meaning of the world around them in the way acceptable to them, as well as to define an efficient collective action which the followers will accept. Manager’s job is to plan, organise and control his/her subordinates in order for them to perform their tasks and thereby achieve the set organisational goals. Leader’s job is to create a vision, mobilise the energy of the followers to fulfill this vision, lead the followers towards achievement of this vision, and create and actualise changes. For all of these reasons, organisations need leaders in the time of change, when they must go through changes, especially when they need to endure transformational changes. Organisations need managers in stable conditions. In contemporary turbulent times, it is no wonder that the attitude that leadership is necessary in all organisations prevails.

In leadership researches, three basic approaches have been differentiated: trait approach, behavioural approach and contingency approach (Yukl, 2006). Besides these, there are numerous independent theories focused on some special aspects of leadership such as: team leadership, transformational or charismatic leadership, women's leadership, leaders and followers exchange, etc. (Northouse, 2007).

Trait approach is the oldest one, and it explores trait that an effective leader should have. The idea is actually that a leader is born and that, by learning what are the traits that make someone become a leader, people in organisations and the society will be able to select those who are "natural leaders". These researches have failed to identify the one trait that all the leaders have and all the non-leaders do not have, so the trait approach was abandoned. Still, the legacy of this approach to leadership research is significant, since we have obtained a list of traits and abilities that leaders certainly must have, such as: self-confidence, self-respect, internal locus of control, communicativeness, social and emotional intelligence. The second approach, behavioural approach emphasises the style of a leader's behaviour as his/her key characteristic instead of traits. Different studies, starting with the Ohio study, through Michigan study, to Managerial Grid study, have explored what are the typical behaviours of leaders which make them effective (Yukl, 2006). All these researches have mainly pointed out that leaders differ by the fact whether they achieve their visions through tasks and structures (formal or working organisational component) or through people and their relationships (informal or social). Another branch of research focused on leader's behaviour, but in the process of decision-making. These researchers differentiated leadership styles according to the degree of participation of the followers in decision-making. Thus, several styles have been identified, which range from authoritarianism to democratic and participative style (Northouse, 2007). Contingency approach to leadership is the newest, and it starts from the idea that there is no ideal leadership style, but instead the leader must adjust their style according to the situation which they find themselves in. Determinants of effective leadership style are identified as: task factors (structurality, complexity, formalisation), followers factors (motivation, maturity, competency of followers) and leader factors (position of leader's power, the relationship between leader and followers).

The Ways in Which Organisational Culture Impacts Leadership

Organisational culture interpretative paradigm observes entire organisation and everything happening within it as a culture, which means that an organisation is a culture. Organisation as a social system and all its products are just a reflection of the system of assumptions, beliefs and values of its members. Hence, leadership in an organisation is also just another manifestation or artifact of organisational culture (Alvesson, 2002; Martin, 2002; Frost et al, 1991). Instead of assuming that the leader works on the culture, in this paradigm it is assumed that the leader works within the culture. The explanation of the impact of culture on leadership, as well

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as the opposite explanation of impact of leader on culture, takes as a starting point the process of interpretation and creation of meanings in an organisation. However, while structural functionalism paradigm holds an assumption that the leader shapes interpretative schemes and thus governs the meanings his/her followers assign to reality surrounding them, in interpretivism paradigm it is assumed that the process of creation of meanings of reality is such that the leader and his/her followers equally participate in it. The main idea is that the leader cannot impose his/her view of reality to the followers if he/she had not previously been accepted as a leader. However, in order to be accepted as a leader, the messages he/she sends verbally, nonverbally and symbolically must be culturally accepted, i.e. they must correspond to the existing cultural assumptions, beliefs and values which are important to the members of organisation. Leader, therefore, cannot impose the meanings of reality completely freely and regardless of the meanings the existing culture implicates as a collective interpretative scheme of the members of organisation. The meanings of reality the leader imposes must be understandable and acceptable to the majority of the members of organisation, and in order to be such, they must emerge from their present interpretative schemes and then bring some change. A leader becomes a leader because he/she just articulates some meanings and images of reality which “exist somewhere” among his/her followers. The leader clearly and simply depicts and communicates the reality in a way it is also seen by the followers, only they do not have such ability of articulation and communication in order to explicitly express the reality as the leader does. In such cases, an organisation, social group or nation actually “singles out” the leader that the most members want. Some would say that each organisation or nation has the leader “it deserves”. The leader must formulate his/her messages, through which he/she imposes the meanings of reality, in such a way that the followers can understand them, and for that to be the case, these messages must fluctuate within the framework of the existing reference system of values and beliefs of the followers in question. This does not mean that the leader cannot make changes. One of the defining characteristics of leadership is that a leader creates changes in social system. But the changes must be such that the followers perceive them as understandable and rational. What separates a leader from a non-leader is that a leader’s messages bring about certain changes, leading the followers into something new. On the other hand, what separates a leader from a misunderstood prophet is precisely the fact that the leader’s messages correspond to the reality that they are changing. True leaders somehow find the way to be perceived by the followers as a part of reality while at the same time they are changing that reality. Some authors argue that leaders manage to do this by implementing changes in only some specific spheres of work or life, while in other sphere, precisely because of that, they firmly stick to tradition and the existing system of meanings. People cannot change everything at once, and in order to change their understanding of a specific sphere of life and work they must have a firm support in some other spheres of life and work. A true leader knows this, and never strives to change

everything at once, but strives to change reality of organisation segment by segment.

It is interesting that there are hardly any empiric researches that would operationalise the organisational culture impact on a leader. These researches should prove the assumption that in certain types of organisational cultures, the assumptions, beliefs, values and norms they contain will make some leadership styles more frequent, more probable, more useful and efficient than others. This assumption is completely in accordance with contingency approach to leadership, since the choice of leadership style leads to dependency on one contingent factor – the organisational culture. Since we were unable to identify relevant and persuasive empirical researches we could use to test the hypothesis that specific type of organisational culture also implies a specific type of leadership, we will present explorative research of this relationship and set certain hypotheses on the impact of culture on leadership, which will be suitable for further testing.

Operationalisation of organisational culture's impact on shaping of leadership in an organisation is possible if a causal relationship is established between specific types of organisational cultures and specific leadership styles. For this purpose, it is necessary, first of all, to identify basic dimensions or criteria according to which the styles of leadership will be differentiated and to recognise the basic types of leadership according to the said criteria. Furthermore, it is necessary to identify basic criteria and dimensions of organisational culture relevant for shaping leader's style and to recognise types of organisational culture according to the said dimensions. Finally, in the third step, it is necessary to set the hypotheses on relations between specific types of organisational cultures on the one hand, and leadership styles they implicate on the other.

Implications of Organisational Culture Types on Selection of Leadership Style

Two most often used criteria or dimensions according to which different styles of leadership are differentiated are: (1) Authoritarianism of leader, i.e. the degree of participation of the followers in decision-making; (2) People orientation or task orientation in solving organisational problems (Ashkanasy, Wilderom, Peterson, 2000). Therefore, leaders differ by the degree in which they autonomously make decisions or in which they allow participation of their followers (employees) in decision-making, as well as by the fact whether they strive to achieve the goals through formal components, structure, roles, procedures and tasks or rather through informal components, interpersonal relationships, influence on people and the like. Since there are two dimensions of leadership style with two poles each, it is clear that we will get four possible leadership styles. People oriented authoritative leader will be the one who makes majority of decisions autonomously and accepts the responsibility, but in implementing of those decisions he/she relies on his/her influence on people and their interpersonal

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relationships. This type of a leader highly values the social structure of the organisation, has high interpersonal abilities and is highly competent in people management. The second type of leader is the one who applies authoritative style, but is also task oriented. This type of leader is also authoritative and does not include the employees in decision-making process and organisational action shaping, but is also focused on work, or formal, structure and tries to achieve the goals of the organisation through structures, roles, procedures, orders, etc. The third type of leader is the one who applies task-oriented participative style. This type of leader expects the employees to give their contribution to the achievement of organisational goals and considers that it is good for the organisation to have as many of its members as possible participating in both making as well as in executing the decisions. But, this type of a leader is oriented on work, or formal, structure and tasks. This is why he/she little cares about social structure and interpersonal relationships, since he/she finds that employees must adapt to the work structure. Finally, the fourth type of leader applies participative style and people orientation in his/her leadership over an organisation. This type of leader includes employees in decision-making and in decision-implementation processes, but while doing this he/she relies on his/her influence on social structure, on people and their interpersonal relationships. The basic leadership style types may be observed in the following figure:

Figure 1: Types of leadership in organisation

	Authoritarianism / Low followers' participation	Democratism / High followers' participation
Orientation to people and social structure	People oriented authoritative style	People oriented participative style
Orientation to tasks and work structure	Task oriented authoritative style	Task oriented participative style

On the other hand, organisational cultures contain different assumptions of people and their interpersonal relationships, which significantly affect precisely the participation of employees and the choice of suitable means for problem solving and organisational goals achieving. The idea is that a leader will have to choose the style of leading the organisation which would suite the assumptions contained in the culture. If he/she does not do so, the leader will not be accepted by the members of organisation, his/her actions will be misinterpreted and will not have the desired effect, and therefore he/she will be unsuccessful.

Overview and analysis of organisational culture types classification in literature show that they are often founded on the assumptions regarding the distribution of power and the nature of organisational action. Obviously, these assumptions correspond to differentiation criteria of leadership styles. The first group of cultural assumptions, which are the foundation for differentiation of culture types and which may affect the choice of leadership style in an organisation, is related to distribution of power. This is because one of the most important questions that every social group, and so the organisation just as well, must solve is the attitude towards power, its distribution and the equality of people in decision-making. Organisational culture researches, and especially national culture researches, indicate that one of the most important criteria for distinguishing between them is actually the belief with respect to what kind of distribution of power in social community or collective is good for that society or collective. This assumption was recognised by Hofstede (2000) as “power distance” in his famous national cultures research. On the one side, we have cultures (organisational or national) in which the assumption that the power must be concentrated at the top of the organisation or society prevails, that is, that only a small number of members of social entity should have the power to make decisions, while the rest should follow their orders. In such cultures it is understood that centralisation and hierarchy are desirable and useful for the organisation, and such cultures are called authoritarian. On the other side, we have cultures in which the assumption that it is good for the organisation or society for power to be distributed as equally as possible among their members prevails. In such cultures it is understood that hierarchy is bad, and that participation by the members of organisation is useful and desirable, and such cultures are called egalitarian. It is important to note that none of the opposing assumptions regarding power distribution is in itself good or superior to the other, and that they cannot be compared simply.

The second group of cultural assumptions relevant to the leadership style choice refers to the nature of human activity. This is because one of the important issues that each social group must solve is the question of choice of suitable form of collective action. On the one side, we have cultures in which technical efficiency is valued and goals are achieved through work or formal structure and tasks, in which a strict division has been made between the work sphere and interpersonal relationships sphere, so that these relationships are irrelevant for goal accomplishment and problem solving in an organisation. These cultural assumptions are recognised by Hofstede (2000) as distinctive for “masculinity culture” or “doing cultures”. On the other side we have cultures in which social structure, balance and harmony in a group are valued more than technical efficiency, in which there is no division between the work sphere and interpersonal relationships sphere, and so the organisational goals are accomplished and problems solved through these relationships. These cultural assumptions are distinctive, according to Hofstede, for “femininity cultures” or “being cultures”.

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Organisational culture types classification according to the two described dimensions is already known in literature. At least two classifications of cultures use the two described dimensions of power distribution and nature of organisational action in order to classify organisational cultures into specific types or kinds. These are the Handy's classification (Handy, 1979) and the Trompenaars' classification (Trompenaars, 1994). Since there are two dimensions of differentiating culture types with two poles each, we can design a matrix with four main types of organisational cultures.

Figure 2: Organisational cultures types

	Authoritarianism	Egalitarianism
Orientation to people, social structure and interpersonal relationships	Power culture (H) Family culture(T)	People culture (H) Incubator culture (T)
Orientation to tasks and work structure	Role culture (H) Eiffel Tower Culture (T)	Adhocracy culture Guided missile culture_(T)

Power culture or family culture is authoritarian, centralistic and leader-oriented. Handy speaks of power as “heliocentric”, where the Sun around everything revolves is, of course, the leader. Metaphor for both types of cultures is a family with a strong father figure. Power culture or family culture is not formal and the focus is on social, rather than on work structure. Just like the family in which everything depends on the father's will, thus the organisation is in this culture just as well seen as a tool in the hands of the leader, and the formal structures, rules or procedures should not stand in the leader's way to organisational goals accomplishment. Leader achieves his/her goals through his/her influence on people, and not through work division or formal structures.

Role culture or Eiffel Tower culture (shaped like a pyramid) is a bureaucratic culture, which is focused on formal structure, procedures and rules. Social structure, people and their relationships are absolutely subordinated to the formal structure, so the organisation is depersonalised. People are treated as “cogs in the wheel”, and the ideal is that they are a “replaceable” part of organisation. This type of culture celebrates rationality, objectivity and formality, and the metaphor for the organisation in it is a machine. Decision-making is centralised, although it is not as much in the leader's hands as much it is in the hands of techno-structure of such organisations, which prescribe procedures and rules.

Task culture or “guided missile” culture is the one in which the image of organisation as a problem solving and task accomplishing tool prevails. Since tasks are usually highly complex, it is necessary for all the members of organisations to

be involved as much as possible. Hence, egalitarianism is valued in the distribution of power, and thereby both participation of the employees and decentralisation are also valued. Nevertheless, this type of culture is oriented towards professionalism, rationality, problem solving and goal accomplishment through formal structure, division of labour and roles.

People culture” or incubator culture are completely oriented towards the members of organisation and their needs. It is assumed that organisation should serve its members, and not the other way around. The goals of organisation are often secondary comparing to individual goals of the members of organisation. Therefore, this culture is oriented towards social structure and includes a high level of egalitarianism in division of power, which thereby implicates decentralisation and participation of the members of organisation in decision-making. Also, orientation in organisational goals achieving is set towards social capital, i.e. people and their relationships.

From the previous description of cultural assumptions and leadership styles, we may conclude that there is an obvious relation between them. It is clear that authoritarian cultures, which are dominated by the assumption of power centralisation in the hands of the leader, demand a leader of authoritative style. In such cultures, most members of organisation presume that it is good for their organisation that the power is concentrated in the hands of the leader, that it should be clear “who’s the boss”, and that it is best if “organisation functions as a family with a strong father figure at the head”. It is normal, hence, that the members of organisation expect the leader to assume the responsibility and make all the decision without consulting the members of organisation. They presume that the role of followers is to execute the leader’s orders and that they, therefore, do not need to and cannot bear the responsibility for the fate of the organisation, since it is completely in the hands of the leader. If the leader in such culture showed a desire to include the employees in decision-making, he/she would risk being perceived as incompetent or hesitant (“Why is he/she asking our opinion when he/she is the one who makes the decision? He/she is the leader, he/she should know/decide. Maybe he/she is incompetent, so he/she wants to avoid the responsibility by transferring it to us?”)

In the cultures holding assumption of the need of egalitarian distribution of power, the members of organisation expect to be asked for their opinions, and the leader is expected to enable their participation in decision-making. In such cultures, it is presumed that more active role of the employees and their responsibility for the fate of the organisation are present. It is logical that such cultures demand the leader’s style which is participative, democratic and which includes the employees in decision-making process. If a leader would try to apply authoritarian style in egalitarian culture, he/she would be perceived as a dictator who does not appreciate his/her associates, so the members of the organisation would show resistance and the leader would be unsuccessful.

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When we speak of the second pair of culture and leadership styles dimensions, it is logically expected that the cultures holding formal organisational action assumptions will imply task oriented leadership style, while the cultures holding informal organisational action assumptions will imply people oriented leadership style. In cultures holding the assumption that a work structure is more important than a social structure, the followers expect from the leader to accomplish the organisational goals and solve organisational problems primarily through this work structure. This is why the leader must, above all, be oriented on structure and tasks, leaving aside interpersonal relationships as a less relevant component of organisation. If a leader would try to achieve goals primarily through his/her influence on people and their interpersonal relationships in this type of culture, he/she would be perceived as incompetent and his/her behaviour would be evaluated as impermissible interfering in interpersonal relationships, politicking or intrigue plotting. On the other hand, cultures in which social structure is considered as more important than work or formal structure, the leader will be expected to achieve organisational goals and solve organisational problems through his/her influence on people and their interpersonal relationships. A leader in such culture must apply people-oriented leadership style. If a leader would try to achieve organisational goals and solve organisational problems in this type of organisational culture primarily through structure and tasks, he/she would be perceived as a formalist who does not appreciate and does not know the people, and who little cares for the interests of the members of organisation.

From the description of dimensions by which different types of organisational cultures and leadership styles are differentiated, it is clear that both cultures and leadership styles differ in two dimensions of the same or similar content with two poles each. This enables us to connect the 4 types of organisational culture and 4 leadership types into a causal relation which they implicate.

Handy's Power culture combines, just as Trompenaars' Family culture does, the assumptions of unequal distribution of power with people orientation and their relations in organisational action. In this type of organisational culture, the organisation is treated as family, and the leader is treated as a father of this family. The leader is, as a true father, expected not to ask his/her (immature children) about the decisions he/she makes, but also to take care of their needs and interests. As well as in a family, relationships are not formalised, and social structure is more important than work structure. In such culture, it is only natural that leaders will choose people oriented authoritative leadership style. They actually have little choice since, if they were to apply some other style, they would not be accepted as leaders and they would be unsuccessful.

H1: In organisational Power / Family culture, leaders who apply people oriented authoritative leadership style will be best accepted and most efficient.

Role culture or Eiffel Tower culture is a bureaucratic culture focused on work, formal structure in which inequality and hierarchy dominate. In such cultures everything is formalised and everything proceeds in accordance with formal division of work, roles, structures, while people and their relationships are secondary. In such cultures, only leaders who apply task-oriented authoritative leadership style will be accepted and efficient. They must accomplish organisational goals through hierarchy and formal structure, which means that there is no participation of employees, as well as that personal attitudes, emotions or relationships between employees are not important.

H2: In organisational Role / Eiffel Tower culture, leaders who apply task oriented authoritative leadership style will be best accepted and most efficient.

Task culture or “Guided missile” culture is a type of culture in which everything is subordinated to achieving goals and tasks of organisation. Therefore, task orientation and task completion through work, formal structure is implied. However, unlike the previously mentioned culture types, in Task culture or “Guided missile” culture it is considered that all the members of organisation should equally contribute to achieving of its goals. Since this type of culture is often present in organisations with highly developed technology, in which knowledge and/or creativity of employees are of crucial importance for success, it is only natural that human resources usage is critical for their success. This, therefore, implicates that all members of organisation need to be involved as much as possible in decision-making. In such cultures, only leaders who combine participative leadership style with task orientation can be successful and efficient.

H3: In organisational Task / Guided missile culture, leaders who apply task oriented participative leadership style will be best accepted and most efficient.

People culture or incubator culture implies that organisation is oriented on people and their needs and interests. Social capital is highly valued, since this type of culture often appears in the very organisations in which knowledge and innovations are key to success. Therefore, it is only natural that in this type of culture the only accepted and successful leader will be the one who applies participative style and who is oriented to people and their needs, interests and relationships.

H4: In organisational People / Incubator culture, leaders who apply people oriented participative leadership style will be best accepted and most efficient.

Recapitulation of relations between organisational culture types and leadership styles they implicate can be observed in the following figure:

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Figure 3 Relationship between organisational culture types and leadership styles

	Authoritarianism / Low participation	Egalitarianism / High participation
Orientation to people and social structures	Power/ family culture People oriented authoritative style	People / incubator culture People oriented participative style
Orientation to tasks and work structure	Role / Eiffel Tower culture Task oriented authoritative style	Task / guided missile culture Task oriented participative style

Conclusion

Leadership and organisational culture are, individually observed, two maybe most popular topics in organisational behaviour research. Still, the relationship between these two elements of management is very controversial. The question whether the culture shapes the leader or the leader shapes the culture is far from being solved, since the answer to it depends on the perspective of observation of both culture as well as leadership. Since researches in which it is assumed that leadership shapes organisational culture dominate in the literature, hence it is particularly important to explain the other side of the coin: the way in which the culture shapes the leadership.

Theoretical explanation of the impact of culture on shaping leadership style takes as its starting point the process of interpretation of reality, during which meanings are assigned to reality in the organisation and around it. Organisational culture determines the frame of reference that the employees in the organisation use for interpretation, i.e. giving specific meanings to phenomena and events relevant to the organisation. In order to be accepted, the leader must act within this frame of reference that the culture imposes, and only within the culture can he/she perform his/her basic function: to articulate a vision and inspire and lead the followers towards its achieving.

Operationalisation of organisational culture impact on leadership implicates that we must identify typical leadership styles imposed by typical organisational culture types. Since leadership styles and certain classifications of organisational culture types are both based on two main criteria regarding the distribution of power in an organisation and the nature of organisational action, whereby each of these two criteria has two poles, therefore the establishing of relationship between culture and leadership is possible by application of 4-field matrix. The conclusion is that the Power or Family culture implicates people

oriented authoritative leaders' style; that Role or Eiffel Tower culture seeks a leader of authoritative style, but with orientation to tasks; that in the Task or Guided missile culture a leader applying task oriented participative style can be the only successful leader; and that in the People or incubator culture the leaders applying people oriented participative style will be most probable, most often encountered, best accepted and most efficient.

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UTICAJ ORGANIZACIONE KULTURE NA LIDERSTVO U ORGANIZACIJI

Rezime: U radu se objašnjava i operacionalizuje način na koji organizaciona kultura oblikuje stil liderstva u organizaciji. Kultura nameće određeni stil liderstva, budući da kreira referentni okvir u kome članovi organizacije interpretiraju i razumevaju svet oko sebe, i u kome oblikuju svoje ponašanje. Lider mora da se kreće unutar kulture i referentnog okvira koji ona nameće da bi bio prihvaćen i uspešan kao lider. Operacionalizacija ovog uticaja sprovedena je identifikovanjem tipičnih stilova liderstva u organizaciji koji će biti prihvaćeni i efikasni u određenim tipovima organizacionih kultura.

Ključne reči: organizaciona kultura, liderstvo, interpretacija, značenja.



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MOBBING MANAGEMENT

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Abstract: *Due to serious consequences that mobbing has had on the individual and the organisation as a whole, the interest of world theoreticians and practitioners for mobbing has been intensified over the past few decades. Although the organisations in Serbia as well as the organisations in the rest of the world are not immune to harassment behaviour of certain organisation members, the interest of the domestic public for mobbing, as a phenomenon, is sporadic and fragmental. The aim of the paper is not only to point out the existence of mobbing as a harassment behaviour within organisation generally but also to point to its existence within the organisations in Serbia, its nature, causes and consequences as well as the role of managers in the prevention and elimination of mobbing.*

Keywords: *mobbing, mobber, victim, management, organisation.*

Introduction

Although it is quite certain that over the decades the Republic of Serbia has represented exceptionally suitable ambience for mobbing¹, the fact is that the issue of mobbing, i.e. bullying and harassment within organisation has been in the focus of attention only recently, but not that quite intensively. It is also the fact that under crisis conditions the number of mobbing cases has increased not only with those reported but also with those cases of mobbing that go unevicenced. Numerous examples from domestic practice reveal that the current crisis has been an excuse for certain employers², whereby the employees have been subject to serious

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¹ „In contrast to EU countries the share of mobbing victims is higher in our country although no one has dealt with it systematically... Mobbing in Serbia is spread mostly in the state administration and healthcare is in the second place“ (Union of Serbian physicians and pharmacists)

² „In order to save their enterprises and avoid huge losses, entrepreneurs in Serbia, those largest ones, mainly let off their workers. In order not to jeopardize or close their firm among many that they have

pressures with the aim to decide themselves to leave the workplace, without social programme or to decide to work under conditions of evident exploitation.³ Great unemployment, as one of the distinctive consequences of the current crisis creates conditions for blackmail of employees by their employers. The crisis represents solid ground for enhancing the so-called gray economy, which is an ideal environment for creating and manifesting different modes of mobbing.

Aside from the fact that the issue of mobbing (bullying and harassment in the workplace) as a subject, has been only recently and sporadically present in the Serbian public, there is an increasingly evident situation that the employees in Serbia have in some way and to a certain extent faced this phenomenon. And if they have had a luck of not being the victims of mobbing themselves, it is a possibility that they have had a misfortune to evidence the bullying of some of their colleagues. Or maybe they have been the mobbers themselves. According to the data of the Victimology Society of Serbia during 2007 out of the total of 216 persons that reported being the victims of mobbing, them 119, or 55% of the total number of victims declared as victims of bullying at work. According to the data of this society the situation was similar during 2008. Out of the total number of 226, that reported to be the victims of harassment, 115 or 51% were the victims of mobbing (Draft bill of the Law on Prevention of Harassment at Work – argument). Even more dramatic are the data that the Stop-Mobbing Association has. According to the data of this Association, during 2008 there were 1.281 recorded cases of harassment at work. Out of that number, 552 persons were male, while 729 persons were female. The age structure of recorded mobbing victims was as follows: 584 persons had the age between 20 and 30 years, 276 persons from 30 to 40 years, 321 persons had the age between 40 and 50 years, 89 victims had the age between 50 and 60 years, while 11 victims were over 60 years of age. According to employer categories, the structure of this reports was as follows: 684 victims were employed in the public sector, while 597 worked in the private sector (Draft bill of the Law on Prevention of Harassment at Work – argument).

Aside from many other reasons (e.g. fear of losing the job⁴, subjective conviction that he/she is not a good worker or even bad person etc.) a lack of information on part of employees also leads to the fact that only a small number of victims of mobbing realise at all that they are victims themselves and consequently

taycoons decide to use for workers unpopular but for them the most efficient measure...” (Daily newspaper Danas 2010).

³ „Employees, generally, do not have protection in terms of personal incomes, their high and timeliness... Hence, those employed are lucky to be employed at all but that does not mean that they have realized the rights that belong to them“ (Political Forum 2010).

⁴ In Serbia, the fear of losing the job takes the first place far ahead from fear of illness and death. Under such circumstances, the worker is forced to suffer what he/she must not and what the Law on Work and other regulations prohibit (Glas javnosti 2010). According to Gallup’s research, 60% of employees in Serbia leave in fear of losing the job, which is major driving force behind psycho terror (Union of Serbian physicians and pharmacists 2007).

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can seek help that would lead them out of the situation they got stuck in without even being guilty.

It is expected that frequent public discussions on the problem of mobbing as well as the Law on Prevention of Harassment at Work („Official Gazette RS“, No. 36, 2010), that was adopted on 26 May 2010 and which came into force on 4 September 2010 will in the upcoming period represent serious encouragement for victims of mobbing to take action for their rescue. At the same time, it is expected that the mentioned actions represent a serious warning to mobbers that the time of harassment at work is slowly but steadily passing.

Considering that the Law on Prevention of Harassment at Work makes employers responsible for possible mobbing within organisation, the management are expected to express an important degree of sensitivity to the issue of mobbing. Aside from taking proper prevention measures⁵ that should put an end to this form of behaviour of organisation members, sensitivity to the issue of mobbing implies taking corrective actions that will mitigate this form of behaviour and its consequence.

Adequate mobbing management, i.e. taking proper preventive and also corrective actions on part of managers for the purpose of preventing its appearance, but also its mitigation or elimination in the cases when this form is manifested represents first of all being well informed on its nature, causes, activities that create mobbing context, key consequences of mobbing for the individual, a mobbing victim but for the organisation as a whole.

The Nature of Mobbing

Mobbing as a behaviour form within an organisation was identified first in the behaviour models of certain animals, birds primarily. Expecting danger from a potential attacker, one or more birds with their wings and cries and flapping of wings attack the attacker, thus attracting attention of other birds that join the attack fast (Bultena, Whatcott 2008, 653). The research of this kind of behaviour in animals represented the dominant focus of attention of Konrad Lorenz, a theoretician that was dedicated to examination of the psychology of behaviour of animals. In the 1960s of the 20th century a similar mode of antagonistic behaviour was identified in Sweden in the behaviour of school children (UGS Nezavisnost 2009). At the beginning of the 1980s of the 20th century Heinz Leymann pointed to the existence of this form of behaviour within working ambience.

⁵ „The employer is obliged to inform in writing the worker before he/she begins to work of the rights and obligations related to the legal prohibition of harassment at work and there is a fine sentence if the employer fails to do so“ (Law on Prevention of Harassment at Work, „Official Gazette RS“, No. 36, 2010).

Heinz Leymann is considered the author of the term mobbing⁶. Under the terms mobbing or psychological terror, Leymann assumes antagonistic and unethical communication that is systematically directed to certain organisation members by an individual or group. Leymann points out that the activities that can be called mobbing proceed on a daily basis and can last over a long period of time (six months at least). As such, these activities can lead to serious psychological, psychosomatic and social problems of mobbing victims that because of the nature of the mentioned issue are placed in the position that they cannot defend themselves from (Leymann 1990, 120). The activities that make mobbing can be heterogeneous and can be carried out in different ways at that. In such context, mobbing as a phenomenon is not dedicated a specific set of activities. What makes mobbing specific is the frequency (almost everyday) and duration (six months at least) of the activities.

Many other frequently cited definitions are based on fundamental characteristics of mobbing as identified by Leymann. Thus, Swedish National Board of Occupational Safety and Health defines mobbing as a repetition of extremely negative activity or rebuked activity that is insultingly directed towards employees and can lead to their exclusion from the community in the working place (Vuković 2006). Mobbing at work is defined as a severe collective campaign, that is led by one or more collective members with the purpose of humiliating, punishing or excluding a certain worker (Bultena, Whatcott 2008, 652).

All in all, mobbing can be said to include different forms⁷ of harassment and abuse, that the individual or group (victim or victims of mobbing) suffer in an organisation as a consequence of the aggressive long term effort of another individual (mobber or abuser) or the whole group of employees (group of mobbers or a group of abusers) to discredit the victim in any possible way (professionally, emotionally, physically, psychologically), belittle, jeopardize and finally exclude from the organisation.

The Causes of Mobbing

The causes of the existence of mobbing within organisation can be heterogeneous. According to some theoreticians (Neuman, Baron), the factors that cause mobbing behaviour can be analysed from the aspect of the level they appear

⁶ The terms that are used in the world parallel to the term mobbing are: bullying (countries of English speaking area), work abuse, employee abuse. In Serbia parallel to the term mobbing the terms „harassment“ and „abuse“ (at work) are also used. The fact that the Law arranging the issue of mobbing which was adopted by the Parliament of the Republic of Serbia on 26 May 2010 is called the Law on Prevention of Harassment at Work implies that the term mobbing is not present enough in the wider domestic public.

⁷ „In some research the term 'mobbing' implies psychological abuse and is examined separately from sexual harassment and bodily abuse while in other the sexual and bodily abuse are only one of the mobbing modes, that is moral abuse“, (Mobbing Srbija 2010, 3).

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at. In that sense these factors can be grouped as follows: individual level factors, group level factors, organisational level factors and social level factors (Taspinar, Sayli 2010). Having in mind the fact that mobbing factors manifested at the group and organisational level are somewhat identical, the factors that provoke the appearance of mobbing within organisation are classified in the paper in three groups of factors. These are:

- a group of personal mobbing factors
- a group of organisational mobbing factors and
- a group of factors that spring from organisational environment.

The factors of personal nature that can contribute to the appearance and enhancement of mobbing within organisation concern primarily the personality nature of organisation members. Not only the members of organisation whose personality nature enables them to become mobbers (abusers) but also those members whose personality nature „helps“ someone become the victim of mobbing.

Psychologists argue that mobbers are persons with personality disorder. These are less capable but powerful individuals without capacity to love, have fun, lacking creativity and giving, etc. They are in the process of harassing other people joined by those organisation members whose personality nature is similar to the personality nature of a mobber. They are mainly the so-called poltroons, then persons that are not enough competent for the assigned tasks as well as those individuals who fearing to become the victims of mobbing themselves or with idea of making personal benefits identify with the abuser supporting his/her aggressive behaviour in relation to the victim.

It is considered that mobbers with their harassing behaviour in relation to the victim are actually trying to hide their failure in some other aspect of their lives (private or professional). They are often the individuals that have some power over the victim and through displaying aggression against the victim are actually demonstrating and abusing that power. In that sense, the bullying behaviour can be a result of the personal fear of a mobber that without bullying behaviour won't be appreciated enough or would become the victim himself/herself.

There are abusers that abuse consciously with calculation, for the purpose of degrading the victim and finally making benefits at the victim's expense (e.g. taking the position that the victim has and whom as a consequence of mobbing has been maybe forced to leave the organisation). Persons with such personality configuration are capable of provoking the conflict situations that are consequently considered the basis for appearance of mobbing (UGS Nezavisnost 2009, 8).

As a process, mobbing mainly starts with the relation of a mobber and a victim that is proceeding according to the principle one on one. In time the number of participants in the mobbing process can increase because of taking side of some organisation members with the mobber. This can lead in organisations where

mobbing exists to unequal polarisation between members. On the one side, there is a mobbing victim, mainly a loner. On the other side, there is a mobber or the whole group of mobbers. The group that supports the mobber instead of the mobber systematically attacks the victim. They are the mobbers' extended hand without which the mobber is weak and helpless (UGS Nezavisnost 2009, 8).

In the practice there are situations in which the main mobber does not exposes himself/herself but acts in the shadow with the help of his/her „helpers“. Some theoreticians emphasise that the major problem of identifying mobbing is the hidden nature of such behaviour (McCord, Richardson 2001). Experienced mobbers actually strive to make in the organisation the image of positive, cooperative member that helps the most of employees. Special danger when it comes to mobbing management represents the situation where the mobber is the manager of an organisation.

Having in mind that the forms of harassment of some organisation members can be very different, the management that tries to suppress the harassment behaviour in the organisation is expected to have a permanent insight into the behaviour of organisation members. It is known that the so-called transformation manager (Simić 2010, 298) is expected aside from many other qualities to display the capability of the so-called „individual examination“ of organisation members. This managerial capability considers his/her readiness and capability to analyse each member of the organisation as an individual for the purpose of better acquaintance with member's individual distinctiveness: personal knowledge, capability, motives, creativity and innovativity levels, personality features, conflict, etc. According to these insights (primarily according to adequate identification of personality features of organisation members) managers are expected to be able to identify those organisation members that have inclination to become abusers, i.e. mobbers.

Independently or with the help of some supporting group, the abuser relatively fast and easy finds the adequate victim towards whom the aggressive activities are directed to. According to their nature, the victims of mobbing are mainly the persons that are:

- highly qualified, competent and very capable
- creative
- honest
- quiet and introvert
- dedicated to the organisation
- capable of identifying the problem precisely as well as irregularities in the functioning of organisation and capable to warn of the problems
- capable to offer the adequate solution to the identified problem
- ready to demand better working conditions
- at the beginning or at the end of working lifetime
- full of enthusiasm and new ideas

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- with rising career
- estimated in a certain way as a threat to someone among organisation members
- independent (do not belong to the so-called fractions),
- female⁸
- with huge family obligations
- ill
- disabled persons
- representatives of marginal groups
- with specific sexual orientation
- diseased of untypical illness (e.g. aids, hepatitis C), etc.

There are opinions that even popularity, wittiness, physical appearance, age⁹, the way one dresses, way of communication, material standing, marital state, family pedigree etc, can place some persons in the position to become mobbing victims (Bultena, Whatcott 2008, 652). Available data reveal that the profession can be considered one of the factors that can provoke the mobbing process. Thus, for example, according to the data of the European Foundation, social workers as well as workers in healthcare and education are 2,8 times more exposed to risk of mobbing in contrast to the average risk level of mobbing that the workers of other professions are exposed to (European Foundation for the Improvement of Living and Working Conditions, 2002).

Aside from specified personal factors that can provoke mobbing behaviour in the organisation, this form of behaviour can be incited by other factors that stem from the organisation itself. Some of the variables of organisational nature that can contribute to but also prevent mobbing within the organisation are: the character of organisational culture, organisational structure, managerial way of managing, capability of a manager to manage the conflicts, the quality of human resource management system (especially the quality of the subsystem of new candidates selection), etc.

Research has revealed that mobbing is mainly present in organisations where (Bultena, Whatcott 2008, 658): the workers have secure jobs, the work process is organized badly, management is not attentive enough and not interested for the fate of its workers, organisational culture is burdened by numerous weaknesses, selection of candidates during recruitment is not adequate, deligation of assignments across work places is inappropriate, illegal and unethical behaviour

⁸ According to data of the European Foundation, female persons are identified as persons that are 75% more exposed to the risk of mobbing in contrast to male persons (European Foundation for the Improvement of Living and Working Conditions, 2002).

⁹ According to data of the European Foundation relatively younger workers (up to 25 years of age), as well as relatively older workers (over 55 years of age), are to the largest extent exposed to risk of becoming mobbing victims in contrast to workers between ages of 25 and 55 (European Foundation for the Improvement of Living and Working Conditions, 2002)

is present, business is not transparent enough, working ambient is stressful, managing conflict situations is not adequate, etc.

Numerous factors from external organisational environment can provoke or eliminate mobbing within organisation. Legal regulative, political stability, economic situation, relation to traditionally marginalized population groups etc. are some of the factors from external organisational environment that can reflect on enhancement or weakening of harassment mode of behaviour within the organisation.

Activities that Create Mobbing Ambiance

Aside from knowing all real and potential causes that can provoke mobbing within organisation and aggressive striving of management to eliminate them or minimise its importance, successful mobbing management represents timely insight into those situations in which mobbing behaviour has already manifested itself. It is surely important to have in mind the fact that mobbing happens behind closed doors, without witnesses and without tangible proofs (Beng 2010, 65).

There are numerous theoreticians (e.g. Heinz Leymann, Kenneth Westhouse etc.) that have made efforts to identify activities within an organisation in which mobbing behaviour is created. Heinz Leymann was able through numerous undertaken research to identify even 45 different activities closely related to mobbing. Starting with the consequences that these activities can have on the victim, he grouped them into five categories. These are (Bultena, Whatcott 2008, 658):

- the activities that jeopardise the way of expression and of communication of the victim
- activities that jeopardise the social relationships of the victim
- activities that jeopardise the reputation of the victim
- activities that jeopardise the quality of personal and professional life of the victim
- the activities that jeopardise health and life of the victim.

The thing that managers must have in mind, when it comes to the activities of mobbers is the fact that some of these activities themselves do not have an a priori negative connotation and can represent the composite component of regular interactions of organisation members. However, a bad intention of the initiator of these activities as well as the frequency and lasting can change their connotation and as such can be considered as mobbing activities.

Any activity that can be at a given moment in any possible way or to any extent be considered an attack on someone among organisation members can represent a beginning stage in the mobbing process. A careful manager should be capable to register and monitor the position of a potential victim as well as any future attacks. If there is a mobber in the organisation it is expected that after the beginning attack on the victim, his or her attacks can be continued and intensified.

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It happens that a skillful mobber acts from a shadow, hiddenly attacking its victim with the help of his/her colleagues „submitters“. Some of organisation members take mobber's side because they trust him/her, while others do it out of fear that they will be the next victims and others are in their nature inclined to attack others and use any opportunity to do so. The increased number of those attacking the victim can delude an uncareful manager who believing that the majority is right can join the mobber and his/her helpers. The moment the manager takes the mobber's side, the position of the victim becomes seriously jeopardised.

The acceptance of the mobber's arguments by the manager and support to his/her actions can represent part of political game that a manager-the manipulator at a given moment plays. The purpose of such political game can represent the managers efforts to show himself/herself part of the majority although being aware that the majority is not right and that the victim is attacked without a right reason.

Such situation is mainly present in those organisations in which managerial position and the way of acting depends on the will of the majority of organisation members. Consequently, it is not a surprise that the results of some research reveal that although mobbing is characteristic of all types of organisation, its presence is extremely typical in organisations in the fields of healthcare and education. Numerous studies (Gul et al. 2011; Celik, Peker 2010), has shown that universities represent ideal terrain for mobbing. This is, first of all, the consequence of the fact that managers within universities (rectors, deans), are chosen from among the members of universities, that is faculties and by these members (The Law on Higher Education). Also, professional enhancement of some university members is determined by the existence or the lack of support of other colleagues.

Consequences of Mobbing

The importance of mobbing management stems from the fact that mobbing as a phenomenon has some serious consequences not only on an individual, a mobbing victim, but on the organisation as a whole.

The consequences that mobbing behaviour has on the victim can be heterogeneous. In addition to the aforementioned group of activities related to mobbing and identified by Leymann, the consequences of these activities on victim can jeopardise: the victim's way of expression and communication, his/her social relations and reputation, the quality of personal and professional life, health and finally life itself. It can be stated in general that mobbing as a phenomenon has as a consequence the array of social, psychosomatic and financial consequences on the victim. A large study on mobbing behavior carried out in Germany revealed that almost all identified mobbing victims (98,7% of them), experienced the consequences that had a negative impact on their health (approximately 43,9% of mobbing victims were diagnosed with having impaired health) or were laid off (68,1% of mobbing victims were laid off) (Sloan et al. 2011).

Human is a social being that expresses a natural need to make proper interactions with people of his/her environment. This innate human need for contact with other people is also present in organisation, i.e. human working environment. Mobbing is considered to inhibit the human possibility to make proper social interactions within organisation as well as outside of it. Permanent harassment of the victim leads to the victims inability to reason normally and objectively and to communicate normally. The victim starts to doubt his/her own qualities and validity of his/her own actions. Insecurity and distrust make the victim retreat, isolate himself/herself, avoid contact which all together disturb the position and influences the victim has had so far.

Because of the extremely high level of stress stemming as a consequence of mobbing¹⁰, the mobbing victim's health is impaired. It is not rare that the victim because of facing mobbing starts to consume drink, food, medicines and cigarettes. In some cases of mobbing there exists the danger of suicide. According to undertaken research Heinz Leymann implied that mobbing in the workplace caused even 15% of suicides in Sweden (Leymann 1990, 119-126).

Some of the symptoms of impaired health of the victim can be (Janković 2010; Sloan et al. 2011): depression, anxiety, crying crisis, fear, panic attacks, social isolation, emotional stupor, headaches, sleep disturbance, dizziness, digestive problems, hypertension, cardiovascular problems, skin impairment etc.

Having insight into the mentioned (and many other) symptoms of impaired health of organisation members, can be a signal to a manager dedicated to activities of mobbing prevention, that the worker with mentioned problems is eventually a mobbing victim.

The mentioned as well as many other social and psychosomatic consequences that the victim suffers can reflect on: the degree of victim's presence at work, the level of motivation, level of enthusiasm, creativity and ethics, level of productivity and dedication to the organisation. Consequently, this can have an influence on the victim to leave the organisation.

The existence of mobbers and victims within organisation is a clear sign that the organisation has a problem and that some of organisation variables do not work in satisfying manner. The consequences of mobbing contribute to worsening of the situation in the organisation. Aside from other, the atmosphere in organisation burdened by mobbing becomes unpleasant and toxic and reflects not only on the work results of a mobbing victim but negatively influences the quality and results of activities made by other organisation members.

Toxic working environment burdened by harassing behaviour contributes among else to:

¹⁰ Research has revealed that the higher level of stress at work is experienced by mobbing victims (Gravois 2006).

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- best workers leaving the organisation, which leads to the disturbance of organisational talent base
- worsening of relationships between workers
- decrease of moral and trust,
- failure of innovative and creative potentials of organisation
- growing of apathy, dissatisfaction, fear, stress
- increase in costs because of the fluctuation of workers, eventual litigations and compensation that must be given to mobbing victims, etc.

The Role of Managers

The mentioned moments point to the need for serious understanding of mobbing by managers but also by all other organisation members. This puts to the fore the need for serious approach to the activities directed towards prevention and elimination of mobbing.

The prevention of mobbing implies the proactive approach to mobbing by the organization's management. This approach, besides acknowledgement of nature, causes, symptoms and consequences of mobbing, implies aggressive efforts of the management to prevent mobbing in organisation. Such efforts are based on:

- timely solving of conflicts in the organisation
- formulation of clear rules of appropriate and inappropriate behaviour of organisation members
- adequate selection of candidates during recruitment of new organisation members
- creation of communication models based on facts, dialogue and open communication
- organisation of education and training within organisation related to mobbing issues
- creation of culture that does not support mobbing behaviour but nurtures cooperation, mutual respect, appreciation, and dignity,
- creation of ambiance within which it can be clearly pointed to eventual existence of mobbing
- enhancement of civil behaviour of organisation members
- enhancement of organisational dedication of organisation members
- creation of good interpersonal relationships in organisation etc.

Aside from that through personal example, carefully chosen management style, appropriate way of communication with organisation members, manifesting highly moral and ethical behaviour, managers can contribute to the creation of organisational ambiance that prevents the appearance of mobbing.

If, however, the actions of managers directed to prevention of mobbing in organisation are not carried out or have no effect, managers are left with corrective and reactive action in a mobbing situation. The success of managers in reacting to already manifested mobbing depends on timely and objective identification of mobbing symptoms, as well as their readiness and capability to:

- mediate in overcoming of situation that initiated mobbing behaviour
- prevent and adequately punish mobbers (mobbers can be given some other working place or get fired eventually)
- protect the victim adequately and offer necessary help and support,
- rehabilitate adequately the victim and make an effort to return to the victim to any possible extent what has been taken from him/her or done during the mobbing process.

Conclusion

Although mobbing, as a harassment behaviour mode has its roots in the past, this issue in Serbia has been given some but not still adequate attention over the past few years. Adoption of the Law on Prevention of Harassment at Work represents serious sign that the problems initiated by mobbing behaviour in the workplace are evident and should be treated with responsibility and adequate knowledge.

Aside from proper institutional framework, the important role in preventing and eliminating mobbing, as a potential mode of behaviour within organisation has its management. Through relevant activities focused primarily on prevention and elimination of already provoked mobbing behaviour, managers try to prevent or mitigate negative consequences that mobbing has on the victim or organisation as a whole.

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UPRAVLJANJE MOBINGOM

Rezime: Zbog ozbiljnih posledica koje mobing ima po pojedinca, ali i po čitavu organizaciju, tokom poslednjih par decenija intenzivira se interesovanje svetskih teoretičara iz oblasti organizacije i menadžmenta, kao i brojnih praktičara, za mobing, kao problem globalnih razmera. Iako i organizacije u Srbiji, kao i one u ostatku sveta, nisu imune na zlostavljačko ponašanje izvesnih članova organizacije, stiče se utisak da je interesovanje domaće javnosti za mobing, kao pojavu, dosta sporadično i uglavnom fragmentarno. Cilj ovog rada je da ukaže na prisustvo mobinga, kao zlostavljačke forme ponašanja u okviru organizacija, uopšte, pa i na njegovo prisustvo u okviru organizacija u Srbiji, na njegovu prirodu, uzroke i posledice, kao i na ulogu menadžera u njegovom sprečavanju i eliminisanju.

Ključne reči: mobing, mober, žrtva, menadžment, organizacija.



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INNOVATION-BASED IMPROVEMENT OF THE ENTERPRISE BUSINESS COMPETITIVENESS

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Abstract: *In the conditions of a dynamic environment and intense competition, innovations are not only the grounds for growth and development of enterprises but their survival factor, as well. Research in theory and practice indicates that the enterprises that are trained to respond to changes by innovation are more successful. Pronounced failure of new products and services, increased costs, more rapid technological development, changes in the behavior of customers and other market participants, impose the need for changes in the access to innovation, a shift from closed to open innovations. Improving the innovation capacity of small and medium enterprises is conditioned by both changes in the external environment and in the enterprises themselves. This paper analyzes some factors that affect innovativeness as the basis for improving the competitiveness of small and medium enterprises in the region of Niš.*

Key words: *innovativeness, competitiveness, small and medium enterprises, intellectual property protection, connectivity, networks*

Introduction

The ability of enterprises to use innovations to create new opportunities in an increasingly intensive competitive and technological environment is, more and more, a key factor of business success. This ability is primarily reflected in a

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proactive way of thinking and operating and in the strategic flexibility as a key capability of a modern enterprise. The actual strategic flexibility can be increased if strategies are the result of innovative responding and creating more diversity compared to competitors. Specifically, under conditions of dynamic changes in the environment, innovation becomes a key factor of the enterprise differentiation and positioning strategies. Innovative enterprises are more competitive in the market because they provide a unique value that incorporates elements created on the basis of clearly defined needs and desires of customers. Innovations arising from customer preferences provide total satisfaction with the entire experience with the enterprise, which allows the enterprise to achieve superior performance and create and maintain long-term competitive advantage by attracting and retaining customers. However, these processes are becoming more complex, because although today's consumers are facing a greater range of products and services than ever, it does not fully meet their increasingly sophisticated needs. For proactive managers, this situation represents an opportunity rather than a threat, and a challenge to create value for segments of consumers whose needs are still unmet. Managers of such orientation direct more and more resources into the processes that enable the differentiation of supply, since the ability to develop new products is considered one of the main indicators of competitiveness of enterprises (Sofianti et al. 2009). "The growth and creation of knowledge have become the dominant topics for managers", while the ability to absorb knowledge from the market represents the key capacity of an enterprise (Sofianti et al. 2009).

The success of innovations as drivers of long-term growth and development of enterprises has become extremely uncertain due to very pronounced pressure from the environment, especially in the case of high-risk projects based on new technologies and/or implemented in new and unfamiliar markets. Projects of this kind typically involve numerous actors from the enterprise and its environment, the use of so-called "rare" resources and taking advantage based on their efficient exploitation. In the knowledge-based economy, the creation of new and improvement of the existing products and services and the development of new business processes are increasingly grounded in knowledge as a key resource of development (Bessant, Tidd 2007, 84-94). The risk of marketing failure of innovations and of not achieving adequate performance imposes the need for new ways of managing innovations and for a redefinition of the existing innovation strategies. In a knowledge-intensive environment, the success of innovations is increasingly conditioned by the ability to be connected into different forms of innovational and other networks. The integration and connection of various functional areas are essential for generating and acquiring knowledge within the enterprise. Also, as an expression of desire to strengthen the enterprise competitive power, various forms of innovation networks were created by linking and integrating knowledge of different actors in the value chain (Stanković, Djukić, 2011; Stanković, Popović 2011, 197-209). The key business processes include customers, suppliers, representatives of research organizations, partners and competitors, which requires

from the enterprise to redefine business and functional strategies and to continuously apply the knowledge of customers and other key stakeholders.

1. Synchronizing the enterprise innovating strategy with environmental changes

Defining and implementing a strategy of innovation gets complicated in the contemporary conditions, characterized by intense market and technical-technological changes. The first group of changes primarily reflects in the emergence of new and modification of the existing customer needs in terms of their increasing sophistication and then in the integration processes among the participants in the global market in order to create superior value which corresponds to these needs. In these processes, more rational use of resources and reduction of risks to acceptable limits are imperative, especially due to the intensification of negative effects of the global economic crisis. The success of innovation is thus determined by identifying and understanding the needs, requirements, preferences and consumption patterns of modern customers, which are constantly changing. Accordingly, terms and sources of the competitive advantage of enterprises are changing, too. It is less frequently acquired by adhering to the existing rules of competition, and more often by modifying them and creating new ones (Kodama 2009, 494; Swaminathan, Moorman 2010, 52-54). Enterprises that operate in this way are often the leaders who define new business rules in the industry, and maintain superiority by constantly finding new ways to create value. To succeed in this, managers of such enterprises foster organizational flexibility, interfunctional coordination, use of resources and capabilities based on the use of knowledge from internal and external sources, which cannot be easily copied by the competition. The new strategies focused on innovation involve interconnection of actors in the market. Traditional principles of competition, which emphasized rivalry, are being substituted by the new ones, accentuating cooperation and integration. Interconnection of competition and creation of different types of business networks based on cooperation and partnership are becoming a source of sustainable competitive advantage.

Efficient use of existing resources and competencies and performance of business activities in general are greatly influenced by the selection and decision on the technology to be used, as well. As argued, among others, by Tellis (et al. 2009, 3-23) and Story (et al. 2009, 461-482), the competitive success of enterprises in many markets and in many industries is conditioned by the development and implementation of new technologies. They have radically changed the ways of performing business processes and communicating with key stakeholders inside and outside the enterprise, and in particular innovative activities. Information and communication technologies thus play a crucial role in the collection and dissemination of knowledge from internal and external sources, which is then used to innovate and improve value for customers. Information obtained from a database on customers is the basis for adjusting the value to their preferences, and thereby

reducing the possibility to experience a failure of innovations in the market. This enables a continual development and upgrade of innovations, where the existing ones are introduced into business processes and used to create new innovations. The importance of innovations is also confirmed by the results of numerous studies pointing to the fact that managers consider the ability to introduce new products and services a key factor for survival and development of enterprises in the conditions of rapid technological and market changes, regardless of whether it comes to developing new products, services or business processes. It is, however, primarily related to the radical, disruptive innovations (Srinivasan et al. 2002, 55; Tellis et al. 2009, 3-23). Due to the mentioned intensive changes in consumer demands, shortening product life cycles and intensifying global competition, radical innovations have been recognized as a means of creating economic growth of national economies (Story et al. 2009, 952). On the other hand, radical innovations also carry the largest market risk. "Thousands of new products for final consumption are introduced each year, and about 60 to 90% of them fail. The situation is similar in the business market, as well "(Stanković, Djukić 2004, 41-49). The most frequent reasons for their failure are: lack of marketing research, lack of strategic orientation, organizational problems, the absence of an innovative atmosphere in the enterprise, technical problems in product designing, synchronization of development and commercialization of products, the dynamics of the needs and demands of customers.

Given the expressed business risk associated with innovation, managers are trying to find new strategies for managing them. There is no unique prescription, but based on the analysis of relevant literature (eg Kandybin 2009, 54; Goffin and Mitchell 2005, 91; Jaruzelski, et al. In 2005, 4; Gottfredson, Aspinall 2005, 66), policies to develop a successful innovation strategy can be defined. Innovation management is based on clearly defined goals of innovations, which, in turn, result from long-term business objectives of an enterprise (such as increasing the return on investment or sales and profits, increasing or maintaining market share, the image changes, diversification or completion of product lines). The objectives of innovations are based on the strategic analysis of the environment - the marketing, competitive and technological, in order to form a value that would be an adequate response to the requests resulting from it. Based on the strategy, a plan is defined for the development and mobilization of the enterprise resources and innovative capabilities, which represents a response to the assessment of optimal innovative processes aimed at achieving the desired goals. The assessment relates to the necessary resources and competences, time and budget to implement the ideas.

When defining an innovation strategy, market-orientation of research and development activities, i.e. the orientation toward customers and the dominant reliance on external innovation sources are suggested. Namely, the results of a research which covered 750 top managers at the global level indicate that 76% of managers considered business partners and co-operation with customers most important sources of new ideas. The reason for favoring the external sources for the

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collection of ideas is the fact that 30% of the income from sales in the surveyed enterprises comes from innovations arising from ideas developed in cooperation with them. Comprehension of the great importance of external sources of knowledge that is incorporated into innovations and the need for sharing the risk of innovative projects lead to the creation and development of business networks and partnerships among various participants in the market. Customers, suppliers, competitors, representatives of research organizations and other members of the networks form interorganisational teams that generate specific knowledge and competencies, mobilize and more efficiently use the shared resources and capabilities, and create increased value for all the participants in the chain. Such relationships encourage the development of next innovations and business operations in general. Networking with other subjects is more effective if management creates and develops innovative climate and culture that encourages and motivates employees to creativity and knowledge sharing; flexible and less formal organizational structure in which the communication between employees is facilitated; and proactive relationship between different parts of the organization and external parties in the innovation process (consumers, suppliers, research institutions, financial institutions) (Stanković, Djukić, Popović 2011, 461-482).

Successful implementation of strategies that result in innovation also requires inter-functional coordination, strategic leadership and management, as well as the existence of adequate resources to support innovation. The dominant perception is that the ability of organizations to implement innovations and the increase of innovative effects are conditioned by the amount of investment in research and development activities. Business practice, however, shows that the increase in research and development costs is in proportion to the number of innovations, but not to innovative performances. Namely, the *Bozz Co.* survey results (Jaruzelski et al. 2005, 4) indicate that in 60% of investigated cases there is no correlation between the research and development costs and the financial indicators of the success of innovations, such as profit and sales growth. This is witnessed also by the fact that the investment at the level of average costs of research and development in the branch of industry has brought many companies into the position of excessive expansion of production lines and consequential losses (Gottfredson, Aspinall 2005, 66), and that, on the other hand, the costs of research and development of many market leaders, such as *Apple Inc.*, are lower (5.9% of sales) than the average of the branch to which they belong (7.6%).

Considering the aforesaid theoretical framework, the authors have set for themselves the task of reviewing the elements of innovation strategies of small and medium enterprises in Serbia. In this matter, the focus is on the review of the development level of awareness of managers of small and medium enterprises of the Niš region about the importance of using external sources of ideas for innovation, networking with relevant stakeholders to achieve the objectives related to innovation and business in general and the significance of applying new technologies in the innovation process.

2. Benchmarking innovation capacities of small and medium enterprises in the region of Niš

2.1. Assessment of Serbian enterprise innovativeness

Condition related to the innovativeness of enterprises in Serbia can be observed indirectly, by decomposing the *New Global Competitiveness Index* (NGCI) which measures competitiveness of national economies. This index is based on 12 so-called "pillars of competitiveness", which are further grouped into three sub-indexes: basic requirements, efficiency enhancers and innovation factors. The last group of factors involves measures of business sophistication and innovativeness (WEF 2010).

In "The Global Competitiveness Report 2010-2011" (WEF 2010, 16-17), Serbia is by this index ranked 96th of the 139 countries and lowest in relation to all neighboring countries, except Bosnia and Herzegovina. By comparing these with the results from the preceding report (WEF 2009), it can be concluded that Serbia's competitiveness deteriorated. The analysis of sub-indices and pillars of competitiveness provides data on the specific reasons that led to such a bad position of Serbia in this respect (WEF 2010, 294-295). Serbia is the lowest ranked according to the indicators related to the efficiency of commodity markets and business sophistication. The lowest individual score of the Serbian economy relates to innovation.

The lowest scores and the worst ranking in the group of factors pertaining to market efficiency are related to the degree of orientation toward customers and the sophistication level of their requirements. These two factors are directly related to the level of innovativeness of business entities. Namely, the orientation to consumers allows for collecting ideas that serve as the basis for innovations in line with their requirements, while an increased level of their sophistication enables stimulation of further innovation.

The indicator which refers to the sophistication of business operations includes the factors that enhance the efficiency of production, which, by increasing the productivity of individual enterprises, results in an increased competitiveness of the economy. This indicator relates to the strategic and operational aspects of business operations of enterprises and networks, including the factors related to brand development and production of unique and sophisticated products and services. The sophistication of business operations, along with the innovativeness, is a crucial factor of the development of innovation-driven economies.

All these data indicate that the innovativeness of enterprises in Serbia is underdeveloped, and that this condition adversely affects the competitiveness of the economy as a whole.

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Information on innovativeness of enterprises can also be obtained on the basis of reports related to the use of EIS (*European Innovation Scoreboard*) system for monitoring the results of innovation processes. EIS is the instrument used by the European Commission for monitoring and comparative analysis of innovation performances of EU countries, as well as other countries that are not members (Croatia, Serbia*, Turkey, Iceland, Norway and Switzerland), but have joined the group of countries using this system of the performance measures. According to the information from the EIS, it is possible to determine the total innovation index (*Summary Innovation Index*) that is calculated by using aggregate indices of national innovation performances and computed as a composite index that contains 24 EIS indicators (PROINNO EUROPE, 2011).

The analysis includes a set of related indicators of innovation performances, grouped in three blocks of weighted composite indices:

Indicators for support:

- Human resources (indicate number of employees with secondary and higher education);
- Finance and Support (available finances as an engine of innovation and the government support to carry out innovative activities).

Indicators of firm activities:

- Investments of enterprises (include indicators relating to the investments of enterprises that have recognized the fundamental importance of innovation);
- Linkages and entrepreneurship (this group of indicators shows the ability and readiness of enterprises to connect with different organizations and institutions);
- The capacity of intellectual property rights (a group of indicators showing the degree of protection of intellectual property rights).

Indicators of innovative activity effects:

- Innovators (number of enterprises that have introduced innovations of products, services and processes[†] onto the market);
- Economic effects (indicators according to which it is possible to evaluate the effects of innovations to both the income and the expenses).

* The Republic of Serbia was included in the group of countries that use the EIS in 2009 for the first time. Research is carried out by the Republic Statistical Office in accordance with the methodology of the European Commission for calculating this indicator.

[†] In the EIS system, innovations are classified into the following groups: product and service innovation, marketing innovation and organizational innovation. In this paper, however, innovations are classified into 3 differently defined groups: innovations of products, services and processes, where the third group includes innovations in marketing and organizational innovations, from the above classification.

Innovation performances in Serbia are considerably below the EU-27 average, since the total innovativeness index for Serbia is 22.7, as compared to 47.8 for the EU.

To gain a better insight into the state of innovation capacity and related activities of the enterprises located in the region of Niš (Nišava, Pirot and Toplica districts) was conducted a survey that allowed receiving the findings presented in the following part of the paper. In this, the focus is on the analysis of only several of the indicators of enterprise activities (by the EIS methodology) as elements of innovation strategies.

2.2. Sample selection and research methodology

The main objective of the conducted research was the analysis and evaluation of the achieved level of innovation capacities (existing condition and implementation degree of innovation activities) of small and medium enterprises in the area of Niš, Pirot and Toplica districts. The research identified enterprise activities in the field of innovation of products, services and business processes. The research was conducted on the sample of 304 small and medium enterprises, which perform their business operations in these districts. The sample was composed according to the following criteria: that the enterprises are registered and carry on business in the area of Nišava, Pirot and Toplica districts and that they are classified as small and medium-sized; that the structure of the surveyed enterprises, given their affiliation to a certain industry, is in line with the actual situation; the survey included enterprises that generated operating profit in 2010 and that are mainly export-oriented.

The starting point for the selection of enterprises (units in the sample) was the information on the number and structure of small and medium enterprises in these three districts on the date of 20 July 2011, obtained from the Business Registers Agency. Based on the data of the Agency, a selection of enterprises was performed according to the set criteria and a list of 304 enterprises was defined (236 for the Nišava, 39 for the Pirot and 29 for the Toplica District).

For data collection, a questionnaire was formulated based on the research objectives and the need for: basic information about enterprises, their affiliation to a particular business sector, human resources, financial, innovative and marketing capability and export orientation of enterprises, implementation of the innovative strategies, co-operation with key stakeholders in the sphere of innovation, and others. The questionnaire was tested by the implementation of a pilot survey in the sample of 30 enterprises. Based on the analysis of the pilot survey results, questions were defined for the Questionnaire and the memorandum for conducting a direct interview with the representatives of enterprises from the sample. Data collection was performed in the period from 25 July to 10 November 2011. In most cases, more than 80%, the survey was carried out directly, face to face. This

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contributed to a very good response of the representatives of enterprises and their willingness to participate in the survey, so the majority of those defined as units of research agreed to participate in the study.

3. Analysis of the research results

The main objective of the field research was to gather data on the grounds of which it is possible to identify existing and potential resources and capacities for innovation in the enterprises of the Niš region. Information obtained in the research allows drawing conclusions and making recommendations pertaining to the largest number of indicators contained in the EIS methodology, which can be applied to a specific enterprise.

The subject of this analysis were just a few of the indicators from the second group, which relate to the activities of enterprises (investment of enterprises in certain activities in order to improve innovation performances, protection of certain forms of intellectual property, as well as efforts related to cooperation with innovators from other organizations and institutions).

3.1. Financing of innovations

Key factors for the success of innovations are the financial resources of enterprises and the ability of managers to effectively manage business finances.

The research results show that in more than half of the surveyed enterprises there are not enough funds to finance investments. The problem in the financing of investments was expressed in 53.3% of the surveyed enterprises. It is also indicative that in 57.2% of enterprises in the sample there is a shortage of working assets, which may endanger not only their growth and development, but their survival, too (Table 1).

Table 1: Financing working assets and investments

Response	Lack of working assets	%	Lack of investment resources	%
No	130	42.8	142	46.7
Yes	174	57.2	162	53.3
Total	304	100.0	304	100.0

Development, technological changes and competitiveness of small and medium enterprises are determined by the volume of investment into tangible and intangible resources. In the enterprises from the sample, the problem of financing investments is very pronounced, especially in conditions of the economic and financial crisis. Lower inclination to invest is the result of a reduction in scope of business activities, and thus in real income. Although the SME sector is more vital

than the others, the problems are still expressed, and the lack of resources has influenced reduction in investment into innovations. The problem of innovations is even more pronounced when viewed in relation to the current state of fixed assets in these enterprises. Most of them have the equipment that is 5 to 10 years old, which may be a significant limiting factor for the realization of innovations. Moreover, as the total resources are limited, the need for replacement of existing equipment may seem restrictive to financing investment in certain types of innovations (Table 2).

Table 2: Age of equipment

	Age of equipment	%
<i>No response</i>	2	0.7
<i>More than 10 years</i>	84	27.6
<i>5 to 10 years</i>	148	48.7
<i>Less than 5 years</i>	70	23.0
Total	304	100.0

Very few of the surveyed enterprises had in the last three years any significant investments in innovation, particularly in patents (Table 3). This fact is disturbing, considering that by greater investment in business premises (36.5% of enterprises) and in equipment (64.1%), without adequate investment in research and development, knowledge and skills of employees, innovation capacity can be improved only slightly.

Table 3: Investment structure of the surveyed enterprises

	<i>Investment into equipment</i>	<i>%</i>	<i>Investment into business premises</i>	<i>%</i>	<i>Investment into patents</i>	<i>%</i>
<i>No</i>	109	35.9	193	63.5	279	91.8
<i>Yes</i>	195	64.1	111	36.5	25	8.2
Total	304	100.0	304	100.0	304	100.0

Such an inadequate investment policy is not characteristic only for current business operations, unfortunately. The largest number of surveyed enterprise representatives confirmed the plans for a continuation of the same trend. Most of the enterprises, more than 69%, will continue directing their investment in equipment, while only 9.9% of them have planned the investment in patents (Table 4).

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Table 4: Planned investment types of the surveyed enterprises

	<i>Investment into equipment</i>	<i>%</i>	<i>Investment into business premises</i>	<i>%</i>	<i>Investment into patents</i>	<i>%</i>
<i>No</i>	93	30.6	218	71.7	274	90.1
<i>Yes</i>	211	69.4	86	28.3	30	9.9
Total	304	100.0	304	100.0	304	100.0

3.2. Protection of intellectual property

Intangible assets have increasing importance for the success of enterprises in modern conditions of economy. The protection of intellectual property as a significant segment of intangible assets is very important for successful strategic positioning.

One of the key questions put to the respondents was aimed at obtaining information about their attitude to intellectual property and capabilities of enterprises to recognize its importance as their highly valuable intangible assets. The status of intellectual property protection is very unfavorable in the region of Niš. Small and medium enterprises pay very little attention to the protection of intellectual property: patents, designs, brands, geographical indications. This statement is confirmed by the research results which show that the most unfavorable situation is in the sphere of patent protection. Only 4.9% of the enterprises in the sample have protected their patents (Table 5).

Table 5. Number of protected patents, brands, designs

Response	Patent protection		Brand protection		Protection of design	
	Frequency	%	Frequency	%	Frequency	%
No	289	95.1	254	83.6	284	93.4
Yes	15	4.9	50	16.4	20	6.6
Total	304	100.0	304	100	304	100.0

Brand is of key significance for the success of enterprises, bearing in mind that, in contemporary business conditions, desired business results are less easily achieved without a brand. In a dynamic environment, it becomes imperative to create a valuable brand (Aaker 1996; Aaker 2004, 6-18), which is based on strong awareness of the name, high prominence and good image, greater attractiveness and loyalty, and other aspects, such as legal protection. The process of branding has become more important and more challenging than ever before. In this matter, the brand is less frequently only means of protecting customers from bad purchase,

but in their eyes it represents and synthesizes perceived product quality performances, emotional aspects and reputation. If successful, the brand becomes a symbol that may have more meanings for the customer and that increases the product value in the market. It is especially important in communicating the product as a way of identifying the manufacturer and its differentiation from the competition, as well as providing legal protection for the product. It makes it easier for customers to distinguish between similar products and services offered by different manufacturers. Facilitated identification of products reduces the costs of searching and encourages repurchase. Brand provides customers with consistent and comparable quality regardless of where the product is purchased, and may provide additional psychological satisfaction, given that the status of the individuals is often associated with the brand.

From the standpoint of the enterprise (manufacturer, retailer), branding helps differentiation of products and affects creation of a more favorable corporate image. Promoting products with brand leads to an increase in selective demand, which helps the enterprise to increase its market share. Brand contributes to the stimulation of repurchase and the increase of genuine customer loyalty, which results in a lower price elasticity of demand and the development of long term relationships with customers. Successful corporate and/or familial brand also allows extension of the brand to other products and creation of prestige, as well as legal protection of unique product attributes. Strategic brand management that is customer-oriented is more effective, which contributes to the eventual improvement of business performances.

However, small and medium enterprises in Serbia still do not properly understand the importance of brand value and the need for its protection. This is confirmed by the results of the presented research, too. Although 50 of the enterprises surveyed (16.4% of the sample) indicated that their brands are protected (Table 5), it is clear that their market value is small. Legal protection of the trademark is just the first step in creating a valuable brand. Brand equity is confirmed in the market.

The situation is similar with the protection of industrial designs, as well. Vast majority of enterprises in the sample, 284 or 93.42% of them have not protected the design of their products (Table 5). The negative aspect of this situation can be understood if one takes into account the manifold importance of design in modern business running. Design represents a set of properties that affect the appearance of the product and its main function. It is the aesthetic features that allow the product to fulfill its basic function. However, the reduction of design only to the role of improving aesthetic characteristics is highly simplified. It is, in fact, the result of creative activity whose aim is to connect various aspects of the product and their expression in its external, visible, but also essential and functional characteristics. A successful design solution is the one which is compliant with the requirements of customers, and which involves the design

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researchers, engineers and designers. In this, it is necessary to achieve the optimum investment into creating a unique entity of form, shape, dimensions, materials, comfort and color. Design is an important factor in gaining competitive advantage and adding value to the product. It is important in forming many goods such as clothes, footwear, consumer durables, and it is increasingly used as a strategic means in the business market. Design can also be considered from the perspective of the seller and the buyer. From the seller's perspective, a well-designed product is the one that can be easily produced and distributed. For the customer, a well-designed product is the one that looks good and can be easily exploited, installed, repaired and maintained. The design of a product should support the creation of the product brand, and is expected to facilitate identification of products and brands, and their visual and perceptual differentiation from others. Key components of a design are the product shape and size, selection of materials, color, aroma and sound. The importance of these elements is conditioned by the nature of the product. For example, modern shape, lines and colors are imperative for the success of consumer goods, while the functionality is crucial for the equipment and devices. Combining of design components into a single unit aims at perception of the product through all the senses of customers. In situations where purchases are based on emotions, designers represent a resource that provides an appearance of aesthetically extremely valuable products. They are becoming nurseries of new ideas (Gobe 2006).

The external appearance of a product is reflected in its form (shape) and determines its uniqueness. Together, shape and size affect the senses of consumers, their associations, thus enabling the creation of a recognizable image of the product. Applied materials should facilitate the use of products and improve their function, appearance and efficiency. The choice of color is also an important decision in developing the design. It should arouse pleasant feelings in consumers, stimulate desired associations and attract their attention. In creating a specific design solution, it is necessary to take care of the rational use of resources. This can be achieved if the solution of a design is based on the optimal correlation between the costs of product designing and the effects that a given design solution produces. The need for a differentiated design is growing in the conditions of intensifying competition, which increases the costs of creating and introducing design. Investment in design, on the other hand, can result in the original positioning of products in the minds of consumers. Therefore, investments into design are treated as an investment, not expense, because they are an important means of differentiation and positioning of both existing and new products.

The protection of products with geographical indications is another kind of protection of innovations. It is a complex process that small and medium enterprises can successfully carry out by establishing cooperation with different actors. Practice shows that this process is more successful if it begins by establishing interconnections of different manufacturers. The initial activity is an identification of the common interest of the producers of final products that is

primarily recognized in the creation of a joint brand. The key role in this process may belong to a separate institution or organization (e.g. a cluster). The indication of geographical origin is a very important attribute that can be utilized to create a recognizable brand, too. The basis for the synergy of small and medium enterprises in the protection of geographical indications for products is a joint use of resources within and between different activities in the value chain. The synergy results in a competitive advantage by linking small and medium enterprises in various forms of networks. The cluster, as a specific network form, is successfully used in the process of creating a brand of products with protected geographical status.

In the area of three districts that were the subject of research, four products with geographical indications have been protected: Pirot kilim, Stara planina cheese, Svrlijig cheese and Svrlijig "belmuž" polenta.

Table 6: Dependence of allocations for R & D and design protection

Percentage of allocation for R & D		Design protection		
		No	Yes	Total
0	Number of responses	21	1	22
	% within the enterprises which have/have not protected their design	7.4%	5.0%	7.2%
up to 1%	Number of responses	147	9	156
	% within the enterprises which have/have not protected their design	51.8%	45.0%	51.3%
1 to 5%	Number of responses	82	9	91
	% within the enterprises which have/have not protected their design	28.9%	45.0%	29.9%
5+%	Number of responses	34	1	35
	% within the enterprises which have/have not protected their design	12.0%	5.0%	11.5%
Total	Number of responses	284	20	304
	% within the enterprises which have/have not protected their design	100.0%	100.0%	100.0%

In order to adequately comprehend the policy of investing in the aforementioned forms of intellectual property, the analysis of contingency tables was used to test the relationship between the investments in research and development activities and the presence of such protection. The analysis results indicate that, out of 93.42% of the enterprises from the sample that did not protect their designs, one half, that is, 147 of them (51.8% of the group of those enterprises

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that did not protect the design, or 48.35% of the total sample) generally belong to the largest group of enterprises in the sample - those who allocate up to 1% of revenues to research and development. Only 20 enterprises, that is, 6.58% of the sample, have protected their designs. In the group of enterprises that have protected the design, 95% belong to the group of those who allocate up to 5% for research and development, and only 5%, i.e. only one enterprise allocates the most, that is, more than 5% of revenues for these purposes (Table 6).

A vast majority of enterprises, 254 of them (83.55%) have not protected the brand. Most of these enterprises belong, again, to the generally largest group of enterprises in the sample - those who allocate up to 1% of revenues for R & D. In this group, 132 out of 156 enterprises which allocate up to 1% of revenues for R & D (84.6%) have not protected their brands. These enterprises also make more than half (52%) of the total number of enterprises that failed to protect the brand. Only 50 enterprises, or 16.45% of the sample, protected their brands. Nearly half (48%) of the enterprises in this group belong to the most numerous segment of the sample, that is, to the enterprises that allocate up to 1% of revenues to research and development. An interesting finding is the fact that indicates that only five enterprises in the group of those who allocate the most to R & D protected their brands - this makes 10% of the total number of enterprises that protected the brand, 14.28% of enterprises in the group of those who allocate more than 5% revenues to R & D and only 1.65% of total enterprises in the sample (Table 7).

Table 7: Dependence of allocations to R & D and brand protection

Percentage of allocation to R & D		Brand protection		
		No	Yes	Total
0	Number of responses	15	7	22
	% within the enterprises which have/have not protected their brand	5.9%	14.0%	7.2%
up to 1%	Number of responses	132	24	156
	% within the enterprises which have/have not protected their brand	52.0%	48.0%	51.3%
1 to 5%	Number of responses	77	14	91
	% within the enterprises which have/have not protected their brand	30.3%	28.0%	29.9%
5+%	Number of responses	30	5	35
	% within the enterprises which have/have not protected their brand	11.8%	10.0%	11.5%
Total	Number of responses	254	50	304
	% within the enterprises which have protected their brand	100.0%	100.0%	100.0%

As mentioned, as many as 289 enterprises, or 95% of the total sample, have not protected any patent. Half (precisely 51.2%) of these enterprises belong, as expected, to the generally largest group of enterprises in the sample - those who allocate up to 1% revenues to research and development. Within this group, 148 out of 156 enterprises (95%) have not protected their patents. Only 15 enterprises, or 5% of the sample, protected their patents. More than half (53.3%) of these enterprises allocate up to 1% revenues, while even 80% of them allocate up to 5% to R & D. Hence, only 20% of the total number of enterprises that have protected patents are in the group of those who allocate the most (more than 5%) to research and development. The number of enterprises that allocate the most to R & D and have their patents protected is 3, which is less than 1% of total enterprises in the sample (Table 8).

Table 8: Dependence of allocations to R & D and patent protection

Percentage of allocation to R & D		Patent protection		
		No	Yes	Total
0	Number of responses	22	0	22
	% within the enterprises which have/have not protected their patent	7.6%	0%	7.6%
up to 1%	Number of responses	148	8	156
	% in the enterprises which have protected the patent	51.2%	53.3%	51.3%
1 to 5%	Number of responses	87	4	91
	% in the enterprises which have protected the patent	30.1%	26.7%	29.9%
5+%	Number of responses	32	3	35
	% in the enterprises which have protected the patent	11.1%	20.0%	11.5%
Total	Number of responses	289	15	304
	% in the enterprises which have protected the patent	100%	100%	100%

Based on the presented data, the following can be concluded:

- Very few enterprises have protected some form of intellectual property.
- Most of them protected their brand/s - 50 enterprises or 16.45% of the sample.
- Only 20 companies, that is, 6.58% of the sample protected their design.
- The smallest number of enterprises protected the patent/s - 15 enterprises, or 5% of the sample.
- A direct connection between spending on R & D and intellectual property protection has not been detected.

Namely, the enterprises that allocate most of the revenues to R & D are not at the same time those that have protected one or more forms of intellectual

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property. Both the enterprises that have and those that have not protected the brand, patent and design are the most numerous in the group of enterprises that allocate up to 1% revenues for these purposes, which was actually expected, given that this is also the largest group in the sample. However, the group of enterprises that allocate 1-5% revenues for R & D is statistically significant in quantitative terms, while the enterprises within this group do not practice the protection of intellectual property forms more than the previously analyzed group. Therefore, the conclusion may be drawn that the relationship between these two variables - the percentage of allocations to the R & D from revenues and the intellectual property protection does not exist, in fact.

3.3. Formation of business networks as a prerequisite for successful innovation

The change of market relations and the positions of their particular participants lead to substantial changes in business operations of many enterprises. Creating superior value for customers requires a broader engagement of the enterprise and the need to connect not only with customers but also with other actors in the value chain. Hence the important indicators of enterprise activities concerning innovations relate to the degree of *interfunctional connections* within the enterprise itself and to *the achieved level of cooperation* between the enterprise-innovator and stakeholders from the external environment. Connecting with customers and other stakeholders has induced changes in the functioning of the marketing as well as other business functions. Synchronization and synergy of all business activities enable overcoming of conflicts among business functions and the orientation towards a single goal, which is the satisfaction of customers along with profit making.

Studies of practice of developed countries show that one of the key factors of improving innovation capacity in small and medium enterprises is their inclusion in different types of networks, especially innovation clusters. Innovations in all areas, efficient use and transfer of knowledge are crucial for successful development of innovation networks. The success of connectivity is determined by: the efficiency of processes in the network, the network structure and its density, the reputation and capability of enterprises to take advantage of networking (Swaminathan, Moorman 2010, 52-69).

The efficiency of the activities and processes executed in the network increases the probability that the enterprises shall successfully use the opportunity to acquire new knowledge and transfer it through the network. In this way, the available resources can be used more efficiently, together with the creation of new ones, which are difficult to copy. Continuous connection of resources of the entities involved in the network increases their value, because it aggravates their exploitation by the entities that are outside the network.

The links between activities, resources and entities involved are subject to modifications. The degree of their interconnectivity determines the network density. Benefits arising from the density of the network are based on the exchange of valuable information and knowledge that is difficult to get outside it. The system of values and standards, and the social dimension of relationships are critical for their successful development. However, it is necessary to point out some limitations arising from the density of network relations. In specific circumstances, sharing information and knowledge among the involved subjects and groups can reduce the ability of rational response of the enterprise and its strategic adaptability. Certain information and knowledge are critical and, if not used properly, can undermine the competitive advantage of the enterprise.

In contemporary economic conditions, the network reputation is a significant source of competitive advantage. Its positive image contributes to a more successful positioning of all participants in the network.

The importance of connectivity is not the same for all participants. It depends on the ability of the parties involved whether the benefit arising from connectivity will be used properly. Abilities are determined by the selection of partners with which relationships are established and by the efficiency of managing relationships and connections. Harmonization of objectives is a very important activity in the development of relationships and networks. Connectivity is justified if it contributes to a more efficient realization of the objectives in relation to other strategic options that can be used as a means for their realization.

In recent years, significant research efforts have been focused on studying the role and importance of innovation networks. Mobility of resources, creating conditions for the establishment of new enterprises, stimulating innovation, efficient development and transfer of technology and knowledge, development of new business models and accesses to markets, globalization of business operations, better strategic and operational alignment of objectives, are some of the advantages of innovation networks. For the most part, these are the advantages whose contribution may not always be quantified, because they include intangible assets.

Connection of small and medium enterprises with various stakeholders contributes to increasing their competitiveness, which stems from the power of networks.

Starting from the knowledge that the enterprises which are connected in different forms of relationships and networks, including clusters, are more successful in the field of innovation and overall business activities, we have identified in our research the number of enterprises involved in clusters and investigated attitudes and opinions of managers about the importance of association for the success of innovations (Table 9).

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Table 9: The total number of innovations and integration in clusters

Total number of innovations		Integration in a cluster		
		No	Yes	Total
0	Number	56	9	65
	% of integration in clusters	22.5%	16.4%	21.4%
1	Number	129	23	152
	% of integration in clusters	51.8%	41.8%	50.0%
2	Number	42	17	59
	% of integration in clusters	16.9%	30.9%	19.4%
3	Number	22	6	28
	% of integration in clusters	8.8%	10.9%	9.2%
Total	Number	249	55	304
	% of integration in clusters	100.0%	100.0%	100.0%

Based on the presented data, it is possible first to conclude that the majority of small and medium enterprises, 249 of them, are not included in clusters. Also, all the studied types of innovation are most present in those enterprises that are not members of any cluster. Hence we can conclude that the number and types of innovation, that is, the degree of the enterprise innovativeness, are not directly related to the enterprise integration in a cluster. Given the fact that in Serbia the development of clusters is at the initial stages, it is logical that the effects of connectivity are inadequate.

The data are also indicative on the attitudes of respondents about the importance of key actors and groups for the improvement of the enterprise innovative capacity. The analysis of respondents' answers leads to the conclusion that only suppliers and buyers from Serbia have great significance for them, while other stakeholders - suppliers and customers outside of Serbia, universities, institutes, consultants, incubators, associations, clusters, banks and investors have little relevance to the success of innovations (Table 10).

The innovativeness of all, including small and medium-sized enterprises, is determined to a large extent by cooperation with scientific research organizations (SROs). Risk can be reduced or made certain through collaboration and association of the enterprise with a SRO and by the realization of joint projects. However, the presented results (Table 10) indicate that the majority of respondents (over 50% of them in both cases) consider that cooperation with universities and institutes as the representatives of SROs is of little significance for the success of innovations. Even when put in relation with other efforts that can lead to improved innovation capacities, the importance of cooperation with a SRO is again estimated as small (Table 11).

Table 10: The importance of stakeholders for the success of innovation

	No response		Little importance		Medium importance		Great importance		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Suppliers from Serbia	14	4,6	36	11,8	73	24	181	59,5	304	100
Suppliers from Ex YU	21	6,9	197	64,8	64	21,1	22	7,2	304	100
Other foreign suppliers	27	8,9	124	40,8	65	21,4	88	28,9	304	100
Buyers from Serbia	16	5,3	31	10,2	48	15,8	209	68,8	304	100
Buyers from Ex YU	27	8,9	155	51	73	24	49	16,1	304	100
Other foreign buyers	28	9,2	162	53,3	51	16,8	63	20,7	304	100
Universities	31	10,2	185	60,9	67	22	21	6,9	304	100
Institutes	31	10,2	197	64,8	65	21,4	11	3,6	304	100
Consultants	31	10,2	187	61,5	66	21,7	20	6,6	304	100
Incubators	30	9,9	211	69,4	52	17,1	11	3,6	304	100
Associations	27	8,9	154	50,7	102	33,6	21	6,9	304	100
Clusters	30	9,9	194	63,8	67	22	13	4,3	304	100
Banks	26	8,6	104	34,2	96	31,6	78	25,7	304	100
Investors	32	10,5	132	43,4	61	21,1	79	26	304	100

Nevertheless, programs funded by government, local partnerships and cooperation with the SROs are in the category of activities that respondents considered very important. Between 10 and 15% of respondents attached great importance to cooperation in the implementation of various activities, which is encouraging.

Table 11: Activities for the improvement of enterprise innovation capacities

	No response		Little importance		Medium importance		Great importance		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Technology-business councils	44	14,5	149	49	85	28	26	8,6	304	100
Trainings	47	15,5	149	49	78	25,7	30	9,9	304	100
Cooperation with SRO	46	15,1	145	47,7	75	24,7	38	12,5	304	100
Allocation of funds	48	15,8	145	47,7	87	28,6	24	7,9	304	100
Technoparks	52	17,1	172	56,6	65	21,4	15	4,9	304	100
Local partnerships	51	16,8	141	46,4	77	25,3	38	12,5	304	100
Government programs	51	16,8	142	46,7	66	21,7	45	14,8	304	100

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In terms of rapid internationalization of business operations and the emergence of high technologies, innovative capability and competitiveness of a country on the international level best express the quality of its economy. Improvement and innovations in all areas of business are permanent processes, and national and business competitiveness is, among other things, the result of the quality of connections among various entities and groups in the national as well as in regional and international markets.

Table 12: Potential effects of cooperation with regional partners

	No response		Little importance		Medium importance		Great importance		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Access to markets	35	11,5	88	28,9	74	24,3	107	35,2	304	100
Regional financial institutions	34	11,2	123	40,5	86	28,3	61	20,1	304	100
Lower costs	41	13,5	95	31,2	83	27,3	85	28,0	304	100
Consistent legal framework	43	14,1	111	36,5	101	33,2	49	16,1	304	100
Access to SRO	44	14,5	128	42,1	101	33,2	31	10,2	304	100
Mobility of workers	40	13,2	133	43,8	90	29,6	41	13,5	304	100
Mobility of engineers	40	13,2	130	42,8	88	28,9	46	15,1	304	100
Mobility of managers	38	12,5	134	44,1	77	25,3	55	18,1	304	100

For the development of successful, especially regional, cooperation of small and medium enterprises, attitudes of managers on its importance and potential effects are very important. Respondents marked access to markets as the most important potential effect of regional cooperation, which is understandable bearing in mind increasingly aggressive competition and more demanding customers (Table 12). Also, significant number of respondents listed reduction of operating costs (28%) and easier access to regional financial institutions (20.1%) as the potential effects of cooperation.

Regional cooperation is very important in the field of innovation. Given that time is a critical factor of innovation success, creation and launch of a joint innovation is a sustainable source of competitive advantage of the partners involved. Respondents rated the joint implementation of projects as very important. It is indicative that more than a third of respondents attached little importance to joint programs of innovation. Also, more than 39% of respondents give little importance to the development of joint technology programs. On this basis, it is possible to conclude that the small and medium enterprises in Nišava, Pirot and Toplica districts are still dominated by a closed type of innovation and that they do not realize benefits of cooperation and networking of different actors across the value chain in the process of innovation (Table 13).

Table 13: Potential effects of cooperation in innovations with partners from the region (former Yugoslavia)

<i>Joint programs for ...</i>	No response		Little importance		Medium importance		Great importance		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
... innovations	74	24,3	107	35,2	94	30,9	29	9,5	304	100
... technology	76	25	119	39,1	79	26	30	9,9	304	100
... education	78	25,7	113	37,2	84	27,6	29	9,5	304	100
... training	75	24,7	111	36,5	75	24,7	43	14,1	304	100
... exchange	78	25,7	124	40,8	67	22	35	11,5	304	100
... cluster build-up	78	25,7	117	38,5	81	26,6	28	9,2	304	100
...development of initiatives	79	26	120	39,5	71	23,4	34	11,2	304	100
... project cooperation	78	25,7	112	36,8	62	20,4	52	17,1	304	100

Conclusion and implications for managers

In the modern economic environment, innovation represents one of the main sources of competitive advantage. In the long run, the only reliable basis for an enterprise to develop would be to innovate faster, better and more than the competition. This applies not only to the innovations of products/services, but increasingly to the innovation of processes.

The fact that innovation can both improve and impair the competitive advantage opens up another question: how to deal with this dual nature, given the current technological and market capacities of the enterprise.

Key obstacles to improving the innovative capacity of all, especially small and medium enterprises, are the unadjusted business orientation and inadequate business model which should encourage innovation. Although numerous factors in the environment can stimulate or constrain innovative capacities in the sector of small and medium enterprises, their success is largely conditioned by changing the awareness of the need and ways of creating value, especially for owners and customers. This can be achieved by appropriate strategic response that is primarily reflected in continuous changes and adjustment of business models developed by particular enterprises.

Studies of the practice of small and medium enterprises in the region of Niš indicate that:

- Obsolete equipment, lack of current and planned investment in it, as well as in certain forms of intellectual property, aggravate and are likely to further impede innovation processes in SMEs in Serbia;

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- Protection of intellectual property forms is rare, indicating a low development degree of managers' awareness about their significance;
- Investing in R & D and connecting through different forms of relationships and networks are at a very low level;
- Awareness of the importance of cooperation with various external stakeholders and the importance of external sources of ideas for innovation, the so-called concept of open innovation, is also very low. Basically, only direct business partners - suppliers and customers, mainly national, are regarded as important associates. The potentials of SROs are still underutilized.

The development of new, innovative economy imposes on enterprises the need to change the manner of their reactions. The changes are primarily related to: orientation on key tasks and processes, liaising with key stakeholders by creating different forms of relationships and networks, inter-organizational and interfunctional connections, creation of new competencies and sustainable advantages resulting from innovation and combination of the existing and new competencies. The increase and maintenance of market share will depend on the capability of the company to use intangible assets (brand, customer databases, relationships with various entities and groups, intellectual capital).

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UNAPREĐENJE POSLOVNE KONKURENTNOSTI PREDUZEĆA ZASNOVANO NA INOVACIJAMA

Rezime: U uslovima dinamičnog okruženja i intezivne konkurencije, inovacije su ne samo osnova za rast i razvoj već i faktor opstanka preduzeća. Istraživanja teorije i prakse pokazuju da su uspešnija preduzeća koja su osposobljena da na promene odgovore inovacijama. Izražen neuspeh novih proizvoda i usluga, povećani troškovi, sve brži tehnološki razvoj, promene u ponašanju potrošača i ostalih učesnika na tržištu, nameću potrebu promene pristupa inovacijama, od zatvorenih ka otvorenim inovacijama. Unapređenje inovativnih kapaciteta malih i srednjih preduzeća uslovljeno je kako promenama u eksternom okruženju tako i u samim preduzećima. U radu su analizirani neki faktori koji utiču na inovativnost kao osnovu za unapređenje konkurentnosti malih i srednjih preduzeća niškog regiona.

Ključne reči: inovativnost, konkurentnost, mala i srednja preduzeća, zaštita intelektualne svojine, povezivanje, mreže



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HOW TO DESIGN AND IMPLEMENT EFFECTIVE AND EFFICIENT SYSTEM OF STRATEGIC CONTROL?

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Abstract: *Designing and implementing of effective and efficient system of strategic control, with appearance of strategic management, is becoming a must for every company which has the aim to survive, grow and develop. Following that kind of approach in this paper, strategic control is seen as a means of thoughtful realization of any successful business result, and causality of planning and controlling as an axiom to which these two phases of strategic management are 'Siamese twins' or 'two sides of the same medal'. The result of this work are descriptions of importance of effective and efficient strategic control, centralized and decentralized ways of controlling, as well as creation of a model of strategic effective and efficient control system which is the main purpose of this work.*

Keywords: *strategic management, strategic system of effective and efficient control, model of strategic management, corrective model of strategic effective and efficient control system.*

Introduction

Drastic and fast changes which are likely to increase both in volume and in speed have become a part of the world and time in which we (does not) accidentally live in. That is the axiom which is going to remain unchanged, obviously, in the future as well.

Although there is no simple recipe how to follow these changes, consequences of that attitude (which is not to be neglected in our conditions, on the contrary) that they are not going to come is a utopian thinking. Naturally, many of us would live more comfortably if we lived in the time of Mozart music, balls, carriages and romance, meaning in the ambient of still ocean. But, we do not live. We live in the time when 'Still Ocean' is substituted for 'volcano'.

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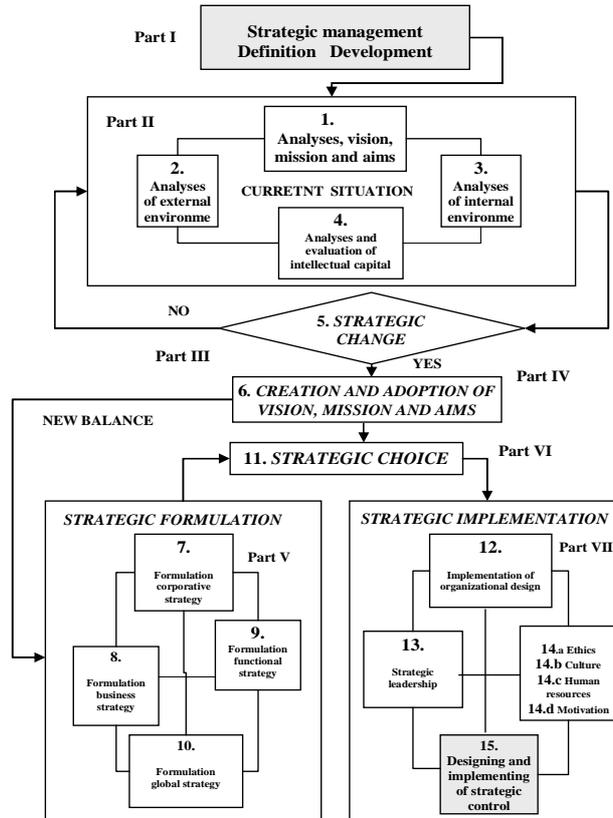
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Thus, in order to create efficient strategies, companies as well as individuals should anticipate fast trends in the surrounding. Only in that way rapid changes which future inevitably holds can be used. Only those who are capable to anticipate ‘volcanic’ trends as initiators of changes can count on success. The Achilles heel of some big companies is often their inability to recognise trends and respond to them fast (Joyce, Woods 2001). This means that effective and efficient managers must become idea researchers, sensitive to early signals of discontinuity, disturbances, threats and chances in the market and society.

1. The Aim of the Paper

From the reasons stated above one of the main aims of every company is designing and implementing effective and efficient strategic control system, as a part of strategic management which includes analyses [1] of vision, mission, aims and intellectual capital of a company, [2] statement if strategic changes are present in the surrounding/environment, [3] creating and adopting new vision, mission and aims, [4] formulating strategy, [5] strategic choice, [6] strategic implementation and [7] strategic control (Fig. 1).

Figure 1. Model of strategic management



How to Design and Implement Effective and Efficient System of Strategic Control?

So, the main aim of this paper is the question: How to design and implement effective and efficient system of strategic control?

Minor aims are directed towards description of the importance of effective and efficient strategic control, designing a system of strategic control, resistance to control, centralised and decentralised control, matching organisational structure and strategy control, as well as designing and implementing strategic control system.

2. Importance/Significance of Effective and Efficient Strategic Control

Term 'control' often has an emotional connotation, and is understood in a negative sense, suggesting direction or command by giving orders. Employed persons can often be distrustful towards system of control by understanding it as an emphasised punishment, sign of an authoritative management, and as a tool of imposing pressure and keeping discipline.

Also, the term control is often misunderstood and made equal to police, authority, or to certain military terms about command and control, or shortly with the term 'Orwellism'. In modern management, practice control represents a phase in management process which is directed towards establishing and removing deviations of set, predefined causes (Joyce, Woods 2001).

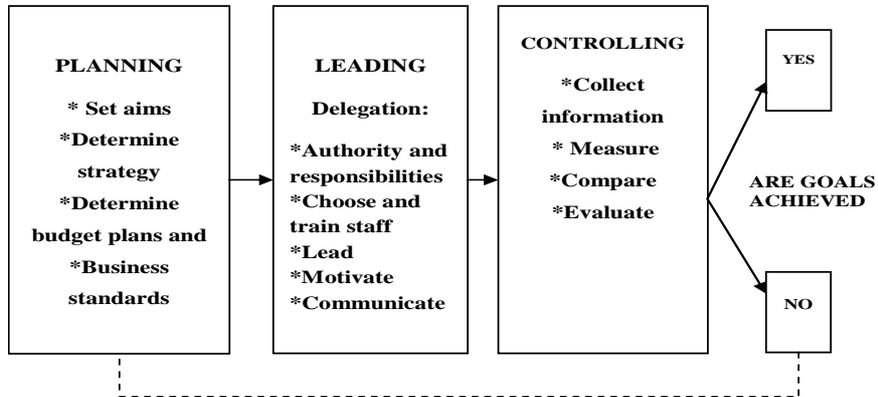
However, this is a very narrow interpretation. There is much more to say about control than just the fact that it is a means of controlling behaviour or tools for imposing authority to others. Control is not only the function of a formal organisation and hierarchy authority structure. It is a function of human/interpersonal influences. Control system is a general concept which is applicable to individual behaviour and to efficiency of organisation work.

Modern approach to manager control points at several basic postulates (Srića 2004):

- Control is like a poison, it heals in small quantities and it kills in big ones.
- Control is a positive and natural force without which managing is not possible.
- Management control is efficient as much as it influences the evaluation of human behaviour.
- The most successful control is dynamic and aims towards future.
- The best control is the one where a human obeys only the rules and not people.

Control function based on comparison of aim (wanted one) and realisation is a constituent part of all natural and social systems (Fig. 2). By carrying it out, effectiveness and efficiency are obtained, so the control is a means of thoughtful realisation of any results.

Figure 2. Planning and controlling as a process of management



Source: Wren, D. A., Voich, D. Jr. (1994)

Research of practice shows that the best control is the one which confirms that we do something well, which stimulates and not punishes: Carrot is a much better method of control than the stick!

In the context of the above written, the importance of strategic control system for survival, development and growth of any company of 'futuristic orientation' is best noticed over the slogan 'everything which is not measurable in today's business relations must become visible and measurable'. Strategic planning without strategic control presents just a mere fulfillment of the form and not direction towards future. That is the reason, why in creating strategic control system, managers should follow certain rules for control which should follow implementation of determined strategy. Thus, the application of the following rules is suggested to companies:

- Strategic control should include just a minimum of the necessary information in order to obtain reliable image of an event. It is necessary to direct towards strategic factors by following 80/20 rules: control this 20% which determines 80% of results.
- Strategic control should observe only significant activities and results, regardless of difficulties. If cooperation between branches is important, then it should be controlled.
- Strategic control should have good timing so that correction can be done immediately. Both short-term and long-term strategic control should be used and applied equally.
- Strategic control should help in marking exceptions. Only those exceptions which are out of determined tolerance demand action.

By using strategic control, it is necessary to create and apply the model of motivation-award for fulfilling or overcoming standards, and the model of punishment for not fulfillment. In their book 'In Search for Perfection', Peters and

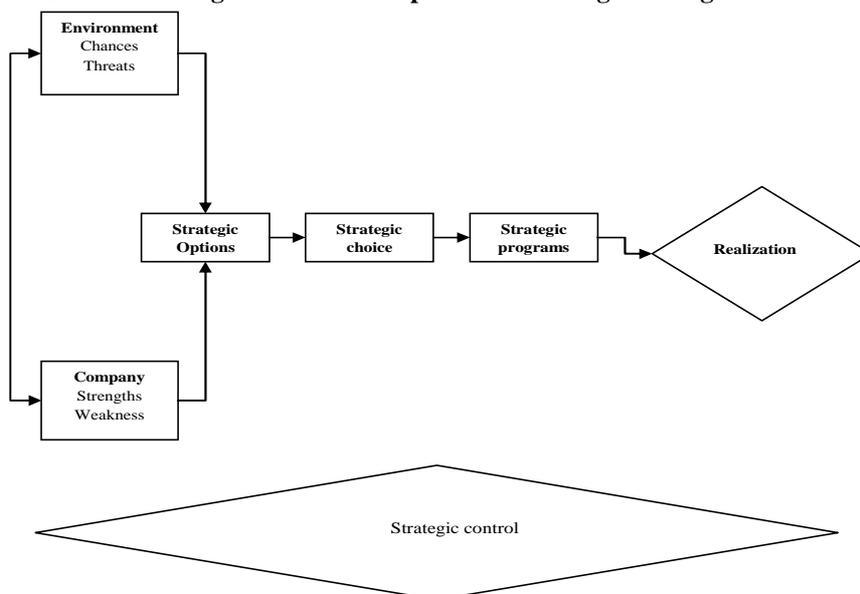
How to Design and Implement Effective and Efficient System of Strategic Control?

Waterman (1982) say that the stronger the culture and more directed towards market, the less is the need for policy of organisational charts or detailed procedural rules. Their first and key principle was emphasising action measures – ‘do something in order to change things’ – instead of endless data analyses and discussions at meetings and boards. In top companies, people from the bottom to the top know what to do in most cases because main/leading values are crystal clear. In Eaton corporation workers set rules by themselves. As one of the employees said: ‘They say there are no bosses here, but if you make a mistake you will find one quickly.’

Strategic control deals with following strategy during implementation, discovering problems or changes in the basic premise and by carrying out needed changes. Differently from the control during strategic implementation, strategic control has the aim to direct activities for the good of generic and global strategy while still applying in the time period of several years when final results will be obtained. Due to faster changes in the global market in the last 10 years, constant improvement has become one aspect more of strategic control in many organisations. Constant improvement provides managers a way to secure the type of strategic control which enables their organisations to anticipate how to react and in time speed up development towards hundreds of fields which influence success in certain business field.

Steinmann and Schreiogg (2000) define control as a strategic task which checks strategic plans and their work on the basis of noticed dangers and signalises on time when changes are to be made in strategic sense (Fig. 3.)

Slika 3: Strategic control in the process of strategic management



As one of the first in that kind of business Yahoo has grown into an Internet giant (Inić 2006). Despite its success, management team has never developed the strategy which would provide constant growth. By ignoring a threat resulting from merging AOL and Time Warner as well as possibility of uniting with eBay, Yahoo has wrongly estimated its strategic environment. Even after significant decrease of income, Yahoo has not redirected its strategy to rely less on its online promotion.

3. Centralised and decentralised control

Many companies accept bureaucracy process of control instead of decentralised one. These two control processes present different cultures and companies' philosophies and that is why managers choose one of them depending of the organisation culture and their own beliefs about control.

Bureaucracy-centralised control includes supervision and influences behaviour of the employed through intensive use of rules, hierarchy of authorities, written documents, award systems and other things. Contrary to this, decentralised control relies on cultural values, tradition, common beliefs. Manager works under the supposition that employees are trustworthy and that they can carry out business well without demanding rules and strict supervision.

Bureaucracy control methods define certain rules and behaviour of employees. Inspectors and controllers are in charge of quality control and not employees. Description of work is specific and is connected with a task, while managers define minimum standards for acceptable efficiency of the employed. For meeting the standards the employed are awarded with benefices, wages and promotion possibilities. Technology is often used for development control and way of work but for supervising of the employed as well, such as time measurement for telephoning or number of words type on a computer. Many of the employees appreciate the system which strictly defines what is expected from them and they are motivated for achieving challenging but reasonable aims.

Decentralised control is based on the values and suppositions which are almost opposite to the bureaucracy control. Rules and procedures are used only when necessary as no organisation can control its employees all the time, while self-discipline and self-control enable employees to work by the standards. With decentralised control the power lies in knowledge and experience as well as in position. Organisational structure is vertical and horizontal with adaptable authority and team of workers who solve problems and make progress. Work description is more based on results which are to be achieved, rather than on certain tasks which should be completed. Managers do not only use material awards but non material ones such as possibility of further education and development. Technology is used to help the employed in making decisions, solving problems and team work.

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Increase of consumer culture in the world has brought brand marketers to understand that they have to respond better to demands of local priorities. Coca – Cola, for example, used to control rigidly its products from the head office in Atlanta (Inić, 2006). But managers, according to their experience, came to the conclusion that consumers at some markets wanted something more than Coca-Cola, Diet Coke and Sprite. Thus, Coca-Cola changed its structure and has decreased the need for control and increased coordination/integration at local markets where local managers have launched independently beverages of new tastes. At the same time GE has invented a model of modern organisation by changing organisation structure of its GE medical system, so as to enable local managers to manage integrally in all phases of the process from product design to marketing. This emphasis of local coordination and decrease of central control has lead managers obsessed with local rivalry to create and produce similar products for different markets (doubling costs and efforts). That is why GE reintroduced centralised control of creating products together with adopting/taking data obtained from managers and their clients from different world data basis which resulted in producing several global products at competitive prices and in that way competitive for sale all around the world. GE's need for control prevailed over the coordination from locally focused product managers. At the same time, GE has received data from almost every client or potential client from all over the world before finishing design of some initial products, which suggested greater control and organisational coordination of global managers and clients' data in order to obtain better series of medical scanners for hospitals all over the world.

4. Designing System of Strategic Control

The choice of strategic control system which is suitable to chosen company strategy offers numerous challenges to management (Inić 2010). Management has to choose control systems which offer the frame for following, measuring and accurate evaluation whether the strategy goal is fulfilled or not. Finance and output controls have to be supported by controls of behaviour and organisational culture, in order to make sure that company is fulfilling its aims in the best possible way. Generally speaking, these controls must be compatible and one must take care of preventing unforeseen appearance of consequences such as functions competing, different divisions, and individualism. Many top-managers point at difficulties of changing organisation culture when talking about reengineering of their organisation to continue to follow its aims. These difficulties appear because culture is a product of a very complex interaction of many factors, such as top-management, organisational structure and systems of award and support.

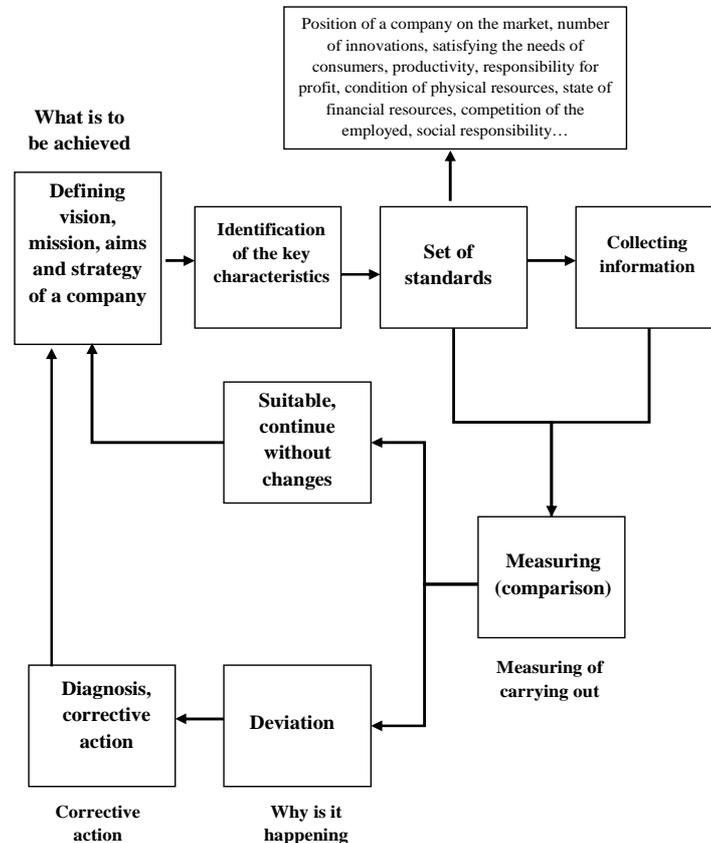
Thus,

- Organisational structure does not function effectively if suitable systems of control and stimulation are not implemented in order to influence employees and motivate them.

- Strategic control is a process of placing targets for following, evaluation and award of performances. Approach of neat agenda to strategic control suggests that managers have to develop strategic control systems which measure all aspects of their organisational performances.
- Control is established at all levels of organisation, departments, functions and individual control.
- Effective control systems are at the same time flexible, precise and able to provide fast feedback to the strategy planners.
- Many kinds of performance standards are available for implementing within strategy. Measures chosen by managers influence the way company functions.
- Control systems are divided into ones which are directed towards output measuring and the ones which measure, i.e. evaluate behaviour or actions/shares.
- Two main forms of finance control are price of the shares in the market and investment turnover (ROI).
- Output control's aims are departments, functions or individuals. It can only be applied when output can be precisely measured and that is why it is connected with management system which is directed towards aims.
- Behaviour control is established through budgets, standardisation, procedures and rules.
- Organisational culture is a collection of norms and values which direct employees' behaviour and work within organisation.
- Organisational culture is a product of the founder or top-management team or their values and attitude, ways in which managers choose design of organisation structure and strategic systems of award which managers choose in order to influence and form behaviour of the employees and motivate them.
- Organisation systems of award are the last form of control. The company creates its systems of award to influence employees and in that way improve efficiency of the whole organization with the aim of equality and interest of all the employees, which is applied also to the company's goals which become the goals of each employee.
- Organisations use these forms of control simultaneously. Managers should choose them and combine them so that they are in accordance with each other as well as with the strategy and structure of the organisation.

According to the listed determiners, for the needs of this work, a model of strategic effective and efficient control system has been created (Fig. 4).

Figure 4. Model of effective and efficient system of strategic control



5. Implementation of Effective and Efficient Control System

It is well known that a key value of a good manager is his/her ability to implement formulated and adopted vision, mission, goals and strategies, as well as the system of efficient and effective control. Many people have great ideas, but the most difficult thing is – to put them into practice.

Implementation of effective and efficient model of a control system is in direct charge of top management of a company which depends on many factors such as:

- Advantage of employees in realisation of vision, mission, and goals: with their personal example above all.
- Collective spirit: using ‘events’ so as to get employees closer and initiate motifs for implementation.
- Challenging: by generating creative energy of employees and imperative of accepting changes.

- Consensus: by connecting and not separating the employees.
- Connectivity: open communication channels to enable information and work energy to flow through a company without obstacles.
- Communication: ‘find’ all influential factors which influence the implementation.

In order to make implementation successful, top-management must provide in other phases of strategic management:

1. That analyses of external (chances, threats) and internal (strength, weaknesses) environment are oriented towards criteria of the future.
2. To understand and accept the continuity in change as imperative of survival, and to respond fast to changes in the company’s name, by which the final output neutralises the futility of actions and eases probability of a successful step out into the future, i.e. creation of development vision.
3. That company’s vision is:
 - oriented towards future
 - identify the essence of company’s competence and critical success factors.
 - has counter intuitive overview
 - respect priorities of company’s stakeholders, i.e. those who are interested for the fate of the company
 - stimulates consistent and integrative action of company’s management,
 - is specific for the company and
 - durable but flexible.
4. Mission of the company should be:
 - authentic
 - challenging and inspirational and fill with its sense all those who participate in its realisation
 - as shorter and more concise as possible
 - clear so that all employees can understand it
 - acceptable for the majority of the employed onesAnd to
 - define all important business activities which company wants to deal with in accordance with its best and unique capabilities
 - respect all interested parties, both from outside and inside, and not only a small group of managers and demands of investors.
5. Strategic goals should be:
 - acceptable
 - flexible
 - measurable
 - motivating
 - specific

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- time defining
 - understandable
 - achievable.
6. The strategy of the company should:
- Picture the system which is to be shaped in order to realise certain aims, not pointing out in the first place quantitative elements.
 - Provide way of company's reaction as a whole to chances and threats in environment and
 - Mobilise all carriers of strategic activity in the aim of its efficient implementation.

Only in that case it is possible to implement effective and efficient control system as seen in Fig. 4.

Different and numerous methods of implementation have been identified in practice. Continuum of these methods is between two extremes: from methods dominantly based on 'force' and which rely on power which top – management has on the basis of its function (or on some other basis), to the method which assumes wide participation of all subjects in the company, from those at the bottom of hierarchy pyramid to its top (participative management).

Similar to this is a classification which differentiates forceful and adaptive methods. There the degree of discontinuity in relation to existing state is one criterion which is realised through implementation of a control system: and in this case force method means realisation of change which is radical stepping away from the existing state. As a rule, this kind of change cannot be realised without 'breaking' resistance, except in the situation of dramatic danger for the company, which can remove by itself, internal resistance and creates atmosphere of inclinations and expectations of employees so that radical changes can immediately be realised.

5.1. Methods of Strategy Implementation

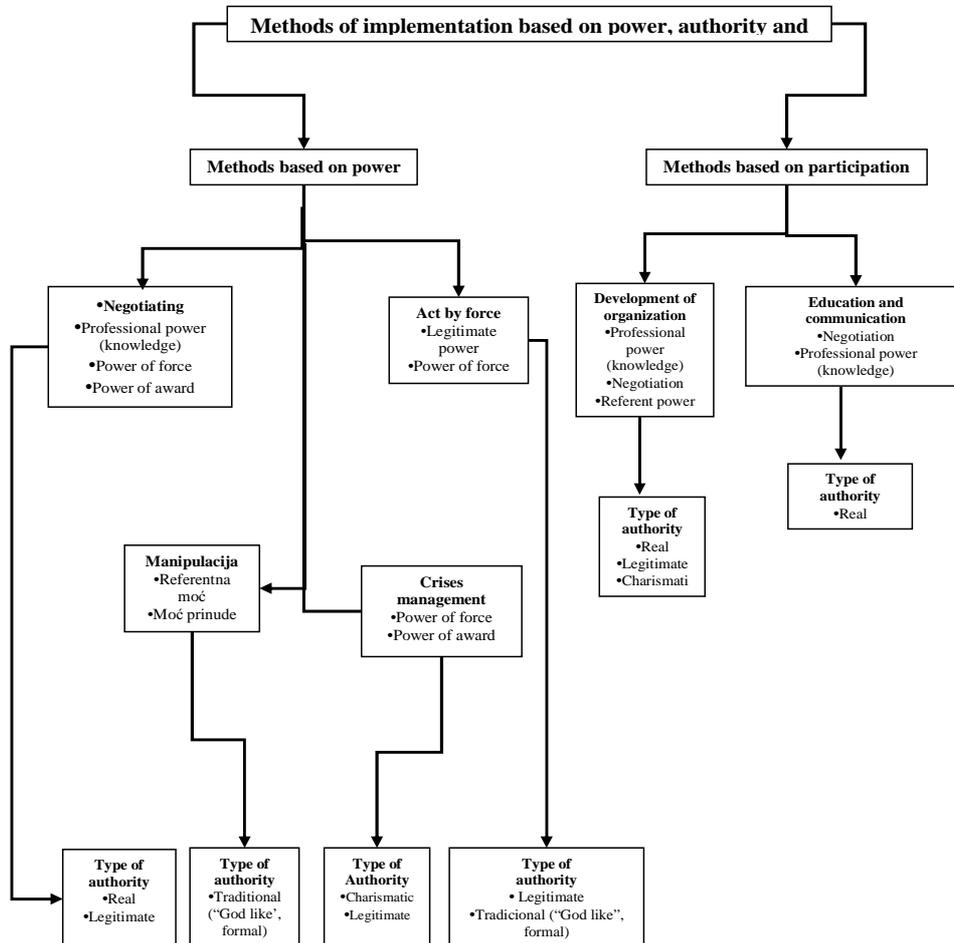
Adaptive method of changes means incremental process of introducing strategy. This method means realisation of strategy change in a longer period of time by introducing smaller changes, step by step, which finally accumulate and make a big change. The nature of this method gives the chance to a wider circle of subjects in the company to take part in it and to adopt their relation towards strategy change in particular situation.

Explanations of attributes given by Fig. 5.

Types of power³:

³ Power is ability of a manager to influence other people, that is to say the ability change attitude or behaviour of individuals or groups in the company

Figure 5: Adaptive method of implementation of strategic control



Power of award is a power which comes out from the fact that one person who possesses power has the ability to award the other person (favorable schedule of using holidays, promotion and/or money award)...

- Power of force is power which comes out from the fact that one person who owns power has the ability to punish other person (threatening, punishing, lowering salary, degradation, suspension or complete quitting work).
- Legitimate power – official – formal authority (subordinates acknowledge the one who has the power that he/she also has the ‘right’ or the law makes him/her influential to the certain extent – to employ candidates, approve expenses out of the budget, make contact with leaders in the company and let people know on time about some important decisions and policy changes)
- Referent power is the power which is based on the wish of a person exposed to power to imitate or identify with the power holder.

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- Professional power (knowledge) or expert power is the power based on the belief or assumption that power holder has some special knowledge which the person exposed to power does not have.

Types of authorities⁴:

- 1) Formal authority, which is based on hierarchy position of a manager in the structure of management function (the higher the position, the higher the authority).
- 2) Real authority, which is based on a personal respect which is characteristic of every member of the staff and which is gained by personal, moral and intellectual working qualities.

Aside from that, according to Weber we differentiate (Bendix 1998):

- Traditional (exists in monarchies and which is expressed in the way divine rights of kings. It is imposed by the way of heredity).
- Charismatic (moral type which comes out from a unique vision of a certain personality, her inspiration or sense of fate) and
- Lawful (based on formally defined status of a person who is on a certain official position).

Method of applying the force means that strategists use their power to impose on the employed the planned change of service strategy, demanding from them to accept it and/or to carry out a part of its obligation in its implementation. This method is simple and in certain situations can be very efficient.

Method of manipulation is a specific way of using power where executors are led to carry out their tasks, but in such a way that they think that they do it according to their own choice or at least to avoid the feeling that they are not acting at their free will. By manipulation the influence on the employees is carried out indirectly – instead of being forced to do certain task, such conditions and environment are created that they themselves start carrying out their task.

Method of negotiation is also a way of specific implementation of a service strategy change based on the exerting power. Unlike other methods there is no imposing of decision implementation but through respecting the strength of a partner one 'accepts' negotiations and a compromise solution acceptable for both sides.

Crisis management or managing crisis is a specific variant of a method of service strategy implementation by applying force. A crisis situation which endangers the existence of a company creates a special type of internal environment and gives managers specific tasks. Clearly expressed crises in a company, as first effect causes 'negative loyalty' relationship between the employed: it is expected or even demanded from top-management to carry out certain measures and to realise necessary changes.

⁴ Authoritarian (Lat. auctor, witness, teacher, writer, role model, authority) – competent, respectable, which is based on personal respect or some organization system (state, party and similar).

Instead of breaking resistance, top-managers are faced with a task to overcome possible panic and to make the right moves at the right time and in the last minute and to save company from the zone of immediate danger for survival.

6. Instead of a Conclusion

1. Control function, based on the comparison of the goal (wanted one) and realisation is a constituent part of all natural and social systems. We provide effective and efficiency through carrying out control, so it is means of sensible realisation of any kind of result.
2. Practice researches show that the best control systems are the ones which confirm that we work well, which stimulate us and not punish.
3. Strategic control deals with following vision, mission, targets and strategy during implementation, by revealing problems or changes in the basic premises and making necessary changes.
4. Through strategic control it is necessary to create and apply model of motivation-award for fulfillment or overcoming standards and not a model for punishing a failure.
5. Key value of a good manager is his/her ability to implement formulated and adopted vision, mission, targets and strategies, as well as system of effective and efficient control.
6. Control systems by their nature deal with people's behaviour and impose rules and loss of personal freedom. People may doubt the control system and to perceive it as an emphasised punishment or indicator of authoritative management.
7. Under certain conditions, however, people may, in fact, wish the control. There are three reasons why employees would like to have control system (Anthony, Govindarajan 2003):
 - To give a comment on realisation (on results).
 - To provide a certain degree of task structure, definition how to carry out task, and ways how to measure achievement (of results) and
 - To have a system of award, money for example, on the basis of achievement (of results).

Although employees are not willing to admit but most of them would like to have a certain degree of control as it gives the feeling of stability and contributes general welfare and safety.

Although they recognise the need for control system and its usefulness they do not want its application on their achievements. Thus, control systems have both positive and negative effects. In order to avoid negative ones and increase positive ones, designing and implementing control system must be established in a constructive and awarding way. That has been achieved by creating and explaining the model of effective and efficient system of strategic control and its implementation in this paper.

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KAKO DIZAJNIRATI I IMPLEMENTIRATI EFEKTIVAN I EFIKASAN SISTEM STRATEGIJSKOG KONTROLISANJA?

Rezime: Dizajniranje i implementacija efektivnog i efikasnog sistema strategijskog kontrolisanja, sa pojavom strategijskog menadžmenta, postaje imperativ za svaku kompaniju koja ima za cilj da opstane, raste i razvija se. Sledeći takav pristup strategijsko kontrolisanje se u ovom radu posmatra kao sredstvo smislenog ostvarivanja bilo kakvog uspešnog poslovnog rezultata, a kauzalitet planiranja i kontrolisanja, kao aksiom po kome su te dve faze strategijskog menadžmenta "sijamski blizanci" ili „dve strane iste medalje". Ishod ovoga rada su opisi značaja efektivnog i efikasnog strategijskog kontrolisanja, centralizovanog i decentralizovanog načina kontrolisanja, te kreacije modela strategijskog efikasnog i efektivnog sistema kontrolisanja i adaptivne metode implementacije sistema kontrolisanja, što je postavljeno kao glavni cilj ovoga rada.

Ključne reči: strategijski menadžment, strategijski sistem efikasnog i efektivnog kontrolisanja, model strategijskog menadžmenta, korektivni model strategijskog efektivnog i efikasnog sistema kontrolisanja.



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QUALITY MANAGEMENT SYSTEM IN HIGHER EDUCATIONAL ORGANIZATION

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Abstract: *Quality Management System (QMS) and the adopted standards pertaining to this area are experiencing their third revision, amendment, and improvement. General requirements in the family of ISO 9000:2005 and 9004:2009 standards have to do with an organization's obligation to establish, document, implement and maintain a Quality Management System (QMS) and to continually improve its effectiveness and efficiency in the following way:*

- *identify the processes necessary for the functioning of QMS and their implementation throughout the organization,*
- *determine the sequence and interaction of these processes (network of processes),*
- *provide the resources necessary to support the system/processes,*
- *monitor the system/processes/products/personnel, measure and analyze their performance and*
- *implement actions necessary to achieve planned results and improve characteristics of systems/processes/products and personnel.*

On the basis of the above, we can say that the introduction and management of QMS in an organization involves fulfillment of the principles and requirements of the standard as well as preparation and possession of QMS documentation which will render effective and efficient management of system/processes/ products and employees. Standards can be applied in all enterprises, manufacturing or non-manufacturing, as well as in higher education institutions. For this reason, the ISO organization adopted Guidelines for the application of ISO 9001 in education IWA2:2007. At universities in Serbia, numerous regulations and standards, i.e. standards of the National Council for Higher Education have been adopted to regulate the functioning of major systems and processes in higher education institutions. This paper is devoted to the analysis of specificity, diversity and complementarity of adopted standards and ISO standards family. Based on the conducted analysis, the paper offers suggestions of the actions and activities that a higher education institution needs to undertake in order to achieve "business perfection".

Keywords: *Quality Management System, IWA2:2007, educational organization*

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1. Introduction

Concept of Quality System (QS) has been experiencing rapid development over the last sixty years. Various phases of QS development have been observed: final control, agreed level of quality, control in the production process, control and management of QS in accordance with ISO 9000 series of standards, prevention in the field of quality, Total Quality Management (TQM), and TQM and quality of life.

The first three phases of the concept of quality refer to the quality of products in a manufacturing organisation, i.e. all definitions of quality in these three periods refer to defining quality of the product only and include the form and contents of the product. Quality control is performed after the product is produced, ex post, which makes the product more expensive – the detection strategy. Cost reduction and increase in quality are conflicting goals of a company's business.

Quality System Control and Management in accordance with ISO 9000 series of standards. These standards came to being in 1987. The first revision of the standards took place in 1994. ISO 9000:1987 and 1994 family of standards referred to QS organisation. Quality of people and products was not included. Since the main objective was the establishment of QS in accordance with the requirements of ISO 9000 standard and its validation by a third-party, i.e. obtaining a certificate, product quality was neglected. It was believed that the achievement of planned company performance ensured product quality. Companies could obtain certification per the following standards: **ISO 9001, ISO 9002, ISO 9003**. Also, there was Standard 9004-Quality management and quality system elements, which had four parts. A combination of ISO 9002 and ISO 9004-2 standards allowed the non-manufacturing organisations to also confirm that their business met the highly specific standard requirements.

Since the revision of standards is done every seven years on average, the next chapter analyses the shortcomings of the abovementioned versions and the concept of ISO standards family in 2008 version.

Total Quality Management (TQM) *is an organisation management approach focused on quality based on the participation of all its members, aimed at long-term success through customer satisfaction, to the benefit of all members of the organisation, stakeholders and society (ISO 9001:1996, p. 22)*

The meaning of each word is as follows:

Total-everybody, in any relation with the organisation is involved in the continual improvement of quality (including partnership with customers /service users and suppliers)

Quality-established quality requirements are known and documented,

Management-control is done in accordance with all principles and phases of modern management.

Quality Management System in Higher Educational Organization

The management is fully involved in organisation management.

TQM enables the organisation to:

- meet and overcome the expectations of customers/service users and all stakeholders, company's stakeholders (owners, internal-external customers, sub-suppliers, workers unions, shareholders, banks, business environment),
- achieve business excellence and excellent business results,
- develop world-class products/services of attractive quality,
- ensure responsibilities and duties for all employees,
- develop and include all employees in the process of learning,
- be oriented towards customers/service users and all stakeholders, as well as partnership, particularly with suppliers,
- manage resources and processes,
- perform continual control, analysis, measurement, improvement and innovation, and
- act in a socially responsible manner.

There are many QMS theorists who believe that TQM is outdated. The justification for this claim lies in the fact that the concept of TQM, principles, new ideas and new development in modern management is included in ISO 9000:2005 and ISO 9004:2009. However, many foreign and local experts for quality believe that a national award for quality is a national model of excellence, national model of TQM. Struggling for global quality, a company that has received the award is recognised as a company of world-class quality, „business excellence” and has an obligation to keep its place on the list. When other companies receive awards, there is a constant struggle to achieve the quality of the awarded company. The best known are the following three awards for quality: Japanese Award for Quality-Deming Quality Award, American Award “Malcolm Baldrige” and European Quality Award - EFQM model of quality. The criteria for all three awards are similar. The award consists of 9 or 10 criteria and each criterion further contains at least six sub-criteria, which are designed to measure results. The measure for the achieved level of quality of an organisation is, of course, the criteria and sub-criteria for the quality award. Serbian National Award for Business Excellence is the Oscar of Quality. The Oscar of Quality was designed to imitate the European Quality Award.

In this period, the company's business goals and the primary business goal are changing: on-going investment in further development of new products/services/results, further improvement of the quality level of the system/processes/personnel/products/services while reducing expenses, rational, effective and efficient use of the company's resources and rational use of natural resources, complying with environmental legislation and environmental standards, environmental management and management of occupational health and safety of employees (risk management). In this way, the global goal also represents the fulfillment of the requirements and expectations of employees, stakeholders and society.

TQM implements the preventive approach of QMS prevention strategies. This means that quality planning is carried out through all phases of a product's lifecycle, i.e. quality control and planning is employed in the following areas: marketing, product design, manufacturing process design, manufacturing process, market development design, packaging, maintenance and servicing of products, product post-use - recycling. An integrated approach to quality management system is also applied. In an integrated global system of quality control, all activities between and including the marketing phase and the product servicing and recycling phases interact with each other in order to achieve effective and efficient use of resources, with minimum deviation from the prescribed specified quality and at minimum expenses.

The prerequisite for the implementation of the TQM concept is the introduction, existence and management of the quality system in accordance with ISO 9000 series of standards in higher education, as well as quality design, development, implementation, verification and planning. The Deming Prize for quality does not include a category for awarding higher education institutions. Since 2001, the American Quality Award is also given to higher education organisations. In 2001, the award went to the University of Wisconsin-Stout, Menomonie, USA, and in 2008 to Iredall Statesville Schools, Statesville, North Carolina, USA (Malcolm Baldrige, web). EFQM Excellence Model defines five degrees of excellence as follows: winning recipient (EQA Winner), winner of the prize (EQA Prizewinner), advanced to the second round known or recognised for excellence (Recognised for Excellence) and committed to excellence (Committed to Excellence). EFQM award has been given to higher education institutions since 2001. The winner in 2001 was St. Mary's College, Northern Ireland, UK. Since 2009 the prize is not granted, only a recognition for a particular area of business is granted and the finalists are disclosed. In 2009, the recognition went to Bradstow school, UK and St. Colman's College, Northern Ireland, UK. Finalists in the same year were Spanish Colegio Sagrado Corazon Carmelitas and Liverpool John Moores University, UK (EFQM, web). The Faculty of Dental Medicine in Belgrade holds a National Award for Improving Business Quality – Golden Charter for Quality, 2007. The award is given by the Unique Association of Quality (JUSK). This school has entered the process of business certification per the ISO 9001:2008 standard.

2. Family of ISO 9000:2000 and ISO 9000:2008 Standards

Being that the ISO 9000:1994 standards had a number of shortcomings and that member states had a lot of remarks, suggestions and new ideas, revision of standards came to being and in 2000 a revised version of standards was adopted. The name of standard ISO 9000 – “Quality management and quality assurance” – was revised and no longer included the term “quality assurance.” It now reads “Quality Management System” (QMS). This reflects the fact that QMS

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requirements along with the product quality management is intended to increase satisfaction of customers and all stakeholders. The shortcomings of 1994 standards consisted in the following: it was considered that by introducing QS in the organisation and its manufacturing functions would ensure quality of product. However, it often happens that an organisation introduces QS and possesses QS documentation, but the product still does not meet the strict customer-defined requirements. Requirements were defined in 20 points and referred only to key activities. Since other activities were not defined, proper process functioning and quality process output was not ensured. Requirements were related only to manufacturing functions. An organisation is a set of subsystems and its management necessitates control of the system as well as of all subsystems. Also, the family of standards is defined for manufacturing companies. If a service-providing company wanted to certify their QS, it had to meet the requirements of ISO 9001 and 9004-2 standards at the same time. Companies had to meet numerous requirements, and prepare and follow tons of documentation. All this led to a revision of the above standards in 2000.

The new concept of the revised standard – the process approach and clearly defined principles and requirements based on the principles enabled the elimination of the above shortcomings.

In 2008, a new revision of ISO 9000 and ISO 9001 took place. The name, concept, principles and structure of the standard remained the same. The changes were not large. The main changes had to do with the inclusion of management of environmental risk to the design and management of QMS, and defining competence of employees.

(1) In this revised standard, just as in the 2000 version, it is said that ***“the adoption of QMS should be a strategic decision of an organisation.”*** (SRPS ISO 9001:2008, p. 7). The 2008 version further says: design and implementation of QMS in an organisation is affected by: environment of the organisation, changes in the environment and risks arising from the environment, the various needs of the organisation, the specific objectives of the organisation, products supplied, the applied processes, size of the organisation and its organisational structure.

In defining environmental risks to the organisation, their importance and frequency of occurrence and the effect of negative factors, SWOT analysis and brainstorming/brainwriting should be used as the initial method.

(2) In standard ISO 9001 it is accepted that an organisation must define the resources required for implementing and maintaining QMS, continually improving its effectiveness and efficiency, and increasing customer satisfaction by meeting their needs. Due to the above, an organisation must satisfy the requirement of the competence of the personnel who carry out activities that affect compliance with the requirements, (SRPS ISO 9001:2008, p.23) competence in terms of education, training, knowledge, and experience.

General requirements of the ISO 9000 family of standards related to the obligation of the organisation to establish, document, implement and maintain QMS and continually improve its effectiveness and efficiency, in such a way to:

- identify the processes necessary for the functioning of QMS and implement the processes throughout the organisation,
- determine the sequence and interaction of these processes,
- provide the resources necessary to support the system/processes
- monitor system /processes/products /personnel, measure and analyse their performance, and
- implement actions necessary to achieve planned results and improve the characteristics of system/processes/products and personnel.

Due to the above it follows that the introduction and management of QMS in an organisation involves the fulfillment of principles and requirements of standards, as well as preparation and possession of QMS documentation which will provide effective and efficient management of the system/processes.

ISO 9000 family of standards consists of three standards:

- **ISO 9000 – QMS – Fundamentals and vocabulary**
- **ISO 9001 – Quality management systems – Requirements**
- **ISO 9004 – Management aimed at achieving sustainable success of the organisation – Quality management approach.**

In order for the ISO 9000 series of standards to maintain its effectiveness and efficiency, the standards are periodically reviewed and revised. This ensures implementation of new achievements in the field of quality management response to customer feedback. All international standards mentioned above – ISO 9000, ISO 9001 and ISO 9004 – constitute a coherent set of standards for QMS.

3. IWA2: 2007-Quality Management System Instructions for the Application of ISO 9000:2000 in Education

The first version of this document was created and adopted in 2003 at the international workshop held in Acapulco. These documents are adopted by consensus of the individual participants in these workshops and are published by the ISO organisation as an International Workshop Agreement. Proposals for holding these workshops can come from any source and are subject to approval by the ISO Technical Management Board, an ISO body member mandated to assist the proponent in workshop organisation. International workshop agreements are not in conflict with the existing ISO standard; rather, the IWA2 document specifically serves to facilitate application of ISO 9001 in the area of education by inclusion of the specificity of one area into the concept, application of principles, and fulfillment of requirements. The second revised version of the document was

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adopted in 2006 in Korea. Over 50 experts from different countries worldwide participated in defining the second version of the document. This document serves as a standard and is valid for three years, and upon expiry of the three-year period it can be subject to revision and may also be withdrawn.

According to document IWA2:2007, the objective of QMS management in educational organisations is the continual improvement of the organisation's performance and effectiveness and efficiency. The document gives the following definitions: "An **educational organisation** is an organisation that provides educational services. An educational organisation is a school of any academic level or training center providing services independently or as part of a larger organisation. An **educational provider** is a person who delivers knowledge to listeners."

3.1. Principles of IWA2:2007

In order to achieve successful management and operation of an organisation, it is necessary that the organisation's path of development and growth follows a defined vision and that it be run in a systematic way. Success may result from the implementation and maintenance of a quality system that is designed to continually improve the performance of the system and its subsystems, including the needs of all stakeholders. Organisation management includes quality management, along with all other management disciplines, i.e. marketing, operational, financial and investment management etc. Successful management and operation of an organisation requires that it be done in a systematic and transparent manner. Standard ISO 9001:2000 specifies eight quality management principles that the top management can and should use in management of the organisation in order to improve its performance. The eight principles are: The **process approach** - educational organisations should adopt a process approach in the development and implementation of QMS. The organisation should identify the degree to which each operational process creates value by the learning process. For this reason, it should include processes associated with strategic goals of the organisation. Understanding the dependencies between processes is very important for an educational organisation in order to improve these processes and provides balance in managing the system development. **Understanding competitive advantages** involves different interest groups in order to ensure competitive advantages of an educational organisation. These factors include technology, skills, expertise and organisational culture. Collective power of the specific organisation leads to the creation of value by the process of learning. Competitive core is the focus on users of services that should support innovation through appropriate adaptation to changes in the educational environment, in order to maintain competitive advantages of an educational organisation. **Systematic approach** allows each operating process to achieve its goals. **Visionary leadership** in an educational organisation includes defining a vision, creating a policy for the realisation of the

vision and directing the educational organisation to quickly respond to changes occurring in the educational environment. **Fact-based decision making** – decision making based on clear and understandable facts rather than speculation. Finally, the information and wisdom are combined with analysis, logical reasoning and scientific approach. **Cooperation with partners** (mutually beneficial relationship with suppliers) is essential to ensure optimal ratio of experience, skills and creativity needed to create the defined value of the learning process. **Involvement of employees** is the most efficient way to achieve the defined goals of an educational organisation, i.e. organised involvement (human resources management) of all employees and the maximum use of their competence, wisdom, experience, skills and creativity. **Continual improvement of the learning processes and teaching staff of the organisation** - Learning allows an educational organisation to continually create the learning value. This leads to sustainable growth of the organisation in the external educational environment in an innovative and constructive manner.

The above principles apply to all organisations, while the following four principles are specific to sustainable success of an educational organisation: **Creating the learning value** should encourage student satisfaction with the level of value absorbed through the learning process. Measures of satisfaction determine the degree to which the value of delivered knowledge meets the needs and expectations of students. The measurement results help educational organisations to increase value by improving the process of learning value creation. **Focusing on social values** means testing what students and stakeholders feel or think in terms of ethics, safety and nature conservation. An educational organisation can provide sustainable growth only with a higher social rating of the learning output added value. **Agility (level of adaptability to changes)** is crucial for sustainable growth in a radically changing educational environment which, by constantly changing the environment, turns into the opportunity to achieve ongoing success in education. **Independence or autonomy** is based on the analysis of circumstances and self-evaluation. An educational organisation should make decisions independently and take appropriate actions freely and independently from others to avoid stereotypes (IWA2:2007, item 0.2, p.xi).

4. Concept and Definition of Processes in Educational Organisations According to ISO 9004:2009

A process-oriented organisation /system is presented as a network of vertical and horizontal business processes. Horizontal processes are main and supporting processes while vertical processes are subprocesses usually related to the functions of the organisation. Clear definition of all processes, their measurable performance and their management facilitate efficient and effective processes which ensure the creation of outputs to meet the demands of all stakeholders and the effective and efficient processes that ensure outputs which positively influence

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the effectiveness and efficiency of other processes, strategic objectives and business results.

Standard ISO 9000 defines a process as *“a set of interrelated and interacting activities which transforms inputs into outputs.”* (SRPS ISO 9000:2007, p.51). The desired result can be achieved in a more effective and efficient manner if the management of appropriate activities and resources is realised as a process.

In order to successfully perform process management, it is necessary to clearly define the process, determine the desired value of the process, and direct effect of all positive factors to the process so as to reach the desired, nominal values. Also, successful process management involves full control, measurement, analysis and improvement of key processes and their performance in the organisation. Interrelated and intertwined processes form a network of processes. In order to fully exploit all the advantages of the process approach in the organisation, it is necessary to determine the type of process, the process itself and its subprocesses, its importance to the organisation and the network of processes.

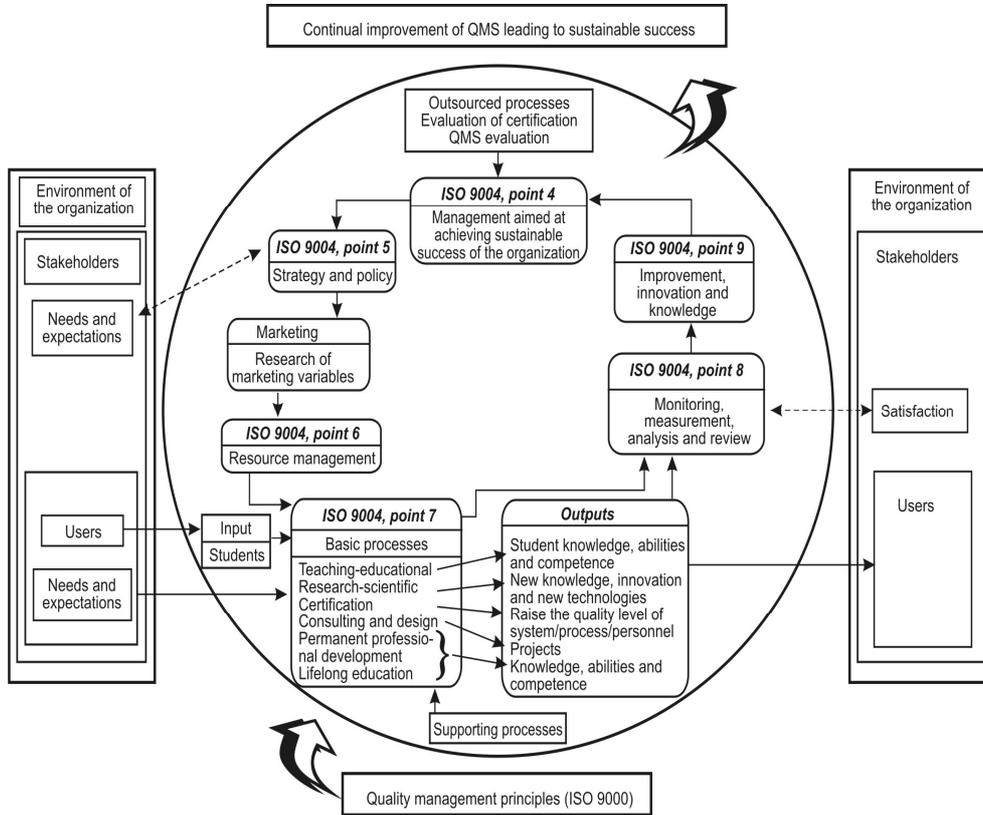
When defining the organisation's processes, one can start from the key vertical and horizontal process, where there are internal and external customers/users. After defining the key process, the organisation's main processes are defined. Main processes are processes that lead to the realisation of products / services, processes that affect the functioning of other processes in the organisation, processes that affect the effectiveness and efficiency of other processes and processes that affect the organisation's strategic goals and business results.

ISO 9000 standards are designed on the basis of process model and processes management (SRPS ISO 9001:2008, Figure 1 p. 6). Based on the figure in the standard we can conclude that, starting from the requirements for continual improvement of QMS, the process approach is based on: responsibilities of the management top in educational organisations (Item 5 of the standard), resource management (Item 6 of the standard), realisation of educational services and defining the process (Item 7 of the standard), and measuring, analyzing and improving the educational organisation (Item 8 of the standard). Standard structure and standard items should be considered as mandatory requirements that must be met in order to successfully manage the processes and as an ISO model of process management.

In the latest versions of the standard, quality philosophy is changed. The standard requires that all processes follow the Deming cycle of process improvement (PDCA): **Plan** (establish goals and identify and establish processes necessary to obtain results in accordance with the requirements of users, stakeholders and organisation policies), **Do** (apply the process), **Check** (track and measure processes and product/ service, compare them with the policies, objectives and requirements for the product or service and report on the results), **Act** (take action for continual improvement).

Along with defining the crucial processes of an organisation, the process users must be determined as well. There are internal and external users. The following processes related to the organisation's goals should be included during and after the period of providing services: education planning, developing curricula, providing knowledge and evaluation of the learning process. Addendum B1 of the standard contains a list of 57 typical processes and subprocesses in an educational organisation. Organisational structure, responsibilities, resources and services should support the QSM. Figure 1 shows a network of processes, the way it should look like in a higher education organisation. It also sets out the basic processes and results for each main process. Further explanation of the figure is as follows: it all starts from the analysis of the organisation's environment and risks from the environment, needs and expectations of stakeholders (economy, public institutions, professional organisations, owners, employees and society) and the needs and expectations of service users (students, economy, professional organisations and society). **Entering processes:** formulation and implementation of strategy and policies and communication, resource management (human resource management, workplace management, library process management, management of financial resources, knowledge management and innovation management, management of processes related to suppliers and partners), and marketing (marketing research and marketing variables research). **Management processes** are: planning, defining and reviewing the mission, vision and strategic goals; defining, reviewing and adjustment of objectives; development and improvement of curriculum and program, analysis of internal audit results; self-evaluation, survey and benchmarking; defining and reviewing preventive and corrective actions; review and improvement of QMS and management system; communication; outsourced processes management (evaluation of certification and evaluation of QMS). **Support processes** are IS, maintenance, administration, general and legal affairs and accounting. **Processes of monitoring, measurement and analysis** are: internal audit, self-evaluation, interviewing users and other stakeholders and benchmarking. Processes of improvement, innovation and learning are: planning the improvement of system, processes, results and monitoring; measurement and analysis of the performance of system/processes/results/staff and management of innovation and organisation's learning process. Finally, when the service is delivered, it is necessary to perform the analysis of environment and satisfaction of stakeholders and users of services and, if the analysis shows their displeasure, then everything returns to the beginning, i.e. changes in the specification and a new design of services / outputs/results.

Figure 1. Network of processes in higher education organisations per ISO 9004:2009.



5. Documentation requirements

One of the standard’s essential requirements in organisations which have had their QS certified is that they need to establish and possess appropriate QMS documentation: quality policy and quality manual, documented procedures and instructions, specifications, plans and records.

Quality Policy - Quality policy and quality objectives are established to provide direction (vision of the organisation) of the organisation. Also, they determine the results to be obtained and help the organisation to use its resources in order to obtain these results. *“The quality policy represents comprehensive intentions and management of the organisation pertaining to quality, as formally expressed by top management”* (SRPS ISO 9000:2007, p 52). The quality policy provides a framework for establishing and reviewing quality objectives. The quality policy usually includes the principles of quality and therefore it is rather general, while the quality objectives must be measurable. *“The quality objectives are things required or wished for when it comes to quality”* (ISO 9000:2007,

p.52). Quality objectives should be coordinated with the policy of quality and commitment to continual improvement, and their fulfillment must be measurable. Fulfillment of quality objectives can have a positive impact on the quality of products / services, operational effectiveness and efficiency, and financial performance of the system and processes, and in this way on the satisfaction and confidence of stakeholders.

Quality Manual - a document describing an organisation's QMS and providing consistent information on the QMS, both internally and externally. The organisation shall establish and maintain the quality manual which includes: description of company, location, historical development of the company, product range, subject and scope, response to the standard's requirements including details of any exclusions and reasons for the exclusions, documented procedures established for the QMS or reference to them and a description of the interactions of processes. Quality manual usually contains the organisational chart of the company up to the level necessary for the management of quality system management and main processes relevant to the procedure as well as QMS management responsibilities matrix.

Documented procedures, work instructions and diagrams which define and describe the processes and key activities and provide information on how they are consistently performed. The procedure shall include name and password, procedure owner, subject and scope, relationship to other documents, definitions and explanation of terms used in the procedure, the procedure itself - description of all sub-processes /key activities in a strictly defined order (who is involved in the process, who controls the process, what the persons do, when they do it, what resources they use etc.), documentation, flowchart and process list (the flowchart and process list contain all of the above). The process list also includes the performance measured and monitored over time.

Quality plans describe the way QS is applied for the specific product/service, project or contract.

Specifications contain expressed and clearly defined needs or expectations, requirements, "Document stating requirements" (SRPS ISO 9000:2007, p. 52). Users requiring products/services with features that depending on the price of products/ services and income, meet their needs and expectations. Required characteristics of products/services can be specified in the contract or may be determined by the organisation itself. In both cases, the user is the one who determines the eligibility of products/services. An image of a process-based QMS model that it all starts with user requirements, and ends with their satisfaction.

Instructions contain recommendations or suggestions as well as other documents necessary to ensure effective planning and execution of the organisation's processes, and

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Records - “Document stating results achieved or evidence of activities performed.” Records can be used to demonstrate traceability, verification, preventive and corrective actions. Records are company documents. In a higher education organisation records are for example results of a survey on the quality of teaching-learning process, travel order, invoice, work contract etc. For how long a record should be kept is regulated by the Statute or, if the organisation has introduced a quality system, it is regulated by the procedure: “Document management and control of records.”

Table 1: Number of higher education institutions in former Yugoslav countries and number of certificates in each

		Universities	Faculties	Academies	Colleges	Number of certificates			
						Universities	Faculties	Academies	Colleges
Serbia	State	7	82	1	50	/	2	/	1
	Private	10	46	3	22	1	10	1	/
	SUM	17	128	4	72	1	12	1	1
Montenegro	State	1	19	1	/	/	/	/	/
	Private	1	13	/	1	/	/	/	/
	SUM	2	32	1	1	/	/	/	/
Bosnia and Hercegovina	State	8	92	7	6	/	/	/	/
	Private	14	55	/	11	1	5	/	1
	SUM	22	147	7	17	1	5	/	1
Croatia	State	7	97	7	15	1	9	/	1
	Private	2	4	/	19	/	2	/	/
	SUM	9	101	7	34	1	11	/	1
Macedonia	State	4	51	/	3	/	1	/	/
	Private	13	67	1	2	/	/	/	/
	SUM	17	118	1	5	/	1	/	/
Slovenia	State	3	44	3	1	/	/	/	/
	Private	2	21	/	14	/	/	/	/
	SUM	5	65	3	15	/	/	/	/

Source: Websites of universities, faculties, academies and colleges stated in Reference section

Although the advantages of implementing ISO 9000 family of standards are well-known in Serbia, the idea of introduction and management of QS as per ISO 9000 family of standards has not yet found its way in a large number of higher education institutions. Faculty of Engineering and IIS - Research and Technology Center in Novi Sad in cooperation with the Faculty of Mechanical Engineering in Kragujevac, Faculty of Mechanical Engineering in Pristina and Europe - Jugoinspekt in Belgrade, have completed the following project as early as in late 1999: “*Development of standardised documents for the introduction of quality systems in scientific research organisations in Serbia*”, with the intention of creating standard documents as a basis for establishing a quality management system, which will be applied according to characteristics of the structure of specific college / institute. The documents were prepared and positively rated by the ordering party, the Ministry of Science and Technology. However, to date, only a small number of higher education institutions have introduced a quality management system. In Serbia, at this moment, two state universities and one college have QMS certification, and as for private schools, 8 faculties of

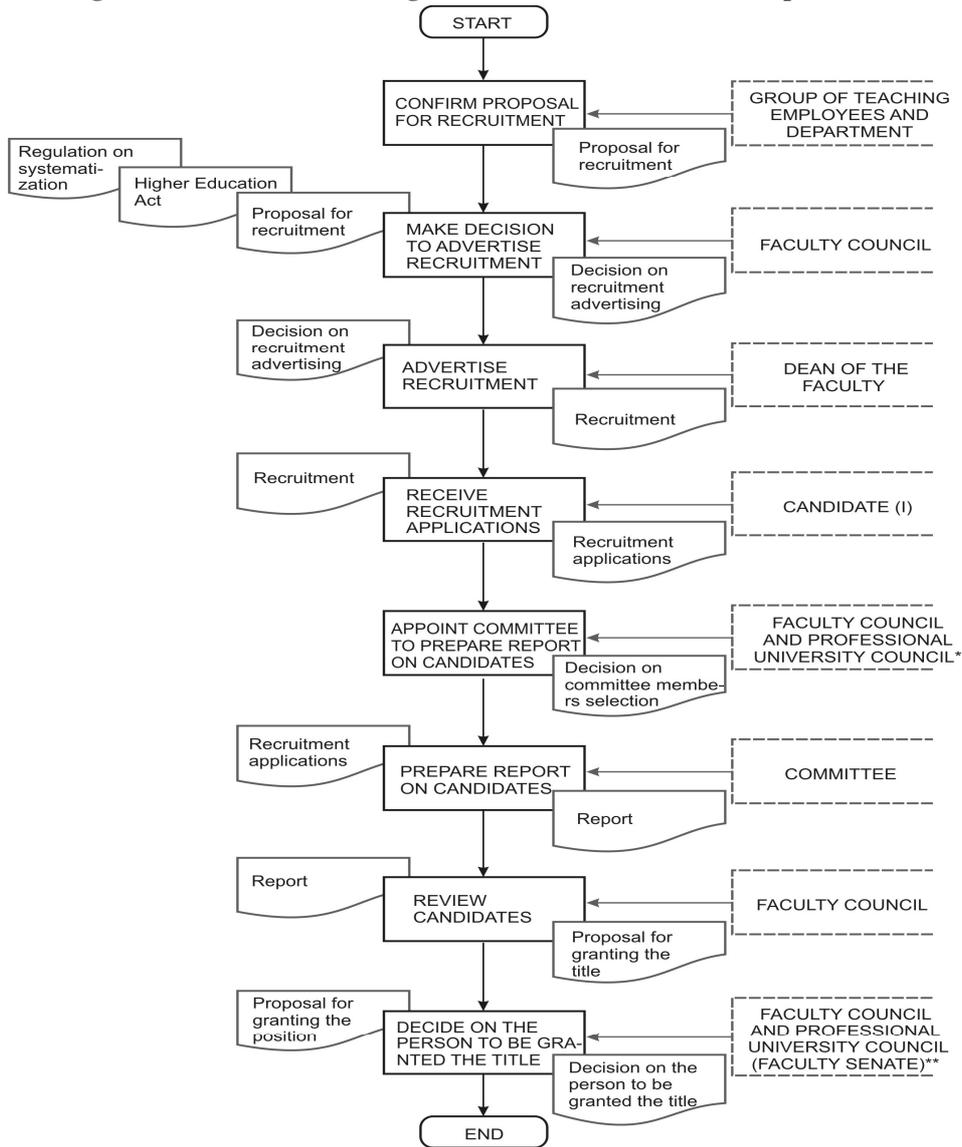
“Megatrend” university have ISO 9001 certification (Megatrend, 2011.web); 3 faculties within the University Business Academy in Novi Sad possess ISO 9001 certification, and the Academy of Arts as part of Alfa University also possesses ISO 9001 certification. There is no available data as to whether any universities or faculties in Montenegro or Slovenia possess certification. In Macedonia, out of a total only one college has been certified. On the territory of Bosnia and Herzegovina there are 8 state and 15 private faculties. Just like for Montenegro and Slovenia, there is no data available as to whether any state universities have certified their QMS. The Independent University of Banja Luka, comprising 5 faculties, has QMS certification. Apart from this university, Banja Luka College QMS has a certification as well. In Croatia, 1 state university, 11 faculties and 1 college have certified their QMS (Table 1).

As well as other state universities, the University of Kragujevac (web) has adopted the following in accordance with the National Council Standards: Quality Assurance Strategy (QAS). The term “assurance” has to be changed to “QMS“, for the term QMS shows that the strategic goal of an organisation is to run the organisation in a way to continually improve quality, efficiency and effectiveness of the system/ processes /results /staff, so as to meet and surpass the expectations of all stakeholders. The strategy defines the following: principles, rules the University conforms to, the mission, objectives, quality assurance actions, action plan that in more details defines the objectives, actions, activities, timeline, as well as responsibilities and authorities. The network of processes has been established, fully compliant with the requirements of ISO 9001 standard. 11 procedures have been defined, specifying the most important processes and enabling management of the processes in the higher education institution. All term definitions are taken from the standard ISO 9000. However, even though the University Quality Assurance Committee has been formed as well as the Member Faculty Committees, the prescribed requirements are not consistently implemented and no specific management of the processes and subprocesses is taking place. Schools are **given recommendations** to perform management in the prescribed manner, and it is up to the faculty to accept it or reject it. It follows that there is no hierarchical feedback connection in management, especially in control of curriculum, teaching methods etc. In addition, not all of the key processes are specified, which results in the lack of prescribed subprocesses and key activities. Due to the above, no specified results are achieved. For example, the procedures clearly define that the primary goal is student knowledge, ability and competence (Chart of business processes structure of the University of Kragujevac, web); however, students show up at the Research-Teaching Council demanding to be allowed to move on to the following year with only 37 points, and then they are allowed to do so. In practice, this means that they may have overdue exams from the second year while at the same time they are admitted to the fourth or undergraduate year. If the curriculum is designed in such a way that students acquire basic knowledge in the early years and upgrade their knowledge in the following years, in the sequence determined by

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the development of the specific scientific field, it is clear that students are not capable of successfully attending classes in the fourth year, and needless to say, student competence is not on a high level. The action plan of the University has been defined in which it was indicated that self-evaluation of the University and member faculties will be conducted in 2009. Even though internal control of specified quality is a must, this has not been done to this day.

Figure 2 Flowchart of teaching and research staff recruitment procedure



* for teaching titles (Assistant Professor and Associate Professor)
 ** for granting Professor title only

Fimek, Faculty of Economics and Engineering Management has certified its QS per ISO 9001:2008. The quality manual of the faculty includes the following: quality policy (Quality Policy, web, p. 8), responses to all requirements of the standard, network of processes, definitions of basic processes, subprocesses and all other processes, matrix of responsibilities where one dimension of the matrix represents the requirement of the standard and the other represents the responsibility of Faculty management. There are three kinds of responsibility - primary, secondary and informative (providing or reviewing information). It must also be noted that apart from the Dean of the Faculty, there is also the position of a general manager. In the field of QMS, the Dean's primary responsibilities include point 4 in its entirety, quality policy, planning and implementation of educational services, design and development, educational service management, data analysis and continual improvement. The General Manager's primary responsibilities include providing resources, infrastructure, work environment and supplies. The Quality Manager is primarily responsible for the following: requirements related to documentation, duties and management operations, validation of processes and the point pertaining to measurement, monitoring and preventive and corrective actions. The quality manual sets out a total of 36 procedures classified into nine groups per the requirements, points of the standard, IWA2:2007. Therefore, it can be concluded that all processes, subprocesses and key activities are defined and managed, and the QS is managed as well.

6. ISO Methodology for Process Improvement

Conceptually, process improvement aims at reducing process duration, reducing costs, especially costs of (lack of) quality, improving the quality of the process results, rational use of resources, and increasing effectiveness and efficiency of the process. In this paper, effectiveness is defined as *the quality of an average work output per unit of time, and efficiency as the quality of an average work output per unit of time with minimum costs*.

Organisation staff involved should be given authorisations, technical support and resources necessary for improvement-related changes. Continual improvement, by any method (ISO 9001 and ISO 9004 methodology, and others) should include the following: selection of areas to improve with justification, evaluate efficiency and effectiveness of the existing process, identify and verify the source of the problem, explore alternative solutions, choose and implement the best solution, this being the one that will eliminate the source of the problem and prevent the problem from recurring, confirm elimination of problem and its source or reduction of the effects of the problem so that the solution is working and the improvement objective is achieved, replace the old process with the improved process, and evaluate the effectiveness and efficiency of projects and consider the use of the solutions throughout the organisation.

6.1. ISO 9001 Methodology for Process Improvement

Within the ISO 9001 standard, the model of continual improvement as well as its stages and activities must be viewed in the context of the entire point 8 of the standard - Measurement, analysis and process improvement. Structure of the point requires that its stages and activities, determined by a strictly defined order, constitute a procedure that the organisation must follow in order to improve the performance of system/process/product/service. Also, it is important to stress that the improvement process must be observed together with preventive and corrective actions, i.e. the improvement process begins and ends with preventive and corrective actions, which lead to improvement of process performance. The steps of the improvement process are the following: monitoring and measurement (customer satisfaction, internal audit, monitoring and measurement of process performance, monitoring and measurement of product characteristics), management of nonconforming products, data analysis and improvement (continual improvement, corrective and preventive actions). Each step has specific improvement activities which are shown by the indicated order.

Customer satisfaction – The organisation must collect and analyse information obtained through customer observation of the extent to which their needs have been met. The organisation, depending on its needs, should establish methods of collecting data and information. The following are sources of information and customer satisfaction measures: complaints, data obtained through direct or indirect communication with customers/users of services, surveys, reports on realisation, reports from different media, comments book. All universities in Serbia perform surveys on student satisfaction with the teaching process. However, the standard requirement is to assess satisfaction of all stakeholders. **Internal audit** – Organisation must perform internal audits of system /processes /key activities in accordance with the audit plan and within the prescribed timeframe, usually every six months. The internal audit is performed by the internal audit team. The auditors cannot check their own work. Faculties of the University of Kragujevac were obliged to perform self-evaluation in 2009; however, no such thing was done. **Monitoring and measurement of process performance** - The document containing the list of processes should define process performance and effectiveness, which are monitored within defined time intervals. Depending on business specificity, organisations should define methods which will provide valid indication of the height and tendency of selected parameters and their overlapping/deviation from nominal values. Each parameter deviation from nominal values is considered as nonconformity and necessitates the application of preventive and corrective actions in order to ensure product conformity. **Monitoring and measurement of output characteristics** - Product characteristics in every organisation are defined through specification of product/service. Every organisation must monitor and measure product/provided service characteristics in different phases of their realisation. Every deviation of realised characteristics from

the planned ones is seen as a nonconforming product/provided service. Educational organisations may use alternative resources to correct nonconformity in achieved learning process results individually (for each student) in order to avoid student dropping out from the educational program. Reports on the nature of these deviations and actions taken for the deviation must be created and saved. Educational organisation should define and use methods for monitoring and measuring educational services within planned time intervals, both during process realisation and on getting process results, so as to confirm that the results fulfill the established requirements of the organisation, as well as statutory, legal and certification regulation “(IWA2:2007, point 8.2.4, p.13)”. For all types of education, specific evaluation tools should be used (such as tests, exams and presentations) to measure progress in fulfillment of curriculum requirements. Teaching staff’s performance evaluation should also be conducted as an integral part of educational service. Performance evaluation can be used from observations of performance to meeting a set of specified requirements. It is necessary to update data and analyse quality within the specified time periods in accordance with the Regulation (Official Gazette of RS, No. 110/05 and 50/06-amendment). Results of process evaluation should be recorded and used to determine the degree to which the defined and implemented learning process meets the intended objectives. **Data analysis** - The organisation shall establish, collect and analyse relevant data in order to obtain valid information that show the effectiveness and efficiency of QMS / processes / staff and their continual improvement. Data analysis must provide information related to: customer satisfaction, compliance with customer requirements, specified characteristics of the processes and products and their trends and suppliers. **Continual improvement** - For each process and key activity, every organisation has defined the methods, actions and activities (quality policy, quality objectives, results of internal audit, analysis of parameters of the processes/products/activities, preventive and corrective actions, review by management) that improve the process and key activity and increase efficiency and effectiveness of QMS. **Corrective actions** are “*actions to eliminate the causes of detected nonconformity or other undesirable situation*” (SRPS ISO 9000:2007, p. 34). Every organisation that has certified its QMS has defined the procedure for appropriate corrective actions that partially or completely eliminate the causes of nonconformity. **Preventive actions** “*actions to eliminate causes of potential nonconformity or other potential undesirable situation.*” (SRPS ISO 9000:2007, p. 34). Every organisation that has certified its QMS has defined the appropriate procedure for preventive actions that partially or completely eliminate the causes of potential nonconformity.

The document IWA2:2007 particularly stresses the self-evaluation process of an educational organisation (in ISO 9004:2009 self-evaluation is also given special significance). Annex A presents the questionnaire (IWA2:2007). The questionnaire contains questions that organisations can use in their self-evaluation. Questions refer to specific points of the standard: Point 4 has nine questions, point

5 has eight questions, point 6 has seven questions, point 7 has nine questions and point 8 has nine questions. By the honesty of the organisation's answers, it can be classified as: level I - informal approach, level II - reactive approach, level III - proactive approach, level IV - systematic approach, level V - adjustable continual improvement

7. Conclusion

Benefits of implementing ISO 9001 standard are the following: achievement and/or strengthening of business confidence with known and, more importantly, potential customers, improvement of business competence, effectiveness, efficiency and productivity, focus on achieving business goals and meeting the expectations of clients and all stakeholders, achieving and maintaining a stable level of quality of products/services to meet the demands and expressed needs of clients, increasing satisfaction of customers and all stakeholders, providing assurance that the planned, desired level of quality is achieved and improved, creating opportunities for new markets and increase one's share on the existing market, obtaining ISO 9001 certification by the accredited certification body, increase competitive advantage and opportunity to participate and compete in tenders. It is therefore necessary to:

- Define and adopt a strategy for higher education development,
- Define and adopt strategic goals and all other goals in higher education. All goals, including strategic, must be measurable. One of the strategic goals for higher education development should be the introduction of QS and QMS in higher education organisations.
- It is necessary to form a pyramidal structure of a QMS committee. The QMS committee must be an independent body (competent staff, independent from political parties and state bodies).
- Educate senior management on all levels, committee members and all employees in higher education for QMS.
- Introduce QMS and prepare QMS documentation,
- Perform internal and external audits, analysis of results/performance, and define preventive and corrective actions within specified time intervals.
- Conduct an external audit of the certification process.
- Establish offices for quality at universities and faculties with the necessary infrastructure and regulations.
- Create a single database for Serbian universities and faculties which are certified per ISO 9001.

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SISTEM MENADŽMENTA KVALITETOM U VISOKOŠKOLSKIM USTANOVAMA

Rezime: Upravljanje sistemom kvaliteta (SK) i usvojeni standardi, koji se odnose na ovu oblast, doživljavaju već treću reviziju, promenu, poboljšanje. Opšti zahtevi familije ISO 9000:2005 i 9004:2009 standarda odnose se na obavezu organizacije da mora da uspostavi, dokumentuje, primenjuje i održava sistem menadžmenta kvalitetom (SMK) i da stalno poboljšava njegovu efektivnost i efikasnost, na način da:

- identifikuje procese neophodne za funkcionisanje SMK i da ih primenjuje u celoj organizaciji,
- odredi redosled i međusobno delovanje ovih procesa (mreža procesa),
- osigura resurse neophodne za podršku sistemu/procesima,
- prati sistem/procese/proizvode/osoblje, meri i analizira njihove performanse i
- primenjuje mere potrebne za ostvarivanje planiranih rezultata i poboljšanje karakteristika sistema/procesa/proizvoda i zaposlenog osoblja.

Usled navedenog sledi da uvođenje i upravljanje SMK u jednoj organizaciji podrazumeva ispunjenje principa i zahteva standarda i izradu i posedovanje dokumentacije SMK kojom se obezbeđuje efektivno i efikasno upravljanje sistemom/procesima/proizvodima i zaposlenim ljudima. Standardi se mogu primeniti u svim preduzećima, proizvodnim i neproizvodnim, kao i u visokoškolskim ustanovama. Stoga je ISO organizacija usvojila i vodič za primenu ISO 9001 u obrazovanju IWA2:2007. Na univerzitetima u Srbiji usvojeni su brojni pravilnici i standardi, Standardi Nacionalnog saveta za visoko obrazovanje, koji uređuju pravila funkcionisanja sistema i glavnih procesa u visokoškolskim ustanovama. Rad se posvećuje analizi specifičnosti, razlika i komplementarnosti usvojenih standarda i familije ISO standarda. Na osnovu sprovedene analize daju se predlozi potrebnih mera i aktivnosti koje bi dovele jednu visokoškolsku ustanovu do postizanja „poslovnog savršenstva“.

Cljučne reči: sistem menadžmenta kvalitetom, IWA2:2007, obrazovna organizacija



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CULTURAL DIFFERENCES AS A FACTOR OF ECONOMIC SUCCESS

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Abstract: Attitudes and values are important factors of economic success. People who work hard and plan the future will most likely succeed, not those, who are lazy or have a passive attitude. However, we should not say that the attitude towards work is the only factor in economic success of the individual. If the difference in attitudes is important for individual success, the logical question is whether it can be important for the economic success of the country as a whole. Are the differences between countries in culture, i.e. values, attitudes and beliefs that prevail in society, partly responsible for differences in economic performance? Just testing this hypothesis is the subject of this paper. Idea that culture can be a factor of wealth of a nation is relatively recent.

Keywords: culture, economic growth, trust, values, society.

1. Definition and Classification of Culture

Taking into consideration that culture is a very important social phenomenon that people of very different educational background deal with, it is very difficult to give its precise definition and determination. This is why there are so many definitions of culture. One of the most common definition is that culture is a set of values, beliefs, rules and institutions specific to a particular group of people (Wild et al. 2001, 42). Gary Ferarri (1998, 16) defines culture as being everything that people have, think and do as members of one society. The three verbs in this definition (have, think and do) are also the three main structural components of

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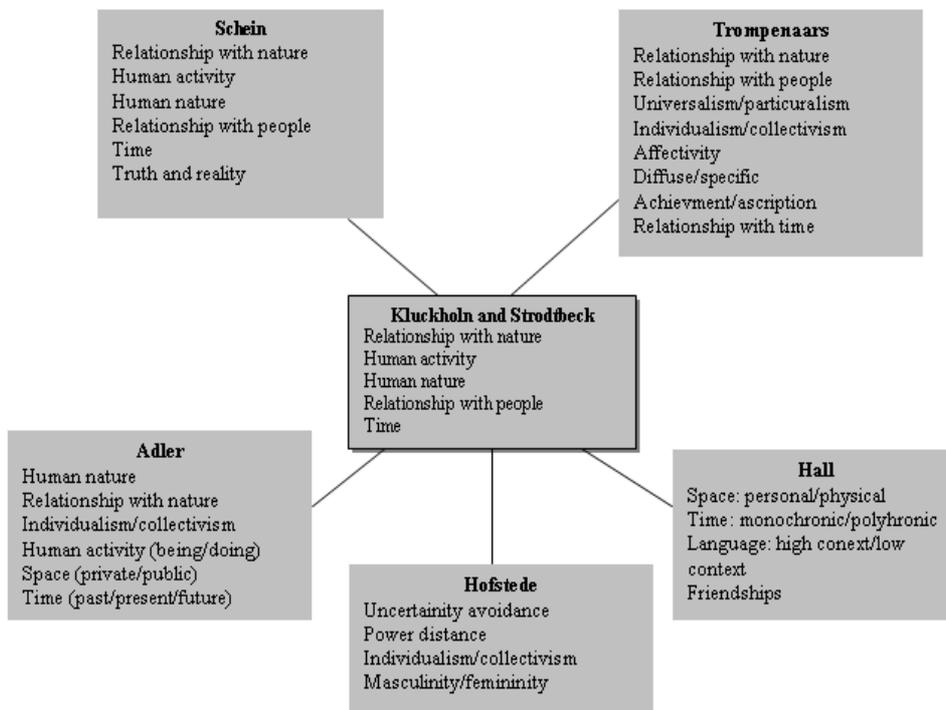
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culture: 1. material goals (to have), 2. ideas, values and attitudes (to think) and 3. norms or expected behaviour (to do).

Terpstra and David (1991, 6) offer a more business-oriented definition. Culture is learned, divisible, an intertwined set of symbols, which meaning provides a set of orientations of the society members. These orientations, taken into account together, enable solving the problems that have to be solved by every society in order to survive.

Despite numerous definitions, there are certain common elements. Firstly, people learn the culture. It is not transferred biologically, but by various social groups (family, school, youth organisations, etc.), from one generation to another. The second element is that culture consists of many different interrelated parts. One element of culture (for example, one's social status) influences other elements (for example, language that someone uses). Therefore, cultural conceptions are not a random collection of behaviours. Culture is a complex puzzle in which all parts are kept together. Finally, culture is shared by individuals as society members. These three aspects of culture are learned, shared and they mutually fit one into another making in that way the essence of culture.

Figure 1. Key dimensions of culture



Source: Schneider S. Barsoux, J. (2003, 34).

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It can be defined by state borders, especially if countries are isolated by natural barriers. Example for that are nations on islands (Japan, Ireland, Taiwan) and peninsulas (Korea). However, most nations have different subgroups (subcultures) within their borders. These subgroups may be defined by linguistic (Flemish versus Walloons in Belgium) or religious characteristics (Buddhist Sinaians versus Tamils in Sri Lanka). A small number of cultures are homogeneous in character. Typically, the sub-cultures have little in common among each other.

Numerous authors studied culture, which can be observed systematically (see Figure 1). There are two generally accepted ways of studying cultural differences: Klucklohn-Sthodtbeck and Hofstede framework.

Sthodtbeck Klucklohn framework compares cultures in six cultural dimensions (Wild et al. 2001, 65). He studies a given culture by asking following questions:

1. Do people believe that they are controlled by their ambient, that they control the environment or that they are part of nature?
2. Do people focus on past events, present or future implications of their actions?
3. Are people simply governed by and cannot be trusted or they may be trusted that they will work freely and responsibly?
4. Do people want success in life, a carefree life or spiritual and contemplative life?
5. Do people believe that persons or groups are responsible for prosperity of everyone?
6. Do people prefer privacy or publicity in governing their actions?

Hofstede framework derived from studies on staff of one global company. More than 110,000 people employed by the IMB in 40 countries answered to 32 questions. On the basis of these answers, Danish psychologist Gert Hofstede (1980) developed four dimensions for exploring the culture:

1. Individualism versus collectivism. Identifies whether culture maintains individuals or a group. Business in individualistic cultures imposes responsibility for decision making on a responsible individual. In collectivist cultures, disgrace for bad decision making is shared by group members.

2. Distance of power. Describes level of inequality among people of different occupations. In cultures with high distance of power, leaders and supervisors enjoy special privileges. In cultures with small distance of power, prestige and rewards are more equally shared among managers and ordinary workers.

3. Avoiding of uncertainty. Identifies readiness of one culture to accept uncertainty about the future. A culture that avoids uncertainty usually has lower "circulation" of employees, more formal rules for regulating the conduct of employees and more difficulties in introducing changes. Organisations in cultures

that accept risk are opened to experience of other cultures, but they also have a higher "circulation" of employees.

4. Quantity versus quality of life. Cultures oriented towards quantity of life emphasise successfulness as power, wealth and status. Cultures that emphasise quality of life generally have a more relaxed lifestyle; people are more focused on developing relationships and general well-being of others.

Image of Serbian national culture based on research in Serbia (Mojic 2003, Janicijevic 1998) is compatible with the results arising from Hofstede's researches. Based on Hofstede's maps of national cultures, it can be seen that dimensions of Serbian national culture are following:

1. Collectivism - index 26 (on a scale from 1- complete collectivism, to 100- complete individualism). People in Serbia believe that a collective is responsible for each member's destiny, and that it is obliged to look after a member. In return, a member of the collective shall express full loyalty to the collective and authority which represents it. With a large distance of power, collectivism may easily turn into dependency relationship of an individual towards the highest authority in the collective. In that way, the member loses its initiative and becomes blind follower of its leader (father of the family, manager, party leader, president of the state).

2. Large distance of power - index 77 (on a scale from 1 to 100) – Serbian national culture belongs to several cultures with the world largest distance of power which means it is very prone to authoritarianism. According to this indicator, Serbian national culture is mostly similar to cultures of Venezuela, Mexico, India and the Philippines, and it mostly differs from cultures of Austria, Israel, Denmark and Sweden. Members of the Serbian national culture believe that power in society is and should be distributed unequally ("it is clear who mows and who carries water"). Hierarchy is quite natural and desirable. It is believed that those who have the power should decide on everything. An autocratic management style is preferred ("a firm hand"). Those who have power do not have to obey the rules (laws), which they pass themselves, but must always look as powerful as possible and must have symbols of power. The only way to change the system is dethroning, i.e. replacing of those who have power. It is also considered that those who have power have the natural right to privileges.

3. High level of avoiding insecurity - index round 90 (on a scale from 1 to 100). According to this criterion, Serbian culture belongs to national cultures with the highest level of avoiding insecurity in the world. This implies that there is a huge resistance to changes among the people, aversion towards risk and uncertainty. In conditions of uncertainty or ambiguity, people in Serbia feel uncomfortable. On the other hand, it indicates that they have no tolerance for differences in opinion and behaviour of others. They prefer everything to be uniformed and standard.

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4. Female values - index 22 (on a scale from 1- fully "female" values to 100-fully "male" values). Members of Serbian cultural heritage consider social world to be primary and they prefer it to the material one. The main objective and measure of value is social position and status, relations among people, connections and friendships, and not results of work or distinguishing oneself on that basis.

According to Hofstede's research, our national culture is most similar to the cultures of Latin American and Mediterranean countries (France, Italy, Greece ...), and most distant from the Anglo-Saxon and Scandinavian culture (Hofstede 2001, 340). Comparing the USA on the one hand, and Serbia and Montenegro on the other, it can be seen how these dimensions of culture influence degree of their economic development (see Table 1).

Tabela 1. Differences between the U.S. and the SCG cultures according to Hofstede's dimensions of culture

	USA	SERBIA
Power distance	Low	High
Uncertainty avoidance	Low	High
Individualism vs. collectivism	Individualism	Collectivism
Masculine versus feminine values	Male values	Female values

Source: Janićijević, N. (1998, 43)

2. The Importance of Culture for the Country's Economic Growth

In order to prove that culture is important for economic development, first it is necessary to show that culture has potentially important aspects that differ among countries and, second, that these aspects of culture significantly influence economic results. None of these tasks is easy, because it is difficult to measure culture. Not only that culture has many different dimensions, but also when viewing only one aspect of culture, there is often lacking of objective and quantitative measures, so that researches almost always rely on subjective assessment of a researcher. Also, in some cases there is direct evidence of cultural impact on economy, while in other cases these impacts may only be derived and indirect conclusions.

Culture is much more a process rather than a distinctive entirety that can be fully defined only by simple summing up of its elements. These elements are connected synergistically and act as a unique entirety. Culture influences all aspects of life. The concept of culture is very broad and that is why, ethnologists for example, divide it according to certain elements, in order to study and

understand it easier. Different authors also state different elements of culture. Donald and McCulloch (1999, 262) also include legal characteristics and political structure in the elements of culture. However, the following elements are mentioned by most of the authors (Hall 1995; Wild and Han 2001; Ferraro 1998; Hofstede 2001): language, openness to implementation of new ideas, values, and willingness for hard work, habits and customs especially in relation to savings, religion, aesthetic values, education, symbols and social structure. Some elements of culture directly influence economic development.

The theory about impact of culture on economic results has two parts. The first component is explanation of how culture influences economic result. The second component is explanation of culture itself. One of culture determinants is religion. For example, countries of South America are presently predominantly Catholic, because they were colonised by Spain and Portugal in the past. In the world, there are numerous religions, but Christianity, Islam and Buddhism are the three most common. Religious beliefs formed in one culture have bigger or smaller implications on behaviour of consumers and conditions in which certain tasks may be performed. Religion can influence creation of working habits. Protestant religion preaches the attitude that people should work hard, to be diligent and to save money. Exactly on this attitude is based development of capitalism in many countries of the northern hemisphere. Some religions have an open attitude towards other religions, while others are closed, i.e. have low levels of tolerance. Countries where population practices religion that is not tolerant for other religious views, as by a rule, develop more slowly than countries that are open to accepting new and different attitudes and values.

Values are basic for classifying things as good or bad, right or wrong, important and unimportant. Attitudes represent relation towards certain things. The value attitudes influence the culture. One of the ways to examine differences in value attitudes is analysis of the value scale (Figure 2).

Figure 2. Value attitudes

One set of values	The second set of values
- Most people are bad	- Most people are good
- Avoidance and negative opinion about people	- The man is a human being
- Attitude towards men is unchanged	- Individuals are subject to changes in thinking
- Resistance and fear to the different	- Acceptance and appreciation of differences
- Lack of trust	- Trust
- Security	- Preference for risk

Source: Rughman A., Hodgetts, R. (1995,129)

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On the basis of this picture it can be established which cultures are open systems and which are closed. Positive or negative or indifferent attitudes towards other people are based on preference for certain values. It does not always have to do with relations to other. Also, it may have to do with attitudes to certain countries and values from these countries. Open systems develop faster economically compared to the closed ones.

Relationship to material things differs from country to country. We can talk about material values, which are prone to changes in accordance with economic and social development. In some cultures possession of material resources is more important (e.g. USA) while in other, family ties and friendship are more appreciated (e.g. Serbia). When studying material culture, the way that people make things it is taken into account (technology that they have), who makes them and why. Also, basic economical structure is taken into account: transportation, communication, energy availability and social infrastructure. If countries are technologically developed, people are inclined to believe in themselves, that is, to believe that they influence things that happen to them, and not to believe in destiny. Their values are also more material due to high living standard. Accordingly, it may be concluded that elements of material culture influence values and beliefs. Cultural level and relation towards technology are manifested in many ways. In the USA, Japan, Germany and other cultures with high technology level, majority of population consists of people with high technological education, so that they accept and start using new technology rather quickly. So, economy can be observed in a way how people use their capabilities and how they benefit from that. Changes in ways of thinking and amount of income level influence creation of new benefits. Countries with a higher level of material culture have the opportunity for faster economic development than countries where possession of material resources is not appreciated to a greater extent.

Education is an important element of culture. Education level influences people's behaviour a lot. Educated people know and read more. With development of technology and productivity also grows participation rate of educated people in population (Obradovic, 2008). In majority of countries, a growing trend of need for education has been recorded over the past decades. Glaeser et al. (2002) suggest that the effect of history on present economic growth reflects the accumulation of human capital, which in turn affects the institutional results. Education plays a key role in evolution of institutions. It is common knowledge that educated people are more willing to accept changes, which influences that a country with a large number of educated people have the possibility of faster economic growth. Also, democracy functions well when people accept it as a legitimate instrument for resolving conflicts, but it also requires specific cultural characteristics and educated population.

Critical aspect of culture is also social structure, i.e. social relations among people. Social relations are a way in which society members relate to each other.

Social organisations, institutions, general social climate affect the way people mutually behave with each other and organise their life activities. Position of a man and woman in society, family, social classes, reference groups, age groups, are different within each culture and they influence economic growth because they have effect on behaviour, values and people's everyday life. Certain segments of social structure are very important for studying impact on a country economic development. The general social climate may have great importance and great influence through certain dimensions: national ideology, relation towards foreigners, nature and level of nationalism, relation towards innovation and changes.

National ideology is a way in which citizens and certain societies value different stimuli and react to them (Donald and McCulloch 1999, 142). There are certain differences in responding among people in different countries. There, where national pride is stronger and more expressed, it may have negative impact on acceptance of foreign values system, which may slow down economic development of a country.

Relation to foreigners is different in different countries, as well as relation to any foreign influence. Some countries even choose closing and isolation as a way of reacting to foreign influences (for example, North Korea). Foreigners, also when they are not a threat to the local economy, are mostly treated as something different (inferior or superior). Countries that have negative attitude towards foreigners have generally slower economic growth and development.

Nature and level of nationalism: Nationalism is a relatively recent phenomenon in human history. Strong national states come into being by falling apart of great empires. Emphasised nationalism and national pride, they mainly force on foreign companies to accept local norms and methods of doing business. Nations and national states which fear foreign domination are generally highly restrictive to foreign business and capital, which can slow down economic growth of the country.

Relation to innovations and changes: Traditional societies show higher resistance to changes compared to developed industrial countries. There are countries with huge resistance to changes which is why investors are orientated to the countries that are more opened and dynamic. Even when there is no resistance to innovations, it is important to understand that the speed of introduction, acceptance and diffusion of innovations process in a given socio-cultural milieu influences economic performance. Traditional societies where that process is slow will also have more slowly economic development.

Typical social structure of certain societies reflects social position of individuals and social groups, as well as current relationships between them. It is possible to identify three distinctive phases in development of social structures, through which certain societies pass: traditional, leadership and status societies (Ferraro 1998, 57).

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Traditional societies are based on strong family relations and emphasised social role of the family. Many societies are traditionally oriented even today. Arabian Peninsula is a typical example. Family in these societies has great influence on its members, and the oldest member is usually dominant. Family is a center of social activities, has huge influence on education and behaviour of young members, determines the specific position of a woman, and it is also appears as an active participant and bearer of economic activities. Most of these countries are characterised by slower economic growth.

Leadership societies are usually characteristic for nations which have rapid economic development. Such societies are usually dominated by strong personalities or special leaders. Traditional values and interrelationships gradually weaken. Many developing countries have special leadership structure (Brazil, China, etc.).

Status societies are typical for the most developed and richest countries. There individuals, more and more, emulate behaviour of others. Identification with social classes and corresponding reference groups is very important.

Taking into consideration existence of numerous components of culture, in further elaboration, the two most important elements of direct relevance to economic growth (trust and relationship to the current waiver for the sake of future benefits (savings)) are analysed.

2.1 Confidence

Economic interactions often rely on mutual trust between the stakeholders. For example, workers believe that at their end of the month, it will be paid a salary by the employer. A trader who receives a check, believed that the buyer will pay for downloaded goods. The shareholders believe that they will receive their dividends from the profits of the company. Without confidence, economic activity would be less safe and more funds would have to be engaged to ensure that transactions are fulfilled by economic agents. The society would lose the benefits obtained by creating a complex form of organisation (for example, allowing people to specialise in specific areas or use of the advantages of trade). Trust has a direct impact on individual behaviour through cultural values and priorities (Akerlof and Kranton, 2000). That is why the function of trust can be viewed as a “subjective probability with which an agent assesses whether the other agent or group of agents perform a particular action” (Gambetta, 2000) and as such may be included in standard economic models. It is obvious that a society in which individual businesses can not rely on others to meet business obligations, will be poor.

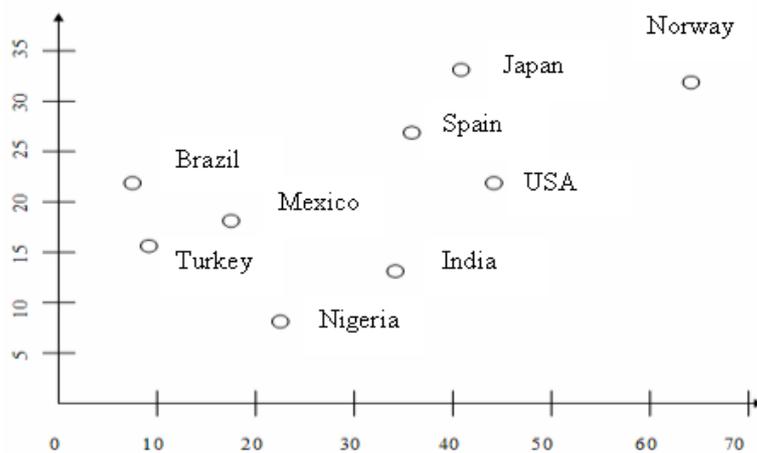
Economist Kenneth Arrow (1972) once wrote that “virtually every commercial transaction has an element of trust within itself”, especially if it requires a period of time. A part of economic underdevelopment can be attributed to the lack of mutual trust. A society in which everyone conducts in accordance

with business ethics would be better, than one in which people are not honest. One of the forces that drives people to be honest is the effective power of the state. If the economic entity does not fulfill its contractual obligations, it can be sued. However, the roots of confidence go much further than the power of the state. There are a number of cases of economic interactions in which neither side was in a position to rely on the legal system or lawyers, but where people continued their operations based on their promises.

Fukuyama (1995) directly connects trust and economic development. There are no differences, between the trust that arises from a better functioning of the institutions (which is often a result of economic development) and the cultural component of trust. It is assumed that culture acts as a force which may explain why people are honest, even if it is not in their interest. If the companies differ in the degree of present trust, it is expected that these differences affect the economic results. However, how can we measure trust and impact on economic development? One research published the results of a survey conducted in a representative sample of countries (Knack and Zak, 2001). In this study, the question of respondents was analysed: "Generally speaking, would you say that most people can be trusted or is it necessary to be cautious in cooperation with them? " The average response, ie. the mean value observed for the entire sample, was that 35.8% of respondents thought that most people can be trusted. However, there was a large difference in the responses between the observed countries. In Norway, 61.2% of respondents thought that most people can be trusted, while in Brazil, only 6.7% of people agree with that attitude.

Figure 3: The ratio of investment and trust

The percentage of investment in GDP (average, 1960-2000)



Proportion of people who say that most people can be trusted

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Interpretation of confidence is probably affected by the experience of people who answered the survey and it should be sufficient to indicate the state of business and social environment of the country where they live. The second approach was very direct experiment (Knack and Keefer, 1997). In 15 different countries, a number of wallets with \$ 50 in them and the name and the address of the owner were deliberately "lost" in public places. The researchers kept track of those wallets that have been returned intact. The correlation coefficient of this measure with confidence questionnaire was 0.67, indicating that the estimates of the people for their community was absolutely correct.

Investment as an economic category than relies on trust, as an element of culture. Each investment is a form of investment that takes time as a resource. Figure 3 illustrates that in a sample of the variety of countries, there is a positive correlation between trust and investment.

As the variable of culture, trust has serious limitations. Trust is not only acquired as element of culture. People can develop trust through quality legal system or as a result of strategic interactions (Axelrod, 1984). Trust may even be the result of optimal investment in social capital (Glaeser, Laibson, Sacerdote, 2002). Moreover, culture can affect economic outcomes through other mechanisms rather than through trust. Trust can influence the economic decisions of people in different ways. Trust is particularly important when the transaction implies someone unknown to the buyer or the seller of goods in another country, when the transaction takes place in a period of time before the end of the spot, and when legal protection is imperfect mechanism. For example, international trade is an area where trust plays a significant role. Guise, Sapienza and Zingales (2004) use data about the relationship of trust between European countries to study whether and how important is international confidence in the bilateral trade between these countries. By analysing the movement of goods, funds and foreign direct investment, they find that the key issue of trust for all of these transactions is the following: if economic agents believe a country's transactions participants in another country, then there is a tendency to exchange more goods, financial assets and investments with them.

2.2 Relationship with Savings

Why are cultural influences changing slowly (Roland, 2005)? First, parents have a natural tendency to teach children what they have learned once, from their predecessors, despite the achievements of the optimality of such beliefs in the present moment (Bisina and Verdier, 2000). Even when cultural norms were effective in the past, their use is prolonged and they become inefficient (Grusec and Kuczynski, 1997). Second, organisations that play an important role in promoting culture and behaviour patterns (state, church, interest groups, etc..) may have an interest in a continued promotion of any belief that can provide a rentier position. Finally, some cultural norms can produce inferior outcomes in terms of economic

efficiency, but as such they are highly desirable and accepted in society (e.g. high fertility is often present in economically poor countries).

Particular feature of culture that is often mentioned as the engine of economic development, refers to a belief, that the effort that an individual invests in the future is likely to pay (e.g. no one would be educated, if they did not believe that education will bring personal benefit and satisfaction). If individuals own economic success associated with the choice of what they do, then they will probably be more motivated to work hard and diligently, to invest in the future, to innovate and undertake cost-effective initiatives. In contrast, if individuals evaluate success based on the absence of an impact on their future, they are likely to be passive and have a resigned attitude to economic activities. Almost none of the parameter does not reflect this better than the savings rate. The attitude of the individual and society towards the economic prospects in the future is embedded in the position of savings.

Country's economic growth is closely linked with the rate of savings. There is no doubt that there are large differences between countries in the rates of savings. If cultural differences between countries affect the rate of savings, then they affect the level of economic growth. For example, in the period after World War II, Japan, South Korea, Taiwan, Singapore and Hong Kong have spared much larger part of their national income than any other country in the world. All these countries have a culture that has been heavily influenced by China, suggesting the idea about the existence of a common "Konfuchian" element that may explain their similar behaviour. Testing these theories is of course very difficult, because in addition to high savings, East Asian countries also share many characteristics not directly related to culture.

Through a process of socialisation, which is maintained and transmitted, culture influences the attitudes and values of the individual. There are different values that affect economic preferences (such as fertility and labour force participation), and political preferences (such as attitudes related to fiscal distribution). Culture can affect economic performance through both channels. Are cultural differences in individual preferences related to attitudes towards savings that have real influence on the formation rate of savings in individual countries? Research at the microeconomic level (Knowles and Postlewaite, 2004) has not only documented that the attitudes towards savings between the children and parents have a high degree of correlation, but that it is conditional on the behaviour of children and it is correlated with the preferences of their planning horizons. The recent macroeconomic research (Guise, Sapienza, Zingales, 2006) has also obtained interesting results. They used standard economic specification of savings implied by the theory of life cycle. The dependent variable is the country's savings rate, measured through the ratio of national savings to GDP. Other variables were the growth of per capita income, dependency ratio (ratio of population aged 65 and under 15 years of age to total population) and public savings. These changing attitudes on life cycle theories had a predictable effect on savings rates and trends

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were statistically significant. Higher rates of economic growth lead to higher savings, lower dependency ratio, higher saving, and higher public savings to higher overall savings. Together, these variables explain 58% of the difference in the rates of savings. By combining these variables with the percentage of people in each country who considered it important for children to learn frugality, this ratio changes significantly in the same direction stressing the previous results. The 10% increase in the share of people who think that the value of thrift which children should be taught, is associated with a 1.3 percentage point increase in national savings rates. These results suggest that to understand the difference in the rates of savings, it is important to measure cultural and economic variables.

Conclusion

Most studies present in modern economic literature, demonstrate the connection between culture and economic outcomes based on detailed arguments in narrative form, and very rarely illustrate statistical data. For example, Landes (1998, 516) considering the basic questions (what drives the success of the national economy) concludes the following paragraph: "If we learned anything from the history of economic development, it is that culture makes all the difference." From the above mentioned, it can be concluded that economic growth changes cultural values of a country. The most important aspect of these changes is the application of modern methods of production and exchange. Urbanization, openness to foreign influences and ideas, as well as enhanced education also have a significant impact on the attitudes and values of residents of a country. Modern culture raises the level of income and higher income leads to improved culture. The mechanism of cultural change produces an effect which enhances the other factors impact income.

In some cases, government policies are specifically aimed at changing the culture, in order to create a more favorable climate for economic growth. In other cases, cultural change as a result of government policy are incidental by-product of economic policy. Culture (human values, attitudes and beliefs) is not usually analysed in economic circles. However, a growing number of economists argues that culture is important for economic growth. As a rule, the individual has no control over the cultural heritage because it can so easily change their own ethnicity, family history or religious beliefs, so it is difficult to change cultural habits in individuals and society as a whole. Culture influences many important economic decisions that people make, including how hard they work, how much they save, provide quality education for their children and how well they collaborate with their colleagues. If countries differ in how their culture is affected by these decisions, such cultural differences certainly affect the economic results. The conclusion that culture is important for economic growth is just a beginning of the research in this area. Ideally, it is possible to measure how important culture is in the same way, as it is possible to measure how the accumulation of capital is important in determining the level of income of the country.

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KULTUROLOŠKE RAZLIKE KAO FAKTOR EKONOMSKOG USPEHA

Rezime: Stavovi i vrednosti koje čovek poseduje su važan faktor ekonomskog uspeha. Ljudi koji marljivo rade i planiraju budućnost najverovatnije će uspeti, a ne oni koji su lenji ili imaju pasivan stav. Međutim, ne bi trebalo reći da je stav prema radu, jedini faktor ekonomskog uspeha pojedinca. Ako je razlika u stavovima važna za individualni uspeh, logično pitanje je da li ona može biti važna i za ekonomski uspeh zemlje kao celine? Da li su razlike između zemalja u kulturi, tj. vrednostima, stavovima i verovanjima koje preovlađuju u društvu, delimično odgovorne i za razlike u ekonomskim rezultatima? Upravo testiranje ovih hipoteza predstavlja temu ovoga rada. Ideja da je kultura faktor bogatstva jedne nacije relativno je novijeg datuma.

Ključne reči: kultura, ekonomski rast, poverenje, vrednosti, društvo.



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COMPARATIVE ANALYSIS OF SUSTAINABLE RURAL DEVELOPMENT STRATEGY IN NEIGHBOURING COUNTRIES – THE BASIS FOR CREATING EFFECTIVE SUSTAINABLE RURAL DEVELOPMENT STRATEGY IN SERBIA

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Abstract: Rural development policy is the basis for designing national strategies for rural development as a very important development document. In present time there is a development concept of sustainable rural development, which represents the result of integration of rural development and sustainable development policies. The research presented in this paper aims to identify some determinants for creating policy and strategy for sustainable rural development. Given that Serbia still has no strategy for rural development, the paper, according to developed European countries, points to the critical elements of designing and implementing this strategy. Some of the criteria for analysis are: the objectives of rural development, funding sources, the indicators of achievements, proposals for solutions. The concept of a national strategy for sustainable rural development should form the basis for creating partial development strategies for different rural areas, which will better define the needs and align with available resources and priorities.

Keywords: rural areas, sustainable development, policy and strategy for rural development.

Introduction

A rural development policy is a very important part of development policies in many countries. This is confirmed by the example of the European Union, where rural development is a major priority in development. In order to realise the policy of rural development, a strategic framework for identifying

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available resources and prioritization of strategies for rural development is required. In addition to the strategy, an important document in guiding rural development policy is the rural development program.

The subject of the analysis in this paper is the rural development strategy that should be the basis for long-term development policy of rural area of the large territory of the Republic of Serbia inhabited by less than half of the total population. *The aim of this study* has been to examine the critical elements of the framework for the development of effective strategies for sustainable rural development. An important aspect in this direction is an appropriate national framework for the formulation of policy for sustainable rural development and direction of development in the long run, taking into account economic, environmental and social dimensions of sustainable development concept.

The previous policy for rural development of Serbia was mostly based on short-term programs and elements of the strategy development for certain sectors (agriculture, mainly). In the last few years, there have been suggestions for a rural development strategy. The subject of the analysis in this work is the *Draft of Strategy for Rural Development of Serbia in 2010*, which is conceptually quite different from rural development strategies of countries in the region.

With the help of comparative methods and analysis methods, this work presents a survey of strategies and programs for rural development of several European Union countries and the countries in the region, and the synthesis of the results has led to the guidelines for creating effective strategies for rural development in Serbia.

1. Framework Modeling for Sustainable Rural Development Policy

One of the important issues in policy development in many countries is the integration of sustainable development and agriculture development policy. The result is the concept of sustainable rural development policy. It is in line with modern development concepts that simultaneously connect and recognize several development dimensions – economic, environmental and social.

Success in achieving sustainable rural development presupposes an adequate framework of national policies for sustainable agricultural and rural development. “The rural area is a specific economic, social and spatial environment. It is, therefore, necessary to have an integrated management of rural development” (Đekić 2010, 204). The ultimate goal is to create strategic plans and programmes whose implementation would influence the direction of rural development, development of non-agricultural activities, prevention of the depopulation of these areas, provision of enough food for the domestic market and active participation in foreign trade in agricultural and food products. “In rural development strategies, until now, three conceptual approaches have been

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theoretically created: strategies focused on particular sectors (sectoral approach), the strategy focused on the rural environment (physical access) and strategies focused on the population” (Bogdanov 2007, 41). Implementation of such strategies should allow the increase in the competitiveness of the agricultural sector, but also other sectors within the rural areas. During the integration of rural and agricultural policies, it is necessary to consider the environmental dimension. An essential component in this development is the concept of sustainability and direction of development in the long run, taking into account both economic and environmental and also social conditions in rural areas.

Very often, as obstacles to the creation and implementation of such policy development, the following conditions occur:

- 1) Low level of awareness of environmental issues and the need to preserve the natural environment;
- 2) A lack of skills and experience to integrate sustainable development strategies and programmes of economic development of rural areas;
- 3) A lack of clearly defined and known in advance budgets to finance activities under the strategy and programme development;
- 4) A lack of appropriate indicators for monitoring and analysis of implementation strategies for rural development.

Thus stated deficiencies or obstacles can be transformed into goals for the creation of sustainable rural development. One of the goals may be the integration of elements of sustainable development and agriculture development policy, tourism, small and medium-sized enterprises, employment policies, poverty reduction and other interrelated policies and strategies at the level of national economy. In this sense, it is necessary to make multisectoral plans and programmes, to create measures for diversification of economic activities in rural areas, provide adequate physical and institutional infrastructure. An important goal is to improve the skills and the ability of policy makers and stakeholders involved in management policies, programmes and planning activities.

To manage this kind of development policy, it is necessary to harmonise numerous activities:

- Revise the national rural development policy;
- Incorporate elements of sustainable development strategy into the strategy of sustainable rural development;
- Consider and analyse data on population and demographic trends;
- Special attention to the social component of sustainability is reflected in the problem of poverty in rural areas;
- Review the legislation relevant to the rural development policy (amendments to the law, adoption of new legal and regulatory framework);

- Encourage the development and transfer of appropriate technology for agriculture, with the aim of improving the competitiveness of this sector;
- Customise programmes that take into account improvements in the production, distribution and marketing of agricultural products;
- Harmonise policies for sustainable rural development programmes that include activities related to natural resources (forest management activities, water, land, etc.)
- Encourage social and economic programmes that support sustainable rural development, especially in marginal areas (less developed areas, mountainous areas, the areas where population is predominantly old, areas with poor natural resources for agricultural production);
- To support the research and finding solutions to specific problems, and establish cooperation between researchers and users of new solutions.

In addition to compliance activities for the policy of sustainable rural development at the national level, it is required that national policies are harmonised with international programmes and policies. Thus, in the European Union, all member states generally harmonise their strategies and based them on strategic frameworks and policies at the EU level (most rural development strategies of EU member states is based on the *EU Rural Development Policy for 2007-2013*) (The EU Rural Development Policy 2007-2013 2007). Of particular importance are the adjustments related to food supply in subregional levels, including regional economic integration for the provision of sufficient quantities of food. Also, it is important to comply with relevant international principles and regulations on environmental protection, with the aim of integrating agricultural and environmental policies and establishing ways for their mutual support. In this regard, it is necessary to strengthen national, regional and international systems and networks for the identification of environmentally suitable technologies, exchange of information on techniques and tools for managing agricultural and environmental policy.

2. Policies and Strategies for Sustainable Rural Development in the EU

Rural development policy is very important for the EU, since “rural area makes 90% of the EU and this area covers more than half of the population” (The EU Rural Development Policy 2007-2013 2007, 3). Today, rural areas are facing strong challenges. One of the challenges is to increase the competitiveness of enterprises and agricultural production in rural areas. Then, increase the average wage that is lower in rural than in urban areas. Also, the challenge is to develop the service sector, which is also less developed in rural than in urban areas.

At the EU level, there is a fixed policy of rural development, and each member can decide to act independently in their own rural development policy and strategy. However, this approach of independent action is not present and rural

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development strategies of each member state are mainly based on unified policy at the EU level. In the *EU rural development policy*, it is important that many issues of rural development cannot be perceived only at the national level. For example, environmental policy and sustainable development are issues of wider international importance. Implementation of rural development measures is funded from the central part of the EU budget and partly from the budgets of individual member states. The rules governing the rural development policy for 2007-2013 were defined as the European Commission Regulation No. 1698/2005. According to this Regulation, “the EU rural development policy for the period 2007-2013 should focus on three areas:

- Improving the competitiveness of agricultural and forestry sectors;
- Improving the environment and rural areas;
- Improving quality of life in rural areas and encouraging diversification of rural economy” (The EU Rural Development Policy 2007-2013 2007, 3).

In order to achieve the defined objectives, it is necessary to pay more attention to the strategic approach for increasing competitiveness, creating new jobs, introducing innovations in rural areas and improving communication between central and local actors in terms of proposing programmes, their implementation and compliance needs and goals.

There are public debates on new objectives of rural development for the period to 2020 due to the fact that the European Union adopted a strategy for “Europe 2020” (Europe 2020 2010). In this Strategy „fundamental guidelines and priorities for future development are: 1) *development based on knowledge*, 2) *sustainable development*, 3) *inclusive development*” (Europe 2020 2010). Thus, these priorities are incorporated into the new concept of rural development to contribute to meeting the challenges defined by the European Union. *Development based on knowledge* means increased competitiveness of the agricultural sector by introducing new technologies and innovations, wider representation of „green” technology, investments in education and research. *Sustainable development* deals with land management, promotion of renewable energy sources, increasing efficiency of resource used by new technologies, greater use of new research results, the reduction of greenhouse gas emissions. In order to achieve *inclusive development*, the greater use of economic potential of rural areas is required as well as development of local markets and job creation, poverty reduction in rural areas and continued income support for farmers. (The CAP towards 2020 2010, 6)

Based on these priorities *the objectives are defined by EU Rural Development Policy until 2020* (The CAP towards 2020 2010, 10):

- 1) *The competitiveness of the agricultural sector* - which can be realised by introducing innovations and increasing the efficiency of resources utilisation in this sector.

- 2) *Sustainable management of natural resources* - will ensure adequate care and proper measures for the protection of the environment, the appropriate measures for preserving soil quality, greater concern for climate change.
- 3) *Balanced territorial development of rural areas* - can be achieved by improving living conditions in rural areas by creating more effective links between urban and rural areas, and providing support to young people in rural areas, which should be a priority.

Recognising these priorities in the development, rural areas within the European Union will reach a higher level of employment, productivity and social cohesion. Future development is designated as “green”, which means ensuring economic growth with a high degree of respect for the environment.

3. The Concept of a National Strategy for Sustainable Rural Development and Related Partial Strategies of Different Rural Areas

When implementing the national rural development policy, it is necessary to adopt and implement appropriate national strategies and measures to accelerate the progress of various rural areas. National strategy for rural development is a strategic framework for identifying key areas and priorities in the development of rural areas. This strategy defines the vision of the rural sector development and its role in the overall development of national economy. National strategy for rural development is a comprehensive and unified framework for the mobilisation of available resources and their effective use for the realisation of set goals. Also, the national rural development strategy should define the needs and align them with available resources and priorities. This strategy forms the basis for the making of rural development programme.

Partial strategies need to focus on resource development of rural areas, or to diversify the economic base, restoring the capacity and reducing the share of shadow economy. The analysis of current situation and defining the desired directions of development are key elements in the process of formulating a strategy for development of certain rural area. Important elements of this process include the following:

- *Establishing long-term goals and priorities for development.* - Like national strategies, partial strategies and plans should also be based on long-term goals or vision. In that regard, partial strategy should be harmonised with the economic, social, environmental and institutional priorities.
- *Networking and good coordination at all levels.* - In order for partial development strategies to accomplish their goals, it is necessary to create mechanisms for linkages and coordination between stakeholders at national and local levels involved in the process of creating and implementing strategies for rural development.

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- *Efficient management of resources and systems.* - To create effective strategies for rural development, there is a need for quality personnel. This means that it is necessary to ensure good coordination, management and control. Strategy quality and its implementation are dependent on clearly defined tasks and responsibilities of each participant in the process. An important element for the design and implementation of the strategy is establishing communication with the public to receive feedback and inputs for policy-makers and strategy-makers.
- *Identifying control indicators.* – In order to monitor progress in implementing the strategy, it is important to identify key indicators. Choice, that is, the design of indicators requires a base of reliable information about the current state and current changes.

For each area, in accordance with its specific characteristics, it is necessary to develop local action plans that will define more closely the specific needs and opportunities for the development of the area. Implementation of adopted policies should be the responsibility of the local level.

4. Characteristics of Policies and Elements of Rural Development Strategies of Countries in the Region

By analysing the elements of rural development strategy of Romania, Bulgaria and Slovenia, it is obvious that all of them are based on the same strategic objectives and strategic goals that are basically taken from the *Rural Development Policy EU 2007-2013*. However, there are some specific features of these strategies.

National Strategic Plan of Rural Development of Romania (2007-2013) in addition to the three strategic objectives defined at the EU level (1) improving the competitiveness of the agricultural sector, 2) improving the state of the environment and rural areas, 3) improving the quality of life in rural areas and encouraging diversification of economic activities), includes a fourth goal, that is the implementation of LEADER¹programme. Thus, all four objectives of rural

LEADER is the EU's programme for rural development. In these projects, a local community has the initiative to promote integrated and sustainable rural development. This programme began to be applied in 1998. The main characteristic is that it is based on local partnerships, public and private, that are creating development projects for the area. Area of a LEADER programme is usually framed by administrative boundaries and it does not have more than 100,000 people. LEADER project has been renewed three times as follows: LEADER I (1989-1993), LEADER II (1994-1999) and LEADER + (from 2000). *The essence of the LEADER programme* includes the following: the programme applies only to the territory bordered rural area, it supports the development of strategy for the development of rural area, it gives support to local people to participate in the implementation strategy and rural development programs, it initiates the establishment of local action groups, it establishes cooperation with other rural areas to exchange experiences, and it enables the international

development are based on the concept of sustainable development. National Strategic Plan of Rural Development of Romania has clearly identified quantitative indicators for monitoring achievement of each goal. Budgets are provided for each activity to achieve the set goal. The budget structure is such that the first objective takes 45% of the budget, the second 25%, third 30% and fourth 2.5% of the total budget.

National Strategic Plan of Rural Development of Bulgaria (2007-2013) includes targets that are complementary and fully compatible with the development priorities of the EU (employment policy, economic growth, sustainable development), the EU policy in the field of environmental protection and natural resources management in rural areas, as well as with the socio-economic conditions in rural areas in Bulgaria. Each objective is clearly presented and explained through the entire hierarchy of objectives and activities for its realisation. The strategy has clearly identified indicators for monitoring achievement of each goal. The analysis of the budget is very modest and anticipated budget for the objectives of rural development for the period 2007-2013 amounted to 2.6 billion euros (National Strategy Plan for Rural Development of Bulgaria (2007-2013) 2007, 43).

The National Strategic Rural Development Plan of Slovenia for the period 2007-2013 has been also consistent with the guidelines and instructions for making the EU's rural development strategy. The strategy contains all the elements included in rural development strategy of other EU member states.

What distinguishes the National Strategic Rural Development Plan of Slovenia from the others is that it clearly gives priority to rural development of Slovenia, in order to raise the competitiveness of economic sectors in rural areas. Indicator for monitoring the achievement of this goal is labor productivity. In order to reach the European average in labor productivity in the agricultural sector or the average of most developed countries in the EU, Slovenia requires more emphasis on education of farmers. In addition, it is necessary to improve the technology for agricultural production. (National Strategy Plan for Rural Development of the Republic of Slovenia from 2007 to 2013 2007, 6)

The Rural Development Programme of Slovenia for the period 2007-2013 represents the operationalisation of the adopted strategy. The first 77 pages deal with the problem of situation in the rural areas of Slovenia in the light of strengths and weaknesses. Then, in the current situation analysis, there is an analysis of the impact of previous programmes to support rural development (since 2004) through various forms of pre-accession funds and funds that are on-hand since entering the EU. Rural development objectives of Slovenia are basically the same as the

economic cooperation. The main *goals* to be achieved by the implementation of the LEADER programme are: to preserve natural and cultural wealth, the creation of an adequate business environment for the development of economic sectors in rural areas, participation of local people in developing strategies and programmes for development of these areas, improving living conditions of rural areas and strengthening social connection.

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objectives of rural development in other EU countries. The overall objective is sustainable rural development. Implementation of planned rural development policy should help rural communities to become more competitive sectors of the economy, to create new opportunities for employment and diffusion of innovation. The programme provides a focus on investment in human resources, knowledge and skills, new methods of environmental management and job creation in rural areas. In this way, the rural areas become more attractive for investors. Rural development policy should indirectly support sustainable development of rural areas by allowing all activities to be coordinated with the environmental goals and objectives of preserving the natural environment.

The most important indicators that should be the result of the implementation of this programme are: economic growth, employment, higher productivity, halting the trend of declining biodiversity, improving water quality, improving soil quality, contribution to the fight against climate change, increasing energy production from renewable resources (Rural Development Programme of the Republic of Slovenia 2007-2013 2007). The budget is directed in a way that separates the majority of funds for improving the state of the environment, and to increase competitiveness (over 85% of the budget for these two components). The total budget for financing the activities envisaged by this programme is over 1.1 billion euros.

In addition to the experience of these countries, it is relevant to learn about the elements and policies for rural development in neighboring countries. First experiences with Montenegro, and Croatia are as follows.

Montenegro has no defined and adopted separate strategy for rural development, but Strategy for Development of Food Production and Rural Areas for the Period from 2007 to 2013. Also, in this Strategy the emphasis is on agricultural rather than rural development policy. However, it is clear that rural development policy will have the most important role in further agricultural policy. The planned budget for rural development is about 30 million euros per year. This strategy document clearly presents the position of Montenegro on aspirations to move closer to EU standards. The Strategy envisages adapting the institutional, legal and market framework to EU standards. The document explicitly states that „since the concept of agricultural policy can not be neither protectionist nor liberal, but rather the concept of sustainable agriculture” (Montenegrin agriculture and the European Union - Strategy for Development of Food Production and Rural Areas in 2006, 11). To achieve this concept, the goal is to develop multifunctional role of agriculture and modernization of the institutional framework necessary for integration of Montenegro into the international community and European processes. Planned reforms in the agricultural sector are concentrated in three segments: agricultural policy reform, harmonization of legislation with the requirements of European integration and institution building. Reforms in the area of agricultural policy require the „three reform processes related to rural development:

- 1) raising the competitiveness of agriculture and processing industry,
- 2) better management of natural resources,
- 3) diversification of economic activities of rural people” (Montenegrin agriculture and the European Union - Strategy for Development of Food Production and Rural Areas in 2006, 12).

Thereby, it is noted that in the planned reforms the social component was not perceived. It presents the third pillar of sustainable development concept, which is defined in such reform processes as underrepresented.

Rural Development Strategy of the Republic of Croatia 2008-2013 was based on the basic goals of the *National Development Strategy of Croatia*, which include: rapid economic growth, employment, competitiveness, reduction of regional disparities. The strategic goals for rural development in Croatia are:

- Improving the competitiveness of agricultural and forestry sectors;
- Preservation and sustainable use of natural environment, natural and cultural heritage;
- Improving quality of life in rural areas;
- Improving the institutional environment. (Rural Development Strategy of Croatia from 2008 to 2013 2008, 37)

All four strategic goals are clearly aligned with the principles of sustainable development. Each strategic goal sets out the qualitative and quantitative indicators for monitoring progress in implementation. The planned budget for the implementation of rural development was 1.5 billion Croatian kuna in 2009, or over 200 million euros a year.

5. Comparative Analysis of Some Elements of Designing and Implementing Rural Development Strategies of Countries in the Region

A comparative analysis of the presented strategy of rural development is designed with the goal of positioning Serbia in relation to the EU countries and some countries in the region to progress in creating a strategic framework and defining strategic guidelines for rural development. This analysis included the following criteria:

- 1) Length of time in which the strategy applies;
- 2) Foundation of the strategy on the concept of sustainable development;
- 3) Clearly highlighted goals of rural development;
- 4) Clearly named sources of funding and budget;
- 5) Monitoring implementation strategy;
- 6) Quantitative and qualitative indicators of results achieved;
- 7) Development of institutions to support rural development;
- 8) Previously carried out SWOT analysis;
- 9) Analysis of state/suggestions solutions.

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Analysis of the period that strategy refers to is particularly important in defining strategies for rural development in Serbia, considering that the time period for the proposed strategies for rural development in Serbia (Draft of Strategy for Rural Development of Serbia 2010-2013) is much shorter than the length of the strategic horizon of other countries.

Table 1 Comparative analysis of some elements of rural development strategies of countries in the region

Country Indicator	Serbia	Montenegro	Croatia	Romania	Bulgaria	Slovenia
The period covered by the strategy	2010-2013	2007-2013	2008-2013	2007-2013	2007-2013	2007-2013
Foundation of the strategy on the concept of sustainable development	Not clearly demarcated	Yes	No	Yes	Yes	Yes
Clearly highlighted goals of rural development	No	Yes	Yes	Yes	Yes	Yes
Clearly named sources of funding and budget	No	Yes	Yes	Yes	Yes	Yes
Monitoring of strategy implementation	No	No	Yes	Yes	No	Yes
Quantitative and qualitative indicators of results achieved	No	No	Yes	Yes	Yes	Yes
Development of institutions to support rural development	Institutions are only listed	Yes	Yes	Yes	Yes	Yes
SWOT Analysis	Yes	Yes (the analysis applies only to agriculture)	Yes	Yes	Only strengths and weaknesses are presented	Yes
Analysis of state / suggestions for solutions	Almost 80% of the text makes analysis of state	16.5% of the text refers to the concept of agricultural policy measures	76% of the text is analysis of state	42% of the text refers to the concept of rural development measures	58% of the text is analysis of state	Yes

It is evident that almost all rural development strategies are based on a concept of sustainable development. Strategies take into account all three dimensions of sustainability: economic, environmental and social. This way of conceiving the strategy is not represented in Serbia.

The objectives of future rural development in the Draft of Strategy for Rural Development of Serbia are not clearly defined. It is important to point out the high precision in defining these elements of the strategy of other countries.

Funding sources and budget are essential for creating opportunities for consistent strategy implementation and convergence of strategic objectives and activities to the real possibilities of the state. The *Draft of Strategy for Rural Development of Serbia* doesn't have specified sources of funding as opposed to the strategy of the countries analysed.

Monitoring the implementation of strategic actions on the basis of clearly defined quantitative and qualitative indicators is certainly an important element of strategic, control and management process. Pointing at this fact is important because almost all of the analyzed strategies for rural development pay special attention to defining these indicators, unlike the Draft Strategy in Serbia.

Institutional support to the creation and implementation of rural development strategy should provide an interactive link between national institutions and local rural population, i.e. to enable the participation of local people in implementing measures to better meet the needs of rural areas. Therefore, this segment of strategy is important. In addition to specifying the institutions of importance for the segment of the rural development policy, it is also necessary to perform the analysis of their real involvement in giving support.

In order to better comprehend the current situation and possible directions for future development of rural areas, it is necessary for the strategic framework to include some of the quality management support tools such as *SWOT analysis*.

It is notable that the strategic documents put greater emphasis on *an analysis of the situation* in relation to *recommendations for decisions*. In the *Draft of Strategy for Rural Development of Serbia* even more than 80% of the matter is related only to the analysis of the situation. Conceptually, there should be room for the segment related to proposing solutions and finding ways to get to these solutions because of the realization of specified development objectives.

Many of these approach deficiencies in the proposed *Draft of Strategy for Rural Development of Serbia* are eliminated by adopting the *National Programme for Rural Development in Serbia for the Period 2011-2013*, but Serbia still has no strategy for rural development that should contain all the listed and analysed elements. In order to improve the future of the Draft of future strategy for rural development of Serbia, it is necessary to further familiarize with its elements.

5. The Draft of Strategy for Rural Development of Serbia - Recommendations for Improvement

In August 2009 “*The Draft of Strategy for Rural Development of Serbia 2010-2013*” was passed. This Draft Strategy was expected to be adopted as the

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Rural Development Strategy for 2010-2013, but at the end of 2010 it was cancelled. Regardless of the proposed Strategy not being adopted, it is important to analyse its Draft in some sections and point out potential flaws in order to arrive at recommendations for its refinement.

The three-year period covered by this Draft Strategy is concerned too short to set long-term policies for rural development. The *Draft of Strategy for Rural Development of Serbia 2010-2013* (The Draft Strategy for Rural Development of Serbia 2010-2013 2009, 43) in part “Vision for Rural Serbia” by 2013, the general goals of future rural development in Serbia are determined by three components: a vision for the agricultural sector, a vision for the food industry and a vision for the rural economy and society. This indicates that the objectives of rural development in Serbia are of economic and social nature. The stated objectives are aimed at raising the competitiveness of the agricultural sector, development of food industry by improving product quality and development of small and medium sized enterprises and greater emphasis on the social component of the rural community. Very important environmental component, the first pillar of sustainable development, is not seen through the vision of the development of rural areas of Serbia. The above vision and objectives of rural development goals are identical with aims of rural development provided by the document of the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia under the name “*Sustainable Agriculture in Developed Rural Economy - A Vision for Agriculture and Rural Economy of the Republic of Serbia*” (Sustainable Agriculture in Developed Rural Economy - The Vision for Agriculture and Rural Economy of the Republic of Serbia 2007, 10).

However, the Draft Strategy for Rural Development specifically stated four strategic objectives for rural development in Serbia, which are obviously based on Regulation 1698/2005 of the European Commission and identical goals of rural development from EU countries: 1. Improving competitiveness of agriculture, forestry and food industry sectors; 2. Protection, conservation and improvement of environment in accordance with sustainable rural development; 3. Preparation and promotion of local initiatives and rural development strategies; 4. Improving quality of life in rural areas (Draft of Strategy for Rural Development of Serbia 2010-2013 2009, 44). The proposed objectives of rural development based on the premise that Serbia will in the period of implementation strategies get the candidate status for EU membership and will be made available funds for rural development (IPARD). On this basis, three areas have been proposed to achieve rural development:

- 1) improve market efficiency and implementation of EU standards,
- 2) preparations for the implementation of agro-ecological measures and local rural development strategies,
- 3) development of rural economy.

In the part of the Draft Strategy entitled “Consistency in programming”, each of the above four mentioned objectives is presented as a separate strategy. Thus, the proposed three measures of rural development are closely linked to the four strategies for rural development. From this, we can conclude that there is no single strategy for rural development in the given time period. Vision, strategic objectives and measures of rural development are clearly intertwined and we can not see the clear and consistent policy of further directions for rural development.

Regarding the budget, the Draft Strategy mentions in two sentences which domestic and foreign sources have been planned to fund the Strategy, without specifying the budget framework and its structure. It is evident that an important element of the strategy has not been adequately considered and defined. In addition, the Draft of Strategy for Rural Development of Serbia doesn't take into account how to monitor the implementation of the measures envisaged, nor provides a framework for quantitative and qualitative expression of the results achieved.

It should be noted that, in the meantime, the Ministry of Agriculture, Forestry and Water Management of the Republic of Serbia prepared “*National rural development programme of Serbia for the period 2011-2013*” (NRDP), which was adopted in February 2011. What is obvious is that the Draft of Strategy for Rural Development of Serbia 2010-2013 is fully embedded in NRDP. In addition, part of NRDP related to the analysis of the most important sectors in agriculture is, in fact, part of the National Programme of Agriculture in Serbia 2009-2011.

However, progress in the National Rural Development Programme of Serbia in relation to the Draft of Strategy for Rural Development has been made in the part that relates to the major shortcomings of the Draft Strategy - the budget for the programme period, and every single activity is clearly defined, and indicators for monitoring achievement of objectives and NRDP enforcement activities are clearly defined.

The objectives of rural development in Serbia are defined through the three priority axes on the model of EU rural development objectives (National Rural Development Programme of Serbia 2011-2013 2011, 114):

- 1) Improving market efficiency of agricultural holdings and application of high national standards of quality;
- 2) Preparatory activities for the implementation of agro-environmental measures;
- 3) The development and diversification of rural economy.

For each axis certain measures are provided that comply with the regulations of the European Commission (EC N0 718/2007) (Commission Regulation (EC) No 718/2007 of 12 June 2007 implementing Council Regulation (EC) No. 1085/2006 Establishing an Instrument for Pre-Accession Assistance (IPA) 2007) concerning

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the regulation of pre-accession instruments. Financing structure of the defined measures (in the form of incentives) is provided as follows:

- To implement measures under the first axis aims at 80% of the total funds available for rural development. The largest amount of funds committed for this measure is because the improvement of competitiveness of domestic production is determined as a priority. The secondary aim is to achieve European standards and the opening up of the economy of the Republic of Serbia to the world market;
- For the policy of protecting the environment from harmful effects of agriculture there is 3% of the total funds earmarked for rural development;
- For measures relating to the diversification of activities in rural areas there is 17% of the total budget for rural development. Secondary goal is to improve income of the employees in rural areas, and to improve competitiveness of rural population.

For each measure, NRDP defines the activities and clearly identifies funding, as well as indicators for monitoring the effectiveness of implemented activities.

The lack of policy for rural development in Serbia is certainly the lack of a strategic document which would define the long-term goals, which should be implemented with adequate development programmes. National rural development programme of Serbia for the period 2011-2013 was certainly a great progress in defining and realizing the objectives of rural development, but the period to which the programme applies is too short to define objectives, aligned with the priorities of rural development of the European Union and bring them closer to their implementation of high standards in area of agricultural sector, environmental protection and living standard of people in rural areas.

Conclusion

An adequate framework of national policies for sustainable rural development is the basis for creating strategic plans and programmes. To manage the development of this policy, it is necessary to harmonise numerous activities related to economic, social and environmental policies at the national level and with international programmes and policies. It is, therefore, important to position the national rural development policy in relation to other countries to analyse the progress in creating a strategic framework and set out guidelines for future development.

All EU countries have a strategy for rural development based on the rural development policy defined at the EU level. Countries in the region also have a strategy for rural development. Guidance for rural development in Serbia is based on the *National Rural Development Programme for the Period 2011-2013*, while the current rural development strategy, as an important development document, does not yet exist.

This paper has analysed a Draft of Strategy for Rural Development of Serbia 2010-2013 that, compared with rural development strategies of the EU countries and some countries in the region, has many disadvantages. Identified weaknesses and conceptual settings of this Draft are: 1) Brief strategic horizon (The Draft Strategy covers the period of only 3 years, 2) Strategy is not based entirely on the concept of sustainable development (the Draft Strategy does not include all three dimensions of sustainability - economic, environmental and social), 3) Great imprecision in defining the objectives of rural development (vision, measures and goals are unclear and do not set a consistent policy of the future rural development), 4) Funding sources were not specified, nor is the budget for the implementation of strategic activities, 5) The Draft of Strategy for Rural Development of Serbia does not monitor implementation of strategic activities, or define the quantitative and qualitative indicators of strategic processes, 6) In addition to specifying the institutions of importance for the implementation of rural development strategy, the Draft Strategy is an analysis of the real involvement of the institutions envisaged in supporting, 7) The Draft of the Strategy for Rural Development of Serbia is mostly based on the analysis of the situation, while very little importance is given to the proposals for solving many problems faced by rural areas.

The above shortcomings of the Draft of Strategy for Rural Development of Serbia 2010-2013 are also suggestions for its improvement. National rural development programme of Serbia for the period 2011-2013 contains some progress in conceptual terms in relation to the Draft Strategy and in part related to some of the identified deficiencies (it defines the goals of rural development more precisely, for each programme activity there is a defined budget, there are defined indicators for following up the objectives). However, the Rural Development Programme, which is scheduled for a period of two years, can not provide vision for the development of rural areas in Serbia, but it is a matter for a strategic document that would pave the long-term goals and courses of action in terms of sustainable development of the area.

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**KOMPARATIVNA ANALIZA STRATEGIJA
ODRŽIVOG RURALNOG RAZVOJA ZEMALJA U OKRUŽENJU
- OSNOVA ZA KREIRANJE EFEKTIVNE STRATEGIJE
ODRŽIVOG RURALNOG RAZVOJA U SRBIJI**

***Rezime:** Politika razvoja ruralnih područja predstavlja osnovu za koncipiranje nacionalne strategije ruralnog razvoja kao veoma važnog razvojnog dokumenta. U današnje vreme aktuelan je savremeni razvojni koncept politike održivog ruralnog razvoja koji predstavlja rezultat integracije politike ruralnog razvoja i politike održivog razvoja. Predmet istraživanja u ovom radu je identifikovanje nekih determinanti za kreiranje politike i strategije održivog ruralnog razvoja. Budući da Srbija još uvek nema strategiju ruralnog razvoja, u radu se, po ugledu na razvijene evropske zemlje, ukazuje na kritične elemente koncipiranja i implementacije ove strategije. Neki od kriterijuma za analizu uzeti su: ciljevi ruralnog razvoja, izvori finansiranja, pokazatelji ostvarenih rezultata, predlozi rešenja. Koncept nacionalne strategije održivog ruralnog razvoja trebalo bi da čini osnovu za kreiranje parcijalnih razvojnih strategija za različita ruralna područja, čime će se bolje definisati potrebe i uskladiti sa raspoloživim resursima i prioritetima.*

***Ključne reči:** ruralna područja, održivi razvoj, politika i strategija ruralnog razvoja.*



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GLOBAL MARKETING COMPETITIVENESS

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Abstract: *Globalisation process has resulted in a new international business paradigm, parallel with product globalization and business process globalization. Conducting business operations in the global market requires knowledge of complex business trends and fundamental tenets of achieving marketing competitiveness. On the one hand, changes in global environment remove companies' restrictions on market entry, while, on the other, they undoubtedly change the conditions of long-term sustainable competitiveness. Global marketing competitiveness increasingly rests on the rational exploitation of available business resources, active innovation of marketing know-how, and focus on both customers and competitors. The basis for this is sustainable and transferable competitive advantage, which is also perceived by global consumers as consumer advantage. Global companies strive to achieve high absolute value, i.e. high value in relation to minimised costs. This implies finding ways of meeting global challenges that competitors will not find easy or quick to respond to in an appropriate manner.*

Keywords: *globalization, marketing competitiveness, competitive advantage.*

Introduction

The key, i.e. specific factors of success are highly determined by fragmentation of the global market, and defragmentation of internationally oriented business entities. The contemporary concept of global competitiveness has arisen from the dynamic framework of corporate, i.e. economic prosperity of companies, states and regions, accompanied by more than obvious impact of innovative potential of global marketing activities and marketing qualification of companies in general.

Rapid technological development, global acceptance of free market, growing mobility of products, workforce, capital and knowledge are both the cause and consequence of the major changes in the global marketing environment.

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Although global growth and increase in social prosperity have been noticeable phenomena over a longer time period, economic crises and recession have stood the test of time, and still present a challenge to the total world economy, including the most stable and highly developed economies.

The 1990s were noted for market integration processes in the form of a fast economic development based on faster growth of service trade than commodity trade, transfer of the global industrial centre to East and Southeast Asia, strengthening integration links, deregulation process, reoriented international exchange flows from macroeconomic to microeconomic level, technology- and marketing-based competitive advantage, struggle to achieve economic leadership through affirmation of international competitiveness and raising the exchange levels of specialised products.

The first decade of the 21st century saw the emergence of new characteristics of the global market, with reduced volume of international product and service transactions, and changes in the distribution of economic power as the visible effects of the latest economic crisis. New conflicts, international terrorism, epidemics and growing economic insecurity undermine global economic stability and open the new issues of undisturbed growth and development.

Achieving global marketing competitiveness features as the basis of sustainable development and growth of globally oriented companies, as companies wishing to survive in the contemporary market have to keep devising and developing their own advantages. Changes in the global environment also demand a change in marketing programmes and different approaches to maximising long-term profitability. A good knowledge of competition coming from different directions, developing and implementing the best marketing strategies are a prerequisite for achieving marketing efficiency and effectiveness of global companies.

Characteristics of the Global Market

The parallel progress of regionalisation, liberalisation and deregulation processes is the most notable contemporary economic trend forming the global market. In addition to these processes and technology transfers, functioning of the global market has also been affected by foreign direct investment (FDI) flows, which has cumulatively resulted in a significant increase in international commodity and service transactions, up to the outbreak of the latest economic crisis.

Regionalisation process implies establishing regional connections in economic, technological political and cultural sense (Vidojević, 2005, p. 18). In economic sense, the beginnings of the regionalisation process coincide with the first steps in the development of the international economic integration system. International economic integrations are characterised by pooling national

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economies with the aim of reducing customs, non-customs and other limitations on international exchange, thus stimulating free movement of workforce, capital, technology and other production factors. International economic integration also implies joint approach to third countries.

One of the most important characteristics of the global market and world economy in general is global economic disbalance. In terms of economy, the most significant effect of the regionalisation process is reflected in the form of Triad, the leading regional economic integration. This example clearly illustrates how regionalisation process results in connecting and growth in intraregional exchange of the three focal points of global economic power: Japan and the industrialised countries of South and Southeast Asia, Western Europe, and North America. In marketing, financial and technological terms, Triad countries are connected in such a manner that the largest number of key international business transactions is conducted in this triangle.

Economic and business flows are much more manifest among Triad countries than between thus regionally integrated countries and other economies, that is, within the rest of the world economy. Regionalisation in the form of Triad has lead to scientific and technological superiority, rapid economic development and growing impact on global economy in general. Strengthening the intraregional exchange within Triad is accompanied by simultaneous decline in exchange between Triad countries and other economies, especially Africa.

Up to the outbreak of the latest economic crisis, Triad market was the most significant and fastest-growing market of many commodities, increasingly homogenised within. However, due to the effects of the latest conomic crises, it can no longer be said that this market covers the major segment of latent global demand, as BRIC countries managed to preserve their economic growth and manifest characteristics of mature global segments.

The low or negative growth rate in Triad countries, disused production capacities and reduced purchasing power increase the global impact of newly industrialised, i.e. emerging markets, bearing in mind, first of all, the unmet consumer demands in these markets.

Under the influence of the consequences of the global economic crisis, relationships within Triad can be expected to intensify competition between the three focal points of these global power centres, which will undoubtedly influence propagating integration processes in other global market segments.

Liberalisation process finalises the important changes in the global environment that became especially prominent over the past two decades, pertaining to eliminating technological, political, administrative and other barriers to the international exchange of products, services and production factors. Liberalisation process was accompanied by constant aspirations in opening national markets, initiated by the need to expand markets.

The trend of liberalising international exchange kept pace with strengthening innovation processes, increasing business efficiency, intensifying competition on a broader geographic scale, gradually resulting in higher global competitiveness levels.

Although liberalisation leads to market expansion and eliminating obstacles to international exchange, it also leads to manifest negative impact on the local, regional and global market. A special importance within the liberalisation process is taken up by investment flow liberalisation, especially in the FDI segment. Such liberalisation is supported by numerous bilateral and multilateral agreements.

The decisive point of liberalisation was the transformation of the GATT into the World Trade Organisation (WTO). The formation of the WTO directed international exchange to global channels, while organisation of its flows is approached on a strategic basic level. Liberalisation within the WTO should contribute to greater global welfare and more even distribution, which is, in its implementation, burdened by numerous challenges.

The basic ideas when forming the WTO referred to raising competitiveness levels and reducing confrontation on the global scale, which then gave rise to two principles on which the WTO functions: non-discrimination and reciprocity. However, attitudes to general liberalisation also differ between Triad countries and underdeveloped countries, depending on the level of economic development.

The forthcoming period will probably see a connection between liberalisation and sustainable development of countries and regions. In addition, what is also necessary is a reform of the WTO, which would be directed towards strengthening economic and political identity of the EU, strengthening the BRIC countries' economies, and the aspiration to change global management mechanisms.

In view of the above, the liberalisation process will continue its development towards encouraging global economic growth, regulating international service exchange, freer market access, strengthening anti-dumping legislation, legal regulation of investment flows and competitiveness.

The liberalisation process is paralleled by deregulation, where both processes make a positive impact on global integration by strengthening market mechanisms. Deregulation refers to lowering economic barriers to global business operations, so as to provide support to more efficient functioning of the market mechanism.

In addition to numerous similarities, liberalisation and deregulation also bear some differences, most notable of which are the effects of deregulation related to consumer rights protection, preventing oligopoly, and liberal relaxation of market mechanisms regardless of players, i.e. competitors.

Global Marketing Competitiveness

The liberalisation process is noticed in many industries, the most cited example being deregulation of air transport, which led to clearly visible economic effects, primarily lower prices of air transport and increase in the number of commercial flights (Morrison, 2002, p. 22). Deregulation of air transport has enabled a growth in the number of low-cost airlines, competing to take over not only the markets of their direct competitors, but also companies providing supplementary services on a global scale.

The deregulation process apparently entered its institutional phase by the formation of the WTO, adopting the rules, procedures and principles on a global scale. A high level of deregulation is already being achieved in free trade zones, which is positively reflected on attracting multinational, transnational and global companies. The further progress of deregulation will also be affected by the changed role of the state, which is increasingly becoming the stimulator of international exchange, unlike the previous practice of rigid regulation and de facto limitation of global competition.

Global competitive relations are also determined by a different attitude of the state to the market, primarily by increasing the freedom of capital movement. Deregulation means abandoning the practice of state support to unproductive companies, which changes competitive relations in local, regional and global terms.

A real problem accompanying deregulation is global environmental destruction, caused by limiting environmental regulations that raise operation costs of global companies. In essence, global companies use deregulation for enormous increase in their profits, and, at the same time, contaminate the environment (Mandler & Goldsmith, 1996, p. 42). Still, uncontrolled exploitation of natural resources and environmental degradation have the most detrimental effect on developing countries, and face the whole world with the challenges of disrupted natural balance, global warming, holes in the ozone layer, erosion of agricultural land, pollution of water, soil and air, etc.

Deregulation broadens market opportunities, but without appropriate environmental regulation one cannot speak of sustainable development. In other words, deregulation should not result in uncontrolled negative environmental impact, as this is contrary to the general idea of accelerated social development, which is at the heart of deregulation itself.

FDI flows significantly shape the characteristics of the global market, as achieving business goals is directly related with including individual economies into global economic flows and trends. Foreign investment, both portfolio and direct, has always determined the level of international commodity exchange, and, under contemporary conditions, FDI is regarded as the key link connecting production and marketing functions of a company with the global market. In other words, companies that do not want to see the erosion of their competitiveness take FDI as a significant element of their own investment and production strategies.

The liberalisation process especially highlighted the role and significance of FDI, given that they are in direct correlation. Such business practices are a property of multinational, transnational, global, but also medium-sized companies, in view of the increasing number of market players from newly industrialised countries, which results in obvious differences in global competition.

The impacts of FDI in the global market are reflected through substitution, complementarity, market expansion and global exchange generation, and strategic marketing effort is defined in accordance with these. Developing FDI by companies is motivated by more complete inclusion into the global market with all-embracing marketing engagement, and global enhancement of marketing competitiveness.

Intensifying financial integration based on linking the production and marketing function is accomplished within global marketing strategies focussed on channelling companies' resources towards the opportunities of global marketing, which presents a promotion of global marketing approach.

FDI flows also feature as companies' global strategic option, which can take on numerous appearances and forms, the most frequent ones being entirely new business activity (greenfield investment) and investing in existing companies and ongoing business operations (mergers and acquisitions). With the strengthening globalisation process, mergers and acquisitions have become increasingly common forms of FDI, due to the impact of structural factors of international environment, where the key elements are (Jović, 2006, p. 73):

- globalisation of business processes
- increased competition on a globally intensive basis
- improving business efficiency and
- availability of costly and sophisticated technologies.

Merger and acquisition activities have three basic modalities; they can be realised as mergers, acquisitions or takeovers, as well as leveraged buyouts. From marketing aspects, these modalities are different primarily in the operative sense, which can be either in the spirit of fair market competition aimed at improving overall market positioning, i.e. friendly deals, or in the spirit of struggle for taking control over certain companies against the management's wish, i.e. hostile takeovers.

The key factor that contributed to FDI becoming the strategic option of global companies is strengthening the bonds between suppliers, producers and consumers, leading to accelerated FDI flows to markets with stable business conditions and favourable conditions for earning profit.

Technology transfers are another characteristic of the contemporary global market. As the transfer of various elements of technology, this process is a practice where the technology of one company is used in the production and marketing

process of another company. Technology transfer can be used for a short or comparatively long term, but in the long run, it is possible to achieve major economic effects through mutual transfer of high-technology elements.

Technology transfer can be realised by means of market mechanism, in-house, i.e. within the company itself, or through implementing international arrangements on a bilateral or multilateral basis. Moreover, it is necessary to notice the difference between technology and know-how, which enables the technology user to apply it effectively.

The dynamic practice of technology transfer has proven to be a powerful stimulus to overall economic and business growth and development, and, as such, features as an essential characteristic of modern global market, as confirmed by a multitude of research. In this respect, the recent years have seen an increasing amount of writing on the „new economy“ based on technology, information and knowledge, unlike „old economy“, based on physical production factors.

Combined with technology transfer, development enables a gradual elimination of monopoly on knowledge. There are well-known opinions that knowledge is much more valuable than work and capital, as it never loses value; on the contrary, it increases with extended application (Lee and Carter, 2005, p. 144). Knowledge is, therefore, in economic sense, also viewed as the driving force of productivity and economic growth.

Technology transfers are much more than just a feature of the contemporary global market, as they have played the role of one of the key stimuli of forming such a market for a long time. Such transfers supported integration and fragmentation of the global market at the same time. Professional literature deals with transfers as a new technological paradigm, leading to a radical transformation of production resources in macroeconomic and microeconomic sense.

Interestingly, in global marketing, products as marketing mix instruments are increasingly viewed from the aspect of R&D intensity coefficient, pointing to incurred research costs in relation to the value of such products. Viewed comprehensively, research and development, investment, marketing and strategic activities are becoming an inevitable element of effective entry to the contemporary global market, where R&D activities enable developing high technologies overcoming the limitations of traditional industries.

Propagating and extending R&D activities not only led to development of high technologies, but also resulted in the emergence of a separate marketing category known as hi-tech marketing. Such marketing implies relating R&D activities to changing consumer needs, and resulting approach to new product development. Hi-tech products are characterised by being promoted at trade fairs even before primary demand for them is generated.

The positive effects of technology transfer are reflected in deregulating various industries, thus opening room for attracting FDI. On a global scale, superior technology has thus become a powerful means of achieving and maintaining competitive edge, especially in a situation when it is a tool for attaining efficiency of global marketing programmes.

Accelerated technology development, however, has also resulted in high obsolescence rate of all technologies, and shortened product lifecycles. Under such circumstances, maintaining competitiveness requires high adaptability levels and constant enhancement of global marketing performance.

Global Competition, National and Corporate Competitive Advantages

The establishment of global marketing has resulted in strengthening competition on a global scale. It can already be argued that in many industries (automotive, cleaning products, etc.) global competitiveness has become the key factor in achieving business and marketing objectives.

Global competition provides advantage to consumer as well, broadening their choice of high-quality, reasonably- priced products. The shift of consumers' choice towards global companies often has negative economic effects. More specifically, the loss of domestic market leads to decrease in production, redundancies, drop in purchasing power, negative social influence, political impact on business trends, and finally destabilisation of marketing environment.

According to Porter, the presence or absence of specific attributes in countries directly influences their industrial development and competitiveness (1998). The competitive advantage of economies is therefore determined by four attributes or determinants, whose influence produces a specific structure of local business environment, and which both encourage and limit achieving competitive advantage. Viewed as a system, these determinants constitute the so-called 'national diamond' which enables economies to achieve competitive advantages in individual industries. These are the following determinants:

- conditions determining production factors
- conditions determining demand
- industries featuring as a support to producing competitive products and follow-up industries and
- corporate strategy, structure and condition of the competition.

A global marketing strategy should comprise coordinated activities stemming from appropriate competitive advantages. A successful strategy requires understanding the unique selling point that will be the source of a company's competitive advantage (Keegan, 2002, p. 291). Implementing such a strategy leads to successfully achieved goals, as the company is perceived as capable of realising its activities better than its competitors.

Global Marketing Competitiveness

In global marketing, competitive advantage is perceived as the foundation stone of the company's marketing strategy and total business strategy, as it reflects the way the company wants to achieve its goals in the global market, i.e. the way it wants to achieve global competitiveness. Companies should recognise their competitive advantages in added value chain, as low labour or raw material costs in European countries can no longer be a source of sustainable competitive advantage.

In the contemporary marketing practice, in the strategic sense, companies join global competition by choosing between two alternative variants (Jović 2006, 75)

- strategy targeted at a particular country, i.e. consumer segments on the national level (the vertical approach); or
- global strategy targeted at the product offered to global market segments (horizontal approach).

Competitive advantage is specific for each globally oriented company, for the bottom line is harmonising specific abilities with critical success factors. It points to the company's ability implicit in a given market, which competitors cannot achieve in a short term without substantial increase in operating costs. As a rule, competitive advantage cannot be easily and simply copied.

In analysing global competition and competitive advantage, one can also raise the issue of interpreting business success. Quality, innovation and marketing management enable companies to find appropriate response to challenges of doing business in a highly competitive environment. Furthermore, marketing power or weakness is increasingly often related to overall power in the target market.

Efficient and effective competing in the global market requires companies to have developed appropriate strategic infrastructure essential for an optimal combination of marketing element and appropriate production resource allocation. One must bear in mind that the essence of global competitive advantage is in fact marketing advantage, which is a specific marketing asset of a globally oriented company.

Establishing competitive advantage requires companies to initiate cross-comparison of analyses of competition, marketing, external and internal factors relevant from the aspect of global market orientation and business engagement. In this process, companies also opt for a core marketing strategy that will be the pivotal point of developing global marketing strategies. The core marketing strategy determines the way a company will respond to the challenges of global competition, in addition to the decisive impact on the choice of modalities for joining the global market.

In the global marketing practice, companies have three basic alternatives for determining the basic framework of their strategies: differentiation, cost leadership and focussing. These alternatives are hard to implement simultaneously or combine; they only feature as the basis of the future development of global competitive strategy.

Critical Competitiveness in Global Marketing

Market globalisation has changed to a significant extent not only the view and sources of competitive advantage, but the nature of global competition itself as well. Global competition is highly present in the process of capital concentration and demonstrating domination in local markets. Activities of global competitors are becoming increasingly aggressive; the process of capital concentration flows, parallel with the process of linking and networking of one-time competitors in the form of strategic alliances and business network, while the commercially and financially powerful players of the global market have also become active participants in political life.

Global competitiveness in the 21st century cannot be built on a uniform approach, for the simple reason that uniform and global approaches depart from one another in many aspects, as objectively, it is impossible to identify a universal approach according to which each company can find its own appropriate competitive solution.

Market globalisation has undoubtedly lead to a dominant position of globalised market sectors and industries, with a few key global companies, strategic alliances and business network taking up the most prominent place within it. The professional public deems that it is market and marketing globalisation that has resulted in growing competition on a global scale, so that nowadays, efficient and effective competing in the global market has become the key survival factor in numerous industries.

In view of the above, it is not hard to understand why one of the open issues of contemporary global marketing is particularly related to achieving long-term sustainable competitive advantage. One must distinguish between global companies' efforts on maintaining current and developing future competitive advantage. Strategic approach to global marketing competitiveness should be based on building new competitive advantage faster in relation to competitors' ability to copy the basis of the existing competitive advantage. In this, practice has shown that global leadership is often not a result of the process of reliable marketing planning, because, as a rule, the object of such planning does not include the challenges of global future. Global leadership, therefore, results more from strategic intention than from global marketing planning.

Another concept accepted in global marketing is then of the critical competitiveness zone (Rakita, 2009, p. 447). At the heart of this concept is the essential effort to find the optimal combination of global marketing mix instruments, i.e. effort to develop effective global marketing programmes. The problem is reflected in multivariate solutions corresponding to individual strategic alternatives.

Global Marketing Competitiveness

Superiority of the global product, i.e. marketing offer is an essential, but not a sufficient prerequisite for surviving on the contemporary global market. The critical competitiveness zone concept therefore starts from the minimum level of size and efficiency representing a necessary prerequisite for creating and maintaining competitive position, both in the domestic and global market.

Critical competitiveness zone cannot be expressed absolutely, but rather in relation to competition and the accepted standards of the target market, which is why this concept of success was adopted much later in the global market than in national marketing. The concept of critical competitiveness zone therefore considers two independent criteria of global market success: differential advantage and economy of scale.

A globally oriented company should continuously enhance its basic competitiveness, and, at the same time, build favourable conditions for its propagation in the global market. In such a situation, it is essential to identify the borderline parameters of critical competitiveness. According to the classical concept of competitiveness, the critical zone is reached by investing assets required to achieving leadership. However, as leadership may imply different aspirations on particular market segments, and is not an essential prerequisite for profitable business operation, it is more relevant to rely on competitive advantage.

In global marketing practice, it is not possible to set critical competitiveness with full accuracy. Successful business zone is set instead, so that the essential issue refers to defining criteria for setting the upper and lower limits of critical competitiveness. In most cases, this means that critical competitiveness in the global market is achieved by meeting the competitiveness level of the corresponding marketing offer elements. In other words, critical competitiveness is achieved by the action of positive economic effects stemming from average requirements and standards of the global market, and appropriate response to basic competition.

According to critical competitiveness concept, the global marketing entry strategy should therefore be balanced with the existing one, and focused on creating the desired differential advantage. Differential advantage is at the same time a determinant and the relevant objective of global marketing strategy. It is of strategic importance for marketing managers to establish the competitive gap according to the profile of critical competitiveness, bearing in mind that differential advantage implies balancing relationships with competition.

Effective global competitive advantage can also be interpreted as the outcome of the functional relation between differential advantage and global marketing entry strategy. Intensifying competition in the global market, companies aspire to meet the increasingly sophisticated consumer demands, resulting in increasing complexity and diversity of the global marketing offer.

Understanding the critical competitive concept and its implementation in the process of developing global marketing entry promotes companies' active

attitude to the global market and helps avoid the traps of potential passivity. Companies' active attitude to the global environment also implies accepting their own responsibility in the situations of unsatisfactory global competitiveness, rather than the negative and futile practice of investigating external reasons.

Marketing Competitiveness in the Globalisation Process

The early 21st century is marked by the establishment of the globalisation process and an economic crisis that managed to shake the functioning logic of the globalised world market. It is realistic to expect that global competition will keep intensifying in the forthcoming years, and that economies not recognisable by globally competitive products, services and companies will strive to create an appealing environment for attracting the business interest of non-resident companies and industries.

Global marketing competitiveness must be distinguished from the international competitiveness of states, although practice has shown that there is a much larger number of successful global competitors from developed countries that have managed to reach a high level of international competitiveness in macroeconomic sense over the past period.

The first theory of international exchange that related competitiveness to international trade subjects and companies is the theory known as the competitive advantage theory, developed by the Harvard Professor Michael Porter. He clearly noted that previous theories were based on unrealistic assumptions, starting from the absence of economies of scale and compatibility of technologies, undifferentiated products, fixed national factors, down to labour and asset immobility.

Under the conditions of globalisation, it is an error to relate the availability of production factors to individual countries, as they are globally available to companies, who tend to utilise them in the most advantageous manner. The lowered communication and transport costs provided additional impetus to the globalisation of world trade. Under such circumstances, the role of the state in international trade flows is reduced, and internationally oriented companies become carriers of global business in full sense of the word.

The stated should create a business environment where production factors will be invested in industries with the highest productivity rate. Bearing in mind that companies rather than countries compete in the global market, competitive advantage stems from innovation and changes in limitations that companies are qualified to make, unlike the aspirations to maximise turnover and profit in accordance with the given limiting factors.

Under contemporary conditions, therefore, global marketing competitiveness is related to global strategy. In essence, a global strategy encompasses a range of competitive advantages arising from location, economy of scale or distribution of a global brand, based on global presence, defence of

domestic domination and overcoming the impact of local market fragmentation (Kotabe and Helsen, 2011, p. 254).

Understanding global strategy is facilitated by conceptualising global industry, competitive industrial structure, competitive advantage, hypercompetition and dependence. The term 'global industry' refers to industries where a company's competitive position in one country makes an impact on its position in another, and vice versa. Competitive industrial structure points to key factors determining the power of competing forces within a particular industry, and on this basis, the achieved profitability. Hypercompetition refers either to aggressive competition which is fiercer than oligopolistic or monopolistic competition, but is not a perfect competition either, where a company can affect the market as a whole. The dependence of contemporary companies is primary related to production technologies, bearing in mind that companies strive to produce a variety of products, with sometimes identical component, using similar technologies.

Some authors deem that the first step in formulating a global strategy is, in fact, a choice of competitive strategy to be employed, in accordance with the choice of the national market where they intend to enter (Czinkota and Ronkainen, 2010, p. 193). Companies competing in the global market have the option to use three basic competing strategies: cost leadership, differentiation and focusing. Moreover, a global strategy does not imply that a company should serve the entire global market. Critical choice refers to allocating a company's resources in different countries and market segments.

The answer to the global aspirations of contemporary companies lies in understanding the five variables moving companies globally, which refer to the five key drivers of globalisation: market drivers, competitive drivers, costs drivers, technology drivers and government drivers (Johansson, 2009, p. 20). Competitive drivers have proved to be a good incentive to a larger number of companies to globalise their business operations, as the presence of foreign rivals on the domestic market significantly increases the need for global orientation.

Marketing competitiveness in the globalisation process demands constant innovation in production and creation of stakeholder benefits, where it is essential to harmonise the sometimes mutually opposing interests of individual stakeholders. This in turn means that achieving marketing competitiveness implies creating conditions for rapid and sustainable productivity growth of the particular company.

In marketing sense, globalisation is manifested as a mechanism with unlimited opportunities for both growth and development on the one hand, and efficiency and competition on the other (Lee and Carter, 2005, p. 137). In global marketing concept, marketing competitiveness is also regarded as a new view of competitiveness, due to decline in the importance of classical approach to comparative advantages, because of evident limitations on analysing the causes and flows of contemporary global exchange. The key point is that companies must

increasingly build their own competitive advantages, rather than using the positive effect of acquired comparative advantages.

International marketing competitiveness refers to the ability of a company or industry to build their own competitive position in the local, national, even regional market space, but based on international or globally accepted criteria (Jović, 2003, p. 120). The most notable criteria on which contemporary marketing competitiveness is based include quality, flexibility, continuous effort on raising productivity, and business networking.

In the period before the firm establishment of the globalisation process, a company's competitiveness on the world market was deduced from reduced variable costs, primarily labour and raw material costs. In contemporary conditions, when research and development costs take up an increasingly prominent position, and are regarded as fixed costs, the proportion of variable costs in total costs has been reduced in a large number of industries. Global competitiveness is, therefore, achieved by maximising the marginal contribution of fixed costs in relation to expanding the spatial dimension of sale (Jović, 2002, p. 18). In this manner, emphasis is placed on the market rather than on resources, as the companies capable of securing a market will also be able to realise their production.

Companies wishing to achieve marketing competitiveness in the global market must develop their own imagination and agility, for this is the way to facilitate channelling market entry and strengthen their own position in market competition. Taking over the lead in the global market also requires raising the value of one's own supply and marketing programme as a whole. Recognisably innovative companies are qualified to perceive and exploit market opportunities, enhance quality and raise productivity levels.

Recent global marketing theory includes views that marketing is also influenced by corporate social responsibility (Hollensen, 2011, p. 123). According to this view, companies create corporate social responsibility programmes by incorporating such activities in the value chain, which is further reflected as contribution or support to total competitive effort. Initiatives in the form of corporate social responsibility help companies secure necessary production inputs, reduce operative costs, and facilitate global logistics, but also to promote the position of marketing function in the value chain. Viewed like this, corporate social responsibility activities take on strategic value for globally oriented companies.

Competitiveness in global marketing is primarily related to carriers of marketing activities, that is, to companies. In macroeconomic sense, however, competitiveness may also refer to countries, in a situation when a country is capable of creating new value by increasing national wealth, managing its key resources over a given time period, connecting them with their own economic and social model (Jović, 2003, p. 120). Accordingly, strategic options decided on at various levels should be harmonised with the global criteria of particular industries.

Global Marketing Competitiveness

Achieving national competitiveness provides states with positive foreign trade balance, reduced unemployment rate, more efficient struggle against poverty, raised living standards, better consumer rights protection, enhanced infrastructure, improved public sector efficiency, etc.

At any rate, competitiveness is increasingly becoming the result of well-defined and developed global strategy, and decreasingly of good natural predispositions. This is why competitiveness is said to be a specific combination of assets and processes, where assets are either inherited or created (natural resources and infrastructure respectively), whereas processes translate assets into economic effects, as it is the case with the production process.

Still, there is no general consent in the professional and practical marketing public over the definition of the concept and phenomenon of competitiveness. The complex and dynamic nature of competitiveness hinders making a universally acceptable definition, but, on the other hand, it enables different approaches to research. Marketing competitiveness in the globalisation process implies appropriate combination of a company's special abilities with its critical success factors (Lee and Carter, 2005, p. 197). It enables companies to overtake rivals in the chosen marketing environment.

Conclusion

Global marketing competitiveness enables companies to achieve high business performance in the global market. It stems from a well-devised and implemented global strategy. Global strategy encompasses marketing activities, research and development, business processes, finance and other specific aspects of doing business in the contemporary global market.

Almost as a rule, achieving global marketing competitiveness is preceded by reducing global business operation costs, improving the quality of products and global marketing programmes, meeting consumers' demands and expectations, and raising competitive advantage, i.e. finding new sources of competitive advantage.

By choosing the appropriate strategic approach, a company decides on the manners of conducting business entry in the global market, choosing primarily between the geographic or production criterion. Assessing marketing environment of one's own resources from the marketing aspects facilitates deciding between alternative options of global marketing engagement. Lacking or having appropriate tangible and intangible capacities determines the application of low- or high-level intensity of global competition.

Strategic attitude to global marketing competitiveness can be defensive, offensive or complementary. The way of achieving global marketing competitiveness is reflected on the choice of the modalities of inclusion into the global market, choice of target segments depending on the positioning of global competitors, as well as the effectiveness of implementing global marketing

programmes. Finally, by achieving global marketing competitiveness a company shifts from passive to active competitive operation in the global market.

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GLOBALNA MARKETING KONKURENTNOST

Rezime: Proces globalizacije rezultirao je razvojem nove paradigme međunarodnog poslovanja paralelno sa globalizacijom tržišta, globalizacijom proizvoda i globalizacijom poslovnog procesa. Poslovanje na savremenom globalnom tržištu zahteva poznavanje složenih razvojnih trendova i osnova ostvarivanja marketing konkurentnosti. Promene u globalnom okruženju, s jedne strane, omogućuju kompanijama ostvarivanje slobodnijeg pristupa tržištu, dok, s druge strane, nedvosmisleno menjaju uslove ostvarivanja dugoročno održive konkurentnosti. Globalna marketing konkurentnost sve više počiva na racionalnom korišćenju raspoloživih poslovnih resursa, aktivnom inoviranju marketing know-howa, orijentaciji kako na kupce, tako i na konkurente. U njenoj osnovi nalaze se održiva i prenosiva konkurentska prednost, koju globalni potrošači istovremeno doživljavaju kao prednost za kupce. Globalne kompanije teže stvaranju visoke apsolutne vrednosti, odnosno visoke vrednosti u odnosu na konkurente uz što niže troškove. To podrazumeva pronalaženje načina da se zadovolje globalni izazovi kojima konkurenti neće moći lako ili u kraćem vremenskom periodu adekvatno da odgovore.

Ključne reči: globalizacija, marketing konkurentnost, konkurentska prednost.



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INNOVATION OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT IN A GLOBAL ENVIRONMENT

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Abstract: *The purpose of this paper is to present the possibility of redefining the role of logistics innovation and modern logistics in today's global business environment. The starting points of research are the characteristics that limit the performances of logistics system. The paper starts from the fact that the pillars of traditional logistics operations can be found in a business culture of the 20th century. Having in mind exceptionally fast and radical technology innovations that mark also the beginning of the new 21st century, the influence of the information and communication technologies huge expansion to the logistics and supply chain management has been analyzed. The new jobs profiles and new kinds of logisticians work practice have been examined. Finally, the paper deals with organizational structures of logistics and the collaborative relationships between 3PL (Third Party Logistics) providers and their business partners.*

Keywords: *logistics management, logistics innovation, global supply chain, e-logistics, collaboration, virtual integration.*

Introduction

The conceptions of a global market and globalisation appeared after the Cold War. During those years, big companies started, more than ever, to use the advantage of supplying cheaper resources out of domicile markets and more aggressively act in relation to the environment. In the the last decades of the 20th century and the first decade of the 21st century economic parameters of industrial development in highly developed countries have shown signs of slower development, stagnation and crisis. Because of that, they were forced to try to find another market potential, in another country and regions worldwide. Today, the

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biggest world companies in production and the service industry have their representatives in high developed countries, but their market became global. Coyle et al. (2003) cited that about 25% of products of American companies are produced out of the USA territory, and about 50% of sales of 100 biggest companies are realised out of the USA. The same source cited that in comparison with 1980 more than 50% of American companies increased number of countries and regions of their working activities.

Characteristics which are limiting performances and effectiveness of logistic systems and supply chain in the 21st century are consequences of logistics foundation on working culture of the 20th century. Those characteristics, according to Vasiljević and Jovanović (2008) p. 211, are:

- reduced flow visibility throughout the supply chain
- poor tracking of equipment status and its components during the life cycle
- push principle as still overruled characteristic of supply chain dynamic
- insufficient interoperability of logistics information systems
- material flow based on mass production and warehousing process (so called Stockage Based Logistics)
- reactive approach to technical systems maintenance, etc.

With entering into new millennium, logistics and supply chain management became central priority of the highest levels of a company's management. Competences in this field are seen not just as working demand, as well as a way to advance market position of company. The global market brought to logistics and supply chain managers new challenges and chances, but also barriers in way of elements that are very difficult, sometimes impossible to control and which are in some way leading to uncertainty and professional risks. Basic unmanageable elements of global logistics environment are political and legal characteristics of foreign markets, their geographical structure, economical, social and cultural characteristics, etc. In the way of these characteristics global supply chain management is much more complex than managing logistics' works 'on domestic field'. That resulted in projecting global logistics strategy in that way as the first activities is environmental analysis and it's specialities that uniquely determine attributes of the new market.

This paper is organised in five sections. Section 2 provides the theoretical background of the paper: logistics innovation and domestic and global supply chains. Section 3 uses the framework derived from the literature survey to discuss different viewpoints of collaboration as one of the basic precondition for globalisation supply chain. Section 4 analyses actual trends of information communication technology (ICT), especially network systems, and their influence on global logistics and supply chain management. Section 5 presents conclusions, discusses the results, and suggests the further research.

Theoretical Background

Together with globalisation processes, the high-tech reality and information society coming from the end of the previous century gained the powerful possibility to generate new industries and to modify the existing ones (Petrović, Mihić and Stošić, 2009). In this new environment, innovations are proved to be one of the key drivers of long-term profitability and business success for an enterprise, as well as for a national economy. At the global level, while defining a roadmap to the European Union's innovation policy at the beginning of this century, the European Council underlined the key role of innovation in the European Research Area. The European Council emphasised that innovations are one of the main sources of competitiveness as well as economic growth. Innovations and innovativeness are said to be the basic enterprise development and competitiveness factors, with increasing importance today, in the age of the so-called knowledge-based economy. This approach has an evolution from the 1960s to the end of the 20th century, when knowledge influence appears to be central element of new economy, with domination of ICT, as a key strategic dimension of competitiveness of the company, but, also, national economy, with a new ways of communication and business, like e-business and the Internet (Day and Shoemaker, 2000).

At the enterprise level, successful innovation management should include some basic elements (Stošić, 2007):

- innovation strategy and coordination with other strategies - business technology, marketing and intellectual property
- innovation models (from idea to market)
- innovation portfolio management (innovation projects)
- innovation incentives and measurement of innovation performance.

When it comes to logistics innovations, it should be pointed out that various innovation typologies can be found, and, consequently, different ways of classification depending on the identified innovation types. There are examples of focused logistics innovation especially supported by ICT as the process innovations primarily (Davenport, 1993), but, also, of positioning logistics innovations in a wide area of management innovations, explicitly referring to TQM (Total Quality Management) systems, BPR (Business Process Reengineering) and modern ERP software like SAP R3 (Trott, 2005).

Having in mind the large area of innovation and innovation typologies, it should be important to take into consideration that an extensive framework for innovation data collection and analysis has been given in the OECD and Eurostat's 3rd edition of the Oslo Manual (OECD and Eurostat, 2005). The basic definition of innovation covers realisation of a new or significantly improved product and/or service, process, marketing method and organisational method, meaning four identified types of innovations. According to this approach, the concept of

technological product and process innovation that was dominant in the previous editions of the Oslo Manual has been redefined and broadened.

When it comes to identification and positioning of logistics innovation, the 3rd Oslo Manual suggests several aspects of classification and analysis. In that sense, it is stated that the “first introduction of management systems for general production or supply operations”, especially considering “supply chain management, lean production, business reengineering and quality management systems”, are to be regarded as the organisational innovations (OECD, Eurostat, 2005). This type of innovation has been identified and explained in the 2nd Oslo Manual edition (OECD, Eurostat, 1997). On the other side, the 3rd Oslo Manual understands innovation in logistics as a component of the process innovation. A “process innovation is defined as the implementation of a new or significantly improved production or delivery method” (OECD, Eurostat, 2005), meaning logistics of the company (including equipment, software products, inventory allocation within the company, or delivery of final products). For example, the introduction of RFID (Radio Frequency Identification) tags to track materials flow through the supply chain or the implementation of GPS system for tracking transport equipment. It should be interesting to emphasise that the Manual also recognises a possibility for new logistics methods to be included in a broader innovation of sales channel (indicating new way of selling products and/or services to customers), and this should be treated as the borderline case, where process innovation in the domain of logistics goes along with marketing innovations (both aimed at increasing sales and decreasing unit distribution costs).

On the other side, it can be said that main similarity between global and domestic supply chain management is the same conceptual supply chain framework of linking supplier’s suppliers, suppliers, manufactures, customers, and customer’s customers, and managing the processes and flows of information, materials, money, and knowledge among those supply chain members. However, global supply chains are more complex than domestic supply chains (Vidal and Goetschalckx, 1997; Coyle et al., 2003; Hulsmanna et al., 2008), and therefore they “are more difficult to manage than domestic supply chains” (Meixell and Gargeya, 2005, p. 533). Global supply chains are coped in multiple countries, i.e. global environment, versus domestic supply chains which are competed in a single country or a unified group of countries, for example, the continental United States. Rounder, J., Vice-President of Worldwide Logistics for Novelty Clothing, Inc. indicated the following differences between global and domestic supply chains, according to Coyle et al., 2003: greater distance, greater requirements for multilingual employees, requirement for standardisation meaning of certain measure unit, higher cultural differences, higher risks of currency fluctuations, greater importance of political, environmental, legal, infrastructural, and trading issues in the global supply chains. Hulsmanna et al. (2008) enumerated some factors for differentiation of global and domestic supply chains, like international differences in patterns of demand, different cultures, distinctive local institutions,

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and interactions, and concluded that the global supply chains had more elements and relations, and thereby more risky environment. Manuj and Mentzer (2008 p. 192) remarked that “global supply chains are more risky than domestic supply chains” due to a large number of links interconnecting a wide network of companies. The major differences between global and domestic supply chain in relation to environmental and structural complexity are considered by Skjøtt-Larsen et al. (2007). Environmental complexity refers to a numerous topics like political, cultural, geographical and ecological issues, legal systems, infrastructure, information and communication technology, etc. Structural complexity refers to a supply chain structure, processes, functions, organisational forms, markets, products, and services. A discussion some of those factors can also be found in Coyle et al., 2003.

Towards Global Supply Chain

Every company is now part of less or more complex global or domestic supply chain. Mentzer et al. (2001 p. 19) pointed out that we don't live in a domestic world – a large number of supply chains are global in some way and should be managed in that sense. Global companies should be able to: manage suppliers and customers all over the world; manage total global logistics costs; increase leverage and component standardisations worldwide; and improve communications of strategies across all of a company's business units and supply chain partners (Handfield and Nichols, 2002). Global companies ‘see the world as a single market and works in the locations that are most effective and efficient’, according to Waters (2007 p. 12). Today, almost every company strives to gain global competitive advantages and to ensure long term position in the global market. The competitiveness of global companies is dependent on their ability to collaborate and integrate the right business processes with the right supply chain partners and to provide the right products, services and information, in the right quantities and the right quality, with the right documentation, to the right place, at the right time, for the right customer, and at the right price, all over the world. We propose these ‘ten rights’ of global supply chains on the well-know idea of ‘seven rights’ of logistics (e.g. Swamidass, 2000). First, these ‘ten rights’ emphasise the importance of collaboration among supply chain partners. Second, they highlight the integration of key business processes across global supply chain and providing products, services and information in an efficient, timely, and reliable manner across the globe. Third, ‘ten rights’ indicates that global logistics in terms of global sourcing, global manufacturing and global distribution is a vital for effective and efficient global supply chain.

Global supply chains must find the best answers at least to the following key universal questions (based on Coyle et al., 2003):

- What should they sell in the global market?
- Where should they sell in the world?

- Where should they source in the world?
- Where should they manufacture in the world?
- Where should they warehouse in the world?
- How should they provide delivery in the global market?
- How should they provide customer service in the global market?

Global supply chain can be viewed as a supply chain with global characteristics (Hulsmanna et al., 2008). Prasad and Sounderpandian (2003 p. 241) summarised a global view of supply chain based on a work of Klassen and Whybark (1994), as a 'network of factories and material sourcing on a worldwide basis'. Harvey and Richey (2001) defined global supply chain management as integration of activities and processes among supply chain members in multiple countries. They broadened the definition of supply chain management given by Handfield and Nichols (1999), see (Handfield and Nichols, 2002).

Nowadays, it is hard to imagine achievement of continuous improvement in the area of logistics and supply chain management that is related with just one company. Collaboration became one of the key words and determinants of development. Collaboration is a process in which supply chain partners "share information, resources, and responsibilities to jointly plan, implement, and evaluate a program of activities to achieve a common goal", according to Camarinha-Matos and Afsarmanesh (2006, p. 28). The collaboration notion considers organised efforts of numerous companies in the way of strengthening relationships and building synergetic business environment that contribute improving of their organisation performances. Yang and Sheu (2007 p. 149) pointed out that 'environmental management strategy must be aligned with the interaction and collaboration of supply chain partners'. Barratt (2004) indicated two main categories of supply chain collaboration: vertical, and horizontal. We guessed that between supply chain partners are three potential levels of development of collaborative relationships: vertical, horizontal and full collaboration.

Vertical collaboration is a basic form of collaboration between suppliers and customers in the supply chain and considers traditional line relations between participants in supply chain, apropos suppliers, manufacturers, distributors and retailers.

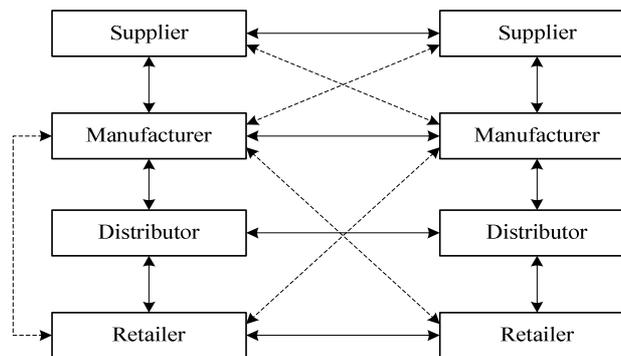
Horizontal collaboration comprehends relation type's vendor-vendor and customer-customer and in some cases even and between direct competitive companies. This way of collaboration enables using benefits of outsourcing and some costs reduction, as product-service development costs, etc.

Full collaboration (Figure 1) is a combination of vertical and horizontal collaboration, which allows benefits to all members of collaborative system in form of network. In collaborative network business partners can 'overcome traditional partners' and be in interaction with partners regardless of their position in network.

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Collaborative networks may have different forms independent of a product kind, i.e. service, volume flow, etc.

Figure 1 Full collaboration view



Nowadays, mobile technologies allow the development of mobile collaborative networks which share business information in framework of mobile scenarios. It is estimated that work out of office (teleworking or telecommuting) will be more represented in future and that this trend won't balk logistics and supply chain managers. It is considered that in 2012 more than half of the employed in the USA at least two days of week will be working out of company, but telecommuting won't eliminate the needs for working in office (Turban et al., 2006). Basic advantage of telecommuting is higher productivity employed with postulate of having necessary discipline, initiative and energy for work in informal environment. Telecommuting will force in that way the employed and their managers to focus on results, and not on the time spent on job.

For further collaboration networks and telecommuting development is very important concept known as 'grid computing'. Grid computing coordinates using a great number of servers and data warehouses, so they can function as one computer. Basic idea is to use unused capacities of computers and speed data transfer time.

Logistic practice that encourages companies to share information and resources with a goal of realisation collective interests is called collaborative logistics. Collaborative logistics ensures to all participants of the supply chain full visibility of the whole process flow from beginning to the end. The base of collaborative logistics is digital data, i.e. data that are created once, but used and updated from authorised users far away, as term of interoperability.

Collaborative relations development in practice may be observed from few viewpoints. Firstly, it is recognised as a trend of joining companies that are marked as 4PL (Fourth Party Logistics) in business practice. These companies mediate and

make easier business processes between numerous logistics providers of type 3PL (Third Party Logistics) on the one side and service customers on the other side.

On forecasting field traditional methods of forecasting, as base of demand managing, as moving average, exponential smoothing, regression analyses, etc., are evaluating to business model that is marked as CPFR (Collaborative Planning, Forecasting, and Replenishment). CPFR is developed by Voluntary Interindustry Commerce Standards (VICS) Association. CPFR is a “business practice that combines the intelligence of multiple trading partners in the planning and fulfillment of customer demand”, according to definition of VICS (VICS, 2004). The mission of the CPFR is to change the paradigm of relationship between the trading partners and to create more reliable information that could lead the value chain to greater sales and incomes (Ireland and Crum, 2005).

Push or MTS (Make-To-Stock) supply chains were based on forecast results until now. However, if lead time is short, a product is expensive, and demand variant, it is more pertinent using of pull or MTO (Make-to-Order) systems, which don't need stock holding, because products are produced in exactly and forward known demand. In a global business environment, frequently combinatorial approach marked as MTA (Make-to-Assembly) is used more, which procure components and work in process by push approach, and final assemblage is perform by pull approach.

In the same time, traditional systems of fulfilling and supplying that were managed by retail (retailer-managed resupply) in the period of a global market are replaced by systems of fulfillment that are vendor-managed (vendor-managed resupply), where vendors supervise and track customer stock level and make decisions when and in which way to have addition. It makes better coordination of supplying on vendor's side, while customers do not need to procure resources for.

The Paradigm of e-Logistics

We are living in the time that is often described as time of ICT. Chang and Gotcher (2008 p. 58) pointed out that ICT ‘is a resource and can be embedded in an organisation’. It is anticipated that the advantage of computer using in contrast to manual work will be more expressed in the future, so the following is expected:

- increase in compactness and mobility of computers
- further development and domination of graphic user-friendly interfaces
- drastic increase in data storage capacity
- dramatic increase in the usage of the Internet
- drastic increase in the usage of multimedia technologies
- further growing of the web-based business
- development and using artificial intelligence, expert systems and neurone networks, and intelligence agents, etc.

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It is especially evaluated that radio frequency identification (RFID) will make a revolution in technology which will take important improving in visibility and reducing of stocks inside of supply and distribution system. It will eliminate the need of warehouse level counting, and additional applications (the so-called rapid check-out) as well as eliminate need of scanning articles in retail.

Traditional electronic data interchange (EDI), which improved supply processes, because of many limitations, will be totally replaced by Web-based EDI. Limitations, which disabled mass usage of the traditional EDI service, were related to high price. In (Turban et al. 2006) is cited that in the USA just about 100.000 companies used EDI services. It was necessary to invest, provide expensive converters for translating business transactions into EDI code, and using costs of VAN (Value Aided Network) were high, etc. There were other limitations: system inflexibility, need for reengineering business process sometimes, to adapt process to EDI demands, and there weren't unique EDI standards, but one company had to use a few standards for communication with different business partners. All of that contributed that Web-based EDI became extremely popular. Its advantages are:

- availability (special network architecture isn't needed)
- acceptable costs (Internet communication is 70% cheaper than VAN system)
- easy tuition of use
- higher level of functionality in front of traditional EDI (for example, search engine, workflow, etc.),

Obviously information in future will have much more property of extensive resource. One of important references of ICT development complexity will make data organisation concepts in effective knowledge management systems (KMSs) and decision support systems (DSSs). The development of these systems contributes to over crossing problem of information overload.

Information system and technologies development, especially Web-based will affect knowledge curve changed form, and in that way accelerate and abbreviate professional logistics and supply chain management careers.

Table 1 Traditional and e-logistics relation

	<i>Traditional logistics</i>	<i>E-logistics</i>
Customer	known	unknown
Average order value	more then 1000\$	less then 100\$
Destinations	concentrate	very disseminate
Average delivery size	very high	low
Demand character	regular	unstandard

Source: Ghiani, Laporte, and Musmanno (2004)

So, today we are speaking about electronic logistic (e-logistics) as a part of electronic business. Basic differentiations between traditional and e-logistics, analysed by Ghiani, Laporte, and Musmanno, (2004) are summed in Table 1.

Commonly accepted attitude is that in the upcoming years will dominate an organisation model which is virtual integration based model, apropos standing vertical integration will be replaced by virtual integration. Virtual enterprise may be defined as integration of key intellectual resources, or intellectual capital in supply chain. Organisation form like that assumes economic vindication of sharing process on those that should be retained in enterprise (in-house processes) and the other that should be consigned to partner's companies (outsourcing processes). Outsourcing processes present one of the most representative manifestations of globalisation. Virtual teams, as form of team work in digital environment, such as computer based communication between team participants via video conference, e-mail, mobile phone, instant messaging, etc. Also team members haven't direct supervisors, or they may be hundred kilometres far away. New organisation structures, thanks to information systems and technology prosperity and availability of one supervisor to overlook high number of subjects, will be composed of minor number of hierarchy levels and everything will be more flat, and central authority followed.

Naturally coming question is about may a logistics manager job in near future be totally automatic. In giving answer to this question one should take care about management hierarchy level. Actually reasonable attitude is that because of bringing decision mainly by routine, a middle management job is the most suitable for automation. Lower manager levels don't spend much time on decision making, but their role is more routed in overlooking and motivation of executors. Some of their routine activities may be automate, but the whole job not. On the other side, good logistics and supply chain managers are preoccupied with strategic questions and decisions, and that is highly creative job, inappropriate for automation.

The globalisation of market and business relations resulted in appearing of new jobs and logistics vocations. Electronic jobs markets, as traditional ways of informing are full of advertisements about looking for Pan-European logistics managers, supply chain managers, strategic alliance managers, e-logistics managers, etc. New jobs and vocations obtrude new forms of earning and innovation knowledge. In earning new knowledge and skills, the special role will get e-learning tools, computer aided education tools that represent efficient instruments for education assistance of logistics staff. Through them it is possible to reduce or eliminate renting place costs, equipment, transport, tutoring staff, etc. On the other side, it may be left to costumers to choose location and time of using e-learning tool, because of their expressed flexibility.

Conclusion

The relationship between logistics and innovation management can be treated as two-dimensional: logistics as the source for innovation and logistics as the support for innovation. In response to intense global pressures, professionals from logistics and innovation area mutually perform complex jobs of development. The global environment is giving them new and huge challenges, together with the chances and opportunities. As the answer to global challenges, this paper considers contemporary approaches such as e-logistics and global supply chain management. In that sense, it was taken into consideration that globalisation increased the needs for logistics services, especially transport and warehousing parts and works in process. On the other side, due to e-logistics and direct delivery, sizes of deliveries are getting smaller as well as increasing the number of more-demanding customers. Outsourcing became one of the most important trends in global supply chain management. Large retailers further expand their control over global supply chain and companies outsource an increasing share of logistics tasks. Products flow in reverse logistics channels is increased, also. Key characteristics of current supply chain changes include transition from vertical to full collaboration, virtual integration potentials improving and new requirement for strong logistics know-how that results in logistics and supply staff competence core. Performance monitoring of logistics systems in the future will have less characteristics of internal enterprise process. From global logistics and supply chain point of view, further research is required in risk sharing, sustainability, security, tracing end tracking operations.

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INOVACIJE MENADŽMENTA LOGISTIKE I LANACA SNABDEVANJA U GLOBALNOM OKRUŽENJU

Rezime: Cilj rada je analiza mogućnosti redefinisanja uloge logističkih inovacija i moderne logistike u globalnom poslovnom okruženju. Polazne tačke analize su svojstva koja danas ograničavaju performanse logističkog sistema, a koja su posledica utemeljenosti logistike na poslovnoj kulturi 20. veka. Imajući u vidu izuzetno brze i radikalne tehnološke inovacije, koje su obeležile početak 21. veka istražuju se uticaji razvoja informacionih i komunikacionih tehnologija na menadžment logistike i lanaca snabdevanja. Predstavljaju se novi profili zanimanja i novi pojavni oblici radnog angažovanja logističara. Ukazuje se na razvoj organizacionih modela logistike i razvoj novih oblika kolaborativnih odnosa između logističkih provajdera i njihovih poslovnih partnera.

Ključne reči: logistički menadžment, logistička inovacija, globalni lanac snabdevanja, e-logistika, kolaboracija, virtuelna integracija



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THE ROLE OF ICT IN BUSINESS IMPROVEMENT OF TRAVEL AGENCIES

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Abstract: *Modern information and communication technologies have influenced the changes in the way of travel agency business - tour operators and retailers, in the direction of the efficiency increase and speed of operation as well as in providing quality tourist services. Nowadays, with the use of these technologies, small travel agencies are allowed, at a relatively low cost, to computerize most business operations and to operate successfully in the global tourism market (e.g. Internet sites, e-mail, booking travel services through the Internet). At the same time, technological innovations in the tourism business have jeopardized the mediating role of travel agencies on the one hand, that is, transformed the nature of tourist supply and provided consumers - tourists greater autonomy in deciding on the purchase and consumption of tourist products. It is believed that in the future tourists will obtain most of the services related to travel electronically, and services of travel agencies will be used only for the purchase of complex tourism products (cruise travel, longer journeys, visits to unknown destinations, adventurous forms of tourism etc).*

Keywords: *information technology, tourism, travel agencies, tour operators, tourists.*

Introduction

In the recent years, the dynamic development of tourism, in addition to the process of globalisation and other economic and political factors, has influenced the changes in the tourism business where the application of modern information technology had the leading role. As tourism represents information-intensive economic activity, the development of modern information technology has contributed to the increase in the speed and efficiency in the use of information in different areas of tourism business.

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Information and communication technologies have led to the modernisation of all stages in the tourist business, and have been accepted not only by mediators of tourist travel but also by consumers themselves - tourists. Mediators in tourism business, or tour operators and traditional travel agencies, have realised that information technologies are their major perspective of business in the future. On the other hand, the use of these technologies has brought significant benefits for tourists as well. Information technology is often defined as "a collective term for marking different mechanisms used for receiving, processing, analysis, recovery, expansion and application of information." (Cooper 2005) This means that the use of a number of modern technological innovations is intended to assist in the operation and execution of business processes in tourism. One of the main tasks of these technologies is to facilitate information flow within and between tourism organisations and companies, as well as to and from consumers.

Information and communication technology (ICT) in tourism have improved processing capabilities and the speed of information processing, and thus enabled the reduction of the workforce in tourism, as well as the volume of equipment and reduced the cost of buying software and hardware. Nowadays, information and communication technologies in tourism have become very developed business models that allow demand and supply to be globalised.

For tourists, the Internet has led to revolutionary innovations that are reflected in the availability of information regarding the quality and attractiveness of the tourism product of almost all tourist destinations in the world. The use of the Internet influences consumer behaviour during organisation as well as during the implementation of journeys. In recent years, the impact of information and communication technology has been more present and more pronounced in the business of all stakeholders in tourism. These changes are particularly visible when considering supply and demand of tourism products and service. For example, on-line reservations in hotels in Europe have increased from 4 billion euros in 2004 to 10 billion in 2007. According to some forecasts, on-line retail in the EU will have increased to around 70 billion euros by the end of 2012, where the most significant role in the growth will be held by ICT and social networks (Deepthi 2008). Consumption in tourism is considered to be one of the largest expenditures of modern households, all of which are associated with the more intensive use of ICT (Buhalis 2003). The application of these technologies provides not only good value for money, but allows the consumer to explore wider social and emotional benefits of relaxation and travel. ICT has changed the behaviour of passengers and allowed them to pay more attention to tourism products, thus affecting personal and group experience that consumers, i.e. tourists have of the journey.

The Importance of ICT in Organising Activities of Travel Agencies

ICT in tourism has led to the development of new functions in the management of travel agencies, which are primarily reflected in the use of the

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Internet and other modern forms of communication with clients. A particularly important role of this technology is in the area of management, creation and promotion of tourist supply, as reflected in (Klenosky, Gitelson 1998):

- increased profitability in package tours and other tourist products created by tour operators and traditional travel agencies. This is the most applicable in airline reservation systems, where other airlines and tour operators have an accurate understanding regarding the supply and transportation capacity available, as well as the demand. This allows airlines and other travel organisers, depending on the level of demand, to create different rates during the year (e.g. in high season and low season etc.).
- assisting tour operators and travel agencies - retailers to understand the needs of their clients, and in accordance with the wishes and needs of tourists form a tourist product
- creating better conditions for communication and collaboration between partners in the chain of tourism (tour operators, travel agencies, airlines, hotels, other carriers ...)
- a complete reorganisation of the ways of tourist mediation (the process of creating a tourist product by tour operators and travel agencies and selling it to customers), with an increase in Internet mediators and e-tourism revolution
- the spatial and geographical spread of travel agencies business, especially tour operators

Modern tourists usually buy a tourist product in one of four ways: through travel agents, tour operators, a regional tourism organisation or directly by using ICT (Klenosky, Gitelson 1998). At the each stage of the sale, an exchange of information is an important factor in the success on which sales depend. In order to quickly transfer information, for it to be accurate and clearly aimed at tourists, the key factors must be travel agents and Reception Services, which participate in the process of creating a tourist product. While ICT can not exclude the responsibility of tour operators or travel agencies for poor business performance, their use can mitigate these drawbacks.

The use of ICT increases the number of business challenges encountered by the operators of the tourism sector, in terms of ongoing maintenance and the introduction of newer and more modern technology as well as training their staff in using technological innovations and performing increasingly complex business operations. The importance of ICT increases the fact that tourist services can not be stored or re-sold later, but the moment of production is equal to the moment of consumption. Information and communication technologies allow travel agencies fuller use of the available capacity and adjustment of their own supply to the demand, which is the ultimate goal of management in tourism. ICT systems have allowed tour operators to sell vacant capacities at great discounts using the system of "last minute holidays". Also, ICT has enabled small travel agencies to provide

updated and detailed presentation of the tourist product, which can be presented at the global level. Because of this, ICT enables a better and more effective collaboration and information sharing within the travel agency (Intranet), between fixed business partners (Extranet) and other stakeholders in the tourism industry (Internet), thus increasing the global importance of tourism industry (Cooper et al. 2005).

The emergence of ICT has made the business of travel agencies more efficient, so they are nowadays capable, in a short span of time, to respond to the specific requirements of clients who look for a new quality of tourist products for their money. ICT has offered new opportunities for tourism industry in finding new ways to meet the demand, in terms of designing tourist supply to meet the demands of individual tourists, including the so-called appreciation of "small-scale economy." This new supply of tourist products, which takes into account specific requirements is intended for tourists who are more capable of payment and demanding, as well as prone to adventurous forms of tourism.

The Development of Information and Communication Technologies in Tourism

For a better understanding of ICT impact on many aspects of the tourism industry, as well as the importance of this technology on the development of various enterprises of the tourism sector (airlines, hotels, agencies, restaurants etc.), it is necessary to consider the course of development of ICT and its impact on tourism in recent years.

Modern ICT in the tourism sector is based largely on technology transfer in the field of air traffic. Airlines were technological leaders in the field of travelling, due to the introduction of central reservation systems (CRS). A large change in the 1920s was the abandonment of the CRS system, which consisted mostly of information regarding flights of private aircrafts, and the transition to global systems that include data for hundreds of flights to different destinations. Therefore, global distribution systems (GDS) were created by combining the central reservation systems of airlines, where the need for more effective tickets sales dictated the connection into wider and more global systems. According to some authors, the role of global distribution systems (GDS) in the U.S. is huge because they represent the main mechanism for booking journeys and efficient operations. Unlike CRS schedule that showed only the itinerary of a single plane, GDS is concerned with organising flight schedules, providing information on the availability of seats on flights, pricing, rules while travelling, details regarding ticket purchase and so on (Klenosky, Gitelson 1998). Today, the possibilities for the use of information and communication technology are practically unlimited. They can be used for baggage and freight system management, to provide information during the flight, to provide entertainment to passengers during the flight, security system management and the control of tourist transport at incoming and outgoing checkpoints.

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Modern technologies have contributed to the changes in the business of tour operators who are beginning to connect to the reservation systems of airlines, or to develop their own reservation systems. Initially, the application of ITC had a role to enhance business operations in the field of package tour bookings. At the same time, traditional travel agencies - retailers have emerged as users of modern information technology, connecting with the booking systems of airlines or tour operators. By applying this technology, they have increased the efficiency in providing information to tourists, simplified sales and bookings of package tours, as well as issuing all types of documents related to travel.

In the 1970s, global distribution systems Sabre and Apollo began installing their own reservation systems in travel agencies. In this way, the processing of reservations became more effective because it significantly reduced the time of data entry (Poon 1993). However, today the tourist markets of North America, Europe and Asia Pacific are subject to saturation, because most travel agencies have reservation systems that originate or are connected directly to one of the four major GDS systems (Amadeus, Galileo, Sabre and Worldspan) (Deepthi 2008). The information technology market saturation is best illustrated by the fact that revenues from the use of GDS stagnate. This is partly the consequence of the increasing use of global networks - the Internet and e-business by tour operators and travel agencies.

Parallel with the development of GDS, in the 1990s, there was an expansion and development of the Internet. The Internet has brought a revolution in the sales channels and created new relationships between consumers and suppliers - direct providers of tourist services, thus reducing the intermediary role of tour operators. As the global network of computers, the Internet provides instant access to potential tourists, interactive multimedia information and other benefits. Plenty of information on the Internet (different data, graphics, video messages and presentations, photographs, sound recordings, etc.) allow the creation of new communication channels for tourism industry. The presentation of multi-dimensional content on the Internet requires from tour operators and travel agents to use aggressive marketing. An Internet site, which is a virtual shop of tour operators or travel agencies must be easy for searching and contain basic information regarding tours. It must also be interactive, i.e. must provide a two-way flow of information, both from and to consumers. Web presentations allow travel agencies to promote their services and package tours and develop their brand. Users are also provided with great comfort and ease of purchasing tourist products, therefore, electronic sale is becoming a synonym for the new millennium.

Modern information technology and tourism are the two main catalysts that enable innovative organisations and individuals to communicate and interact with the outside world. The intensive use of information technology will inevitably have impact on the tourism sector, and it is increasingly being talked about e-tourism, which digitises all processes and value chains in different types of travel agencies,

but also in air transport, hotels and other tourism sectors. Electronic tourism allows the application of innovations and the use of modern communication technologies that provide opening multiple sites at once, so that consumers can compare products and services of several companies simultaneously. Between 2002 and 2008 the share of on-line bookings in the total reservations rose in the UK from 5% to 60% and is expected to rise to 80% from 2008 to 2012. In Germany, the recorded growth of on-line booking is equivalent to about 10% in 2002, to almost 50% in 2008. According to the estimations of the growth of on-line booking by 2012, it will have increased by over 70% (Deepthi 2008). According to some statistics, in 2009 almost 60% of all trips in the United States were purchased on-line. According to estimations, the on-line retail market of China will soon surpass the U.S. on-line booking.

The importance of e-tourism in modern conditions is extremely high. Today, there are many on-line travel agencies, as well as numerous Internet airlines and Internet destinations. Many low-cost airlines have more than 90% of Internet bookings with low cost processing, which significantly reduces operating costs of the company, while at the same time leading to the development of a new market - on-line visitors interested in travel (Cooper et al. 2005).

Unlike the CRS and GDS systems controlled by the airline, the Internet is not a closed system dependent on the contract. It is more open and competitive, and also allows bypassing mediators such as travel agencies and tour operators and establishing a direct contact with tourists. This sequence of events certainly does not support travel agencies, but faces consumers. On the other hand, the Internet has contributed to the improvement and modernisation of tourist agencies and tour operators, who basically did their business in the same way for decades. Modern information technology has brought about the appearance of different suppliers of tourism services, other than on-line travel agencies, on the Internet market, and it is increasingly being talked about individual suppliers, such as British Airways, which through its own site offers tourist products, as well as multiple supply sites (known as "agency killers") and so on (Bastakis et al. 2004).

The range of products Internet travel agencies offer to visitors is large and constantly increasing. More recent analyses of the leading on-line travel agency sites rank them according to the demand in the following order: airline tickets, hotel reservations, car rentals, cruises, package tours, last minute holidays, MICE, information regarding destinations, information regarding visas, tickets for events or tourist attractions, tourist insurance, parking, currency exchange and restaurant reservations.

On-line shopping for consumers, in addition to a number of benefits, also has a number of shortcomings. Namely, tourists, by purchasing a specific tourist product, knowingly or unknowingly also buy a large number of additional services that are the integral part of the offered products. This way of creating a tourist product is known as dynamic packaging.

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Dynamic packaging allows consumers to purchase products on-line themselves with the possibility of using different discounts, by which they are encouraged and motivated to continue purchasing this way. In this way, the individual needs of e-tourists, which differ from consumer to consumer, are satisfied. In February 2004, lastminute.com announced that the sales of dynamic packages reached 10.3 million euros, compared to 1.5 million euros in January 2003 (Cooper et al. 2005). Searching for information on the Internet is performed using search engines, the most popular being Google, Netscape, Yahoo, Excite and Altavista.

The Internet has enabled tourists, without the help of a mediator-agencies, to create a tourist product of their own accord, on the one hand, and on the other hand, changed the behaviour of the tourist clientele regarding travelling in terms of prolonged stay at the selected destination. Research shows that well-informed travelers become more familiar with the destination itself, have a preplanned places to visit and do not spend their time solving problems that may occur due to insufficient information. Tourist destinations on the Internet offer timely, relevant and accurate information and are more likely to be chosen. The Internet improves the function of destination management systems (DMS - Destination Management Systems). DMS provides information regarding tourist attractions, accommodation facilities and ways of their reservation, as well as other tourist facilities that may be important for tourism in a specific destination (Deepthi 2008).

The expansion of the Internet, and especially the advent of Web 2.0 technologies in the early 21st century, have influenced the development of websites that provide a high degree of interaction between travel agencies and consumers of tourist services, as well as the mutual exchange of information and experience between tourists themselves. It is the interaction between tourists that has led to the creation of diverse web content, where blogs hold a special place and role. In blogs that deal with travel and tourism themes in general, the data are displayed in reverse chronological order, and existing content can be supplemented by comments, news, images, clips and links to other blogs or websites. According to the data for 2007, on the Internet browser used primarily to search blogs (www.technorati.com) there are 112 million identified blogs with more than 500.000 entries under the term "holiday" (Deepthi 2008). The exchange of impressions and experiences from tourist travels between tourists through blogs can often be the key factor for the selection of a specific tourist destination.

Limiting Factors of the Increased Use of ICT in Tourism

As a result of mass exchange of information among potential tourists and excessive use of the Internet for the selection of tourist travels in general, there has been an overload of consumers with the Internet and information it offers. For this reason, many consumers want to distance themselves from the "bombing" of information over the Internet. This trend has led to the formation of the system

known as "consumer to consumer" (C2C) (Deepthi 2008). This system, which originated with the development of social networks has facilitated the operation of the Web 2.0 system and restored consumers' confidence in the information provided on the Internet. Many less biased sites (www.tripadvisor.com) have been made, which provide quite valuable information for interested users. Thus, a virtual community has been created, in which, through social networks, consumers who have similar interests are connected. By creating such sites, which cannot be claimed to be absolutely impartial (since they do advertise certain tour operators, hotel chains, etc.) business of travel agencies has been jeopardised, which has resulted in an additional adjustment of agencies to the market, thus creating a more pleasant atmosphere for potential tourists.

The above mentioned are virtual communities of people looking for other persons with whom they will exchange information and ideas through the mediation of ICT. Studies have revealed that these virtual communities facilitate making decisions that are primarily related to the choice of travel and sharing their travelling experience before, during and after the journey. Also, some analyses indicate that the majority of tourist web content in the future will be created by individuals, not agencies, tour operators and other tourist organisations. The importance of the development and expansion of social networking phenomenon is reflected in the statement that the company AOL in 2008 sold their site www.bebo.com for 850 million US\$ (www.theinquirer.net), while the value of the Facebook site is estimated to 10.5 billion US\$.

On the other hand, the use of ICT in tourism and adoption of new technologies is not an easy process, because there are constraints that slow down the spread of on-line businesses, and are related to the availability of the necessary technology by potential tourists.

Many Internet users and on-line technologies generally fall into two categories (Cooper et al. 2005):

- observers, who just surf the Internet and use it for travel planning
- customers, who surf the Internet, and buy tourist products

The decision to buy tourist products via the Internet is a very complex process which consists of the following steps or phases (Cooper et al. 2005):

- the awareness of the existence of a large number of alternative options for buying tourist products
- forming an attitude about using the Internet as a way of buying tourist products
- an intention to use the Internet as a tool for buying
- reaching a decision to accept or reject the Internet as a mediator in buying a tourist product
- assessing the importance of the Internet upon completing a purchase

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Whether a consumer will decide to accept a purchase via the Internet or not, largely depends on the previous experience of the consumer in using these networks. Some disadvantages which follow this way of shopping, can often increase the aversion towards the Internet and electronic shopping (e-commerce). Several factors influence the decision of consumers to buy certain tourist products, such as the credibility of the site, or the seller of tourist services, the accuracy of information provided on the site, the level of security for Internet payments, the development level of existing technologies and so on.

Security issues related to Internet crime, fraud in auctions, fraud in the sale of package tours and the loss of privacy, etc. significantly slow down the growth in the number of clients who are willing to buy tourist products through electronic commerce and the Internet. Further growth in Internet booking involves such a kind of business policy of tourist supply that will increase consumer confidence in this type of service provisions. In addition, a further dynamic development of Internet sales of tourist products, may affect not only the role, but also the very existence of intermediaries in the sale of tourist services, which has already happened to a number of tour operators and travel agencies.

That is the reason why today a very frequently asked question when it comes to the Internet, is what kind of business policy should be held by tour operators and travel agencies in order to survive in the tourist market, that is, what should a good Web site contain? Based on previous experience, in order for a website to achieve business success, above all it must have good and easy navigation, to be comprehensive, advisory, to be permeated with a friendly relationship and care for clients and professionalism in business between the seller and the buyer, as well as to have a recognisable brand - the brand that inspires confidence in clients, and should have the tools to quickly search for words, and, especially important, to offer reasonable prices for high quality services at a tourist destination.

A large selection of tourist attractions and competition on the tourism market, has led to the creation of new segments of tourist supply and orientation towards specific target groups. One of these segments is to create a customised tourist offer for clients with disabilities and older population ("third age tourism"), since in developed countries the proportion of these population groups in the total tourist demand is permanently increasing.

The biggest problem of e-tourism is the fact that there is a large disproportion between the number of visitors on sites and those who after a visit decide to buy a specific tourist product. Research shows that consumers use the information available on Internet sites for planning their travels, but often, however, opt to travel by themselves, avoiding the use of services of travel agencies. The time that averagely elapses from gathering the information from the site until making a decision on travel and booking is about a month. In order to keep up with new trends in tourism, many travel agencies tend to develop new

tools and to promote destinations by introducing a new system, known as the destination management system (DMS).

An increasingly prevalent view that the involvement of the government or public sector is necessary for developing tourism and improving the quality of tourist services at destinations. It is necessary to ensure the presence of the public sector on the Internet and its involvement in solving problems in tourism as well as assisting small and medium-sized enterprises in promoting and selling tourist products electronically etc. This is achieved through the development of DMS, as a form of tourist marketing, which is used for coordination, development and marketing of tourist products at particular destinations. Regional and local tourist organisations usually take the initiative. DMS is actually a mechanism for storing information on tourist service providers, attractions for visitors and other activities at destinations, but also at a regional and national level. Unlike most tourist sites, which provide information on destinations around the world, DMS have a clear geographical focus, which makes them more authoritative and reliable. Simple DM systems usually have multimedia content related to the destination (photos, video), while modernised DMS have information centers, multimedia outlets, services for permanent members. Some of the best examples of well-developed national DMS are the Australian Tourist Organisation, Visit Britain, the Canadian Tourist Organisation, the Finnish Tourist Board, Singapore Tourist Board and so on (Buhalis 2003).

The typical configuration of a DMS is based on a combination of a large number of diverse sources of information in one place, thus offering clients to develop their individual packages on-line or to buy package tours from tour operators or travel agencies. The main base for the development of DMS systems were existing bases of regional and local tourist organisations. These databases provided information about the region, as well as information about individual tourist products. While setting up these systems the main goal was not selling products or competing with tour operators, but they eventually took over the function of selling tourist products. A natural upgrade of regional and local databases was the development of DMS, which allowed customers to book travel products on-line, before or after going to the destination. This type of organisation has brought extra income to local tourist organisations and agencies due to increased sales of other services related to tourist products.

Destination management systems first arose in the late 1980s and early 1990s, only to reach their expansion in the early 21st century. The implementation of ICT was crucial for the development of DMS, as it caused radical changes in management and marketing of the tourism sector. The main function of DMS is communication with customers, suppliers and local and regional tourist stakeholders. Despite the high costs of development, the implementation of these systems is cost-effective for multiple tourist organisation. The main success factors of DMS are related to the influence of the public sector, the existence of high

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quality product data at a regional level, as well as links to other external systems. In addition, destination management systems are not used by consumers only for the collection of information when making decisions about travel, but are essential for finding information that make it easier for consumers to travel and only allow visitors to precreate their stay at a tourist destination.

The Future of ICT in Tourism and Agency Business

E-tourism analysts stress its lack on the "third age" market, especially among the age group between 55 and 65 years of age. Population aging and the increase in senior population in the EU, U.S., Japan and the new emitting countries like China, Russia and others stress the need for creating e-tourism adjusted to the needs and requirements of this segment of consumers. Today, in some developed countries, there are specialised tour operators who have adapted their tourist products to suit older population ("third age tourism"), while others, for this segment of demand, offer bookings and sales of package tours over the phone instead of offering electronic ones.

Many tourist professionals have begun to take advantage of a new technology that is available via WAP mobile phones (Wireless Application Protocol) and thus to achieve a global approach on the world tourist market (Carl 2001). The evolution of technology allows the use of the Internet via mobile phones, which are, for communication with customers, a far more flexible and cheaper tool than a computer. The flexibility of this technology is reflected in the fact that a consumer can use his/her mobile phone from anywhere, for example, to send a message to the railway company with a request to issue a timetable, and then purchase the tickets for the trip. New trends in the use of communication tools are forcing travel agencies to find ways to sell their tourist products, and at the same time reduce costs related to the issuance of expensive brochures, catalogues and other advertising publications. In the future, the success of e-tourism will certainly depend on the use of 3G (third generation) mobile phones and other technologies.

With the improvement and promotion of ICT, as in the case of Web 2.0. implications, there is an increasing number of challenges for the tourism industry and conventional business models. As for the tourist clientele, in addition to the abundance of information, visualisation of products and tourist destinations is extremely important, the multimedia presentation becomes the basis for exploiting the potential of ICT. Using three-dimensional (3D) and virtual tours, visits can be simulated and a virtual experience similar to the actual visit can be created. The increase in the number of digital maps, along with the aerial and satellite imagery such as Google Earth can enhance tourist experience and opt a tourist for a certain destination. Interactive digital television also plays an important role.

Among the most promising information and communication technologies are considered to be those that are related to mobile and wireless technologies such as PDAs (Personal Digital Assistant) and 3G mobile phones. By using a mobile phone or PDA, visitors are enabled to easily view a large amount of information about a specific tourist destination (Cooper et al. 2002). The above mentioned technologies can now be used to book hotel accommodation and airline tickets, while those in the future will be able to help tourists to choose or plan daily activities at a tourist destination.

The future development of new technologies such as microwave interactive global network (WiMAX) will enable wireless access to greater distances than it is currently possible. The use of new technologies, especially satellite navigation and technology, enables tour operators and travel agencies to determine the degree of mobility of tourists and determine directions of further promotion of specific tourist destinations. Also, the growing role of television is present in the sale of various goods and services, including the promotion and sale of tourist products. Obviously, the media also influences the development of tourism, by bringing tourist products closer to customers, reducing the uncertainty of travel for potential tourists by providing support to the passengers in making their personalised tourist products.

Information and communication technology, thanks to the continuous improvement of computer (hardware and software) and telecommunications technology, as well as other technological innovations (NetWare, groupware, humanware etc.) undoubtedly led to a revolution in the sale of tourist products and a change in the structure of tourist supply, promotion, distribution and sale of tourist products. ICT impacts on the tourism industry are reflected in radical changes in the organisation of the global tourism business. These changes are best reflected in a new way of doing business in tourism, which has become very rational and made it possible for both travel agencies and tourists to save time needed for the selection, booking and purchase of travel products.

By using ICT, tourists have been given greater flexibility in the choice of holidays and a greater degree of autonomy when purchasing tourist products. In addition to ICT causing the development of virtual companies, there has been great pressure on travel agencies and tour operators, which, in order to remain in the market, have entered a tough battle with their competitors.

Until the advent of the Internet, tourist supply was seen as a system that can not function without intermediaries such as travel agencies - tour operators and retailers. With the advent of the Internet there have also appeared new forms of distribution, such as direct sales. Therefore, travel agents, thanks to ICT, have started to offer tourist products tailored to the individual needs of tourists, besides the classic mass tourist products - package tours.

The Role of ICT in Business Improvement of Travel Agencies

The scope and pace of changes in tourism as a result of the evolution of modern technology are extremely high. Changes in information and communication technology are very fast, so in order to preserve and improve their market position, travel agencies and tour operators are forced to change their business strategy and sale channels. All present on-line purchases force travel agencies to analyze the views, opinions and comments of tourists on the Internet and based on that form and supply the market with new tourist products tailored to customers' requirements. Obviously, the Internet and other technologies are a big business challenge for travel agents, which may determine future business strategies.

Conclusion

Information and communication technologies for all participants in the tourist market, especially travel agencies and tour operators, have imposed the need for questioning previous ways of doing business and creating a strategy that will ensure the survival and further development. The new structure of tourist demand and great opportunities offered by modern information and communication technologies, are key factors of changes in business practices of travel agencies in the market. The new condition of the global tourist market forces tour operators and travel agencies to apply modern information and communication technology into their business, with innovations in sales channels, which are in line with changes in consumer behaviour. ICT has enabled the creation of new tourist products, which include attractive content, unknown destinations and new experiences, that is, an offer suited to the sophisticated demands of tourists.

It is believed that a particularly important role in the digitalisation of tourism business will be played by DICRMS (Integrated Computerised Reservation Destination Management Systems), an improved destination management system (DMS). This system should work in a global network (WAN) and should be accessible via the Internet and mobile devices (Deepthi 2008). High costs of implementation and the use of sophisticated information and communication technology lead towards the globalisation of large tour operators and travel agencies, with further concentration of agency business in a small number of companies.

These revolutionary technologies have allowed travel agencies new forms of communication with consumers, but have also given rise to some problems:

- high costs of capital investment in information and communication technology and relatively high operating costs on the overbooked tourist market force smaller tour operators, and travel agencies in particular, to find different ways of connecting with larger operators on the tourist market
- abuses in the payment of travel services by electronic means increase the risk of buying tourist products via the Internet

- the abundance of different content on the Internet, sometimes of suspicious origin and authenticity, which results in the saturation of consumers with the information related to travel
- the availability of cheaper travel options to be found on the Internet reduces the degree of tourist loyalty to products offered by tour operators and travel agencies
- constant innovation in information technology and changes in business of travel companies hampers the communication between consumers and travel agencies, which is especially true of older generations of tourists

The appearance of numerous sites that offer tourist products of different quality and cost reduces the degree of customer loyalty to a particular tour operator or travel agency. In other words, most tourists are typical representatives of global consumers. This means that by using the Internet they want to maximise their travel needs at the lowest cost possible, thereby neglecting the role of travel agencies that provided them with tourist information regarding a particular product. Brand loyalty to a particular tour operator or travel agency has not become the dominant way of consumer behaviour on the on-line tourist market. The current development of new technologies and software leads to the creation of social networks and causes a new revolution in tourism business, which raises the question of how will travel agencies and tour operators exploit the potential this new technology offers.

Despite all these shortcomings and potential dangers, both for tourists and for agencies, information and communication technologies play and will play an even more important role in the process of creating tourist supply and demand.

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ULOGA ICT-A U UNAPREĐENJU POSLOVANJA TURISTIČKIH AGENCIJA

Rezime: Savremene informaciono-komunikacione tehnologije uticale su na promene u načinu poslovanja turističkih agencija – prodavaca turističkih usluga i turoperatora, u pravcu povećanja efikasnosti i brzine obavljanja poslova i pružanja kvalitetnijih turističkih usluga. Sada je, uz korišćenje ovih tehnologija, omogućeno i malim turističkim agencijama, da uz relativno niske troškove, kompjuterizuju većinu poslovnih operacija i da uspešno posluju na globalnom turističkom tržištu (npr. Internet sajтови, e-mail, rezervacije turističkih usluga putem Interneta). Istovremeno, tehnološke inovacije u turističkom poslovanju su marginalizovale posredničku ulogu turističkih agencija, s jedne strane, odnosno transformisale prirodu turističke ponude i pružile potrošaču - turisti veću autonomiju u odlučivanju o kupovini i potrošnji turističkih proizvoda. Smatra se, da će u budućnosti turisti najveći deo usluga vezanih za putovanje pribavljati elektronskim putem, a usluge turističkih agencija koristiti samo kod kupovine kompleksnijih turističkih proizvoda (kruzing putovanja, duža putovanja, poseta nepoznatim destinacijama, avanturistički oblici turizma i sl.).

Ključne reči: informacione tehnologije, turizam, turističke agencije, turoperator, turisti.



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THE ROLE OF THE NETWORK DIAGRAM IN ANALYSIS OF PROCESS CAPACITY AND EFFICIENCY

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***Abstract:** This paper deals with issues concerning process capacity and process structure changes. The aim of the paper is to point out the effects of process improvement by enhancing its capacity. The task is to explore the possibilities and to suggest ideas for improving the process by eliminating restrictions, whether they come from insufficient capacity, or they come by inappropriate structure of the process. Realization of this task can be facilitated by constructing a network diagram, as a tool of network planning methods. Network diagram is considered to be an adequate tool for the realization of this task, because it offers the possibility of process structure analysis, as well as process duration analysis.*

***Keywords:** process, capacity, bottleneck, efficiency, network diagram.*

Introduction

A modern approach to enterprise management suggests that the successful enterprise is the one that can generate an amount of money sufficient to meet the needs of all stakeholders, assuming that consumer satisfaction is previously provided. Consumers can be viewed as first among equal stakeholders, given that the condition for generating money is continuous satisfaction of their requirements. If one bears in mind the philosophy of Balanced Scorecard model, it can be said then that the condition of fulfilling customers' needs and providing their satisfaction (customer perspective) is the efficiency of business processes (internal process perspective). This fact speaks in favour of the adoption of process orientation as the basis of the modern approach to enterprise management.

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The internal process perspective, in the Balanced Scorecard model, is the most important for meeting consumers' demands, in terms of providing expected features and quality of products and services. In this way, indirectly, the internal processes perspective represents the condition for achieving a desired level of financial performance. In addition, the impact of internal process perspective on financial results can be observed in two ways, by increasing revenue and reducing costs.

Increase in income occurs as a result of providing satisfaction of existing customers and attracting new ones, and as a consequence of increasing products' quality and speed of delivery, or via consumer perspective and the internal process perspective. Cost reduction occurs on the basis of a productive use of resources, which means that each activity is successfully realised for the first time, and that there is no need to correct errors and defects and to use resources for these purposes.

Although the process approach has become significant in the last decades of the last century, the idea of process orientation appeared in the work and papers by Adam Smith. In modern conditions process approach is considered relevant response to the challenges that enterprises face with, which are primarily related to the dynamic environment and to the need to improve the business in terms of quality, time and costs, in parallel.

1. The Significance of Process Orientation

Each employee in an enterprise is given certain tasks to perform and thus to contribute to the achievement of defined goals. Knowledge and skills of employees are a significant factor of successful performance of tasks. However, knowledge of employees must be properly oriented and networked. This networking can be significantly easier through the implementation of process orientation. By encouraging communication and collaboration, process orientation facilitates establishing connections between employees, as individuals, and between organisational units (Sommer 2003). For this reason, an important characteristic of process orientation is considered identification of the process owner.

In the twenty-first century it is necessary to replace the traditional management approach, which is based on the strategic business units and functions of an enterprise, with modern approach, based on the portfolio of resources and capabilities (Anđelković Pešić 2007). The second approach is based precisely on the process orientation. Process orientation provides many benefits. One of them refers to the most important feature of process orientation, and it is the identification of a process owner.

The process owner is responsible for the whole process from start to finish, which enables avoiding the traditional fragmentation of responsibility, and

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consequently the “transfer” of responsibility (here “transfer” means avoiding responsibility). Given that the boundaries of the process are precisely defined, it is possible to achieve better communication and better understanding of the requirements of end users of the process.

By establishing links between the activities that belong to the same process, regardless of their organisational segmentation, process orientation reduces the risk of sub-optimisation (Harrington 1997). All previously mentioned indicates to significantly greater opportunities for providing lower costs and shorter process realisation, compared to the traditional way of running business (www.netmba.com). Finally, according to the idea of process orientation, for each process key performance indicators should be identified, with a requirement for keeping the track of continuous process improvement (Harmon 2008).

The first step towards a process orientation is identification of business processes, and above all, key business processes. In doing so, key processes are considered the ones that ensure critical requirements of consumers (Chang 2005). Critical customer requirements can be determined only through establishing and maintaining communication with customers, and these are requirements that must be met to ensure that consumers do take into consideration the specific products and services of the enterprise as one of the alternatives.

When critical customer requirements and key processes are identified, the next step is to check whether there is a gap between features that consumers demand and expect, on the one side, and the results of the process which should provide customer satisfaction, on the other side. The existence of the gap indicates that the process has some weak points or some constraints, which prevent the fulfilment of critical requirements and providing customer satisfaction.

The problem of weak points or constraints can be solved in different ways, one of which involves increasing the capacity of the process, just by increasing the capacity of resources which represent the limitations of the process. The implementation of this method for eliminating the constraints assumes the change of the process structure or process restructuring. In both cases the task is to increase the efficiency of the process, and aim is to ensure customer satisfaction, and then the other stakeholders.

In order to ensure the outlined above, the elements and boundaries of the process must be precisely defined. Defining the process begins with identifying the process output, which for the consumers or some other process in the enterprise has a certain value (Harrington 1991). After the identification of output retrograde procedure is applied.

During this procedure all the activities needed to get the process output, as well as the process inputs, should be identified and analyzed. In this way, the decomposition process is actually performed. In this sense, the task of the process owner is to provide an adequate structure of the process, and successful

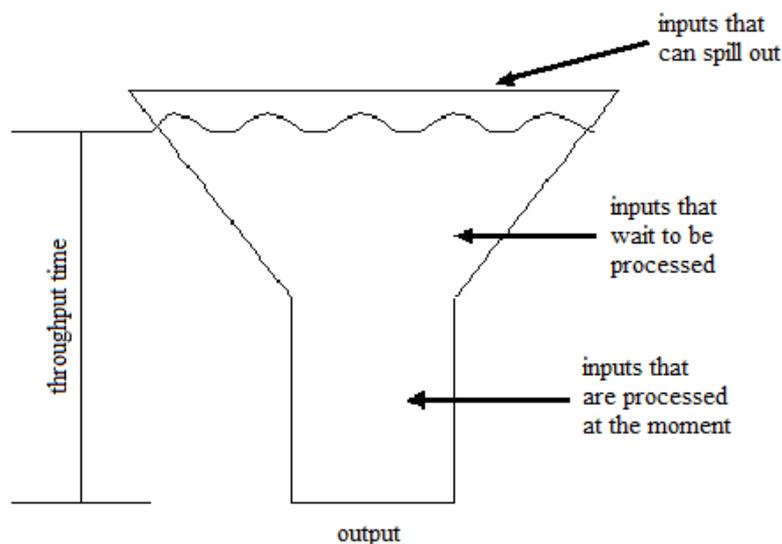
implementation of activities. This can be achieved through increasing the efficiency of activities, among other ways, by increasing the degree of utilisation of capacity of resources through which these activities are implemented.

2. Process Capacity and Bottleneck

The process analysis assumes that what enters the process in the form of input, after a certain transformational and transactional activities has to get out of the process in the form of output. In this sense, the process can be seen as funnel (Figure 1). Some activities or processes' resources represent the limiting factors to the amount of inputs that can be processed, and therefore are considered as constraints.

If there are more inputs than the processes is able to transform for a given period of time, they are waiting to be processed, and if there are a lot more inputs, they can be lost forever (Chase, Jacobs, Aquilano 2004, 128). The capacity of the process is one of the factors of its efficiency, and is determined by the capacity of activities or resources used for activities realisation. An activity or resource with the smallest capacity is the one that determines the capacity of the whole process. It has the lowest throughput, or the greatest negative deviation from the standard duration (Chen, Li 2009). Such activity or resource is the process bottleneck.

Figure 1: The structure of units in the process



Source: Chase, Jacobs, Aquilano 2004, 128

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Process capacity can be increased by increasing the capacity of resource which is a bottleneck or by reducing the amount of work that is being performed with this resource. In the first case, usually it relates to the investment in capacity expansion or hiring additional employees. In the second case, it relates to transferring the tasks to the activities being performed by the other, underutilised resources.

When transferring tasks, attention has to be on choosing the activities to which tasks are supposed to be transferred, because the tasks should be transferred from the activities performed with the resources that are bottlenecks to the activities performed with the resources that have unused capacity (Harrington 1999). If this principle is not respected, it may happen that the transfer of tasks causes the additional reduction of the process capacity and to cause the effect opposite to desired.

Identification of the bottleneck of a process is a critical segment of process analysis, because the bottleneck, not only determines the capacity of the process, but also an ability to increase that capacity. According to Goldratt and Cox, (Goldratt, Cox 1993) the time saved for the resource which is a bottleneck represents a saving for the whole process, while the time saved for the resource that is not a bottleneck does not contribute to improvement of process efficiency, since the rate of throughput is determined by the bottleneck.

Identifying and eliminating the bottleneck is a permanent task of process owner (Dowdle, Stevens, Mc Carty, Daly, 2003). In fact, when one bottleneck is eliminated, the other resource automatically becomes one with the smallest capacity and a source of new opportunities to increase efficiency of the process. The greater the difference between capacity of resource that is next-to-last and capacity of resource which is the bottleneck, the effect of bottleneck on the process efficiency is significant and vice versa.

Bottleneck causes two side effects: hunger and blockade (www.goldratt.com). Hunger occurs when a certain resource capacity is unused because there is no input to be processed since the resource that should deliver these inputs represents the bottleneck. The blockade occurs when the capacity of a certain resource is unused because the resource that should overtake its outputs is unable to do so, or represents the bottleneck.

3. Network Diagram – a Tool for Process Capacity Analysis

The relationship between the capacity of enterprise or its processes, and demand certainly has to be established. However, managers must have in mind that they are not suppose to harmonise the capacity with the demand, but work in progress, which occurs in business processes, with the demand. Actually, according to Goldratt, managers should align the flow, and not the capacity (Goldratt, Cox 1993).

This approach sways a long valid idea of alignment of the capacity and demand. This is because the complete harmonisation of capacities does not always have the desired effect. In fact, such compliance would be possible only if the processing time in all phases of the process is continuous, or if there is no variation.

Variations in processing time or changes in processing duration cause the unused capacity for the following stages of the process, on the one hand, or the accumulation of work in progress, on the other (Chang 2005). In this way the resource, which, according to the size of the capacity is not a bottleneck, due to variations in processing time can become a bottleneck. For this reason, managers should not adjust and balance the capacity, but the process flow.

Network diagram may have important role in process capacity analysis and in increasing process efficiency. The network diagram is one of the tools in the network planning. The application of the method of network planning in the analysis of capacity and efficiency of the process is considered to be desirable, because these methods allow (www.sfsb.hr):

- Evaluation of process duration
- Optimal allocation of resources
- Finding the best solution for process structure and so on.

The network diagram is a graphic outline of the process. It makes easier the analysis of process structure and duration and analysis of appropriate costs. Analysis of the structure refers to the determination of the sequence and relationship between activities, as parts of the process. On the other hand, the analysis of process duration assumes identification of the beginning and the ending time of each activity.

After that, it is desirable to calculate the time reserves for certain activities. This further enables the identification of critical events and critical activities of the processes, such as those where the delay is not allowed, because it effects the duration of the process as a whole. Resources for performing critical activities usually are candidates for gaining an epithet “bottleneck”.

Here are presented some ways for increasing the capacity and, consequently, the efficiency of the process (Summer 2003):

- Add new units of resource to increase the capacity of the resource which represents a bottleneck (e.g., additional machines).
- Extend the time of exploitation of the resource which is a bottleneck (e.g., extend working hours or introduce new shift).
- Increase the efficiency of activity that is performed by the resource which is a bottleneck.
- Transfer a part of the activity from the resource which is the bottleneck to the resources whose capacity is not used enough (when it is possible).

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- Redesign the product in a way which enables a better usage of resources.
- Choose outsourcing as an alternative for increasing flexibility and eliminating the negative effects of bottlenecks and so on.

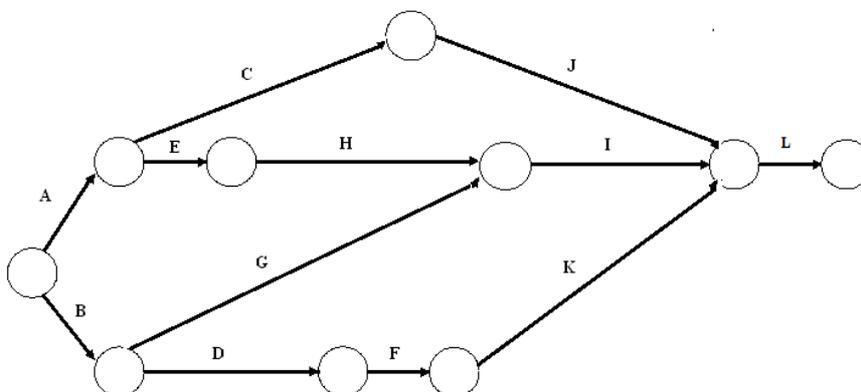
4. Constructing a Network Diagram and Determining Process Efficiency

The construction of a network diagram is based on the interdependence of activities and visually shows the sequential dependency of activities, as parts of the process (Gliviak, Sakál 2005). The following overview shows the activities (Table 1) with the duration and interdependence, while network diagram of the process (Figure 2) shows the whole process visually.

Table 1: An overview of the hypothetical process activities, their duration and interdependence (adapted according to: Laguna, Marklund 2005)

Activities	Duration (minutes)	Interdependence
A	4	-
B	9	-
C	7	A
D	5	B
E	6	A
F	3	D
G	10	A, D
H	5	F
I	6	G, H
J	8	C
K	4	E
L	5	I, J, K
Σ	72	

Figure 2: The network diagram of the hypothetical process



The efficiency of the process can be defined in different ways. Given that this paper deals with the analysis of process capacity and efficiency considering constraints, process efficiency is determined according to methodology suggested by Goldratt, as the creator of the Theory of Constraints.

Goldratt suggests the following method for determining or increasing process efficiency. According to him, one should first determine the maximal time which unit can spend in any phase of the process, considering that phase includes the group of similar activities. To determine this time, it is necessary to have data about demand for the process outputs. This time is referred to as VM. Assuming that a working day includes 8 hours, during one day for realisation of the process employees may use 480 minutes (60 min * 8 hours). If, at the same time, daily demand for the process output is 30 units, the maximal time that one unit can spend in the process phase is 16 minutes, or:

$$VM = \frac{\text{Daily duration of the process}}{\text{Daily demand in units}} = \frac{60 * 8}{30} = 16 \text{ min/unit} \quad (1)$$

The next step is to determine the theoretical (minimum) number of phases of the process (BF), necessary to satisfy the limitation concerning the maximal time that the unit can spend in one phase, and in the following way:

$$MBF = \frac{\text{Total duration of all activities}}{VM} = \frac{72}{16} = 4.5 \approx 5 \text{ phases} \quad (2)$$

Table 2: Rank of the activities

Activities	Number of dependent activities
B, A	6
D	4
E	3
G, C, H, F	2
J, I, K	1
L	0

The following step is formulation of the rules by which activities will be arranged or grouped in phases. There are no structural rules, accept the interdependence, and mostly the activities are grouped in phases according to the number of activities which depend on them. Therefore, the first activity will be the one upon which depend the most of other activities (Kaufman, Sato 2005). If there

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are more activities with the same number of dependent ones, it is necessary to formulate an additional rule, for example, the priority should be given to the activity that has a longer duration. Ranked activities, considering the two above mentioned criteria, are shown in Table 2.

When the ranking of the activities is carried out, the next step is their grouping in phases. Since it is determined that phase can last 16 minutes, if in the first phase there is only activity A, the unused "capacity" of the phase is 7 minutes (16 - 9 = 7). Therefore, the first phase can be assigned some other activity, and the next on the list, according to the number of dependent activities, is activity A. Therefore, the first phase is assigned to the activity A, which lasts 4 minutes. After that, the unused "capacity" of the phase is 3 minutes (9 - 4 = 3). When the process of assigning activities to phases is completed, a schedule of activities for each phase is gained, as shown in Table 3.

Table 3: Assigning activities to the phases

Phase	Activities	Duration in min	Unused time of phases	Activities with the greatest number of dependent	Activities with the longest duration
1	B	9	7	A	A
	A	4	3	-	-
2	D	5	11	E	E
	E	6	5	G, C, H, F	G
3	G	10	6	C, H, F	C
4	C	7	9	H, F	H
	H	5	4	F	F
	F	3	1	J, I, K	J
5	J	8	8	I, K	I
	I	6	2	K	K
6	K	4	12	L	L
	L	5	7	-	-

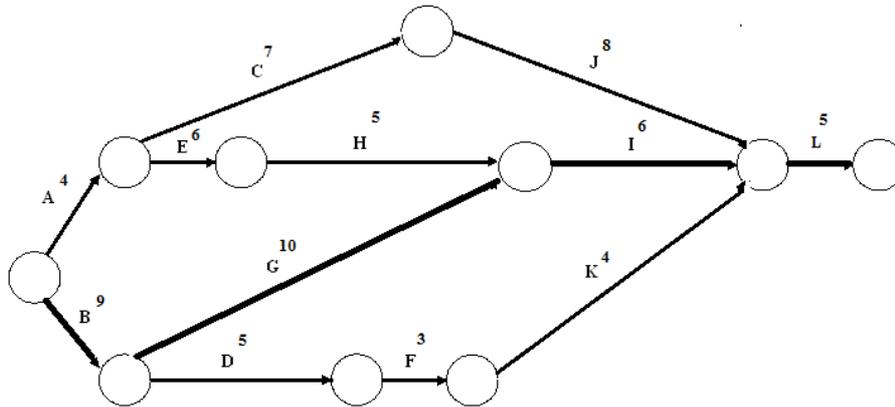
When grouping the activities into the phases is carried out, the process efficiency may be determined. The efficiency of the process can be calculated as follows:

$$EP = \frac{\text{Total duration of all activities}}{VM * BFr} = \frac{72}{16 * 6} = 0.75 = 75\%, \quad (3)$$

while BFr represents the real number of phases, which, as it can be seen from Table 3, is equal 6. Process efficiency of 75% shows that during the process there is 25% of unused time. Efficiency increasing can be provided through a different grouping or assigning of the activities to the different stages.

The process efficiency showed previously, determined according to methodology suggested by Goldratt, takes into account the duration of the activities, but not their interdependence. Namely, in this example, there are activities that are implemented parallel, which contributes to the shorter duration of process than it is shown. Specifically, in the previous analysis it is assumed that the process lasts 72 minutes and really it is much shorter, more precisely 30 minutes (which can be determined by analyzing the time using the network diagram, shown in Figure 3).

Figure 3: Network diagram – the critical path B-G-I-L



Critical path, as the longest path from the beginning till the last activity of the process, represents the shortest possible way of process realization. In the specific case, critical path includes activities B, G, I and L and lasts 30 minutes. Seen in this way, the real efficiency of the process (EPr) is significantly lower and amounts to:

$$EPr = \frac{\text{Time of process realisation}}{VM * BFr} = \frac{30}{16 * 6} = 0.3125 = 31.25\% \quad (4)$$

The process efficiency calculated in this way, compared to the efficiency based on methodology suggested by Goldratt, reflects the real state of the process. However, Goldratt's approach cannot be ignored, because his intention was to point to the need for combining the activities of the process in order to increase its efficiency. Basically, Goldratt's idea is precisely the introduction of process orientation. Therefore, he suggests that activities do not have to be grouped in the

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phases according to the organisational units which they belong to, in order to avoid negative effects of functional division. Rather he suggests the way that allows the maximum possible balance of phases duration (Yahya, Goh 2002), and increasing the efficiency of the process as a whole.

5. Network Diagram in Function of Process Efficiency Rising

When certain actions for efficiency increase are taken, one must take into account the dependency between activities, so that, as already noted, in the first phase cannot be an activity that depends on the activities that belong to the second or third phase. Also, it is often possible to divide an activity into two or more activities with shorter duration. Therefore, increasing the efficiency of the process can be provided in one of the following ways (Ash, Pittman 2008):

- Division activity in several activities with shorter duration.
- Create parallel phases, such as the formation of two phases that are composed of the same activities, so that the work in progress from the previous phase can be transferred to any of the two parallel phases.
- Provide training of employees to perform the activities faster (if the activity cannot be assigned to some phase because it takes a little longer than there is unused time within the phase).
- Introduce overtime work to carry out activities that cannot be reduced and so on.

For the same example, it is possible to create a process, whose efficiency is much higher, only through redistribution of the activities to different phases, taking into account the first and basic principle of their grouping. This principle concerns the number of dependent activities. If, instead of the second principle (the longest lasting of the activity), the other principle is followed – the activity which duration is the closest, but shorter than the “unused capacity” of the phase, the process efficiency should be higher (Table 4).

Now the process has five stages (one stage less compared to the previous solution), which by definition means increasing its efficiency. In addition, it is respected that the maximum time that unit can spend in a single phase is 16 minutes or less. The efficiency of the process after reassignment of the activities has increased and now is equal 90% or:

$$EP = \frac{\text{Total duration of all activities}}{VM * BFr} = \frac{72}{16 * 5} = 0.90 = 90\% \quad (5)$$

Table 4: Assigning the activities to the phases – approximate lasting principle

Phase	Activities	Duration in min	Unused time of phases	Activities with the greatest number of dependent	Activities with the approximate duration
1	B	9	7	A	A
	A	4	3	-	-
2	D	5	11	E	E
	E	6	5	G, C, H, F	H
	H	5	-	G, C, F	G
3	G	10	6	C, F	F
	F	3	3	C	C
4	C	7	9	J, I, K	J
	J	8	1	I, K	I
5	I	6	10	K	K
	K	4	6	L	L
	L	5	1	-	-

As stated above, the efficiency calculated on this way is unrealistically high, because the existence of parallel activities is not taken into account. If the time of the process realisation is used instead of the sum of the activities duration, the real efficiency, as in the previous case, is significantly lower and amounts to 37.5% or:

$$EPr = \frac{\text{Time of process realisation}}{VM * BFr} = \frac{30}{16 * 5} = 0.375 = 37.5\% \quad (6)$$

This way of increasing process efficiency is rarely encountered in practice of the enterprises in Serbia, primarily because grouping of the activities into phases is not usually performed as it is previously described, but according to the principle of functional origin. Namely, when the process extends across multiple functions, then the activities are grouped into phases depending on the functions or the organisation within which they are performed. When it comes to the production phase most often the sets of activities are performed in a single facility or a group of machines.

However, some recommendations made in this way of the process improvement, related to the changes in process structure, such as the separation of activities, parallel realisation of activities, the introduction of overtime etc., may be used to increase the efficiency of process in enterprise that do not implement mentioned way for grouping activities in the phases.

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According to the previously highlighted, it is necessary to make the difference between capacity utilisation and process capacity. This is consistent with Goldratt's assertion that one should not adjust the capacity of resources, but during the course of production. Namely, the capacity of a particular process represents a certain (maximum possible) amount of products per unit of time. Bearing in mind that the process involves the interdependence of different resources, the capacity of the process is determined by the capacity of resources which is the smallest compared to others. If the two activities are performed in parallel, then the capacity of the process is conditioned by the capacity of resource whose capacity is smaller. Capacity utilisation, in fact, shows what percentage of the total possible capacity of the process is actually used. When it comes to capacity increasing, it primarily refers to the increase in capacity utilisation.

6. Process Capacity Building

In the previous example, the subject of analysis was the time of realisation of activities in the process. From the following example it can be seen that it is not enough to take into account the duration of the process. Rather it is necessary to take into consideration the capacity of the process and resources that are used (Table 4).

If one takes into account the interdependence of activities on the one hand and the capacity of resources needed for performing these activities, on the other hand, it is possible to identify potential ways to increase the capacity of the process. The analysis of process realisation time and process capacity indicate the same problem - that the bottleneck is a resource which is used for realisation of one of the critical activities.

In this case (hypothetical example), according to data from Table 4, there are two bottlenecks, and they are the resources Rd and Rg, whose capacity is equal 12 units, or activities D and G. These activities take 5 and 10 minutes, and for their realisation employees have one and two units of resources, respectively. This means that for one hour on these resources it is possible to perform these two activities 12 times, which would, concerning that G is a critical activity (represents a part of the critical path), means that the process capacity is 12 units per hour. Also, as noted earlier, it is necessary to pay attention to the capacity of the resources that are next on the list of potential bottlenecks, which are in this case resources Ra (15 units per hour) and Rc (17 units per hour). In this precise case, the main task is to decrease duration of the activity G or to increase the capacity of the resource Rg or to transfer a part of the work to the resource, which is used for some other activities. In the last solution, it is desirable that the resource to which a part of work is going to be transfer, is the resource used for performing of the parallel activity (parallel with the critical activity).

Table 4: The capacity of resources and before tasks transfer

Resources	Time of activities duration	Resource capacity	Available resource units	Total capacity of resources (units per hour)
Ra	4	1/4	1	$60 \cdot 1/4 = 15$
Rb	9	1/9	3	$60 \cdot 3/9 = 20$
Rc	7	1/7	2	$60 \cdot 2/7 = 17.14$
Rd	5	1/5	1	$60 \cdot 1/5 = 12$
Re	6	1/6	2	$60 \cdot 2/6 = 20$
Rf	3	1/3	1	$60 \cdot 1/3 = 20$
Rg	10	1/10	2	$60 \cdot 2/10 = 12$
Rh	5	1/5	2	$60 \cdot 2/5 = 24$
Ri	6	1/6	2	$60 \cdot 2/6 = 20$
Rj	8	1/8	3	$60 \cdot 3/8 = 22.50$
Rk	4	1/4	2	$60 \cdot 2/4 = 30$
Rl	5	1/5	2	$60 \cdot 2/5 = 24$

(Adopted according to: Laguna, Marklund 2005, 157-158)

If Figure 2 is observed, the network diagram shows that the activity G is parallel with the activity H. This activity is much shorter, and more importantly, the capacity of resource by which it is performed is 24 units per hour. This means that, if technically feasible, it is desirable to transfer part of the activity G to the resource Rh. If it is possible to transfer one fifth of the tasks from resource Rg to the resource Rh the situation will be as it follows:

- Activity G then will last 8 minutes ($10 - 2 = 8$), which means that the capacity of the resource Rg will be increased from 12 to 15 units per hour ($60 \cdot 2/8 = 15$).
- Activity H then will last 7 minutes ($5 + 2 = 7$), which means that the capacity of resource Rh will be reduced from 24 to 17 units per hour ($60 \cdot 2/7 = 17.14$).

By increasing the capacity of the resource Rg through transferring tasks to resource Rh only a part of the problem is solved. In fact, another resource now becomes a bottleneck and it is the resource Rd. The capacity of this resource is also 12 units per hour. The activity performed parallel with the activity D, which is realised through the resource with higher capacity is activity E. The capacity of the resource Re is 20 units per hour. In case that one fifth of the tasks transfers to activity E or performs with the resource Re the scenario would be the following:

- Activity D then will last 4 minutes ($5 - 1 = 4$), which means that the capacity of resource Rd will be increased from 12 to 15 units per hour ($60 \cdot 1/4 = 15$).

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- Activity E then will last 7 minutes ($6 + 1 = 3$), which means that the capacity of resource Re will be decreased from 20 to 17 units per hour ($60 \cdot 2/7 = 17.14$).

Certainly, it should be emphasised once again that the transfer of some tasks can be done only if there are technical possibilities, and therefore this method of increasing the capacity is easier to accomplish in the non-production process, where technical limitations are significantly lower compared to production. Table 5 provides an overview of resource capacity after the transfer operations.

Table 5: The capacity of resources after tasks transfer

Resources	Time of activities duration	Resource capacity	Available resource units	Total capacity of resources (units per hour)
Ra	4	1/4	1	$60 \cdot 1/4 = 15$
Rb	9	1/9	3	$60 \cdot 3/9 = 20$
Rc	7	1/7	2	$60 \cdot 2/7 = 17,14$
Rd	4	1/4	1	$60 \cdot 1/4 = 15$
Re	7	1/7	2	$60 \cdot 2/7 = 17,14$
Rf	3	1/3	1	$60 \cdot 1/3 = 20$
Rg	8	1/8	2	$60 \cdot 2/8 = 15$
Rh	7	1/7	2	$60 \cdot 2/7 = 17,14$
Ri	6	1/6	2	$60 \cdot 2/6 = 20$
Rj	8	1/8	3	$60 \cdot 3/8 = 22,50$
Rk	4	1/4	2	$60 \cdot 2/4 = 30$
Rl	5	1/5	2	$60 \cdot 2/5 = 24$

Now the bottlenecks are all the resources whose capacity is units per hour or the resources Ra, Rd and Rg. The capacity of the resource Ra could increase through transfer the part of the work to activity B or resource Rb. However, when it is comes to the resources Rd and Rg further increasing of their capacities in previously way is not possible since the resources of their paralel activities do not have enough capacity to overtake a part of the tasks. Precisely, if a part of the work is transfered from activities D and/or G to activities C, E or H it would lead to the same limitation in capacity per hour. For example, transfer of a part of the work in duration of 1 hour from activity D to activity E, would lead to the following situation:

- Activity D would last 3 minutes ($4 - 1 = 3$), which would mean that the capacity of the resource Rd would be increased from 15 to 20 units per hour ($60 \cdot 1/3 = 20$).

- Activity E would last 8 minutes ($7+1=8$), which would mean that the capacity of the resource R_e is decreased from 17.14 to 15 units per hour ($60 \cdot 2/8=15$).

Conclusion

Process management represents the relevant answer of enterprises to the dynamic environment. The approach to enterprise management based on processes provides the process visibility and enables the overview of the process flow. In that way, assuming the information transparency and activities coordination, the process sub-optimisation or local optimisation can be avoided. When the whole process is observed, it can be seen why and how it is possible to provide the balance of the resources capacity or, precisely, the balance of the level of resources capacity usage. This balancing assumes a continuous search for the ways for process improvement, which may be minor changes, like transfer of work between the process activities, but significant changes, too, which concern changes of the process structure.

Based on the simplified, hypothetical example presented in this paper it can be concluded that the process improvement is a complex task and that in deciding about how improvements should be implemented several parameters have to be taken into account. So, if only respected parameter is duration of the process its capacity may be compromised, which means more units in the process, and, finally, more resources trapped in the commodity form than is really necessary.

If the process contains a resource that is a bottleneck, it is necessary to ensure full capacity utilisation of the same, because one hour lost at the bottleneck, is an hour lost for the entire process, or the entire enterprise. This means that the capacity of the bottleneck determines the capacity of the process. That is why, despite all the negative characteristics of inventory, it is necessary to ensure that in front of the resource which is a bottleneck there is always inventory, in order to prevent the appearance of unused capacity. In addition, it is desirable that between the resources that represents the bottleneck and the resource prior to it there is a communication regarding the required amount of work in progress and inventories in order to avoid their uncontrolled increase.

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ULOGA MREŽNOG DIJAGRAMA U ANALIZI KAPACITETA I EFIKASNOSTI PROCESA

Rezime: U radu se razmatraju pitanja kapaciteta procesa i promene strukture procesa. Cilj rada jeste da ukaže na efekte unapređenja procesa putem povećanja njihovog kapaciteta. Zadatak je razmotriti mogućnosti i sugerisati ideje za unapređenje procesa putem eliminisanja ograničenja, bilo da ona dolaze od nedovoljnog kapaciteta, bilo od neodgovarajuće strukture procesa. Realizacija ovog zadatka može se olakšati konstruisanjem mrežnog dijagrama, kao alata metoda mrežnog planiranja. Mrežni dijagram smatra se adekvatnim alatom za realizaciju ovog zadatka, jer pruža mogućnost analize strukture i vremena trajanja procesa.

Ključne reči: proces, kapacitet, usko grlo, efikasnost, mrežni dijagram.



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THE LIMITATIONS OF THE CVP ANALYSIS AS A BASIS FOR BUSINESS DECISIONS

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Abstract: *The limitations of CVP analysis (cost-volume-profit) may be used as the additional utility, i.e. the managing instrument in the cause of realization one of the primary aims-the maximizing of the profit of the firm. The CVP analysis, in the framework of analysis of the break point gained a huge popularity among its managing stuff-because of its transparency ease-of-use and the possibility of graphic (visual) mathematical overview of the planed and the realized results for the needs of controlling. On the other hand, due to restrictions of the theoretical and practical character it is not necessary to accept it without reserve and without a criticism. Namely, the information acquired on the basis of analysis of the results of breakeven point are exclusively for short term business making of decisions for the situations of unrealized production capabilities in the circle of the stable economic ambience. The model operates with one stable variable (the volume of activities),while the rest of the factors such as consisting elements of the financial result are constant.This pints out to the conclusion that the mutual interaction of the rest of important elements is not in use,which is not in accord with dynamical interactions which are used in theoretical principles and production industry practice.On the basis of those arguments we can may make a conclusion that the concept of the braking point is based on the statical approach with quantitative orientation and because of that fact it must be combined with other relevant information od dynamic and qualitative character.The structure of work is thus conceived to completely responds to the aim of exploration,which can be defined in the shortest way as completely critical review of the limitation of the CVP analysis in the dynamic scope.*

Keywords: *CVP analysis, breakeven point, the profit from sell, costs.*

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1. Introduction

One of the most important analytical tools, for the needs of short-term business decision making, is the analysis of the relation "cost - volume - profit" (or CVP analysis), which in simple and transparent way shows the impact of changes, in the volume of activities, on the relevant costs and results. Knowing these relationships helps the management to formulate the business plans, and to identify the critical volume of activity, that represents the border between areas of loss and gain (breakeven point of profitability).

The semantic meaning of the term "volume", as used in the CPV analysis, can be ambiguous. Thus, for example, the volume of activities in the producing organisations can be expressed as a number of the pieces produced, and in the service industry the volume of activities will be displayed as hours of work, number of nights, etc. Unlike the term "volume", meaning the profit from sales, the term which is used in CVP analysis is of a generic character, and is used by nearly all organisations.

In the theoretical sense, CVP analysis is based on the assumptions of the linear functions of costs and revenues, within the relevant range of activities, for a short period of time. The assumptions of costs and revenues linearity provide, among the other things, fast projections of total costs for the alternative volumes of activity. Furthermore, the approximation of linearity of the costs and revenues, which is of a static character, provided that the CPV analysis gained a significant dynamic advantage over the other models such as, for example, the plan of the business results.

The assumptions on which the cost – volume – profit analysis is based on, bear the hallmarks of a stable business environment, characterised by perfect capital market, labour force and production resources. Thus, for example, the model operates with: constant selling prices and contribution retail margin per unit, unchanged production structure, fixed constant costs, within the relevant range of activities, and production without stockpiling.

Operationally, CVP analysis applies for assessment of the targeted gain, calculation of the breakeven point, analysis of the planned contribution safety, calculation of the volume of sales (necessary for achievement of the targeted income) and in decision making for the level of prices, in situation of an underemployment.

After the initial explanation of the bases of CVP model of analysis, in the remainder of this work we intend to deal with its critical evaluation, limitations and shortcomings. So, the key points of the critical analysis will be based on theoretical settings review, for the needs of practical application.

The problem of setting the boundaries for validity of results of CVP analyses should be placed in broad and narrow sense. Thus, the exposure will begin

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with a critical assessment of consensus about the linearity of costs and revenues, which are as basic elements incorporated into CVP analysis and intersection point of profitability. Furthermore, instruments of the CVP analysis, as a basis for business decisions making based on optimisation of cost - volume relations and the results, are incorporated into the calculation of the variable (contribution) costs, and with it represents an organic entity (wholeness). In that sense, the paper will particularly scrutinise the relevant theoretical limitations of the system, for calculating the variable costs, in the light of practical application and interpretation of analytical indicators, for the purposes of business decision making.

Finally, it should be mentioned that CVP analysis is often mistakenly identified with breakeven point analysis, though it makes a methodological concept for its determination. Due to these reasons, this paper in particular critically discusses the theoretical assumptions and limitations of the model, for determination of the breakeven point of profitability, which may have an impact on the domains of its practical application.

2. Limitations of the Implementation of Economic Theory in the Accounting Practices, through the Prism of the Breakeven Point of Profitability

An analysis of the breakeven point of profitability is suitable quantitative basic element in short-term decision making, because of its sublimation and transparency of display of the basic operating parameters, such as costs and revenues. The essential differences between the teachings of the economic theory and accounting practice, in terms of the breakeven point of profitability, consist precisely in how we interpret the functional dependence of the total revenue and cost of the volume of sales, production and market prices. In fact, it is possible to have in economic theory conditionally two basic market situation, the first based on the assumption that the market structure is imperfect – consists of a small number of large suppliers. Under such circumstances, the company will manage to sell a larger quantity of products only if it reduces the unit price of its products. The function of the total revenue will not have the straight line form, rather a form of an exponential function, with a starting point at the origin. In addition, different price elasticity for individual products and their substitutes, with the variation of disposable income, will affect that the demand for some products will increase or decrease, depending on the estimated level of satisfaction, that they bring to the potential users. The competition between manufacturers and products is far from exhausting all the factors that could affect the behaviour of the sales price. However, even if their individually effect on the sale prices and revenues could be determined, there is still an imminent problem with the choice of a representative form of the revenue curve, in the range of possible production volume. The second market situation, accepted by accounting practice, is characterised by the full competition in which the individual producer has a little market share in the sales of homogenous products, and sales is conducted per prices that are beyond its

impact and are determined by market, so with certain theoretical abstraction the function of total revenue can be represented as a straight line.

Figure 1 Economic – theoretical behaviour of the revenues, costs and results

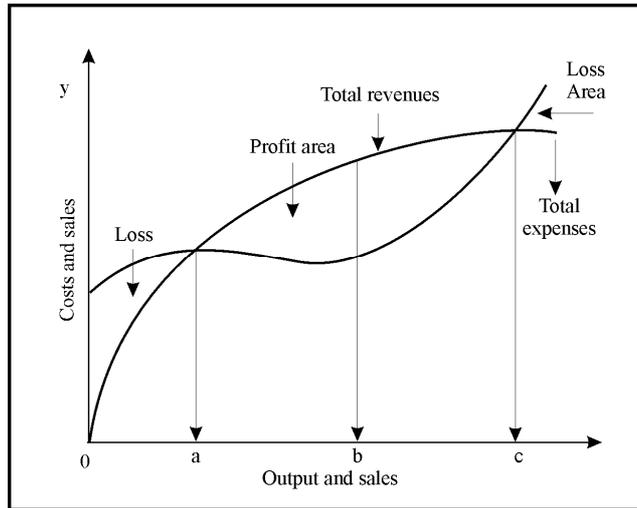
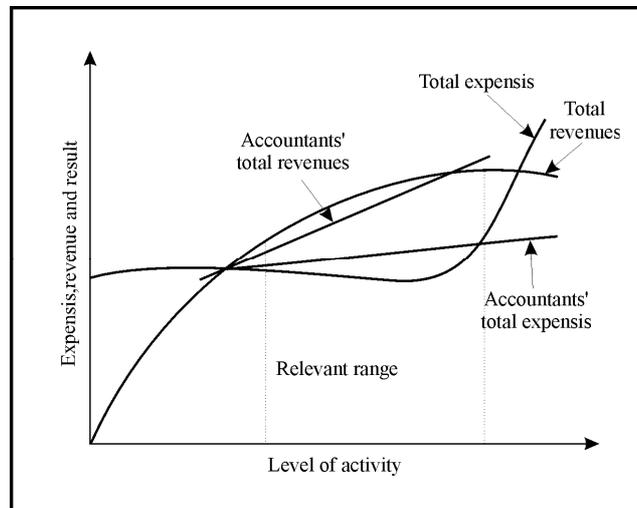


Figure 2 Accounting presumptions about the straight – line behaviour of revenues



Figures 1 and 2 according: (Stevanovic 2005, 314-315)

For the construction of a breakeven point of profitability, in addition to income, the function of the total costs is equally important. For the short-term decision making, which is applied within this model, fixed costs must be taken as constant - immutable. Possible changes in the production volume may occur only with changes in the variable factors of the fixed assets, installed within the

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company. The curve of the average total costs would have the shape of the letter "S" with the typical sequences of growth and declination, for the possible ranges of production. However, due to the conceptual but even more due to the pragmatic reasons, accounting practice has taken the position that the total cost should be presented in the form of a straight line, with the value of the abscissa in the amount of the fixed costs. Due to the continuity of further exposure, we will graphically present, along with the necessary substantive comments, the differences between the economic – theoretical behaviour of revenues, expenses, results and the accounting presumptions, about the straight – line behaviour of revenues and expenses in Figures 1 and 2.

According to the teaching of economic theory (Figure 1) it is obvious that the profit zone is located between the volume of activity, spatially bounded by points "a" and "c". At zero time, at zero volume of activity, the total costs are completely composed from the fixed costs. During the start of production, the contribution cost and contribution revenues of additional units of production are emerging, which are serving, up to the point "a", to fully cover the fixed costs, thus the appearance of the starting zone of loss is logical. After covering the fixed costs from point "a" to "c" the profit zone occurs, in which the point of the optimal range of activities - "b" is determined with an extreme amount. The point of optimum is represented with maximal financial result, which is possible to achieve within the area of profit. In that spirit, Professor Babić (Babić 1967, 256) notes the following: "when equalising the additional costs and additional revenues, the company makes a possible optimum, and when you equate the average variable cost and selling price, the possible achieved maximal transparent financial result is long gone, or reduced to the loss which corresponds to the total volume of fixed costs." However, according to our opinion, this statement is only partially true, because if we talk about the relevant scope of the volume of activities, fixed costs have already been covered, therefore, the additional units of product after the optimum zone will cause losses undoubtedly, but not in the amount of mass of the fixed costs, rather at the level of difference of growing contribution costs which exceed contribution revenues, and will lead to the situation in which the company at extremely high volume of production and sales will enter into the new zone of loss.

Without attempting to furthermore theoretically challenge previously simplified assumptions of economic - theoretical and accounting learning, we will focus in the following presentations on a more pragmatic - accounting approach that is shown in Figure 2. The essence of the accounting concept is based on the assumption that the company operates within the relevant range of activities, which is located in the profit zone. If we extract this part, we will observe the possibility of linear behaviour of total revenues, total expenses and total results, which is easily demonstrated in Figure 2.

3. The Disadvantages of the Calculation Concept per Variable (Contributory) Costs

The calculation per variable (contributory) costs, mainly deals with relations between the three different values: sale revenues, variable costs and contributory profit. This concept is also known for the treatment of fixed costs, which are seen as the costs caused by the drive willingness of the company in whole, which managers want to maintain within the planned accounting period. More specifically, the fixed costs occurred as a result of the previous period and as such are irrelevant for business decision-making, from the aspect of theoretical model. Furthermore, conceptually fixed costs are not included in calculation of the stockpiles of unfinished production and, consistently, they have been treated as periodic expenditures, so it can be concluded that a financial result is dependent on the sale income, actually on the sold quantities and selling price, along with the value of variable costs within the accounting period, not by the degree of utilisation of the available capacity.

Logically, based on the elementary concept of calculation per variable costs, the question could be asked, with what degree of success in the specific business policy, companies can use methodology and results of this calculation for the long-term analysis. Since the calculation of results is in the focus of interest based on sales volume and variable costs – the so-called contribution profit (gross contribution), the attention of management focuses on the short-term effects of reduced variable costs in order to achieve the largest possible contribution result, for the need of covering the fixed costs. Therefore, the system of calculation per variable costs, with its methodology and information, is model whose expressed power corresponds to the analysis and decision making within the short term, inside the relevant range of fixed costs.

The methodology of calculation per variable costs is in some segments too focused on the quantitative elements. However, without a valid analysis of qualitative factors, which can significantly affect the business decision making process, the system of calculation strives toward the triviality. Static concept of quantitative analysis is often based on the premise of constancy, of some cost and non-cost factors. However, the theoretical assumption that elements of cost will behave identically in the future as in the past, actually that they will act in the same manner and with the same intensity, is not real.

The companies of the same domain, sectors and groups, have cost structure that is different in the cost price or the total realised revenues. Cost structure could be debated in many different ways. For the purposes of this topic, the division of costs into fixed and variable components is of particular importance, in combination with presentation of the structural involvement in the total costs and selling price. The share of the fixed costs in relation to the selling price, or the total income, could be a significant constraint to the successful implementation of the

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methodology and information that are produced by this system. For example, a high share of fixed costs, within the structure of costs per unit of product and selling price, suggests to the conclusion of successful application of the methodology and information, from the system of calculation per variable costs, for the needs of business decision making, because every additional unit of sale contributes to additional coverage of the fixed costs and convergence to the breakeven point of profitability. However, a high share of variable costs, in the cost structure and selling price, fully derogates this method, because there is only a narrow layer of fixed costs to be covered, and in this case the system of calculation for the full costs provides more correct information for business decisions. In the context of the cost structure, one more important fact should be pointed out, which is related to the contributory gain during the fluctuation of the sales volume. Companies, whose cost structure is dominated by fixed costs, will be faced with a decrease in net income, in periods of falling sales volume, compared to companies with the prevailing share of variable costs in the total cost structure. However, in periods of sales growth, operating results will be adjusted for the costs that have been temporarily postponed, or covered at the expense of the previous period.

Covering of the fixed costs, charged to the income of the period during which they have occurred, and charged to the variable costs only after the realisation of the product, much of the theorists considered as incorrect (Novičević, Antić 2005, 249). As an argument the fact is pointed out, that all the costs are equally important as the building elements of the price of cost, and as such they should be covered after the realisation. When costs are of the same importance, they cannot be covered by the preferential principle, because in the end it all comes down to logic that for the determination of net profit the total costs should be covered.

The degree of capacity utilisation is also one of the limiting factors in applying the methodology and information that this accounting system can provide, for the needs of business decision-making (Malinić 2004, 303). This accounting system is suitable for short-term decision making, in situation where there is no additional investments in available capacity. Therefore, the logical question arises, what approach in the formulation of business policy, the company should have, respecting the methodology and system information, from calculation per variable costs, in the case: a) when the level of business activity is below the normal existing capacity and b) when the normal level of capacity utilisation is achieved, or nearly achieved. Regarding this question, in the literature, there is an absolute consensus that reads: in the case of an underemployment, the company will accept all new orders whose prices are above the level of variable costs, and with the approaching to the full capacity utilisation level the reasoning is changing, because the company is then in the position to perform a selection of orders and to change the production structure, according to the concept of maximising net profit (Malinić 2004, 304). In another words, in a situation of an underemployment, company will accept any further order, whose price is above the level of variable

costs, because with that difference in price, no matter how big it is, it will partially cover a portion of fixed costs. In the second case, when the company is approaching the full capacity utilisation level, a large part of fixed costs has already been covered, so the business concept is changing. The company is now able to make the selection of orders according to the degree of contribution to the contribution margin result, regarding the scarce factor of production, which means that the focus of business policy in these circumstances is overall profitability, actually the net income as the majority of fixed costs has already been covered from revenues, from the previous period. Therefore, the benefit of calculating system per variable costs and the information it provides is invaluable for short-term business decision making, in conditions of insufficient employment of capacity, while in situation of full capacity employment, the information must be adjusted to the other quantitative data, relating to the amount of full price or the overall profitability, respectively.

According to the significance, not the last objection which could be made to this system of calculation, refers to the way of reaction of the fixed and variable costs, in relation to changes in the volume of activities, from the standpoint of theoretical learning and practical application (Gowthorpe 2009, 125). In theory, for example, direct labour costs are of variable characters. However, it cannot be expected in the practice that any decrease in the volume of activity, at least in the short term, results in automatic dismissal of the production workers. In addition, the way of payment of the wages, changes the nature of costs. For example, in the textile industry, where workers receive the wage per piece, then it is a variable cost, because it depends on the amount of the units produced. On the other hand, when the cost of labour is fixedly determined, then by the theory, variable cost changes the character of behaviour and receives all features of the fixed cost. Such examples could be found in other sectors, such as: a commercial airline transport, activities of restaurants and travel agencies, etc.

4. A Critical Review of Validity of the Concept and Results of Business Analysis, Based on the Model of Breakeven Point of Profitability

Breakeven point of profitability is part of a broader concept for business decision making, which is in theory and business practice known as CVP analysis. The concept of CVP (cost – volume – profit), is based on the learning of the manner of costs and profits response, during the change in the volume of the business activities. The understanding of these relationships is essential for the development of plans and estimates, for the future operations (Meigs, Meigs 1999, 1092). Therefore, this analysis has the attributes of the planning and control instruments and as such, along with the breakeven point of profitability is involved in the system of calculation per variable costs, and together they represent the organic whole. The breakeven point of profitability and CVP analysis should be viewed as the relationship of the integrated work in the whole, which in the final

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instance represents the complementary part of the calculation methodology for short-term business decision making.

It is an undeniable fact that the analysis of the breakeven point of profitability is narrower concept than the CVP analysis, but it is also indisputable that they are complementary to each other, because they rely on the exact methodology that aims to test the specific business decisions, through the prism of the impact on the fulfillment of global business plan. Breakeven point of profitability enjoys a relatively high popularity among the senior management, due to its possibility to simply assess global profitability flows, in the short run through analysis, planning and relationship "costs – revenue – results control" (Stevanović 2005, 395). In order to understand the continuity of the further exposure, it is necessary for work to focus on the following issues, formulated as: a) relationship between costs and volume of activities and b) relationship between the costs and volume of aggregates activity, the theoretical assumptions of the model, the way of representation and critical review of the results of breakeven point of profitability.

4.1. The Relationship between Cost and Volume

For the purposes of analysing the cost - volume - profit relations, we must first determine some measurable size of the volume or activity that serves as a carrier of the cost, or that causes the existing costs (Meigs, Meigs 1999, 1078). Only after that, we can analyse how costs react to changes in the volume of activity. The unit of measurement used to define the carrier of the cost is called the basic activity. It can be a key input unit in production, such as tons of material, direct labour hours, machine hours of work, etc. Alternatively, and usually, basic activity could be based on an output, such as the equivalent of the additional units of production, sales, or the incomes from sales. The problem of choosing the basic activity, although easy at the first glance, in certain circumstances could be quite complex: production of wide range, multiphase production of the reversible character, coupled production and mixed production of products and services. In this regard, the identification of the cost carriers or the base of activity is most easily achieved in mono production, where the activity could be easily expressed quantitatively and through its value, while the base of activity for the wide specter production is difficult to determine without the possible errors. Once the appropriate activity base is chosen, all expenses by the type of reactivity (elasticity) can be classified into one of three following broad categories: a) fixed costs (or fixed expenses) that do not vary with change in the volume of activity in the short term, within the relevant zone of employment, b) variable costs that vary with a change in the volume of activities, by a form of direct proportionality and constant reactivity (elasticity) and c) mixed costs that are often referred as to semi-variable costs and contain, partly fixed and partly variable component.

Fixed costs are largely irretrievable costs and as such are not relevant for the intersection point model, because they have already been made during the

previous period, and cannot be influenced in the future. Variable costs and partly mixed costs, are in the focus of management, because these are expenses that have yet to arise in the future and as such are relevant to business decision making. The problems that appear in this area could be identified as: inadequate or incorrect selection of base activity, which may interfere with the concept of causality between costs and performances, unsustainable constant of reactivity (elasticity) of variable costs within the relevant zone and incorrect separation of mixed costs into fixed and variable component.

In strictly theoretical terms, mentioned behaviour of the costs applies for the short-term time horizon. In the long run all costs are variable, so the company (as needed), depending on developments in the volume of production and sales, may change the volume of the facility, belonging equipment, and the number of employees (Ljutić 2011, 93). Some authors (Slović 2010, 86-87) consider, that such cost concept is simplified, because the cost behaviour is viewed solely through the prism of changes in the volume of activities. More specifically, if we include the time aspect (as independent variable) into dynamic analysis of cost behaviour, the situation would be reverse. Actually, the relation of fixed costs on the passage of time would be proportional, while the flow of time would be irrelevant for the variable costs. Furthermore, the graphical illustration would show the fixed costs as variable, and the variable costs as fixed. Within the exposure on the dynamics of cost, we should note the following: that the classical doctrine of the indivisibility of fixed costs is unrealistic and that the volume of activities is not the only factor that determines the cost (Kolarić 1975, 143). In addition, in the dynamic analysis of the cost behaviour, the following factors should be included: quality, price, size of a company, product assortment, reaction of the management bodies to changes in the volume of activity.

4.2. Basic Aggregates and Graphic Display of Breakeven Point Model of Profitability

The broadest framework of CVP analysis, in which the intersection point of profitability is only operational instrument, is based on the following assumptions (Horngren, Harison, Oliver 2009, 953): a) management can easily classify the costs into variable and fixed and b) each factor that may affect the cost depends on the volume of activities. Fixed costs are immutable. In the wider operative context, when analysing the intersection point of profitability, the following source units are used: volume of activities, sales revenue, total costs, variable and fixed costs. Based on the original aggregates, the breakeven point of profitability could be expressed in mathematical terms, through the equation: sale revenues = total costs. Economically, the intersection point of profitability (cover point) represents a volume of activities where the total costs are covered by sales revenue.

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For the purposes of more subtle analysis, contribution margin is used as accounting category, which is calculated as the difference between sale revenues and variable costs (Figure 3). In essence, contribution result shows how income, above the level of variable cost of an individual product, production line or a selected assortment, contributes to the coverage of fixed costs. The real significance and practical usefulness of the accounting learning, of understanding the behaviour of marginal or contribution profit and total company result, are illustrated in Figure 4.

Figure 3 Display of the contribution profit

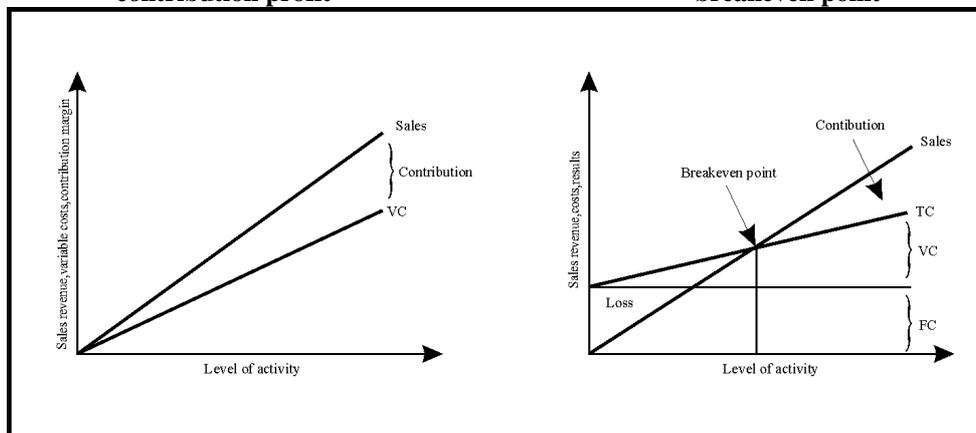
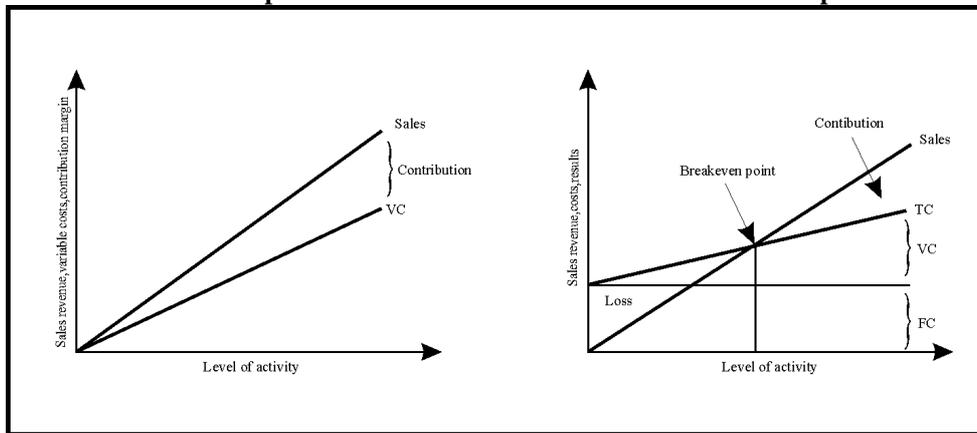


Figure 4 Display of the breakeven point



Source: (Chadwick 1997, 52-53)

The meaning of symbols:

- VC- variable cost,
- TC – total costs,
- FC – fixed cost

With the help of the dynamic graphical analysis of the breakeven point of profitability, it could be clearly concluded that, the position of intersection point of profitability and the amount of the contribution profit, along with the net profit, is affected by changes of the following factors: selling prices, variable costs per unit, total fixed costs within the relevant zone of employment, volume of production and sales. In addition to the above listed elements, changes in the assortment of production and sales, also affect the position of the threshold of profitability. Change of the assortment has a respective impact on all of the above listed factors, and through them also on the financial result, although due to its nature it cannot be shown analytically in the graph.

4.3. Theoretical Assumptions and Practical Applications of the Concept of Breakeven Point of Profitability

Breakeven point of profitability shown in the chart of profitability can be expressed by quantity and value, quantity when it comes to a company that produces only one product, and value in the case when it comes to production (sales) of many kinds of products, which is in practice much more common case. In addition, the intersection point of profitability for the need of quick analysis could also be determined by algebraic means. It is believed that the first algebraic formula for this purpose is appointed by Berlin professor Sher (Kovačević 1982, 207). Theoretical settings of the breakeven point model are also its limitations, when it comes to practical application. It is logical to assume, first, that some of the theoretical limitations arise from the differences that exist between economic and accounting learning, about the behaviour of costs and revenues. The other part of limitations comes from the very concept of CVP analysis and methodology of calculation per variable costs, in which the CVP analysis is implemented. About the stated restrictions as a framework, in which the concept of a breakeven point of profitability is located, there was much more talk in the preceding section. For these reasons, during further discussion, we will try to give a sublimated display of theoretical presumptions, when applying the concept of intersection points, as follows (Majcen 1988, 137-138): that all fixed costs are absolutely fixed and they are not changing within the relevant volume of activities; that all variable costs are, without difference, proportionally variable; the procurement price of the proportional means and standards by which the calculation of the provided work is done, should be constant in the relevant volume of activity; the selling prices of products should be constant for the entire analytical period, i.e. total income should act proportionally; the product structure should be fixed for the analysed period and that the capacity should be fixed, i.e. without increase or decrease in fixed costs.

To these constraints the following factors could be added, which include: stability of general level of prices (monetary and price stability) and the synchronisation of production and sales (production without stockpiling). After examining the listed limitations, it can be concluded: that all the factors that influence business results within the observed period, for a particular relevant area of employment are constant, except for a volume of production, which represents the only independent variable. Based on everything stated above, it can be claimed that the model is primarily static and quantitatively oriented, because it does include the dynamic changes of factors, and their mutual qualitative and quantitative influence.

Critical review of the theoretical assumptions of the concept we can set inside narrower and broader framework. From the view point of the broader framework, two simplified presumptions could be contested (Michael 1997, 401): the first one, in the economical science, total income and total costs are usually not linear. The accounting presumption of linearity is only valid for a range of

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activities, which is known by the name of relevant zone. The second one, opportunity costs, related to the cost of investing in equity, are not included in the accounting but they are included in the economic model. Thus, economic understanding and accounting measurement of total costs are not convergent. Neither model is "fair", because the both models, economic and accounting, are based on the simplified assumptions about the behaviour of costs and revenues. The economic model does not include income fluctuations, which result from the discount that we give to certain customers. On the other hand the costs have never been strictly fixed or strictly variable. With this in mind, CVP analysis, and the turning point of profitability have in themselves all these restrictions, including even the assumption of constancy of the key factors and linearity of costs and revenues, within the relevant zone of employment.

In a broader context, we can further discuss the validity of models in an environment of different competitive market structures. According to the presumptions of the concept of a breakeven point on the constant sale prices, model could be applied with much success in the markets of free competition. Actually, the constancy of prices can only be achieved in the market of free competition, where consumers are faced with a number of suppliers that are offering homogeneous products. In this way, the atomised supply of homogeneous products rules out any possibility of a direct impact on price forming, because prices have already been established in the market and must be accepted (assumed) as set values (Pindyck, Rubinfeld 2005, 252). The implicit conclusion is that the maximisation of profit in such conditions is possible only through an increase in the volume of production (sales), because the competition strategy through prices and product differentiation is completely ruled out. With all mentioned approximations of the general character, there is another problem that is at first glance of a technical nature, and in fact has a much more serious critical dimension. The problem is related to the arbitrariness of the delimitation process of mixed costs, into fixed and variable component. Regardless of the well-established methods of their separation, the mistakes are possible that will directly affect the validity of decisions, made on the basis of the analysis of results of a breakeven point of profitability.

In addition to these limitations of a general nature, in the light of critical theory individual assumptions could be observed, underlying the analysis of the threshold of profitability, such as cost behaviour, constant production and sales assortment, constant selling prices, which are not realistic in the real world, not even for a short period of time. Actually, in the real world, many assumptions will be rejected, or their impact on business results will be undervalued or overvalued. The practice may result in the following situations (Chadwick 1997, 55): fixed and variable costs do not always behave according to the running pattern; selling price will not be constant, because the products are sold in different markets, market segments and customers at different prices; decisions made by management may affect the level and structure of variable and fixed costs; level of production

efficiency is not always constant; product mix has to change with changes in demand, and for this reason it is difficult to be predicted. In addition, we must not forget that the threshold of profitability chart is most useful if applied for short-term decision making and should be used in combination with other information, essential for the survival and development of a company.

5. Conclusion

"Cost - volume - profit" (CVP) analysis and the breakeven point of profitability can be successfully used for short-term business decision making, in situations of incomplete employment capacity and within the scope of the relevant volume of activities. The relevant range of activities and short term, as restrictions to CPV analysis, are intended to assist managers in quantifying the potential business risks, for the future business actions. In this sense, from the theoretical aspects, we can speak of the constancy of selling prices, fixed costs and product assortments, as a real fact. Although this analysis is based on rigorous assumptions that are highlighted in the work, it features a significant degree of flexibility. This flexibility is reflected in the fact that using a series of chart of breakeven point of profitability, the constant changes that occur in the result could be observed, as consequence of changes in the constant factors within a dynamic environment.

The model of breakeven point of profitability, which is an integral part of CPV analysis, usually relies on quantitative financial information. That practically means that the analysis does not include the opportunity of costs of capital, which value is important for positioning of a breakeven point. Furthermore, among the other things, the model implies continuity within production and sale. However, when it comes to a halt in the production and sale, the stocks start to accumulate, which also have the character of the opportunity costs.

The basic concept of CVP analysis and of breakeven point is in the broadest sense focused on contribution gain, actually to its involvement in covering the fixed costs. Consequently, in business policy, the company will before reaching breakeven point of profitability accept all orders, whose sale prices are above the level of variable cost. After reaching the breakeven point, the management will perform selection of orders and of assortment, by criteria of maximisation of contribution profit. On this way, business policy measures will initiate changes in the cost structure, which will be reflected on the range of contribution safety.

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OGRANIČENJA CVP ANALIZE I PRELOMNE TAČKE RENTABILITETA ZA POTREBE POSLOVNOG ODLUČIVANJA

Rezime: Analiza CVP (troškovi – volumen – rezultat) može da posluži kao dopunsko oruđe, odnosno upravljački instrument, u svrhu realizacije jednog od osnovnih ciljeva – maksimiziranje dobitka preduzeća. CVP analiza, a u okviru nje analiza prelomne tačke, stekla je veliku popularnost među korisnicima zbog svoje jasnosti, jednostavnosti i mogućnosti grafičkog (vizuelnog) i računskog predstavljanja planiranih i ostvarenih rezultata za potrebe kontrole. Međutim, zbog svih ograničenja teorijskog i praktičnog karaktera ne treba je bezrezervno i nekritički prihvatati. Naime, informacije na osnovu analize rezultata prelomne tačke namenjene su isključivo kratkoročnom poslovnom odlučivanju za situacije nedovoljne zaposlenosti kapaciteta u okviru stabilnog privrednog ambijenta. Model operiše samo sa jednom promenljivom varijablom (obim aktivnosti), dok su ostali faktori kao gradivni elementi finansijskog rezultata konstantni. To upućuje na zaključak da je međusobni uticaj ostalih bitnih elemenata isključen, a što nije u saglasnosti sa dinamičkim interakcijama svojstvenih teorijskim načelima i privrednoj praksi. Na osnovu tih argumenata može se zaključiti da je koncept prelomne tačke zasnovan na statičkom pristupu sa pretežno kvantitativnom orijentacijom i zato se mora kombinovati sa drugim relevantnim informacijama dinamičkog i kvalitativnog karaktera. Struktura rada je koncipirana tako da u potpunosti odgovara cilju istraživanja, koji bi se najkraće mogao definisati kao sveobuhvatni kritički prikaz ograničenja CVP analize u dinamičkom okruženju.

Ključne reči: CVP analiza, prelomna tačka, prihod od prodaje, troškovi.



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THE ROLE OF INVESTMENT FUNDS IN CAPITAL MARKET DEVELOPMENT

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Abstract: *Decline in trust and the withdrawal of foreign investors from the Serbian capital market contributed to the decline in value of turnover on the BSE. Increased risk of investing in the Serbian capital market focused investors on less risky investments, and in that respect and less profit. In such circumstances, the Serbian capital market, the investment alternative is to invest in mutual funds. Mutual funds carry a slightly higher risk than savings in the bank, but as a rule, and higher yields on invested funds. The paper analyzes investment funds in the capital markets of Serbia, in terms of types, methods of functioning and income of the fund. The paper is also a survey of the net asset value per share of the fund NAV (net asset value), the total rate of return of open investment funds (total rate of return of open investment funds) and the rate of total yield closed-end investment funds (rates of total yield closed-end investment funds). The aim is to point out the advantages and disadvantages of investing in mutual funds in the capital markets of Serbia, and the possibilities of realizing returns on invested funds.*

Keywords: *open-ended investment fund, closed-end investment fund, the NAV (net asset value), rate of return, risk;*

Introduction

Investment funds are one of the most popular ways of investing money in the world. In countries which have high level of development of stock exchanges and their transactions, investment funds have become extremely popular over the past twenty years. For the last ten years in our region the development of the investment funds market has been linked primarily to the definition of the legal framework necessary for successful functioning of investment funds market, then to the establishment of more investment funds and companies running investment funds, as well as to an increase of investor awareness about the importance of market capital as a place for collecting capital. Investment funds were created as a permanent pursuit "of small investors" and the investors who do not know well the

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regulations on the capital market and want to invest capital and enter the capital markets at the "back door" in order to make returns through positive performance of the investment fund. According to the Investment Funds Law, investment fund is an institution of collective investing, where money is collected and invested in various types of assets with the aim of making profit and reducing investment risk (Investment Funds Law, 8).

Indirectly investment funds are financial institutions which take assets of small individual investors to whom in return they issue shares or, less frequently, the certificates on participation in the financial assets of the fund (units) (Šoškić, Živković, 2006, 13, p.451). Collected money of the fund is invested in various types of assets (shares, bonds, treasury bills and other lawful securities), in compliance with the investment objectives specified in the prospectus, for the purpose of making profit and reducing the investment risk. Income generated in this way is invested by the mutual funds in domestic and international financial markets and securities, creating a diversified investment portfolio. By investing in the mutual funds an investor earns income from dividends on shares and interest on bonds traded by the investment fund, capital gains as a difference in the price of securities traded by the investment fund, depending on the investment strategy of the fund as well as an income in the form of capital gains through the increase in value of investment unit of the fund.

In the first chapter of the paper Mutual Funds on the Serbian capital market we will analyze the situation on the Serbian capital market regarding the movement of basic indicators of the Serbian capital market, the level of development and the importance of investment funds, as well as the movement of major stock indices on the BSE. The second chapter will analyze the basic principles of operation of investment funds and the movement of investment units of investment funds in 2010 on the market capital of the Republic of Serbia. The third part of the paper is called Measuring investment funds yield, which analyzes net asset value per investment unit (NAV), yield rate of open-end investment funds and yield rate of close-end investment funds. The final section discusses the risks of investing in the mutual funds on the capital market of the Republic of Serbia.

1. Investment funds on the Serbian capital market

The Republic of Serbia has been in the process of radical reforms of economic and financial system for a long time. The low level of development of the Serbian capital market is one of the reasons of slow progress of the market economy in Serbia. By passing the Law on Securities, Law on Enterprises and Law on Banks in 1989 financial market was re-activated after fifty years of discontinuity in its existence. Development of capital markets has led to enhanced *market standards* which characterize modern financial markets, providing conditions for correcting the current deviations of economic and financial system

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and keeping up with the countries with high level of capital market development. The capital market of the Republic of Serbia, as a newly formed and still developing market, has been shaken by the global financial crisis. This is primarily reflected in the fall of turnover at the BSE in the last three years, represented in the Table 1.

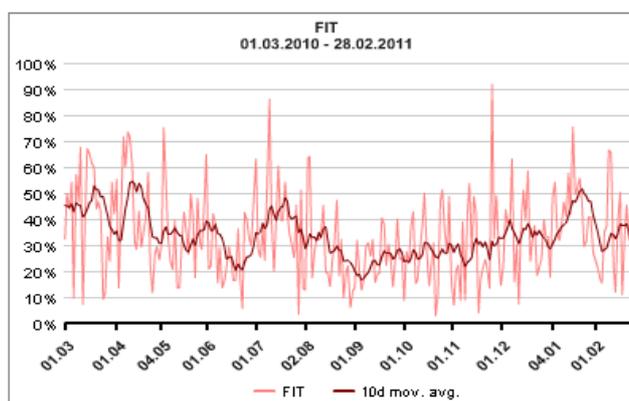
Table 1. Turnover on the BSE during the period 2005-2010

Year	Turnover RSD	Index				
		2005/06	2006/07	2007/08	2008/09	2009/10
2005	48,350,670.61					
2006	100,583,951.91	108,03%				
2007	164,990,865.96		64,03%			
2008	71,853,776.13			-56,45%		
2009	41,778,491.98				-41,86%	
2010	23,017,197.76					-44,91%

Source: (BSE, www.belex.rs, (10.02.2011))

As we can see the downward trend in nominal terms at the BSE starting from 2006 continued in 2007, 2008, 2009 and 2010. Stock market analysts as a key and enduring problem of the capital market of the Republic of Serbia state extremely low turnover due to low demand and shares supply. Serbian capital market is too dependent on foreign demand. It was obvious at the beginning of the global financial crisis when foreign investors quickly left our market, as well as now when the crisis is subsiding and when there is no significant influx of money from abroad.

Graph 1 Parameter values (FIT) in the period from 01.03.2010 to 28.02.2011

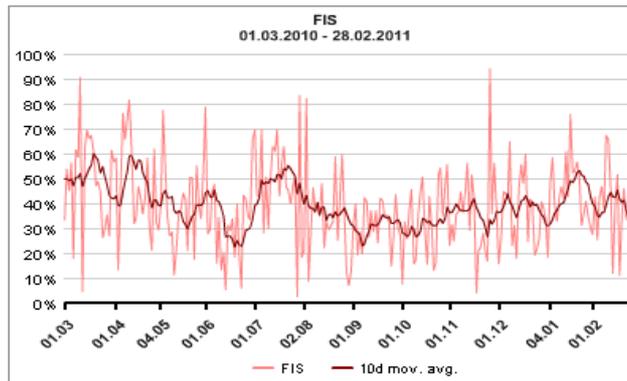


Source: (BSE, www.belex.rs, (28.02.2011))

The reason is very simple, there was a decline of confidence in the capital market of the Republic of Serbia and in the companies whose shares are traded on the BSE. However, the values of participation of foreign investors in total turnover

of BSE (FIT) and their participation in the total turnover of shares BSE (FIS) in the previous year did not show high volatility, i.e. there was stagnation of these parameters. Movement of the value of the parameter (FIT) in the period from 01.03.2010 to 28.02.2011 is presented with Graph 1 and the value of the parameter (FIS) in the period from 01.03.2010 to 28.02.2011 is presented with Graph 2.

Graph 2 Parameter values (FIS) in the period from 01.03.2010 to 28.02.2011



Source: (BSE, www.belex.rs, (28.02.2011))

These are just some of data which illustrate the current state of capital market of the Republic of Serbia. However, the Serbian capital market provides opportunities for achieving returns. One of the most important rappers of the situation on the BSE that describes the movement of prices of most liquid Serbian shares in real time is **BELEX15** index. **BELEX15** is quoted on several European stock exchanges such as: *Scoach, Boerse Stuttgart, Warsaw Stock Exchange* in the form of an index certificate. In the last year it recorded significant fluctuations with a tendency to fall.

Graph 3. Movement of BELEX15 index in the last year (2010-2011)



Source: (BSE, www.belex.rs, (27.02.2011))

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Another index of the BSE, **BELEXline**, which presents a general, basic "benchmark" index of the BSE, whose value is calculated at the end of the trading day, also showed in the past year, significant fluctuations with a tendency to fall. Movements of the indices **BSEBELEX15** and **BELEXline** in the last year are presented with Graph 3 and Graph 4 respectively.

Movement of the index BELEXline in the last year is presented with Graph 4.

Graph 4. Movement of BELEXline index in the past year (2010-2011)



Source: (BSE, www.belex.rs, (27.02.2011))

The data presented in Graph 3 and Graph 4 show great volatility in prices of financial instruments traded on the capital market of the Republic of Serbia. This resulted in the increase of the risk of investing in the securities on the domestic capital market. Mutual funds offer investors the possibility of investing financial assets on the capital market with a lower degree of risk in relation to individual investments. Since the countries with highly developed capital market are characterized by the existence of large number of highly developed investment funds, the paper analyzes the significance and the degree of development of investment funds on the capital market of the Republic of Serbia.

According to portfolio theory, investment funds reduce investment risk through diversification. Diversification aims to invest assets in large number of instruments, in order to compensate the possible loss with the profit gained from other instruments. Even with the small amount of money invested in investment funds investor receives diversification of investment risks which is characteristic for big investment amounts invested in a number of different securities. Mutual funds buy and sell large amounts of securities, leading to lower transaction costs than costs paid by an individual investor. Investment fund gives investors the opportunity to turn their shares into cash at any time, which is a very important feature of liquidity of invested financial assets. Investing in mutual funds is a very simple procedure which requires signing in the fund and investing according to plan and schedule of investors, while the minimum investment is at sufficiently

low level for individual investors who own a small amount of financial assets. On the Serbian capital market there are three basic types of investment funds: open-end funds, close-end investment funds and private investment funds.

2. Basic principles of operation of investment funds

Open-end investment fund operates on the principle of raising funds through minority investment units. Number of owners of investment units in the fund and the value of fund assets are constantly changing. Property of investors is invested in various securities: shares, bonds, treasury bills and other lawful securities. The entire property is divided into equal parts - the investment units. Each investment unit is a proportionate share of the total assets of open-end investment fund. The owners of open-end investment fund are investors who invest money and in this way buy units of an open-end investment fund. The value of the units varies depending on the change rate of the securities in portfolio of open-end investment fund. Success of open-end investment fund is measured by the yield, i.e., growth in unit values. The company's goal is to increase the total assets of open-end investment fund, thereby to increase property of the investors. The goal of open-end investment funds is preservation of the property value with high rates of return in the long term by investing in domestic and foreign securities markets.

Depending on the selected investment objective, open-end funds can be divided into (investment-funds-www.investicioni fondovi.com, (20.01.2011)):

- 1 Fund of the asset value preservation
- 2 Income fund
- 3 Balanced fund
- 4 Equity fund

Fund of the asset value preservation invests in short-term debt securities and cash deposits. These funds have the lowest risk rate and their yields are the lowest compared to other types of open-end funds. Income fund invests at least 75% of its assets in debt securities (bonds). Investing in the income fund carries a slightly higher income risk than investing in the fund for preserving the property value, and thereby achieves slightly greater income. One feature of income fund is that it is exposed to the risk of movements in interest rates, i.e. when interest rates increase the value of income fund assets decreases. Balanced fund invests at least 85% of assets in equity and debt securities, that is, it invests in debt securities minimum 35% and maximum 65% of total fund assets. This fund carries a moderate rate risk and moderate returns. Equity fund invests at least 75% of its assets in equity securities (shares). These funds are the riskiest and most convenient for the people who are willing to accept high investment risk. Most investment funds in Serbia are funds of value growth.

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In 2010 on the capital market of the Republic of Serbia there were a lot of changes in terms of investment funds. Two new funds were established on the market by the management company of the Raiffeisen Invest a.d. Belgrade: Fund of the asset value preservation Raiffeisen Cash and equity fund Raiffeisen World. DZU Citadel Asset Management changed the name of the acquired Balanced Fund "Hypo Balance" with the decision of the Commission for the Securities to "Triumph Balance." Commission for the Securities approved the merger of two open-end investment funds "Triumph" and "KD Exclusive". By the end of the year we can say that only three funds had negative movements and they are from the group of equity funds. The largest decline in investment units had Raiffeisen Fund -50.54 percent, then funds Focus Premium -20.69 percent and Delta Dynamic -4.59 percent (seebiz.eu, www.seebiz.eu, (20.01.2011)). Increase of 10.06 percent in the value of units from this group of funds, was achieved by the Global Fund Illyricum, then the increase of 8 percent was achieved by Fima Proactive, the fund Raiffeisen World also achieved increase of 6.67 percent, the fund Citadel Triumph had an increase of 5.52 percent and fund Kombank Infond had an increase of 1.17 percent (seebiz. eu, www.seebiz.eu, (20.01.2011)). All balanced funds had an increase in value of investment units by the end of the year. The biggest increase in value of the unit had Triumph Fund Balance 9.80 percent, then the fund Erste Euro Balanced 35 4.37 percent and Delta Plus fund 3.87 percent.

The least risky funds, the funds of the asset value preservation had positive changes in 2010. The biggest positive change was one by Erste Cash Fund of 8.93 percent, followed by Raiffeisen Cash Fund with growth of 8.71 percent, Money Fund Fima with 7.77 percent and the fund Citadel Cash from 7.64 percent. Total income of open-end investment funds in 2010 was reduced by -8.47 percent (seebiz.eu, www.seebiz.eu, (20.01.2011)). Erste Fund Cash had the biggest asset growth of 312.28 percent and Raiffeisen Fund had the biggest drop in assets of -90.20 percent (seebiz.eu, www.seebiz.eu, (20.01.2011)).

By the end of 2010 the assets value of all open-end investment funds amounted to RSD 1,078,876,273.62. The largest growth and decline in value of investment fund units on the Serbian capital market in 2010 are shown in Table 2.

Table 2 The largest growth and decline in value of investment fund units on the Serbian capital market in 2010

No.	Fund name	Growth in value of investment units	Fund name	Decline in value of investment units
1	Ilirika Gold	10,06%	Raiffeisen Akcije	-50,54%
2	Triumph Balance	9,80%	Focus Premium	-20,69%
3	Erste Cash	8,93%	Delta Dynamic	-4,59%

Source: (seebiz.eu, www.seebiz.eu, (20.01.2011))

Close-end funds raise their money through public bids and have limited number of shares. When the public bid is closed, the investors who bought fund shares can trade them on the regulated market at the market price of such shares which may be lower or higher than the value of the fund asset. The management company is obliged to include shares of the fund on the regulated market within 3 days of receiving the issue receipt. In addition to securities which open-end funds invest in, close-end funds may invest in real estates as well as in the companies that are not traded on the regulated market and can be more risky than open-end funds. Close-end funds do not carry out the purchase of shares from their members, but they must sell them on the secondary, stock or over-the-counter market.

Depending on the investment policy and the type of assets which they invest in, close-end funds are divided into (Investment-Funds, www.investicioni-fondovi.com, (20.01.2011)): close-end funds which more than 50% of their assets invest in securities traded on the regulated market, close-end funds which more than 50% of their assets invest in shares of companies that are not traded on the regulated market and in shares of partnerships, limited partnerships and limited liability companies in the Republic of Serbia and close-end funds for investing in the real estates which more than 60% of their assets invest in real estates. On the Serbian capital market there are private funds organized as limited liability companies. They are intended for experienced investors, and the minimum bet is EUR 50,000.

3. Measuring investment funds yield

Investment policy of the investment fund determines its basic objectives and investment strategy. The main objective of the investment policy of open-end investment funds is to achieve attractive returns with acceptable risk. A share is a share of total net assets of open-end investment fund. The calculation of net asset value per investment unit (NAV) is presented in Table 3. The initial value of investment unit of all open-end funds in Serbia is 1,000 RSD. When a natural or legal person invests some money in the fund he actually buys certain number of investment units. The net value of the fund is calculated every work day at the end of trading. Since the value of securities changes every day the net value of the fund changes daily too. The net value of the fund is a good indicator of the success of the investment fund. It is also important to point out that the price at which buying or selling shares of open-end funds is done reflects the market value of portfolio securities which they possess. The share price is determined based on net asset value NAV per share. In close-end investment funds share prices depend on market trends and the supply and demand, and they differ from net asset values (Eric, 2003, 7, p.220).

The calculation of net asset value per investment unit (NAV-Net assets value), is presented by the hypothetical example. Let's suppose that the investment fund owns XXX 1500 investment units. The current market share price at the end

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of the day is 1.5 it, and the cash that fund owns is 15 000. Obligations of the fund amount to 5500 n.j. It is necessary to calculate net asset value of the open-end investment fund per investment unit.

Table 3 The calculation of net asset value per investment unit (NAV Net assets value)

Description	Value
1 Cash	15 000
2 Market value of financial instruments (1500*1,5)	2250
3 The total market value of fund assets (1+2)	17 250
4 Liabilities (Liabilities Fund)	5500
5 Net asset value of fund (3-4)	11750
6 Number of investment units	1 500
7 Net asset value per investment unit (NAV-Net assets value) (5/6)	7,833

Mutual funds can make a profit for their investors on three grounds. Firstly, from dividends and interest received from securities in the portfolio. Secondly, based on realized capital gains (capital gains distributions) if the sale price of securities is greater than the purchase price. The third aspect is an increase in value of securities in the portfolio of the fund and thus an increase in NAV (Net assets value) fund (Šoškić, 2006, 14, p.282). Yield of the investors in mutual funds is not guaranteed category. Depending on the situation on the capital market, price movements of securities and other parameters, investor can make certain losses in certain categories or even in all in a particular period. The investment policy of investment funds should be based on long-term horizon.

The yield is an income per share paid to shareholders from dividends and interest, i.e. it is based on the first income fund (Šoškić, 2006, 14, p.282). It is usually expressed as a percentage of the purchase price of shares of fund (offer price or buy price). Payments in addition to dividends and interest include realized capital gains as well (capital gains distributions), i.e. they include all payments to shareholders for the first and second income of the fund. The total yield of the fund investors includes, besides payments, unrealized capital losses that are manifested in the growth of NAV. As the best measure of overall performance of the investment fund it is usually taken on the basis of dividend yield and/or interest, profits realized by selling securities and share value growth of the fund NAV.

If we mark up the rate of the total yield of open-end investment funds with the p yield, realized capital gains with k and increase in NAV with $NAV_{t+1} - NAV_t$, then the total rate of return of open-end investment funds is calculated based on relation 1 (Šoškić, 2006, 14, p.282):

Relation 1:

$$Up = \frac{p_t + k_t + (NAV_{t+1} - NAV_t)}{NAV_t}$$

By the same principle in Table 4 we shall calculate the yield rate of open-end investment fund per share:

Table 4 Yield rate of open-end investment fund per share

Dividend per share in the current accounting period	Realized capital gains per share	Net asset value per share, beginning of period NAV _t	Net asset value per share at end of period NAV _{t+1}	Yield rate of open-end investment fund per share
0,43	0,32	7,83	7,90	10,47%

In close-end investment funds the situation is simpler because the rate of return is obtained as with any other share as the ratio of the sum of capital appreciation of the $C_{t+1} - C_t$ and d dividends, with the share price of the fund at the beginning of the period of C_t , represented by Relation 2 (Šoškić, 2006, 14, p.282):

Relation 2:

$$p = \frac{(C_{t+1} - C_t) + d}{C_t}$$

By the same principle in Table 5 we shall calculate the yield rate of close-end investment fund per share:

Table 5 Yield rate of close-end investment fund per share

Dividend per share in the current accounting period	Realized capital gains per share	Share price at the beginning of period C _t	Yield rate of close-end investment fund per share
0,80	0,45	30	4,17%

In open-end investment fund investors, as a rule, do not receive full amount of the total yield. In addition to management fees, which are deducted before the formation of NAV_{t+1}, there are other provisions intended mainly to the costs of the distributive-sale fund organizations. Cost structure of the investment fund can be presented by the following mathematical relationship:

$$Tu = Un + In + Nu + Tf + Dt + Tt$$

The Role of Investment Funds in Capital Market Development

Tu-Total costs,
Un-entry fees,
In-redemption fees,
Nu-fees for asset management fund,
Tf-costs of the fund,
Dt-other costs,
Tt- money transfers costs.

The investor pays an entry fee when purchasing a share of the fund (from 0 - 5% of payment (usually 3%)). The investor pays a redemption fee when (selling) purchasing shares of the fund (0 - 5% of the value of personal property (usually 0% or 1%)). The management company is entitled to annual fees for asset management fund which is calculated on a daily basis as a percentage of fund assets, or as a percentage of average annual net asset value of the fund and is charged directly from the assets of the fund (from 1% to 5% (normally 3%)).

Costs charged from the assets of the fund relate to the costs associated with securities trading (commission of broker-dealer company, stock exchanges, CSD) as well as the costs of the custodian bank and external audit. Other expenses are paid by investors from other services performed by the management company at the request of investors: preparation and submission of reports on transactions and shares, delivery of financial statements of the fund. Costs incurred by the banks or other financial institutions through which you buy the investment units (normally the same as paying bills, max 1%).

4. Risks of investing in mutual funds on the capital market of the Republic of Serbia

Since every investment carries some degree of investment risk, investing in mutual funds carries certain risks as well. In finance the risk is closely related to the yield. Simply put the risk is the possibility of suffering loss, damage or harm (Erić, 2003, 7, p.146). It can be said that the yield and risk are both sides of the same coin. The risks that most affect the yield of investment funds are usually the following: interest rate risk, the valuation of securities risk, currency exchange rate risk, operational risk, liquidity risk, changes in tax regulations risk etc.

Most commonly risks are divided between those the management company of investment funds may also affect and the those they can not affect. The first group of risks is most often eliminated by diversifying the portfolio of the fund. Portfolio risk is measured by the so-called beta coefficient of portfolio which is sensitive to changes of the whole securities market. When the beta coefficient is less than 1 it means that its yield is less sensitive than the yield of the overall market and thus it is less risky. Risks can be systematic and nonsystematic. Systematic risk is the one the manager can not influence because with the

diversification of investment it can not be avoided. Nonsystematic risk is the one that can be limited by diversification and selection of appropriate investments. On the basis of risk of investments in open-end investment funds, it is possible to create a risk scale of investment, represented in Table 6.

Table 6 The risk scale of investment in open-end investment funds

Open-end investment fund	The risk scale
Fund of the asset value preservation	1 - 2
Income fund	2 - 4
Balanced fund	4 - 6
Equity fund	8 - 10

Risk scale: 1 - without risk 5 - medium risk,..... 10 - high risk

Conclusion

Mutual funds are professionally managed financial institutions that mobilize capital from more individuals for the purpose of investing in a set of securities of different issuers. They are nothing but a set of shares and/or bonds. These funds obtain the capital by selling their stocks and shares, and then use these funds to invest in many different market segments. Establishment of a large number of investment funds has led to the enrichment of the institutional structure of banking and financial sector and to the increase in competitiveness. In addition, there was a deepening of financial markets. The structure of the types of investment funds in Serbia is dominated by value growth funds, which are most profitable, but carry the greatest risks, and which proved their existence most obviously at the beginning of the financial crisis. Each investor whose primary investment objective is to protect his capital, and to gain a fairly high rate of return with minimal risk, should consider investing in mutual funds. Generally speaking, the volume of securities at the BSE is currently small. The reason for this situation on the capital market of the Republic of Serbia has shaken investors' confidence, due to recent sharp corrections in stock prices and global economic developments.

Abrupt corrections occurred primarily because of poor knowledge of the functioning of capital markets by domestic investors, non-transparent privatization, and the low level of corporate governance. To bring back investors' confidence in the capital markets of the Republic of Serbia, it is necessary to ensure full compliance with the standards of corporate governance, make business enterprises more transparent and speed up the resolution of court disputes. Recently the capital market of the Republic of Serbia and capital markets of the neighboring countries have become unstable and they require a permanent and comprehensive analysis of issuer risk that follows investing.

Investing in mutual funds makes balanced relationship between returns and risks, considering current conditions of the capital market of the Republic of Serbia

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in terms of relationships between risks and returns. However, the investors in this region still do not have a habit of investing in the stock exchange and most of them will rather opt for some other kind of investments such as real estates, because there are still fears inherited from the past. What is certain is that investing in mutual funds in the near future, will certainly gain in importance, because Europe and the world is becoming more integrated, information propagates at the speed of light, so it is inevitable for the Serbian capital market and its citizens to take greater part in the development of the modern world.

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ULOGA INVESTICIONIH FONDOVA U RAZVOJU TRŽIŠTA KAPITALA

Rezime: Pad poverenja i povlačenje stranih investitora sa tržišta kapitala Srbije uticao je na pad vrednosti prometa na Beogradskoj berzi. Povećan rizik investiranja na tržištu kapitala Srbije usmerio je investitore na manje rizična ulaganja, a s tim u vezi i manji prinos. U takvim uslovima na tržištu kapitala Srbije, investicionu alternativu predstavlja ulaganje u investicione fondove. Investicioni fondovi nose nešto veći rizik od štednje u banci, ali po pravilu i veći prinos na uložena sredstva. U radu je izvršena analiza investicionih fondova na tržištu kapitala Srbije, sa aspekta vrste, načina funkcionisanja i prinosa investicionog fonda. U radu je takođe izvršena kvantitativna analiza neto vrednosti aktive po akciji fonda NAV (net asset value), stope ukupnog prinosa otvorenih investicionih fondova (total rate of return of open investment funds) i stope ukupnog prinosa zatvorenih investicionih fondova (rates of total yield closed-end investment funds). Cilj rada je da se ukaže na prednosti i nedostatke investiranja u investicione fondove na tržištu kapitala Srbije, kao i na mogućnosti ostvarivanja prinosa na investirana finansijska sredstva.

Ključne reči: otvoreni investicioni fond, zatvoreni investicioni fond, NAV (net asset value), stopa prinosa, rizik

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