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The value of general methods, quantitative techniques and management models in professionalizing management

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The economic organization has been considered, over the last two or even three decades, to be an open system structured into essential subsystems. Consequently ,the management of the organization has been defined, in a systemic manner, in managerial literature, as bringing together elements having an informational, decisional, organizational, as well as a motivational character. The subsystem of management methods and techniques is a methodological-experimental subsystem made up of methods, techniques, procedures and instruments characterized by rationality, complexity and formalization, which conduce to an ascending dynamics of the organization's managers' professionalization. Recent research into comparative management comes to the conclusion that it is necessary to combine the techniques into new methods, and even methods into new leadership and management systems, with a view to attaining an increased effectiveness of management.

1. Introduction

Characterized by various cases of overlapping and interconnections between the economic aspects and the political, social, juridical, informational, moral, religious ones, the management, when approached in a functional manner, as a process, puts together a set of actions through which the manager (either as an individual or as a member of a team) plans, organizes, decides, stimulates the employees, and controls activity, in order to achieve the organization's objectives. To the frame of reference generated by the functions or attributes of management a number of further approaches have been added to management, as a process, in accordance with the dominant aspect, which has been treated as such in the managerial literature, be they of factorial, methodological, economic, informational, organizational, qualitative or successive nature.

A.Functional, through managerial attributes	**B. Factorial, through inputs and outputs**
1.planning or prognosis of organization	1.evaluation of the inputs' influence
2. coherent organizing of the activities	2.re-evaluation through competing organizations
3.decision on organization's optimization	3.quantification of information from the stakeholders*
4.stimulating the labour resources	4.evaluation of the outputs' influence
5.control of the organization	5.efficiency rates of the optimal transformation into outputs
C.Methodological, through the state of the system	**D. Economic, through the needs -resources correlation**
1.understanding the current state of the system	1. determination of needs
2.defining the desired state of the system	2. analysis of available resources
3.determining the contradiction between the states	3. optimal allotment of resources
4.decision of solving the contradiction	4. utilization of resources and satisfying the needs
E.Informational, through databases	**F. Organizational, through managerial rules**
1.searching the available information	1. coherent assembly of rules, regulations and norms
2.selection/completion of useful information	2. summing up the methods of training and stimulation
3.processing the useful information	3.principles of setting up responsibility
4.transmitting the results of the processing	4.defining the set of cooperation relationships
G.Qualitative, through control**	**H. Logical seriate arrangement of activ ities of the processes**
1. planning (*plan*)	1. activities of projecting (adjusting) the processes
2. action (*act*)	2. activities of organizing the processes
3. verification-control (*check*)	3. activities of current direction of the processes
4. executing (*do*)	4. activities of optimizing the decision in the processes

Table 1 Criteria for approaching the process of management, and its stage-structured content

Remarks: * In the first stage, the information is quantified from the stakeholders in the internal milieu (shareholders, associates, employees and the managers at the various levels of the organization), and in the second stage, from the stakeholders in the external milieu (suppliers, creditors, customers). ** Management as a qualitative process (Edward Deming).

2. System approach applied on the management concept

The acceptance of a system is however much more suitable for management in keeping with the evolution of the activities of the organizations in the contemporary milieu/environment, which is ever more unstable from the point od view of technologies, of labour force resources' migration, of re-evaluation of the energy resources, of the diminution of the deposits of the main raw materials, of the informational explosion and asymmetry, of the continuous shifts in the province of the principles and rules of business ethics and social responsibility, etc. The economic organization has been considered, over the last two or even three decades,* to be an open system, whose internal processes are in a bilateral relationship to the external milieu, but also a subsystem of the economic external milieu, as it is significantly influenced by the external milieu, and subsequently it influences the latter, in its turn, but to a much more restricted manner. At present, the organization's external milieu itself is perceived as a set of extensive, broad-scope interconnected subsystems (of a political, social, cultural, educational etc. nature), with which the contemporary organization has links that allow for possibilities and generate limitations [1], both harmonized through the management process.

In its turn, the system of the organization is structured into essential subsystems, their imaging being different as to the operational or human criterion of systematization. Thus, in a first partitioning of an operational type, specific to the managerial literature written in English, five types of active subsystems are identified in the organization:

- the production subsystem, where inputs are turned into outputs;
- the supportive subsystem, which ensures the totality of the inputs in the external milieu (i.e. human, material, related to energy, informational, etc.), but also the placement of the outputs towards the same milieu, thus materializing the external connexions of the organization;
- the subsystem of conservation (the maintenance subsystem), where the mechanisms of recruiting and training, of social adjustment and motivation, in keeping with the norms of the organization, are reunited;
- the subsystem of adaptation / adjustment (the adaptive subsystem), which elaborates the corrective measures, meant to adapt the system after researching into the influences in the external environment/milieu.
- the management subsystem, which directs/guides the activities of the other subsystems of the organization, through ensuring the functions of planning, organizing, decision-making, stimulation and control.

The second systemic partitioning of the organization results from the combination and relations among the human entities, groups and managers, which in turn create the other three vital subsystems: the individual subsystem, the group one, and that of the managers.

In their turn, the management subsystem, analyzed as a self-reliant / independent system, irrespective of the organization's specificity, includes several components, which are to be distinguished as far as their area and weight within the organizational ensemble is concerned. The first approach to the division of management subsystem was based on characteristic management tasks, planning, organization, command coordination and control [2]. The next approach was a division into operational, organizational and institutional levels. [3] the division can also be individualized, in keeping with the nature and the characteristic features of the instruments utilized, as falling into five general subsystems: informational, decisional, organizational, of management methods and techniques, as well as a final category, generically called "other elements".

Consequently, the management of the organization is defined, in a systemic manner, in managerial literature, as bringing together elements having an informational, decisional, organizational, as well as a motivational character, by means of which the "*ensemble of the management processes and relationships*" is exercised, "*with a view to obtaining the maximal degree of efficacy and efficiency*". [4]

The most visible component of the organization's management system has a prevalently form-related nature, and ensures the organizational framework, as well as the division, the combination and the functionality of the activities involved. *The organizational subsystem* puts together the prevalently form-related elements and a number of informal elements; identifies, relates and even combines the organization's components, subdivisions and resources. The principal instruments of formal organization remain the organizing and functioning regulations, the organization charts, the descripti-

*** This type of systemic structuring of management was developed, after 1970, as part of the open systems school, which included some of the most prestigious repressentatives of contemporary compared management, such as Anant Neyhardi, S.D. Prosad, Bernard Estafeu, Rosalie Tung, etc.**

ons of functions and positions. In parallel to the formal organization, the one of an informal typeco-exists in the organization, which possesses, as essential elements, an informal group, an informal type of conduct, informal relationships, roles, organizational culture and even leaders [5]. A good organization makes the informal and the formal overlap, and turns the informal leaders into formal ones, whenever possible.

The informational subsystem, represented by the ensemble of the messages decrypted from the organization's banks and databases, putting together informational flows and circuits, procedures and means of access, memorizing, processing and transfer of information, is permanently present in the existance of all the functions of management. The quality of being an informational subsystem emerges from the aggregation of the quality of the data and information, of the flows and circuits, of the procedures and means of informational treatment. This system influences all dimensions of organizational structure and managerial tasks.[6]

The decisional subsystem, represented by the ensemble of the decisions made and enforced, is conditioned by the quality of all the other subsystems, and represents the most active part of the system; it directs the development of the organization and triggers the personnel's actions, thus constituting the determining factor in increasing the organization's efficacy.

3. The subsystem of management methods and techniques

The subsystem of management methods and techniques is a methodological-experimental subsystem made up of methods, techniques, procedures and instruments characterized by rationality, complexity and formalization, which leads to an ascending dynamics of the organization's managers' professionalization.

The remaining micro-subsystems are grouped into the other elements category, and include various other significant components related to the transformations, and to the efficiency rates, adaptation to change and preservation, stimulation and control, continuous/lifelong learning, etc.

Comparing the organization with the human organism system can surprise through immediate associations between the organizational subsystem and the bone system, between the informational subsystem and that of blood circulation, between the decision-making subsystem and the nervous system, between the methods and techniques subsystem and the subsystem of the sense organs, etc. The overall structure of the subsystems of management is a resultant of a theoretical nature, as these approaches to the leading/directing activity are difficult to identify and delimit in practice, because of the complex character of the management system, a system characterized by several variegated instances of overlapping of the economic aspects and the social, juridical, informational, moral, cultural, educational, religious, etc. ones. In other words, any management system presents a set of common structural rules, while differing from one organization to another, and also in the point of efficiency. That diversity has, as explanatory variables, both the objective factors that influence the organization (the resources available, the information already known, the quality of the human factor, etc.), and the subjective factors, mainly generated by the manager's ability to cope with competition, conjuncture, instability, i.e. the permanent changes in the organization's business milieu.

The practical management is a component organically integrated within the organization, which works in bilateral relationships or flows with the external milieu/environment, through transfer of information, human, material and financial resources. The content and the intensity of those flows exhibit defining / distinguishing aspects in each national economy, more often than not within the same economy, individualizing the organizations' managerial systems. Thus, another important signification of management systems emerges, a pragmatically delimitative one. Along these lines, one can distinguish: management systems of a technics-focused type,[7] characteristic of the last century, but still used today in economies under political dictatorship, and also – in a specific form – in the army, management systems almost exclusively based on human relationships, management systems centred on the analytic and holistic approach, specific to the developed economis, i.e. to the analytical organizations in North America, and the integrative organizations in Japan, etc.

Cassette no 1.

The technics-focused managerial systems *isolate the individual, underestimate or even annul human relationships, and take support on the individual qualities, unilaterally aiming at obtaining high performances. These systems are coherently applied in the military field, whereas, in the economy of the countries ruled dictatorially, they have led to gradual degeneration of all the functions of management; planning has lost its elasticity and become ever more rigid, organization has exclusively turned into commands and orders; any decision also implies the* *top manager, as stimulation and motivation has become manipulation, and control materializes in servile conformity and dedication to the leader.*

The managerial systems based on human relationships *ensure the harmonization of the leader's relations with his/her subordinates, the harmonization of the teams and the relationships between the individuals, in conformity with the principle of the individual's liberty of expression and communication, the goal being equally to obtain high performance. The systems based on human relations have an organizational structure taking support on collaboration, and participative management allows the people to adapt, out of their own initiative, to the demands of the organization. Thus, the organizational priority becomes a concrete information about the people/personnel, the teams, and the relations holding between all those elements and the manager. These managerial systems comparatively underestimate the importance of modern technologies in proportion to human resources.*

The managerial systems centred on the analytical approach *are based on the hypothesis according to which understanding of each detail leads to correctly perceiving the phenomenon in its entirety, and, on the operational plane, on the primordial character of the parts as to the whole, in consideration of the fact that, as long as each part of a whole is perfect, the whole as an aggregate will also function perfectly. The consequence of the analytical systems is an exaggerated attention to details: the management's attention is directed to the components rather than the (essentially North-American) organization, as an ensemble.*

The systems centred on the holistic approach *are based on the theory of systems, according to which the whole is more than the mere sum of its parts, i.e. when the climate of the subsystems is perfect, the whole, or the organization, may not be perfect. This type of management, Japanese in its origin, seeks to define, and put into practical use a philosophy of the organization, on the basis of which the other elements of management will be established and operationalized, beginning with the objectives, and ending in the specifications of the positions/posts.*

The nature of the managerial process highlights at least three dimensions naturally lacking finiteness, viz. the presence of the unknown (uncertainty), or the limitation that element gives the process under observation within the organization, the limitation of the observer's competence – in this case, the manager's – and mainly the limitation of the method used in the analysis. The relativity of managerial knowledge is of an exhaustive type, or that of the comprehensive analysis, the limitation as a result of the imperceptible presence of the unknown, or uncertainty, permanently gives the chance of attempting new solutions to still other managers, or their organizations, as "The kingdom of the Unknown has no precise limits"[8].

The self-limitation caused by the manager's restricted ability, or his lack of skill and competence is a millennial tribute serenely paid to those competent, and mainly to their scrupulousness in evaluating their own skillessness.* If the fact is almost unanimously admitted that the fundamental means of scientific interpretation is the one provided by the method, then the limits imposed upon managerial analysis by the method used are, naturally, all the more important. The slightly condensed statements made by ?tefan Odobleja, maybe the most vehement defender of the method, to the effect that "We can study real, palpable things, but if we fail to study them in keeping with a rigorously scientific method, these studies do not represent science", or "Neither the object nor the subject, but the method is the one that determines science"[9] are arguments which support both the superiority of utilizing the method in the practice of any science, and the paramount contribution of the method in securing management its scientific character.

In economic terms, the method [10] is defined as the ensemble of the modalities of approach, of the principles, procedures, and analysis techniques of the economic phenomena and processes, of the procedures of expounding the results of the researches, capable of serving the mission of economic science. Within the entire scope of management, emphasis is laid on the degree of process-wise formalization, as being one of a relatively reduced type, and on the non-rigid formulations specific to this many-sided, yet coherent combination of principles, ideas, orientations, procedures and case studies that synthetise the body of the method.[11]

A management method is prevalently applicative as part of an organization, and implies a subsequent similarity as far as the specific procedures and techniques are concerned, in order to quantify and compare results, or measure them against one another, in time, in space, and from an organizational standpoint. The category of the methods also includes a lot of subclasses of techniques based on scientific notions, which are used in applying the theoretical knowledge of management (from the technique of operational rese-

*** "I still remember the days when the scribes would leave blanks on a page" (Confucius, in Analects).**

arch, to the technique of modelling by means of network-shaped graphs, or to various stochastic or simulation techniques, etc.). The same managerial technique is frequently utilized as part of several methods, which can more than once increase the degree of confusion between methods and techniques in contemporary management.

The criteria of classification in the field of methods are manifold, and they continually make methods fall into diversely structured classes. For instance, in accordance with the sphere of applicability one can distinguish the class of the general methods, and that of the specific methods, in accordance with the domain of application – the class of the production, research, commercial, financial and accountancy, and personnel methods; when one considers the functions of management, one distinguishes the class of the methods of planning, of organization, of decision-making, of stimulation, and of checking/control; as far as the objectives are concerned – the class of the methods meant to increase the turnover, to scale up production, to cut down expenses, to augment labour productivity / work efficiency, to increase profit; starting from their scientific support, one distinguishes the class of the mathematical methods, of the information methods, of the statistical-economic, psychological, sociological ones; in relation to the classical reasoning – the class of the inductive and deductive methods, etc.

In succintly describing methods, their manner is considered significant, of being structured as general methods, and specifically managerial methods. The specific methods are also techniques belonging to various disciplines and sciences (mathematics, statistics[12], sociology, psychology, etc.), which makes treating methods and techniques distinctly difficult. One of the optimization solutions seems to be the use of the concept of method where a general method is presented, and then, when it comes to specific methods, the special mention is in order that, in this case, such methods and techniques are joined together which are in principle inseparable and difficult to take apart.

The first ten most usual and generally acknowledged general management methods remain: the method of previsional management (MP), the method through objectives (MPO), the method through exception (MPE), the method through projects (MPP), the method on the product (MPPr), the method through budgets (MPB), the method through results (MPR), the method through systems (MPS), the method through innovation (MPI), the collegial method (MC), and the method through consensus (MPC).

Cassette no. 2

-the method of previsional management (MP) is synthesized in the fact that the organization's objectives are made explicit over a long term, and that it involves the strategy or rational choice (i.e. based on studies) of the main objectives, of the necessary actions, and the apportioning/earmarking of the resources over a long term, in order to make possible the efficient fitting of the organization into the economic milieu, the policies, or its manner of organizing and coordinating the various activities, a kind of tactics or action iterated within the strategic constraints and the quantified objectives or targets proposed by the organization;
-the method of management through objectives (MPO) has emerged as a solution to fighting functional deviations, starting from the idea that an organization's success and development depend on the correlation of its objectives with the objectives of the organizational subdivisions, and the employees' own ones, as in a genuine control panel, as the very essence of the method lies in accurately and correctly setting a small number of such objectives (inter-correlated goals), for each hierarchal level, and each organizational subdivision;
-the method of management through exception (MPE) has gained recognition as a consequence of the increase in the organizations' dynamics, of the informational explosion, and the augmentation of the complexity of the management processes, and is represented by a system of identification, communication and rapid signalization addressed to the hierarchically superior manager, a system which entails the necessity for the latter's periodical intervention; as a rule, the manager becomes apparently inactive, as his/her reaction is only visible for evolutions exceeding the admissible limits of tolerance – statistically determined, through using the dispersion of the past values, and the tests of a t or F type, centered on the Student repartition (by means of the chart values of t), or on the Fisher-Snedecor repartition (by means of the chart values of F resulting from the function $F = \sigma12 / \sigma22$);
-the method of management through projects (MPP) is characterized through the limited duration of any project, through the innovational character, and through the fact it helps solve a number of complex, precisely defined problems, and its stages are defining the project through its objectives, its scope and impact criteria, as well as the assessment of the final results; appointing the project manager, making up the team and systematically

monitoring the project are essential factors in the successful unfolding of the project;
-the method of management on the product (MPPr) provides a novel, unexampled structure, of a three-dimensional type, adding to the two-functional, simultaneously hierarchical and functional structure, the structure of leading through the product; it has been generated by the variegated spectrum of a product manufactured by some organizations, and includes all the aspects concerning the product, all along its existence, from the concept stage up to the assimilation of a new one; the product manager intervenes in the information flows, in order to see to the conception and agree to the programs and the objectives of the product, by checking the production process, with a view to optimally using the factors of production;
-the method of management through budgets (MPB) is a planning and control model specific to those activities where the objectives are especially financial, and so its form of expression is accountancy-related, i.e. by means of monetary units, the budgets being achieved starting from the principle of participation in construction and execution, of the realism of both the incomes and expenses recorded, as well as the principle of the flexible planning;
-the method of management through results (MPR) is specific to the empiric managerial school, and represents an organized manner of obtaining certain results, as a consequence of the evolution and the leaders' activity assessment, in the process of accomplishing some objectives; it rests on concrete reality, and turns to account the interdependence between results and efforts in order to ensure the efficiency of the activity, but also incurring the risk of failing to adjust to the changes that take place in social and economic life; hence, the method can be temporarily applied in efficient, powerful organizations, but is inadequate for those having technical and economic difficulties;
-the method of management through systems (MPS) underlines the fact that the development of the big, modern organizations is similar to that of natural organisms, being accompanied, in a parallel, by a considerable increase in the volume of the management processes, which are permanently systematized and simplified through procedure-related provisions as to the content and succession of the activities, through automated methods, through networked systems (logically integrated schemes of activities and relations of precedence);
-the method of collegial management (MC), or management centered on collaboration, is based on a well-individualized concept concerning delegation of authority, and transforms the employees into collaborators, which makes it imperative that, apart from being assigned tasks, they are delegated the power of making decisions; this is a mixed method, simultaneously through the system, through the objectives, through exception, and through results, or on the product;
-**the method of management through innovation (MPI)** is characterized by a permanent effort of renewing the organization's activity, in keeping with the demands of the market; special attention is paid to the incentives meant to help introduce innovative ideas, as the motto of the organization applying this method was "new and different";
-the method of management through consensus (MPC) unfurls gradually and in all the structures of the organization, being centered on the group decision, which increases its effectiveness and materializes in a high degree of employee involvement in all the major problems of the organization's management, as well as an accelerated process of application of the decision, thus becoming the corollary of modern Japanese management.

4. Conclusion

The recent research into comparative management has come to the conclusion that it is necessary to combine the techniques into new methods, and even methods into new leadership and management systems, with a view of attaining an increased efficacy of management. All the broad classes of methods are ever more frequently structured – in a relatively far-fetched, strained manner – as aggregates of techniques, while the methods and the techniques are increasingly utilized in ever more diverse combinations by the managers, starting from the disadvantages of individual application of any method or technique, from the capacity of homogeneous ensembles of techniques grouped into methods of satisfying multifunctional managerial needs, up to the permanent desire of managers to achieve methodical and technical improvement or professionalization.

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Value based target working capital level

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658.14/.17**

Grzegorz Michalski[1]

The basic financial purpose of corporation is creation of its value. Liquidity management should also contribute to realization of this fundamental aim. Many of the current asset management models that are found in financial management literature assume book profit maximization as the basic financial purpose. These book profit-based models could be lacking in what relates to another aim (i.e., maximization of enterprise value). The corporate value creation strategy is executed with a focus on risk and uncertainty. Firms hold cash for a variety of different reasons. Generally, cash balances held in a firm can be called considered, precautionary, speculative, transactional and intentional. The first are the result of management anxieties. Managers fear the negative part of the risk and hold cash to hedge against it. Second, cash balances are held to use chances that are created by the positive part of the risk equation. Next, cash balances are the result of the operating needs of the firm. In this article, we analyse the relation between these types of cash balances and risk. This article presents the discussion about relations between firm's net working investment policy and as result operating cash balances and firm's value. This article also contains propositions for marking levels of precautionary cash balances and speculative cash balances. Application of these propositions should help managers to make better decisions to maximize the value of a firm.

1. Introduction

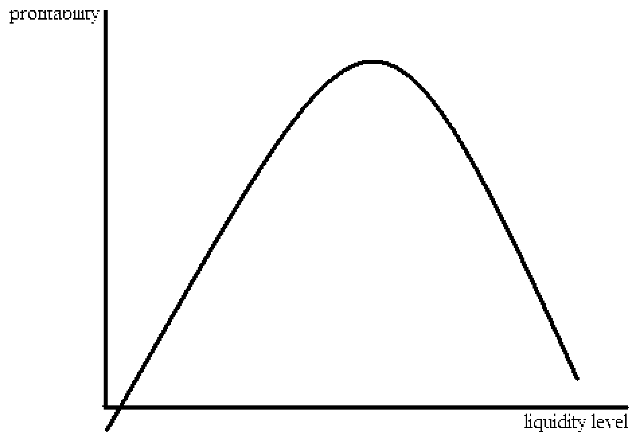
Corporate cash management depends on demands for cash in a firm. The aim of cash management is such that limiting cash levels in the firm maximizes owner wealth. Cash levels must be maintained so as to optimize the balance between costs of holding cash and the costs of insufficient cash. The type and the size of these costs are partly specific to the financial strategy of the firm.

In addition, cash management influences firm value, because its cash investment levels entail the rise of alternative costs, which are affected by net working capital levels. Both the rise and fall of net working capital levels require the balancing of future free cash flows, and in turn, result in firm valuation changes.

Liquidity management requires that a sufficient balance of cash and other working capital assets - receivables and inventories – should be ensured[2]. If the level of liquid assets is not adequate, it enhances the company's operating risk – loss of liquidity. Maintenance of working capital assets generates costs, thus affecting the company's profitability. The problem of this paper is how liquidity can be combined with profitability.

If the level of liquid assets is too low, then a company may encounter problems with timely repayment of its liabilities, while discouraging clients by an excessively restrictive approach to recovery of receivables or shortages in the offered range of goods. Therefore, the level of liquid assets cannot be too low.

Fig. 1. *Liquidity level vs. profitability*



source: own study.

At the same time (as we can see at fig. 1), surplus liquid assets may negatively affect the company's profitability. This is because upon exceeding the "necessary" level of liquid assets, their surpluses, when the market risk remains stable, become a source of ineffective utilisation of resources.

Along with an increased risk of the company's daily operations, you should increase the level of liquid assets to exceed the required levels as this will protect your company against negative consequences of unavailable liquid assets. It is possible to measure profitability of liquidity management decision in two ways. Firstly, it is possible to check how it affects the net profit and its relation to equity, total assets, or anoth-

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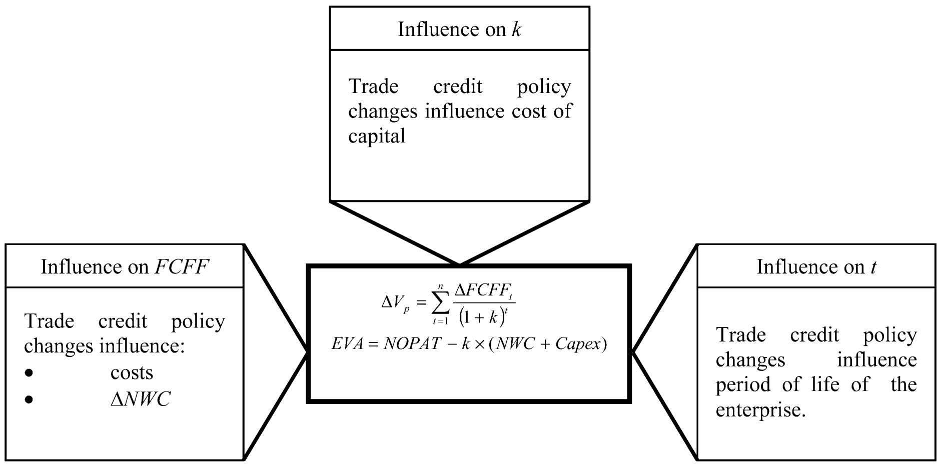
er item of assets. Secondly, it is possible to assess profitability in relation to value of the company.

Individual elements influencing liquidity management decisions affect the level of free cash flows to firm (*FCFF*) and thus the value of the company. Let us assume that the company is faced with a decision regarding the level of liquid assets. As we know, a higher debtors turnover ratio and inventory turnover ratio (resulting from a more liberal approach to granting a trade credit for the purchasers and offering a shorter turnaround on clients' orders) will be accompanied by more sales (larger cash revenues) but also higher costs.

Fig. 2. *Liquid assets influence on value of the corporation*



where *FCFF* = free cash flows to firm; *ΔNWC* = net working capital growth; *k* = cost of the capital financing the corporation; and *t* = the forecasted lifetime of the corporation and time to generate single *FCFF*.
Source: own study.

Profitability measured by *ROE* indicates that "medium" liquidity level is optimal. Similar results will be achieved if estimating influence on the company's value (see fig. 2.).

Again, the optimal variant was one that assumed a "medium" liquidity level as applying such level of liquidity ensures potentially the highest increase in the company's value measured by ΔV.

If the level of liquid assets is too low, it downsizes the sales thus discouraging clients with an overly restrictive trade credit policy. On the other hand, excessive exposure to liquid assets under the "high" level of liquid assets variant generated higher sales revenues than under the "medium" variant, but at the same time the positive result of increase in the sales volumes has been offset by high level of generated costs.

If the advantages of holding cash at a chosen level are greater than the influence of the alternative costs of holding cash, thereby increasing net working capital, then firm's value will also increase. The net working capital (current assets less current liabilities) results from lack of synchronization of the formal rising receipts and the real cash receipts from each sale. Net working capital also results from divergence during time of rising costs and time, from the real outflow of cash when a firm pays its accounts payable.

$$NWC = CA - CL = AAR + ZAP + G - AAP \qquad (1)$$

Where: *NWC* = Net Working Capital, *CA* = Current Assets, *CL* = Current Liabilities, *AAR* = Accounts Receivables, *ZAP* = Inventory, *G* = Cash and Cash Equivalents, *AAP* = Accounts Payables.

When marking free cash flows, cash possession and increased net working capital is the direct result of amounts of cash allocated for investment in net working capital allocation. If an increase of net working capital is positive, then we allocate more money for net working capital purposes and thereby decrease future free cash flow. It is important to determine how changes in cash levels change a firm's value. Accordingly, we use equation, based on the premise that a firm's value is the sum of its discounted future free cash flows to the firm.

$$\Delta V_p = \sum_{t=1}^{n} \frac{\Delta FFCF_t}{(1+k)^t}, \qquad (2)$$

Where: ΔV_p = Firm Value Growth, $\Delta FCFF_t$ = Future Free Cash Flow to Firm Growth in Period t, k = Discount Rate[3].

Future free cash flow we have as:

$$FCFF_t = (CR_t - FC_{WD} - VC_t - NCE) \times (1-T) + NCE - \Delta NWC_t - Capex_t \qquad (3)$$

Where: CR_t = Cash Revenues on Sales, FC_{WD} = Fixed Costs, VC_t = Variable Costs in Time t, NCE = Non Cash Expeses (i.e. Depreciation), T = Effective Tax Rate, $DNWC$ = Net Working Capital Growth, $Capex$ = Operational Investments Growth.

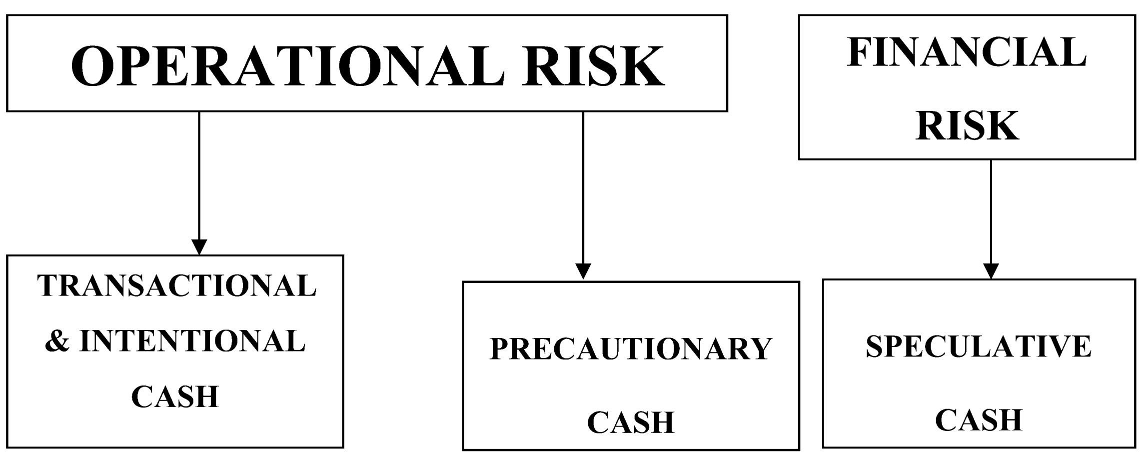
Changes in precautionary cash levels affect the net working capital levels and as well the level of operating costs of cash management in a firm. Companies invest in cash reserves for three basic reasons:

First, firms are guided by transactional and intentional motives resulting from the need to ensure sufficient capital to cover payments customarily made by the company. A firm retains transactional cash to ensure regular payments to vendors for its costs of materials and raw materials for production. As well, a firm retains intentional cash for tax, social insurance and other known non-transactional payment purposes.

Second, firms have precautionary motives to invest in cash reserves in order to protect the company from the potential negative consequences of risk, which are unexpected, negative cash balances that can occur as a result of delays in accounts receivable collection or delays in receiving other expected monies.

Third, companies have speculative motives[4] to retain cash reserves. Speculative cash makes it possible for the firm to use the positive part of the risk[5] equation to its benefit. Companies hold speculative cash to retain the possibility of purchasing assets at exceptionally attractive prices.

Figure 3: *Reasons for Holding Cash by Companies and Their Relation to the Risk.*



Source: own study

[3] To estimate changes in cash management, we accept discount rate equal to the average weighed cost of capital (WACC). Such changes and their results are strategic and long term, although they refer to cash and short term area decisions [T.S. Maness 1998, s. 62-63].

[4] [M.H. Miller 1966, s. 417-418].

[5] We define risk as the probability of obtaining a different effect than anticipated. Companies hold speculative cash to benefit from chance. Chance is the positive part of the risk equation, or the probability of obtaining an effect that is better than anticipated.

2. Value based strategy in working capital management

The issue discussed here attempts to address the question of which net working capital management strategy should be applied to bring the best results for a specific type of business. Financial decisions of a company always focus on selecting the anticipated level of benefits in conditions of risk and uncertainty. Decisions regarding net working capital management strategy, whether focused on assets (strategy of investing in the net working capital) or liabilities (strategy of financing the net working capital), affect free cash flows and the cost of capital financing the company. The principle of separating financial decisions from operating decisions, i.e. separating consequences of operations from changes in the capital structure, calls for a need to take the net working capital management decision first focusing on assets (it affects free cash flows to the company) and then on liabilities (it affects the structure and cost of capital used for financing the company).

Management of net working capital aimed at creation of value of the company. If the benefits of maintaining net working capital at the level determined by the company outweigh the negative influence of the alternative cost of such maintenance, then an increase in net worth of the company will be reported.

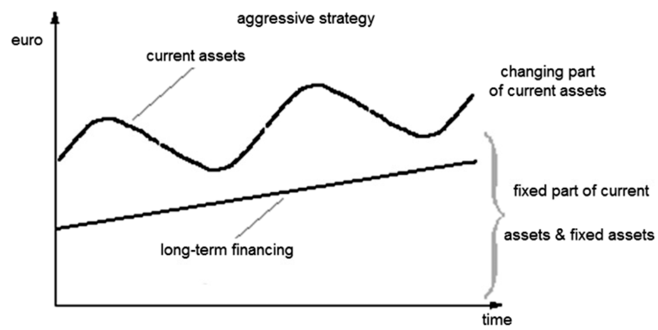
Interesting from our point of view, determined by the need to obtain the main objective of the company's financials management, is how a change in the net working capital level may impact the value of the company.

Net working capital is, most generally, the portion of current assets financed with permanent funds. The net working capital is a difference between current assets and current liabilities or a difference between permanent liabilities and permanent assets. It is a consequence of dichotomy between the formal origination of the sales revenue and the actual inflow of funds from recovery of receivables and different times when costs are originated and when the funds covering the liabilities are actually paid out.

When estimating free cash flows, maintaining and increasing net working capital means that the funds earmarked for raising that capital are tied. If the increase is positive, it means ever higher exposure of funds, which reduces free cash flows for the corporation. An increase in production usually means the need to boost inventories, receivables, and cash assets. A portion of this increase will be most probably financed with current liabilities (which are also usually *automatically* up along with increased production volumes). The remaining part (indicated as an increase in net working capital) will need an alternative source of financing.

Current asset financing policies are driven by the manner of financing current assets. Any changes to the selected current asset financing policy affect the cost of capital but do not impact the level of free cash flows. The company can choose one of the three policies:
a) an aggressive policy whereby a major portion of the company's fixed demand and the entirety of its volatile demand for financing current assets is satisfied with short-term financing.

Fig. 4. *Aggressive strategy*



Source: own study

b) a moderate policy aiming to adjust the period when financing is needed to the period when the company requires given assets. As a result of such approach, a fixed portion of current assets is financed with long-term funds, while the volatile portion of these assets is financed with short-term funds.
c) a conservative policy whereby both fixed and volatile levels of current assets are maintained with long-term financing.

Fig. 5. *Conservative strategy*

Source: own study

The aggressive policy will most probably mean the highest increase in the net worth of the company. However, this result is not that obvious. This is because an increase in financing with an external short-term capital and a decrease in financing with an external long-term capital (namely shifting from conservative to aggressive policy of financing current assets) means enhanced risk level. Such increased risk level should be reflected in an increased cost of own capital. This stems from increased costs of financial difficulties.

The aggressive policy of financing current assets is the least favourable, considering an increased cost of own capital.

Policies regarding investments in current assets are applied by the company as measures determining amounts and structure of current assets. There are three major policies available:
a) an aggressive policy whereby the level of tangible assets is minimised and a restrictive approach to merchant lending is applied. Minimising current assets results, on the one hand, in savings which later translate to higher free cash flows. On the other hand, insufficient level of current assets increases the operational risk. Too low inventories may interrupt the production and sales process. Insufficient level of receivables will most often lead to a restrictive merchant lending policy and, consequently, potentially lower sales revenue than in the case of a liberal merchant lending policy. Insufficient transactional cash levels may disrupt settlement of liabilities and as a result negatively affect the company's reputation.
b) a moderate policy whereby the level of current assets, and in particular inventories and cash, is held on an average level.
c) a conservative policy whereby a high level of current assets (and especially inventories and cash) is maintained at the company and ensuring a high level of receivables by using a liberal trade creditors recovery policy.

If the company aims at maximising ?V, it should select the aggressive policy. However, similarly as in the preceding item, it is worth considering the relation between the risk increase and the cost of own capital (and probably also external capital). The more aggressive the current asset investment policy, the higher risk. Higher risk, on the other hand, should be accompanied by higher costs of own capital and probably also external capital.

Changes of the policy, from conservative to aggressive, cause an increase in the cost of capital financing the company's operations due to enhancement of risk. It is possible that in specific circumstances, the risk may drive the cost of capital to such a high degree that the aggressive policy will be unfavourable.

In the discussed examples, the company should select a conservative current asset financing strategy and an aggressive current asset investment policy.

The primary objective of financing the company's operations is to maximise the company's net worth. It can be estimated among others by totalling all the future free cash flows generated by the company, discounted with the cost of capital. Decisions regarding management of net working capital should also serve the purpose of achieving the primary objective, that is maximising the company's net worth. These decisions may impact both the level of free cash flows and the cost of capital used for financing the company's operations. The module discusses probably changes of the capital cost rate, resulting from changes in selection of the net working capital management policy and, consequently, the anticipated impact of such decisions on the company's net worth.

3. Value based strategy in cash management

The most liquid current assets are cash balances. The purpose of cash management is to determine the level of cash resources at the company so that it increases the wealth of the company owners. In other words, the objective is to maintain such level of cash resources at the company that is optimal from the point of view of trade-off between the costs of maintaining cash balances against the costs of holding insufficient cash balances. The type and amount of these costs is partially driven by the particular financial policy applied by the company.

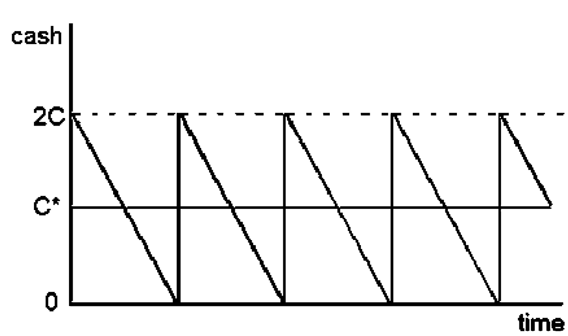
Based on observation of current inflows and outflows of the company, it may be noticed that there are four basic situations at the company in terms of operational cash flows:
1. when future inflows and outflows are foreseeable and inflows exceed outflows,
2. when future inflows and outflows are foreseeable and outflows exceed inflows,
3. when future inflows and outflows are foreseeable but it is impossible to determine which are in excess of which,
4. when future inflows and outflows are not foreseeable.

Depending on the type and volumes of inflows and outflows at the company, it is possible to select one of the four models of cash flow management. It is certainly not necessary for only one of the above situations to prevail at the company. The same business may have periods when inflows exceed outflows on a permanent basis, as well as periods when a reversed trend is noted or it is not possible to determine the trend. It is similar in case of projecting future inflows and outflows. It is possible that in some periods of time inflows and outflows can be projected without any major difficulty, while in other periods such projection is very hard or completely impossible.

Using information about future cash inflows and outflows, we are able to apply, for example, the Baumol model or the Beranek model. If we anticipate that cash inflows are greater than outflows, we are able to use the Beranek model ŠW. Beranek 1963 also: F. C. Scherr 1989, pp. 131-132Ć to determine cash flow management within a firm. On the other hand, if we predict that cash outflows are greater than inflows we use Baumol model ŠW. Baumol 1952Ć. When we cannot forecast long-term cash flows, for a period longer than approximately 14 days, we are able to use the Stone model ŠB. Stone 1972; T. W. Miller 1996Ć to determine cash flow management. However, when we cannot predict future cash inflows and outflows at all, the Miller-Orr model[6] can be used to determine cash flow management.

According to the BAT model assumptions, the company receives both regular and periodic cash inflows, while it spends cash in an ongoing manner, at a fixed rate. At the time of receiving funds, the company earmarks a sufficient portion of these funds to cover its outflows. This is performed until the next inflow of cash. This model can be recommended in a situation when future inflows and outflows related to operations of the company can be foreseen and, at the same time, operational outflows exceed inflows. The BAT model comprises two types of assets: cash and (external) marketable securities, which generate profit in the form of interest during each period.

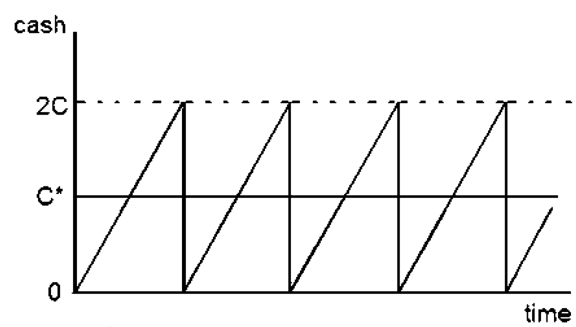
Fig 6. *BAT model*



Source: P. J. Beehler, *Contemporary Cash Management*, J. Willey & Sons, New York 1978, p. 191.

The BAT model has been developed for two reasons: in order to specify the optimal cash balance at the company and to suggest how the company managers should proceed to ensure optimal cash management.
The company which decides to follow recommendations regarding cash management, arising from the BAT model, determines an optimal cash level C^*_{bau}. It stems from the BAT model that when cash is spent, the company should secure cash from nonoperational sources of cash. Most often, this means that it should sell (external) securities, close the held deposit, and/or raise a short-term loan. The total amount of raised funds should be in each event twice as high as an average cash balance. The ratio of the total demand for cash in a given period and one transfer, provides information on how many such operations must be performed during the year. It is clear that if conditions, which enable application of the BAT model, have existed at the company for less than one year, then shorter periods should be taken into account.

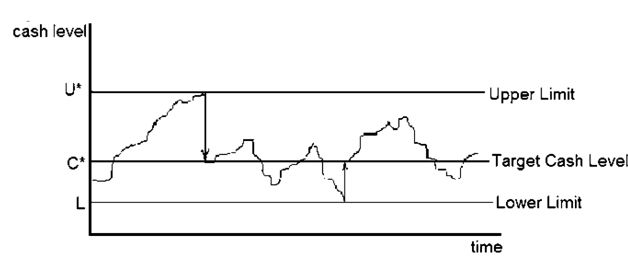
Fig 7. *Beranek model*



Source: own study

The basic assumption of the Miller-Orr model is that changes in cash balance at the company are unforeseeable. The company managers react automatically when cash balance equals either the upper or lower level. This model is presented in the figure.

Fig. 8. *Miller-Orr Model*



Source: P. J. Beehler, *Contemporary Cash Management*, J. Willey & Sons, New York 1978, p. 193.

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6 [M. H. Miller 1984] also: [G. Michalski 2005].

Reacting to the situation when the cash balance at the company reaches the upper or lower limit, the management board buys or sells (external) short-term securities, opens or closes short-term deposits and/or repays or raises a short-term loan in order to restore the target cash balance C_{mo}^*.

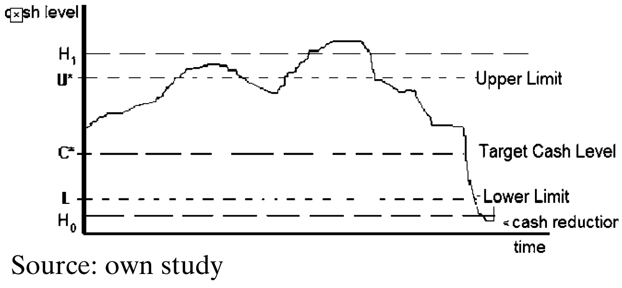
This model is used traditionally in such a manner that the management board of the company first specifies the lower limit of cash L that it finds acceptable. This value is specified subjectively based on experience of the company managers. As in a sense it is a minimum level of cash balance, it depends on such factors as availability of the company's access to external financing sources. If in the opinion of the management board members this access is easy and relatively inexpensive, liquidity at the company is lower and L can be set on a relatively low level.

The Miller-Orr model assumes that the target cash balance C^* depends on the (alternative) costs of holding funds, costs of cash shortages (transfer) and variants of cash flows during the considered period (this period must equal the period for which an interest rate has been set). The level of variance of cash flows during the analysed period is best determined based on historic data.

The target cash balance according to the Miller-Orr model is calculated based on the formula for C^*_{mo}:
In this model, after setting the target cash balance C^*_{mo} the upper limit U^* is determined as a difference between triple target cash balance and double lower control limit.

The Stone model is a modification of the Miller-Orr model for the conditions when the company can forecast cash inflows and outflows in a few-day perspective. Similarly to the Miller-Orr model, it takes into account control limits and surpassing these limits is a signal for reaction. In case of the Stone model, however, there are two types of limits, external and internal, but the main difference is that in case of the Stone model, such signal does not mean an automatic correction of cash balance as in the Miller-Orr model.

Fig. 9. Stone Model



Source: own study

If the cash balance exceeds the upper external limit H_1 or the lower external limit H_0, the management board analyses future cash inflows by projecting future cash balance by calculating the S level.

If the S level (determining the cash balance after n days from the moment of surpassing either of the external control limits) continues to surpass any of the internal limits, the management board should prevent variations from the target balance by purchase or disposal of securities in the amount sufficient for the cash balance at the company to be restored to its optimal level C_s*.

This model is presented in Figure 4. It shows that the cash balance has been growing as from the beginning of the analysed period. At some point, it exceeded the upper internal limit U^*. Then it exceeded the external control limit H_1. At the time of exceeding the external control limit, the management board of the company forecast future inflows and outflows. As the forecast indicated that the cash balance would continue to exceed the internal control limit (the grey line), the management board decided to adjust this level to the anticipated C^*. After the appropriate adjustment, the cash balance started to decrease after a few days and it surpassed the lower external control limit. Another forecast was prepared and it turned out that for several days the cash balance would remain below the lower internal control limit. Therefore, the cash balance was reduced down to C^*_S.

4. Cash balance forecasting

Maintaining the appropriate cash balance requires not only ongoing monitoring of the currently held current assets and liabilities that mature in the forthcoming future, but also those that should be anticipated in the future. Therefore, it is necessary to plan future cash inflows and outflows[7].

Cash forecast is performed based on cash budget. This tool contains a forecast of recovered receivables, expenditure on inventories and repayment of liabilities. It provides information about the cash balance, as cash balance is a result of inflows from sales (payment of receivables) and outflows due to purchase of materials and other costs of the company.

Cash budget is most often prepared several periods in advance subject to the company's information capabili-

[6] **Moir L., Managing corporate liquidity, Woodhead, Glenlake/Amacom, New York 1999, pp. 11-39.**

ties and needs. The most popular version of a cash budget is one prepared for six monthly periods. However, there are no reasons why cash budgets should not be prepared for six weeks or six biweekly periods. In any case, the rolling wave planning is used, which requires that subsequent periods be added to the budget on an ongoing and regular basis so that at any one time the company has a forecast for the fixed number of forecast periods (namely, if the budget is prepared for 8 biweekly periods, then it should be adequately extended when required so that a sixteen-week budget is available at any time). This requirement ensures for the budget to be constantly valid and applicable. Six-month budgets are most frequently prepared based on monthly time bands. For some companies it is absolutely necessary to determine inflows and outflows for individual weeks and sometimes even days. The more detailed the control of cash inflows and outflows, the more probable the precise and correct control of cash flow levels. When developing a cash budget, it is a matter of top priority to hold a forecast of the company's sales revenues. Preparing such forecast is the primary and at the same time the hardest task. Next, the demand arising from the held fixed assets and inventories, resulting from production of goods for sale, is forecast. This information is combined with information on delays in recovery of receivables. Also tax due dates, interest due dates, and other factors are taken into account.

5. Precautionary cash management - safety stock approach

Current models for determining cash management, for example Baumol, Beranek, Miller-Orr or Stone models, assign no minimal cash level, and are based on the manager's intuition. In addition, these models are based inventory managements models. In this study, we address the potential for adaptation of these methods of determining safety stock to determine minimal cash levels in the firm. Safety stock is a result of information about the risk of inventories. To calculate safety stock we use Equation 4 [M. Piotrowska 1997, p. 57]:

$$Z_b = \sqrt{-2 \times s^2 \times \ln \frac{C \times Q \times s \times v \times \sqrt{2\Pi}}{P \times K_{bz}}} \quad (4)$$

Where: z_b = Safety Stock, C = Cost of Inventories (in percentage), Q = One Order Quantity, v = Cost of Inventories (Price), P = Yearly Demand for Inventories, s = Standard Deviation of Inventory Spending, K_{bz} = Cost of Inventories Lack.

It is also possible to apply the following equation to determine minimal cash level [G. Michalski 2006]:

$$LCL = \sqrt{-2 \times s^2 \times \ln \frac{k \times G^* \times s \times \sqrt{2\Pi}}{P \times K_{bsp}}} \quad (5)$$

Where: LCL = Low Cach Level (Precautionary Cash Level), k = Cost of Capital, G^* = Average Size of One Cash Transfer[8] which are the basis of standard deviation calculation, P = the Sum of all Cash Inflows and Outflows in the Period, s = Standard Deviation of Daily Net Cash Inflows/Outflows, K_{bsp} = Cost of Cash Lack.

Part of the information necessary to determine LCL, still requires the manager‘s intuition. For example, costs of lack of cash, contains not only costs known from accountant records, but also other costs, such as opportunity costs. Precautionary cash reserves are, first of all the result of anxieties before negative results of risk. Its measure is the standard deviation.

Case 1. Managers of the firm X, value the cost of the lack of cash as 5000. The day?s standard deviation of cash inflows/outflows is 35,466 monthly. Average single cash inflow/outflow is 27,250. The monthly sum all cash inflow/outflow is: 817,477. The alternative cost of capital is 18%.

For the firm X, precautionary cash level is:

$$LCL_1 = \sqrt{-2 \times 35\,466^2 \times \ln \frac{\frac{0,18}{360} \times 27\,250 \times 35\,466 \times \sqrt{2\Pi}}{817\,477 \times 5\,000}} = 142\,961.42$$

When cash outflows and inflows volatility is 0, precautionary cash balance is also 0:

$LCL_0 = 0$

Then we can estimate net working capital growth:

$\Delta NWC = LCL_1 - LCL_0 = 142\,961{,}42 = -\Delta CF_{t=0}$

The standard deviation is 35,466 and tax rate is 20%. So, we can estimate yearly alternative cost precautionary cash reserves and the influence on the value of the firm:

$$\Delta TCC = \Delta NWC \times k = 142\,961.42 \times 0.18 = 25{,}733 = \frac{-\Delta CF_{t=1\ldots\infty}}{(1-T)};$$

$$\Delta V = \Delta CF_{t=0} + \frac{(\Delta CF_{t=1\ldots\infty}) \times (1-T)}{k} = -142{,}961.42 + \frac{-25{,}733 \times 0.8}{0.18} =$$

$$= -257{,}330$$

6 [M. H. Miller 1984] also: [G. Michalski 2005].

7 In Beranek model and Baumol models, G* is twice optimal cash level. In Stone and Miller-Orr models, the average transfer G* is assigned from real historic data or from its anticipation.

8 Moir L., Managing corporate liquidity, Woodhead, Glenlake/ /Amacom, New York 1999, pp. 11-39.

As demonstrated in order for the precautionary cash balance to remain level, with the standard deviation equal to 35,466; a decrease in the firm's value of 257,330 results.

6. Speculative cash balance management - option approach

All firms do not necessarily hold speculative cash balances. Speculative cash is held in order to utilize the positive part of the risk equation. Firms want to retain opportunities that result from price volatility. For example, in the ordinary practice of Polish firms, we see that speculative cash balances can be useful to benefit from transactions in foreign exchanges. It can be profitable for firms to purchase necessary products or services in foreign exchange at prices cheaper than its average purchase price. Such purchase is possible if the firm maintains speculative cash balances. Speculative cash balances give the firm the ability to use of their purchasing power any time. Such cash superiority over other assets shows option value of speculative cash balances[9].

Case 2. The entrepreneur can choose from one of two possibilities:

- He can to invest in the firm activity, for example, he can purchase in foreign exchange,

or

- He can decide to hold cash (national currency).

Entrepreneur make the decision between these two possibilities at least once every day. The purchase of foreign exchange and its use in the operating activity of a firm makes other cash resources inaccessible for continued speculation. If the entrepreneur chooses to hold cash, he still has the possibility to purchase foreign exchange. Yet, foreign exchange price changes from day to day. The daily standard deviation of the foreign exchange price is 4%. This means that the foreign exchange price today is 1.00 PLN. The next day the foreign exchange price can be 1.04 PLN with the probability 0.5; or 0.96 PLN with the probability 0.5. Suppose that next, the foreign exchange price meets its long-term value of 1.00 PLN. If on the first day, an entrepreneur decides to hold cash, and the next day?s foreign exchange price falls to the level of 0.96 PLN (lower than its expected value), the entrepreneurs expected income will be 0.04 PLN. On the other hand, if the foreign exchange price reaches the level of 1.04 PLN (above its expected value), then the entrepreneur won't purchase foreign exchange, and his expected income will be 0 PLN. So, if an entrepreneur has cash for 10,000 foreign exchange units, his expected value of the benefit of holding in national currency (in cash) by one day, will be:

$$E(\text{benefit}) = \sum_{i=1}^{n} \text{benefit} \times p_i = \frac{0.04\text{PLN} \times 10{,}000}{1.0005} \times 0.5 + 0\text{PLN} \times 0.5 \approx 199.90 \text{ PLN}$$

The daily alternative cost of capital financing for the firm is:

$$\frac{18\%}{360} = 0.05\%$$

Therefore, we can also express it for 10,000 foreign exchange units:

$$0.05\% \times 10{,}000 = 5 \text{ PLN}$$

This means that the expected benefit is 199.9 PLN. This demonstrates the basis for holding speculative cash balances in a firm. Of course, the size of speculative cash balances should be an effect of the firm's customary activities and its real operational needs. The legitimacy of holding speculative cash balances increases here together with the increase of volatility of foreign exchange pricing (or volatility of the price of any other assets necessary to the firm) and grows smaller together with the height of the alternative costs of capital financing for the firm.

7. Conclusion

Liquid assets management decisions are very complex. On the one hand, when too much money is tied up in working capital, the business face higher costs of managing liquid assets with additional high alternative costs. On the other hand, the higher liquidity assets policy could help enlarge income from sales. Firms hold cash for a variety of different reasons. Generally, cash balances held in a firm can be called considered, precautionary, speculative, transactional and intentional. The first are the result of management anxieties. Managers fear the negative part of the risk and hold cash to hedge against it. Second, cash balances

[9] [S. E. Beck 1993]. Cash we can compare to American option without expiration date. Other near to cash assets can be compared to European option, see: [J. Ingersoll 1992, pp. 5-6, and S. E. Beck 1993]. The right to faster acquisition has a value, and such value gives base to have speculative cash balances. Costs of expectation on realization of other options can cause loss that is not recovered by future earnings from these (less liquid than cash) assets, see: [S. E. Beck 2005].

are held to use chances that are created by the positive part of the risk equation. Next, cash balances are the result of the operating needs of the firm. In this article, we analyze the relation between these types of cash balances and risk. This article also contains propositions for marking levels of precautionary cash balances and speculative cash balances. Application of these propositions should help managers to make better decisions to maximize the value of a firm.

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The human resource management positioning in the new economy

UDC 005.96

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The development of information-communication technologies and the Internet has instigated the economic growth in highly developed countries, which is known in literature as the new economy. Human resource management in newborn, innovative companies plays one of the most important roles, the one which is based on creative digital strategies. This paper observes basic theoretical postulates of these companies, their approaches to human resource management, the overview of new workplaces which are planned by infrastructure that is based on the Internet and ICT, as well as the work place analysis of a successfull virtual company in our enviroment.

1. The basics of new economy

The new economy has been the issue of discussions since 1997, when a strong ten-year long economic growth in the U.S.A. could not be described by the then prevailing methods of evaluation, and the general attitude was that the roots of this great expansion of the post-industrial society lie in the implementation of ICT (information-communicational technologies) and its strong influence upon the organization, inovation, costs, development, and productivity. The implementation of the ICT is accompanied by a specific paradox: a significant, many decades long growth in its implementation is accompanied by a steady fall in its prices [11]. The direct consequences of this trend are very serious and complex tasks put before the software industry as well as large investments into the ICT worldwide. Thus the new economy becomes a global phenomenon. If we make a comparison between the classic and the new economies, we can observe the following sequence of evolutionary changes [12]:

- the business environment leaves the local and physical milieu and becomes global and virtual;
- the so far physical and tangible business resources become increasingly part of a network and are therefore intangible;
- periodical and gradual changes in the classic economy accelerate and become permanent and unpredictable;
- the so far dominant mass production is increasingly replaced by individual production which is to meet individual demands, and
- computer networks and electronic exchange of information are becoming an inseparable part of a new business environment.

The starting point for creating a strategy in the classic economy was traditionally a company whose strategy is defined. The new economy does not accept this and places the focus of the process of creating the business strategy upon new forms of creating new values. Competition on the market is directed towards the innovation of the model of business operations which is in turn directed towards using a new business network created by the Internet, where the companies compete in offering the customers the new values in their products and services. The innovations in the sales channels, in the product itself or in the distribution, the improvement of business operations, the cost reduction or complying with the demands of individual customers are some of the most frequent ways of new values creation [15].

In these new circumstances the companies have realised that they can no longer rely on on the existing modes of doing business and creating new value. Therefore the new economy models are created through adapting the existing models, making changes in the following fields [21]:

- the business infrastructure moves from the physical towards electronic, network infrastructure;
- the traditional hierarchy business organization is replaced by a new organic, modular and virtual organization;
- instead of traditional models we now have innovative models, based on electronic business operations;
- the business strategy changes and abandons the chain for the network values;
- new management models require new managerial profiles; and
- new metrics of analysing the business models performances are developed.

Building the business based on the premises of new economy often requires that a complete breakdown be made with the classic concepts and that an entirely new model be created, widely different from any classical concepts. This is why probably most successful managers of the new economy are relatively young people, those who managed to "get free" from the experiences that were long considered to be indispensable in the organization of a successful model of doing business.

According to Spremić [20], the customers who make their purchases using information-communicational infrastructure expect, in addition to high quality, favourable prices of products and services, whereas the owners and shareholders, on the other hand, focus upon the profit that is to result from such a type of business. On the third hand, the globalized, turbulent market does not leave much space for the companies to relax, but imposes on them the demands that they always offer new values to the customers at lower prices, and to earn profit to their owners and shareholders. Thus the business environment is exposed to constant uncertainty and ample changes, and prompt response has become a must. The actual moving force of the new economy is knowledge, described by a model of asymetric information, according to which the market is no longer based on the offer-demand relations, but the greatest advantage in this trade relation belongs to a better-informed party, the one who has more knowledge. The cost of lack of knowledge, i.e., the difference in knowledge in the new economy governed transactions has to be paid, and this is the main source of value that is earned on this market. The implementation of this knowledge is the initial trigger for all the mentioned changes, making it possible for business people to be essentially innovative and creative. The requirements and expectations from the employees set in such a way bring the Human Resource Management (HRM) into the focus of interest of the managements of the companies based on the ICT and the Internet infrastructure.

2. The development of the hrm idea

The HRM is an approach actualised in the 1980s as part of organized restructuring of processes in the companies. The idea of managing the employees emerged with the growth and the diversification of the companies' fields of work. The flow of events in the usual processes brought fundamental changes in personnel management. Its further development gave rise to the HRM, where the previous personnel files keeping grows into a type of employee management in the company, on which we can find significant analyses and discussions in literature [10]. From the strategy point of view, the HRM is an organizational function directed towards supplying adequate human resources for a certain company. Thus it is held that personnel files focus on work, contrary to the HRM, which brings a radically new approach to the employee management, related to the company strategy, in which people are the resources to be actively managed in accordance to the long-term interests of the organization [2].

The move from collectivism to individualism in this case corresponds with the transformations going on in the past two decades, when the companies' practice shifted from a primarily administrative to a mostly active, strategic role it plays in practice. Thus the HRM is not only the responsibility of personnel departments, but also of managers in the entire environment. It includes the objectives that embrace both the employees, the work processes, the change management and employee files, i.e., all the key components, indispensable in corporate functioning [23]. In accordance to the abovementioned, the key elements related to the activities concerning the HRM are formulated by Bloisi [2] in the following way:

- it is necessary to ensure that the right team of employees be available, in the right place and in the right time;
- the employers encourage the employees to use the already established system of promotion to analyse their own ambitions and capabilities, and hence develop appropriate strategies respective to their ambitions;
- innovative organizations that adapt easily to the market should be flexible towards the changes in management in order to continuously improve their development; and
- administration should function in such a way as to ensure a regular and appropriate pay, and the employees files should be updated on a regular basis and suit the objectives of the company's organization.

The HRM function means recruiting, estimating, motivating and retaining the employees who are necessary in order that the company should do business effectively. This function is also responsible for the activities such as training of employees and the management of the company, planning generally approved activities and the evaluation of safety of the work environment [4]. Similarly, the value chain of business companies generally has a complete level that (according to quotations in [1]) includes recruiting, hiring, retaining in the company, training, career development, compensations, administration of values achieved and negotiating the planned activities at work. The main objective of these activities may be matching the appropriate people to their respective jobs, and, on the basis of the results of this, all the other activities in the company.
Since the activities related to human resources may in-

clude factors from both inside and outside the company, the demand for effective HRM strategies becomes more important as companies face an ever greater competition, participate in the global market, suffer continuous technological changes and, especially, interact with business partners by means of direct transactions over the Internet [3]. If the company management understands the mentioned HRM functions and its specific features in a given organization, the company has good chances to create a plan to support digital activities included in the HRM in the company.

3. The digital strategy concept

Every business organization has a goal or a reason they exist for. In order to achieve this goal they must have a strategy. Andrews defines the business strategy as a path with the decisions within the company that serve to determine and identify the objects, purposes and goals on the basis of which general policies and plans for achieving given goals are defined, as well as the level of business the company aims to achieve [12]. The specific features of digital strategy are reflected in the creation of a general plan to formulate digital activities, the completion of which will serve to establish the direction and execution of digitally supported goals [4].

New information-communicational technologies (ICT) on the Internet infrastructure ensured the customers the access to free or very inexpensive information easily, so that they are now informed in a much better way. Porter [16] maintains that the Internet can be used to create economic value only in cases the technology brings profitability, and these are the industry structure and the sustainable advantage in comparison to the competition. On such a basis the author claims that electronic commerce is a moving force with a powerful set of tools that may be used, cleverly or not so cleverly, as a strategy basis in every industry. In the process of defining the digital strategy the companies do their best to create their digital future. The organizational function is a key activity within an organization and incorporates research and development, marketing, financing and the HRM. Therefore the IBM defines a list of key factors of success:

- an acceptable strategy that has a full support from the top management of the company;
- a clear objective with creating leng-term relations with customers and new values;
- introduction of full implementation of the Internet and its technologies; and
- adaptable and integrated business processes and infrastructure.

Central to these factors are people that will make their implementation possible and the work in a new work environment created by the digital strategy. When the company decides to undertake strategic actions, the role of the organizational part of the company in charge of human resources is to prepare the employees who will help execute this strategy.

4. Ict implementation in hrm

The companies that use electronic infrastructure in their business must pay special attention to the employees' pay, because it is constantly rising [6]. Since the ICT experts usually have different needs and demands, they are not happy with a remuneration system fixed in advance, hence in such cases usually flexible conditions are favoured, where these expert may choose among a range of bonuses such as flexible working hours, child care, language or driving courses, accomodation, etc. Dissatisfaction with work is usually connected with the design of work places. i.e., there is a relationship between the complexity and the job satisfaction: the monotony of repetition of the jobs that do not require special skills leads to frustrations and boredom [6]. Therefore the redesign of these jobs, accompanied with an adequate training, may be of significant help in such situations.

The ICT implementation brings an essential change into the work place design. The implications are felt in the requirements for necessary skills and roles of individuals in the work process. Thus the emergence of call-centres radically changed the standard design of workplaces, since in this case it is necessary to repeat the activities endlessly, incessantly talking to the customers over the telephone, simultaneously monitoring the information enetered by the supervisor [6]. Thus the technology implementation centralised the functions and influenced the redesigning of jobs, the employees no longer being in a position to rely on their personal information on customers. In this way the local knowledge was transferred into the computer database.

The concepts of new skills required from the employees brings into the focus of the strategy the idea of organized learning. Central to this idea is the company's competence to effectively reconcile the different understandings, knowledge and mental models built on the previous knowledge and experiences, i.e., on memory [22]. Successful companies have always been capable of accepting the techniques of learning on their own development and of understanding their own processes and functions, and consequently of achieving a dominant position in their field of work through a process of superior organizational training in skills and on the basis of their ability to make their vision real. An interesting example is Aetna Training Center, described in [4], which after a long period of training employees in a classic way, decided to create a distance learning model, and thus managed to train 3,000 employees in 2 years. Their training results were 4 per cent superior to those of people trained in classic schoolrooms.

Undertaking complex activities such as work on creating mutual knowledge is based on the establishment of social relations among the employees as a basis for the individuals to act as organized groups [13]. Dissemination of information in the company, based on a mutual space in which the individuals can collaborate, helps surpass the barriers that separated some organizational units and individuals. Allowing all the employees, on all levels, to access the company information and share their ideas with others erases vertical barriers in the company. As such an organization also erases horizontal barriers, a logical conclusion follows that the Internet can tear off all the walls within the company [7]. In this way there would be no further need for the middle level of management, and the ICT experts would have more working space. The research into this approach to organization is limited, in the first place, by the trust related factors. The companies, however, increasingly invest into such a type of relations, thus improving the trust, the commitment to the company and a shared understanding of the goals of business activities, however the real benefits from these can be expected only after a longer period of implementation [19].

5. The digital strategy and the strategic human resource management

Business organizations tend to increase the profit, to reduce the costs and to find the best way to employ all their resources: financial, material and human. And while, according to Nelson [14], the products and the financial markets are still important, the creation and realisation of new values is increasingly shifting towards the global market of talents. A saying that is gaining importance in the modern business world is that 90 percent of value of successful companies leaves them every day at the end of the work time and go home. The new economy ideas brought the employees into the centre of the company's strategic values. Companies increasingly evolve towards those based on knowledge, and the intellectual potentials of the employees, enriched by the ICT values, make the greatest corporate value [17].
De Cieri and Kramar [6] define strategic human resource management as a path of planned development of human resouces with the activities the purpose of which is to enable the organization to achieve its goals. The SHRM is developed as an attempt to connect the policies and practices concerned with human resources into an organizational strategy for the purpose of achieving the advantages as regards competition. Therefore the elements of the SHRM comprise strategy formulation and strategy implementation.

The key component in the company that attempts to establish a successful business strategy is made up of human resources. The HRM can safely be said to be a better way of understanding and managing the employes in the context of radical global and technological changes [8]. These authors also maintain that the HRM can be used to define the management's limitations and policies related to creating interests, employment, the work of the employees, their pay and the work discipline. Hence the HRM becomes part of strategic management of the employees, by which the basis for a general business strategy is formed. Such management includes the instruments for tuning human resources, such as the work places design, training and improvement, as well as the career developmet structure.

The task of the strategy of the company developing on an ICT basis is to achieve a successful mix of two sets of skills – the skills required in managing relations among the employees, and the technical skills [17]. The transformations of business ideas into technical solutions in a short period of time is an essential part of new economy, where technology cannot be separated from managing relations among the employees. The companies should retain the employees and then develop their adaptability and flexibility, and the lack of required skills is filled in with the employees' ambition to improve in order to obtain better work positions and other priviledges. A creative atmosphere and the freedom of choice are the triggers of these processes. The group of predominantly technical skills include the knowledge management, the software for managing the information system known as company resources planning, as well as data storage. A powerful concept whose idea is to reduce the cycle times, requires, apart from the abovementioned skilss, the skills for managing customer realtions and knowledge of various fields of management.

An exceptionally important segment of the discussions of business strategies is related to intensive networking business behaviours. Of specific interest are individual knowledge and the resources of the corporate collective knowledge that are the result od the growing specialization in acquiring as large a fund of knowledge as possible in a direct field of interest, but in the other fields as well [9]. Powerful services for supplying the required knowledge are becoming ever more innovative and enable the clients to undertake various creative activities [18]. These serviuces are crucial in the transformation of companies into dynamic learning organizations, at the same time taking on the informative, councelling role, or a role of directly supporting the execution of certain processes. These services are backed up by a highly trained team of employees with the skills and knowledge to support innovative systems in the very centre of business activities.

The formulation and implementation of digital strategy will not be the same in new companies created on the Internet infrastructure, in those previously developed and well grounded companies that are beginning to use the Internet in their business, and in the groups of companies in the form of consortium on the Internet structure, however, the extent to which the HRM is implemented is in direct proportion to to the success of the strategy established.

6. The work position structure in digital companies

Following the commercialisation of the Internet and the emergence of the WorldWideWeb technologies towards the end of 1994, this electronic infrastructure witnessed an extremely important business development. Since in the background of any successful company are the employees who predict the challenge and fight it, they normally expect to get dynamic and well paid positions in this new economy, as well as a chance to build successful careers. The majority of the managers view these new, leading personnel of new infrastructure as the team from the ICT organizational unit. As the managers in charge of human resources are expected to understand the organizational design, they have to design a strategic approach to ensure that the human resource development will be in accord with the corporate ideas of development. The research conducted by Chan & Swatman [5] carried out a thorough analysis of the work positions necessary in such companies. Thus the authors identified the jobs they classed into eight basic categories, two of which were related to technical infrastructure, five describing various services, while the last category was related to legal aspects of the business. The names of the work positions they defined have different synonyms in practice, however the substance, i.e., the jobs they do, is generally the same everywhere, the synonym for the term ”electronic commerce” being often replaced by a somewhat wider concept of ”electronic business”. The review of these categories is as follows:

- The first category is related to the development and programming of Web applications. The highest position in this category is the Web director and requires a significant work experience following graduation. The application software director is in charge of the development of multimedia solutions in the electronic business, the programmer-analyst uses various ICTs necessary for the development of the Web site, whereas the electronic commerce designer works on the developmet and maintenance of the various products of the electronic commerce.
- The work in the category of systems and solutions of electronic commerce is directed towards information systems lying behind the electronic commerce applications (developed by the employees from the first category). The main skills of the employees from this category are connected with the ICT used in the development and production of information systems, however, new specialisations emerge. Thus we here encounter the project manager, the team manager, the electronic business development manager, the system architect, the electronic commerce specialist, the system administrator, the system analyst, the database analyst, the database designer, the database administrator, the system engineer, the web administrator, the safety and risk consultant, the electronic commerce architect, the logistics manager and the system tester.
- The employed in the third of the categories are to ensure the detailed descriptions, the system requirements, the business processes analysis and the cost and benefit analysis related to the knowledge of solutions and activities in electronic commerce. The names of work positions in this category are the business solutions manager, the business development manager, the electronic commerce product engineer, the business system analyst and the electronic commerce system analyst.
- The highest growth is recorded in the category of sales and consulting activities. These jobs are present in every industry in which electronic commerce is important. Performing these activities requires much less ICT knowledge. The names of work positions we find here are: the business manager, the electronic business development manager, the marketing and business development manager, the top editor of contents, the electronic commerce specialist, the specialist

engaged in the call-centre, the electronic business safety consultant, the electronic commerce consultant, the employment consultant, the PR consultant, the ICT consultant, the ERP/CRM consultant (i.e., the business programme packages consultant), the marketing manager, the electronic commerce accounting manager, the sales manager, the sales person and the supply manager.
- The work positions in the new economy companies, related to senior management are classed into the category called strategic planning. The positions are called the vicepresident in electronic commerce, the general manager in electronic commerce, the senior manager, the executing manager in electronic commerce, the business manager in planning, the business manager in communications, the business strategist in electronic commerce, the national business strategist and the credit manager.
- The category of jobs in education and training can be divided into 2 groups of jobs: the first group provides training for the employees and the company's business partners, while the other group includes people working in regional educational or training institutions. The names of work positions are: the instructor or tutor of electronic commerce, the training manager, the lecturer, and the professor of electronic commerce/electronic business.
- The category related to research includes more than 20 fields of research, and the names of the work positions are the researcher in electronic commerce, of either academic or occupational direction.
- Finally, the task of last category of professionals in legal matters is to establish laws and prepare the government policy in the electronic commerce field. Their fields of interest are business and criminal law, contracting processes, intellectual property, legislation concerning industry matter, conditions of legal jurisdiction, privacy and freedom of information. The titles in this category are the electronic commerce legal advisor, the electronic commerce policy planner and the parliamentary advisor for electronic commerce.

An example of the structure of a new economy company in practice can be observed in the case of the biggest on-line bookstore in the region, the Knjizara.com. The company is territorially located in Belgrade and functions on the principle created by the biggest book (and not only book) sales system, the Amazon.com. The manager of the company which performs sales exclusively via the Internet has provided the following data: the Web site of the company is daily visited by 8,700 to 13,000 visitors. The company daily delivers between 30 and 70 packages of books. The software solution for work was bought from the third party. The system is backed up by a book catalogue containing about 30.000 titles by about 850 publishers, as well as a catalogue with about 10,000 antique books. The lager of the company is quite small and is limited to the books that are currently in demand. The Knizara. com realizes approximately 85 percent of its sales on the national market, and its largest exports are to the former Yugoslav countries, which mostly order technical literature, while the fiction share in the exports to these markets is negligible. The Knizara.com also delivers books into other countries, in which people are interested in the literature in the Serbian language, mostly into the countries of the European Union, the U.S.A., Canada and Australia.
The company ranks among small enterprises, with only 10 employees. Among them are the Web site editor and the ICT system engineer, who cover the first two groups of jobs. The others are the company's general manager, the accountant and the courier, whereas the jobs concerning the orders processing, monitoring the orders towards the publishers, book receipt, completing orders, packaging, addressing and invoicing is jointly executed by the rest of the employees.

Even at a glance at this structure it is clear that not one employee is engaged in the sale itself. This crucially important function in each shop is in charge of the application software of the company, working on the model of a good salesperson. Since all the shops and every customer's order are entered in the corporate database, on each subsequent visit to the shop the programme searches the database and identifies the interests, inclinations and similar behaviors and suggests new purchases to the customer on this basis. In order that such an approach should be executed, it was necessary that every book be precisely described with different classification notions, which can serve as a framework for composing an offer to any prospective customer.

7. Concluding remarks

The global trends in the past 10 years have been directed towards an intensive use of the Internet infrastructure and the accompanying ICTs, dominant among which was the WorldWideWeb. The transfer from direct business contacts in contracting towards electronic modes of commerce caused a new strategic positioning of companies and the emergence of a large number of new jobs whose executors are the specialists with new skills. As such, they do not always comply with the prevailing ideas on the inclinations and demands of the employees. Therefore the HRM specialists are faced with a serious task to get to know them better and to create new frameworks in which both interested parties will find enough reasons to try to find mutual interests.

On the other hand, a succession of new, so far relatively unknown jobs emerge, for which it is necessary that a most appropriate solution be found. In this report we tried to offer a relatively broad review of new work positions, without providing any strict differentiation, since the main idea of this report is to create an introductory, broad idea of this new segment of global business, not to provide final answers to newly created, still very open-ended demands.

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Potentials of project financing projects

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As a model of financing of a project, project financing is being widely used in both developed countries and developing countries, especially in case of the capital intensive investment projects. Project financing is superior compared to direct investments and other models of financing, which makes it attractive and appealing way of project financing. Project financing helps putting to use the funds in many infrastructural projects in the different industry fields in both public and private sectors, for the purpose of improving the quality, efficiency and effectiveness of investments. This model takes into consideration only the investment justifiability and the results of projects, not the previous period of the companyžs activity. The increasing number of investors in the Republic of Serbia, as well as an increasing demand for investing in industrial and infrastructural projects gave rise to project financing as a model of financing. To make the implementation of this way of financing possible, the Republic of Serbia created a respective legal framework. Based on the previously mentioned facts, this model of financing could be applied on infrastructural projects, such as transport, energy, irrigation, soil improvement, telecommunications, oil and gas refinement, projects on education and health care, but also on investments in housing and business premises. The purpose of this paper is to point out the potentials of project financing as one mode of financing and its contribution to economic development.

1. Introduction

Project financing is defined as financing of a certain project, mostly an infrastructure or industry project, where the creditors rely upon cash flow and project revenues as financial sources to service the investment. This basically means that the creditor has control over the cash flows and that the profit achieved is the only way he can use to retrieve the invested capital, i.e., that "the project assets are to ensure the financing of the project itself [3]", and is therefore the only guarantee of the project realization.

The project sponsors and investors make up the motive power of project financing. The project sponsor is the party "behind" the project, the motive power, most often the government of a country, an independent entity of a certain industry sector or a consortium (trust), a future purchaser of the products or services provided by the project. The investors are usually financial institutions, such as: international organizations for development financing, banks, investment funds, equipment manufacturers, contractors, prospective customers, etc. [1]. A project may have one or more sponsors who promote the project idea and motivate all the participants in the project execution.

The governments worldwide supported the initiative for using the individual investors' funds in financing infrastructure and services in a wide range of activities in industry, such as: power supply, transportation, irrigation and land-improvement systems, telecommunications, oil and gas, mines, schools and hospitals. Such a way of fund raising ensures improvements in a great number of public activities and services which are indispensable in ensuring a quality work and business operations.

Simultaneously, the companies in the privatization process, or those that have just completed it, are burdened with high costs, the variability of demand on the market and frequently the decrease in value of the national currency compared to euro or dollar. Hence project financing gains in importance, as one aspect of infrastructure and capital intensive project financing, since, according to its qualities, it means improvement in the project evaluating and financing.

2. Advantages of project financing projects

The financial evaluation of infrastructure and capital intensive projects is complex. Implementation of project financing scheme means using a specific technique of risk and uncertainty, which makes the designing of the Report on cash flows extremely complex. Project financing is an atrractive financing model in the countries with low credit rating, too, on condition that the project earns a satisfactory hard-currency revenue to service the liabilities to the creditors, and on condition there are legal and other kinds of certainty that the revenues earned will be used to the purpose of servicing the debts related to project financing. The aim of project financing is not to hide the debt from the creditors, the credit rating estimating agencies or the shareholders, but to make each stakeholder share the risk of the project among them.

In addition to reducing the project and the financial risks, there are a lot of important advantages of project financing, among which [2] are:

- the sponsor has an opportunity to obtain the capital for a certain project which he himself cannot provide;
- the project is an easier way to obtain guarantees that the sponsor might not get himself;
- in case the sponsor's credit rating is low, and the project is good, chances are better that he can raise capital and obtain favourable conditions for his project;
- financial burden in servicing the debt is much lower for the investor;
- the project can easily comply with certain investment regulations the sponsor may have difficulties to comply with;
- the sponsor finds it easier to avoid certain problems (e.g., blame in case the project fails, etc.);
- the costs per investor(s) are significantly lower; etc.

A very important feature of project financing is the certainty that the funds invested will be returned with a respective revenue. This usually stems from the guarantees, both direct and indirect, issued by the third party, most often the state. The necessity to insure these projects results from the fact that they are capital intensive, i.e., that they most frequently require that a vast amount of capital is invested. In such a case, all the previously mentioned financial sources are possible, however, each of them has its own price and risks.

The companies choose project financing when investing into large projects, in which case they most frequently decide upon the so-called structural financing. The structural financing is such a type of financing that allows for the investors to track the cash flows, and they can do it through forming a Special Purpose Vehicle (SVP) as a unit responsible for achieving the defined financial goals. Project financing is of special interest for the companies engaged in manufacturing industry, in the production and transmission of power supply. This is because their sources of capital are most often rather scarce, but also because of the possibility to [2]:

- avoid the balance sheet encumberment;
- avoid to report the debt so that it does not affect the shares price, i.e., avoid financial response;
- avoid the fall in the sponsor's credit rating due to the existing liabilities;
- limit the direct responsibility in the risky phases of the project execution and effecting.

As regards the project investors, we should point out to an increasing interest in joint projects that is present worldwide. Numerous factors motivate people to enter the project execution jointly with partners, the most frequent of which are the following:

- the project is beyond the financial or management means of just one enterprise;
- a lower risk exposure for each participant in the project execution;
- it is financially more reasonable to invest jointly with another enterprise:
- one or more partners enjoy rating reliefs.

The final goal of project financing is to raise enough capital required for the project execution, as well as enough profit to regain the invested funds easily. One way to achieve this goal is insurance issued by a third party, which has already been mentioned; however, rare are the projects supported by a third party without that party gaining some direct profit from the project.

3. Elements of project financing

A successful completion of a project depends on a number of elements, therefore they should be thoroughly analysed by both the sponsor and the project financier. Some of the most important elements are as follows [2]:

- a satisfactory feasibility study and financial plan; both should be based on realistic premises, and be able to conform to the capital market conditions, such as interest rates, inflation, etc.
- an adequate insurance cost of the future project;
- an estimation of real consumption and the price of power resources that must be supplied for the implementation of the project;
- an adequate market for the future product or service;
- determining the need and the time of investment as regards the materials involved in the project construction;
- selecting an experienced and reliable contractor to do the job;
- selecting an experienced and reliable management;
- incorporating only tested technological component into the project;
- closing a contract to the satisfaction of all the contracting parties;
- all the most important sponsors should be involved in the creation of the SPV
- the project plan should incorporate the project solution as well;

- the project should promise a guaranteed profit;
- environmental risks should be acceptable for all the parties participating in the project.

In case the project is executed abroad, it is necessary to take into consideration certain factors, such as:
- a stable and friendly political environment;
- the opportunities of obtaining the licences, contracts and rights;
- the acceptability of the estimated political risk;
- risks related to raising capital and the conversion of capital are evaluated and are acceptable for the investor;
- chances for protection from criminal activities;
- the rule of laws that protects the enterprise, property and rights related to the investment itself.

Any factors that may lead to the failure of the project should be paid special attention to and analysed. In the first place is a possibility of delay, incurring additional expences, and, as a result, "exceeding the budget". Especially dangerous are poorly designed technical solutions, financial bankruptcy of one of key parties, a rise in prices or the lack of material. The consequences may be lower competitiveness on the market, i.e., the replacement of the management of the project.

In case the project is executed abroad, special attention should also be paid to the factors such as the influence of public institutions upon the project execution, a possibility that personal property be withdrawn, or a financial insolvency of the Government. A successful realization of the project requires an imperative and thorough analysis of the abovementioned factors, but also their further monitoring and, if necessary, avoiding them during the project execution.

Any one of these reasons may be sufficient enough to the creditor to make him search for the possibility of financing the project jointly with the sponsor. The liability for a debt may be acceptable for a certain part of the project, not for a project as a whole. Where the sponsor is not in a position to avoid a long-term loan to be serviced out of the project profit, the sponsor may agree with a creditor to pay the money back upon the completion of a given phase of the project.

4. Consolidating the project financing sources

The financial instruments that can be used in the acquisition of the project fixed assets vary. They include capital (current equity), loans (for a defined period of time), and a hybrid capital. Capital refers to plain shares, reinvested capital and dead (non-engaged) capital. As a form of financing, however, capital is rarely used as such; far more frequently the capital is raised through loans, both the long-term loans and the sub-prime loans.

The long-term financing through credit (use of long-term loans) is by all means most frequent compared to other types of financing, while the sub-prime loans are used most rarely, from the point of view of ranking of various types of project financing. The hybrid capital refers to the types of financing that basically are a form of financial instruments, and the firm achieves this capital through loans; however, they also display some characteristics and liabilities, such as preferential shares, or convertible bonds.

Convertible bonds may be converted into a certain number of shares, whereas preferential shares are treated as capital, but the value of the dividends paid to them is fixed. The company set up for the purpose of executing a project may decide not to pay the dividends on its preferential shares, upon the completion of public auction of shares, assuming that the failure to pay the dividends on shares shall be understood as part of agreed relations on announcing the public auction of shares.

The company set up for the purpose of execution of a complex project rarely decides upon raising capital through capital issue. Only in exceptional circumstances, when there is no other possibility, will a company turn to this type of financing (financing through the hybrid securities issuing). Other types of financing should also be mentioned, for example, leasing, joint venture or various forms of sponsorships [4,5].

5. Project capital structure

The costs of project financed projects are in fact the costs incurred on the basis of combining various types of financing instruments to finance the project. Therefore the capital structure of the company set up for the purpose of project execution is defined according to four elements:
- the type of financial instruments;
- the extent to which the financial instrument participates in the capital structure;
- the method of obtaining certain financial instruments;
- an adequate conceptual relationship, characteristic of financial instruments (for example, grace-period, the repayment period or the government's guarantee to participate in project financing up to a certain amount).

Each of the above mentioned elements may have a lasting impact upon the total costs of the project, and therefore to the financial feasibility of the project. For example, capital costs are, as a rule, higher than the costs of financing out of the debt, since the securities owners regularly require that a revenue rate be higher than the interest rate to the loaned assets, especially when the debt share in the project formed company's assets financing is high. We may say that a lower level of capital reduces the costs of the project itself, which simultaneously means a higher risk for the project. Banks and other financial institutions may not be interested in financing the project, or they may raise the risk premiums for projects in which the capital share is extremely low.

There also are some advantages and disadvantages in comparing such projects through the issue of bonds and commercial credits. The interest rate to the credit as well as the payoff period itself may be fixed or flexible, whereas in case of bonds they are always fixed. In case of flexible period of payoff and variable interest rates, bank loans allow for some flexibility in the form of financial engineering. This can be of utmost importance for privately financed projects, where the risk level is high and whose revenues are due in far future, compared to the investment period.

In comparison with the bonds, however, the debt is normally less expensive and is due in a shorter period of time. Long-term financial instruments are important in project financing since the project cannot generate revenues during the construction phase and tends to gradually build the cash flow during the operational phase. Therefore, at the very beginning of the operational phase, revenues may be minimal and consequently insufficient to service high payments on the credit. Such payments may prove to be a serious burden to the project and may therefore have a significant impact upon a normal operation of the project and eventually ruin the project itself.

Furthermore, in economically non-developed countries, or in the countries with insufficiently deveoped legal economic environment, the creditors may, and they frequently do demand extra guarantees from the government of the country in which the financing is to be approved, or they may demand that the Agency for exports financing and international agencies, such as the World Bank, the Asian Development Organization and the International Finance Corporation be included, all for the purpose of "covering" the political and the economic risks. Incorporating international agencies means higher reliability, therefore commercial banks engaged in the project may reduce interest rates on the borrowed capital. The lower cost of capital directly increases the probability that the project itself be completed successfully.

6. Capital share on the basis of stock issue

The project capital structure often depends on the type of financial institutions and, generally, on the investors' readiness to invest into the project; on their relationship, as well as on the amounts they are willing to invest. According to the definitions characteristic of different types of capital, the capital level characteristic of project financing of the project is defined through the capital share in the total amount of assets used to finance the project, where only the assets raised in stock issue are viewed as "capital". In practice, the capital share may vary from 0 to 100 percent, according to the type of the project. Shortly, project financing project in the power supply sector means the capital share of 10 to 30 percent.

Therefore, an adequate capital share is the most important variable that accompanies capital structure creation in both the private and the public sectors. Hence, there are three key parties interested in the capital share level: stockholders (who are at the same time the stakeholders of the project), creditors (banks and other financial institutions that invest capital into the project), and the government (that tends to engage private investors and perhaps grant guarantees or other forms of support to the project). The three different parties, the participants in the same project, view the project each in its own way, but also express their own estimations as to how large a capital share is really necessary in the project itself, and their interests depend to a certain degree on the scope of the project itself.

In case of capital owners, their capital is covered by various project activities, including consulting, designing, construction, maintenance and business operations, and the property related to the execution of the project itself. They will consider the project financially justified if the internal revenue rate to the capital exceeds the projected rate. Therefore the capital owners will always tend to maximize the internal revenue rate to the capital. The reasons that the capital owners do not invest a large amount of capital in such projects are [15]:

- the need to minimize the project risk;
- allocating their limited amounts of capital in other, possibly more profitable projects;
- raising the internal revenue rate to the capital engaged by reducing the capital share as long as

the interest rate on the credit is lower than the internal profitability rate of the capital;
- lack of assets to invest more capital, and
- increasing the working capital share.

Creditors simultaneously prefer a higher level of capital share, since in that way they reduce the risk on the loaned capital, i.e., the credit is rated higher when it comes to repayment of the investment capital. To the creditors, the financial justification of the capital loaned should meet a minimal level of the service provided on an annual level, expressed by a coverage ratio.

A lower level of capital share means an increase in the risk that will not meet the coverage ratio for the invested capital, and in such conditions the creditors may demand higher risk premiums for a lower capital share. One more reason that creditors may demand a higher level of capital share results from the fact that a higher level of capital share will normally mean a higher level of "equity capital" share, and therefore ensure the increase in share and the revenues of the project.

In infrastructure projects financing, the government representatives should especially take into consideration the following four elements:
- the completion of the construction phase, together with the budget allocated for the costs;
- especially sensitive activities and qualitative performances during the operational phase;
- the presence of services and products characteristic of the project in public;
- a low cycle of costs accompanying the project itself.

The success based on the abovementioned elements requires an adequate capital structure and a long-term acceptance from the part of the participants in the project. The govrnment will, unfortunately, insist on retaining a minimal amount of capital as a long-term guarantee of the participants in the project, as their promise to accept the liabilities for the project. In any case, all the other conditions will remain unchanged, e.g., a low level of cost share, which results from the ratio between the demanded internal revenue rate on the capital expected by the capital owners and the interest rate to the capital borrowed from the bank.

The government should, therefore, ensure the conditions in which the capital level used will be satisfactory for both the investor, the creditors, and the public itself.

7. Project financing risk analysis

The greatest risks the project sponsors encounter are the political, the financial, the constructional, the operational and the market risks. The political risk stems from the possibilities of emergence of some political disturbances, such as war, revolution, assets expropriation, changes in tax policy, currency depreciation, problems in controlling foreign trade, export limitations and any other activities of the government that may have an impact upon the project profitability [6]. Political risks may be extraordinary high, especially in developing countries, with unstable governments [8], therefore the changes within the government may influence not only the project policy, but also the project sponsorship.

The financial risk is related to the rates of currency exchange, the inflation and the capital costs (interest rates). The risk in foreign trade is often extremely high in developing countries, especially those characterised by a high depreciation rate. The cost of capital need not be directly related to the country in which the project is to be executed, but may be directly related to the countries in which it is to be raised.

The construction risk is primarily related to deferring the construction phase and the time of cost coverage. The deferring of the construction phase may be conditioned by technical difficulties, poor management or both. As in project financing the investors rely on the revenues achieved on the basis of the project completion, in the sense of investment cost settlement, it is clear that any deferral of the project termination will simultaneously defer their chances to obtain the payments due to them on the basis of the revenues earned. The cost coverage will affect the project profitability by increasing the construction and financial costs.

The operational risk is related to the operational costs of the entire capital. Basically, the operational and the maintenance costs may exceed the planned costs. The costs not included may also have a negative impact on the project profitability.

The market risk most often results from the risks of demand and prices. The risk od demand is certainly based on the demand for the product or the service themselves, which are to be provided by the completion of a certain project. The price risk is the one that is directly related to a later defined price of a product or a service provided upon the completion of the project. Normally, the price is always subject to certain corrections by the state, which consequently takes on respective obligations as to co-financing, which is often observed in charges imposed for the motorway toll, or in some similar way of co-financing.

The understanding of the project risk is of great importance in defining an appropriate financing strategy. The creditors, as well as investors themselves, will certainly try to avoid highly risky projects, except in situations when they are too tempted by extremely high revenue rates on the capital invested. The BOT sponsors usually protect themselves using strategies which will serve as logistics for the risk taken, in terms of reducing financing costs as well as in terms of gaining competitive advantage [10, 11]. It should be nevertheless pointed out that the most important item related to planning support is the selection of an adequate financing strategy.

8. Bot project financing model

Building and transfer of buildings, plants and factories is a specific form of project financing and is based on financing on the BOT model. The BOT model is based on the contract on the construction and financing of the entire facility, the building, the plant or the workshop, on using the facility and later transferring it to the ownership of the state (the issuer of rights, most often to the state that is the concession issuer) upon the expiry of the period not longer than 30 years.

BOT is a cpecific model of project financing of infrastructure products, implemented more seriously from mid-1980s. BOT may be defined as a form of project financing from "limited sources"of capital, based on a concession type agreement. The first successful BOT project was the Suez Canal, completed in 1868 [7]. Numerous other BOT projects followed.

The BOT arrangement is used for financing the projects of public character, which are financed out of private funds, and the ownership over the facility that is the subject of contract is transferred from the private owner to the state after a period stipulated in the contract [13]. The concession in BOT projects is granted to privately owned companies to build and manage the facility which would normally have been built and managed by the state. The project investment company is also responsible for project financing and designing. The projects may be power plants, airports, highways, tunnels or water cleaning plants.

At the end of the concession period the private company transfers the ownership over the facility to the state, however, this may not always be the case. The concession period is, first and foremost, defined by the time required that the revenues generated by the facility repay the debt of the company and provide a reasonable revenue rate in return for the company's engagement and risk [14]. As any other forms of project financing, BOT is based on the repayment of debts of the project out of the revenues "generated" by the project, under the obligation that, upon the expiry of a defined period, the project, or the facility constructed and its further exploitation be transferres to the state.

The specific feature of this model is the element of concession, where in the legal theory the concession is defined as a legally binding relationship between the state (concedent) and a legal or a physical entity as a private entrepreneur (concessioner), by which the concedent transfers the usage of a public facility or of execution of a public service, in return for a compensation, for the purpose of meeting public interests.

The BOT projects financing is usually not based on the sponsor's credit rating, nor is it based on the physical value of the project assets, but is based on the key financial performances of the project. The creditors view the project revenues as a source out of which they can repay the assets engaged in the project and simultaneously as a collateral of the project assets. The added value of the project is not expected to cover the value of the borrowed capital, however it is used as a means of insurance of the project, in case of interference of a third party. The borrowed capital in the BOT projects is understood as an off-balance loan of the participants in the project, as long as that very loan does not endanger their credit rating or a credit potential. Due to the length of the period the concessioner's financial assets are engaged, the BOT project loans in the majority of cases enjoy a long maturity period and higher interest rates compared to other commercial business loans [6].

BOT projects are financed on the basis of the capital sources that may be of different origin, i.e., may be both the capital and the loan. The capital structure in the majority of BOT projects means an exceptionally high leverage. The capital usually makes up 10-30 percent of total project costs, whereas the credit covers the remaining 70-90 percent of the debt. As the debt/capital ratio varies from project to project, the general strategy that is followed is to incur the debt that can be serviced by the cash flow of the project in terms of an acceptable revenue rate on the investor's capital. In any case, a low level of capital share means a significantly higher risk for both the profit from the project and satisfactory didvidends for the investor(s), which stresses the importance of the correct positioning of the project debt and capital ratio.

The capital investor may be anyone who invests and expects revenue on investment, such as shareholders and institutional investors; however, they all (designers, project-makers, and enterprises engaged in building and maintenance) directly benefit from the investment realization [9]. The investors and creditors are mainly interested in the level of capital share, especially when estimating risk and evaluating the project.

In case of a public tender for a BOT project execution, a significant amount of capital invested means a competitive advantage, since it points to a high level of liabilities the sponsors have taken. [9]

The non-source debt instruments are used in project financing as participants in the role of creditors, therefore the participants in the sponsorship consortium, which is certainly more acceptable compared to the situation in which they directly or exclusively rely on the revenues achieved on the basis of the project as the payoff basis. The goals of the BOT project sponsors are to maximize a long-term financing by debtor financing, as well as to maximize the fixed financial share rate, and simultaneously minimize the refinancing risk. [12]

The BOT projects may basically be grouped into two sub-sets, as highly risky construction projects in the first phase and relatively low-risk operational activities and activities related to project maintenance in the subsequent phase. Many creditors are not willing to take risks in the construction phase. Simultaneously, it is not possible to abandon the non-source financing instruments until the construction phase has been finished. The project sponsors can use the capital to finance the construction phase and refinance the capital, or to offer it on a public auction of shares upon the completion of the construction phase.

Conclusion

The fact that project financing is implemented today in both the developed and the developing countries to finance the largest investment enterprises points put to its superiority in comparison to direct investments and other forms of investments abroad, which makes it attractive and modern in the circumstances in which we live now.

The increase in the number of investors in Serbia and an ever greater demand for improving and building infrastructure resulted into the need for project financing, which is based on an insight into not only the company's business in the previous period, but also into the justification of financing, by analysing the project itself. At the same time, the legal framework for effecting of this sort of financing has been created. This type of financing would greatly contribute to the improvements in the financing the construction of business and residential facilities, industrial and tourist resources (hotels, industry workshops, store houses, logistics centres), commercial facilities (hypermarkets, shopping malls, etc.), but primarily the infrastructure facilities (such as investments into the business premises and the business operations support in the fields of power supply, transport, irrigation, land improvement, telecommunications, oil, gas, education and health care) in Serbia.

Quantitative methodologies support project financing and include stimulation and the financial engineering techniques. They optimize the capital structure and evaluate the financial change of the project, in risky circumstances, especially in cases when the project realisation is accompanied by the construction risk, the risk of potential bankruptcy and the economic crisis, as well as any other limitations emerging as a consequence of the capital scarcity.

This type of financing undoubtedly has an impact upon the quality, the type and the value of the guarantees provided by the government and by other participants, however, it also takes into consideration the method of capital raising, the concept, idea and risk of the project, and the possibility of failure in the construction phase of the project, in both the private and the public sectors.

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Does a financial leverage determine the cost of debt? The case of slovenia

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The capital (debt and equity) is the essential part of corporations' (long-term) financing; it is one of production factors. Capital, either debt or equity is scarce and is therefore not a free commodity. Due to higher risk equity capital is usually a more expensive source of financing that debt capital. In capital budgeting decisions managers could be stimulated to finance a portion of the total capital needs of the company with debt capital at expected lower costs. The use of debt capital tends to lower weighted average cost of capital, but induces an additional risk: due to fixed obligations that come together with debt financing, the company becomes more risky. We denote companies that use debt capital as financial leveraged companies. Higher the financial leverage, higher the risk of the company and higher (in normal terms) the cost of debt. The aim of the presented research was establish and analyze the relationship between financial leverage and costs of debt financing in Slovenian publicly traded corporations. Due to the lack of primary data on cost of debt, we estimated the cost of debt using two different methodologies and involved regression analysis to analyze the relationship between the two variables. We used linear regression function to establish the relationship between the variables and used also selected controlling to eliminate the time and cluster dimension of the data. With the presented analysis we could not find a statistically significant relationship that we were seeking, but some ending results gives impulse for future work.

1. Introduction

The capital (debt and equity) is the essential part of corporations' (long-term) financing; it is a typical production factor, besides labor. Capital, either debt or equity is scarce and is therefore not a free commodity (Stewart 1999). The use of capital induces on one hand costs for its users and on the other hand the profitability for the investors. The combination of debt and equity is denoted as capital structure and capital structure decisions are one of the most challenging financial management decisions.

Debt is normally cheaper than equity (due to lower risk and tax shield). Therefore debt can be used to lower the costs of financing and increase the profitability of equity capital. This is so-called financial leverage, which is induced with the use of debt financing and can be beneficial for the corporation in the case of its good performance (Brigham and Ehrhardt 2005). On the other hand, in case of bad performance of the business, debt capital can induce additional risk while debt obligations (interests) are fixed and not bound to a firm's performance. Higher financial leverage therefore can cause the company's insolvency in "bad times". Due to the risk of financial leverage it is the postulate of financial management that higher financial leverage increases the costs of debt financing. The aim of the presented research was to establish and analyze the relationship between financial leverage and costs of debt financing in Slovenian publicly traded corporations. Due to the lack of primary data on cost of debt, we estimated the cost of debt using two different methodologies and involved regression analysis to analyze the relationship between the two variables. We also included two sets of controlling variables: time variable and cluster classification variable(s). Our analysis could not prove a statistically significant relationship between estimated cost of debt and financial leverage. However, after we filtered the data, we could find some form of possible correlation between the two variables, but the relationship was not statistically significant due to a very low number of observations (n=8) in this analysis. We can interpret the results as not confirming the initial hypothesis, but the last analysis stimulates further work in gathering more data and analyzing thoroughly the phenomena. One of the explanations could also be the extensive competition in banking sector in last couple of years, when banks in Slovenia were not so careful granting favorable interest rates for loans. We speculate that after the problems of subprime crisis hit Slovenian banks as well, banks would be more finical and that the expected relationship could probably be found later on.

The article is organized as follows. After the introduction, basic theoretical background is explained. In chapter 3 we present initial hypothesis, restraints and academic value of the research. Further, in chapter 4 data and methodology is described. Chapter 5 shows and discusses results. We conclude with final remarks.

2. Theoretical background

Business decisions/business operations require capital. According to financial management theory a capital is composed of three components: equity, preferred capital and debt. Capital is scarce and is therefore not a free commodity (Stewart 1999). Different components of capital have different costs, which are – obviously – determined by the risk investors are exposed to when "lending" the money to a corporation. Corporations decide about their capital structures on the basis of capital costs and tend to find an optimal capital structure: a capital structure where the weighted average cost of capital is lowest possible.

Debt is normally cheaper than equity (due to lower risk and tax shield). Companies therefore try to use debt to lower the costs of financing and increase the profitability of equity capital. In fact, they use so-called financial leverage[1], which is induced with the use of debt financing and can be beneficial for the corporation in the case of its good performance (Brigham and Ehrhardt 2005). On the other hand, in case of bad performance of the business, debt capital can induce additional risk while debt obligations (interests) are fixed and not bound to a firm's performance. Higher financial leverage therefore can cause the company's insolvency in "bad times". Tirole (2006) notes that companies that are safe, produce steady cash flows, and have easily redeployable assets that they can pledge as collateral, can afford high debt-equity ratios, i.e. higher financial leverage. In contrast, risky firms tend to have lower leverage as such.

Higher financial leverage on average result in higher expected profitability of equity capital, but it results also in higher risk of debt for investors. Due to the risk of financial leverage it is the postulate of financial management that higher financial leverage increases the costs of debt financing.

Although the relationship is theoretically straightforward, the problem has not been heavily tested on real data. Hull (2007) develops a model in which change in borrowing costs (which is in the model leverage-related) is used in a capital structure model. The author argues the use of financial leverage as significantly better than pioneer approaches developed by Modigliani and Miller (1963) or Miler (1977). That a higher financial leverage involves higher risk confirms also early research by Baxter (1967), and Kraus and Litzenberger (1973), who advocated a trade-off model where increasing levels of risky debt lead to increasing bankruptcy costs. The significant influence of financial leverage point out also Hook and Opler (1993), who note that one of the crucial determinants of bank lending to companies is (besides others) also its financial leverage. Banks is prepared to lend (debt) capital at lower price to low-financial-leveraged companies.

Dhaliwal, Heitzman and Li (2005) explore the effect of taxes and leverage on the cost of capital. They advocate that however the basic postulate holds (i.e. a positive effect of financial leverage on the cost of (debt) capital), one must have in view also the effect of taxes. Corporate taxes lover the effect of leverage, while personal taxes increase this effect.

Also other studies (e.g. Durand 1960, Solomon 1963, Barnes 1964, Baumol and Durton 1967, Scott 1977, Haley 1966, Schell and Halley 1977, Elliot 1980) have studied the relationship between capital structure (which determines the financial leverage) and cost of capital (where the cost of debt is one of the components) and come so important, but similar finding as summarized above. However, all these studies have two restrictions from our perspective. First, they have all been done a couple of decades ago. Second, these studies were all mostly based on data available in the advanced countries (UK, US…) and not in post-communist or any other transition economies. In these countries some concepts are crucially different and have to be pointed out separately.

3. Hypothesis, restraints and academic value of the research

The main focus of the research was to test the following hypothesis:

> *H1: In Slovenia the fundamental financial logic holds; companies with higher financial risk (i.e. higher financial leverage) have significantly higher cost of debt.*

Some restraints of the research have to be pointed out. First, some restraints come from data limitation, which is explained in next section. Second, due to extensive competition in banking sector in last couple of years banks in Slovenia have been approving most favorable interest rates for most companies, especially to publicly traded corporations, which have been considered as least risky. Not before subprime financial crisis have banks really been careful with approved interest rates and really considered the differences in riskiness of the investment from the perspective of financial leverage, again especially for publicly traded corporations. And last, comparison to other research, preferably to some research of the similar topic in Slovenia or other post-communist/transition economy was unfortunately not possible due to their nonexistence.

However, taking into consideration these restraints, the research is – to our knowledge – a pioneer research of the similar topic either in Slovenia or other post-communist/transition economy, and as such it could be taken into consideration in future research.

4. Data and methodology

We tested the hypothesis on public corporations that are listed on Ljubljana Stock Exchange. In the database we included 18 corporations in the period from 2005 until 2007. Data was obtained from GViN database. For more detailed insight in the data source see Stubelj (2008).

Data on financial leverage is calculated and published for all selected companies on yearly basis, so this data was easy achievable. On the other hand, we had hard time determining the adequate cost of debt for those companies. Following our hypothesis we needed the (estimate for) cost of debt (in percentage) on case and on yearly basis (so, cross section and longitudinal data). Unfortunately, such data is not publicly available, neither in individual yearly reports of selected companies nor in any of the available databases. Further, in Slovenia companies mainly use bank financing (and not raise debt capital on capital markets with bonds), therefore we could not use market required rate of return (on company's bonds) as a relevant data source.

Due to the lack of relevant academic or expert guidelines on the topic under these specific conditions, we used two methodologies, that both have some advantages and disadvantages, respectively. First, we estimated the cost of debt simply as a quotient between paid interests on company's debt in the year *t* and the value of debt at the beginning of the year *t* (i.e. at the end of year *t-1*). The same procedure was used also for the estimation of (average) cost of government debt in Slovenia (see Dolenc 2006). So, the estimated cost of debt of the company *i* in year *t* was calculated as:

$$ {}_{d}r_{i,t} = \frac{I_{i,t}}{D_{i,t-1}}, \qquad (1) $$

where:
- $_dr_{i,t}$ … estimated cost of debt for the company i in the year t,
- $I_{i,t}$ … interests paid by the company i in the year t and
- $D_{i,t-1}$ … the value of debt of the company i in the end of year t-1.

This procedure is quite straightforward, but it has, however, some disadvantages when used in the present context. First, the estimation can be either a) overestimated or b) underestimated, if a) a company does not hold short-term debt at the end of the year but uses heavily the short-term debt during the year, and b) a company pays off a larger amount of debt in the beginning of the year. Second, estimated cost of debt is actually the average interest rate a company pays on existing debt in current year, and not in fact the cost of debt the company has risen in the current year.

The second solution that seemed worthwhile taking into consideration was the estimation of additional interests paid in current year (compared to last year) relative to additional value of debt at the end of the previous year (compared to the year before). Analytically, this can be expressed as:

$$ {}_{d}r_{i,t} = \frac{\Delta I_{i,t}}{\Delta D_{i,t}}, \qquad (2) $$

where:

$_dr_{i,t}$ … estimated cost of debt for the company *i* in the year *t*,

$\Delta I_{i,t}$ … (interests paid by the company *i* in the year *t*) – (interests paid by the company *i* in the year *t-1*) and

$\Delta D_{i,t}$ … (the value of debt of the company *i* in the end of year *t*) - (the value of debt of the company *i* in the end of year *t-1*).

These estimates should in fact be better proxies of the company's cost of debt that a company must pay in the year *t*. However, some drawbacks arise again. Two are crucial. First, if a company lowers the outstanding amount of debt, it should also lower the interests paid, otherwise we get unexpected (i.e. negative) value of estimated interest rate. This has proven not to be the case for all cases and all years. Second, the dynamics of the borrowing plays a crucial role as well: if a company raises debt towards the end of the year, it will pay low interests in the current year (if any at all), but the value of debt will significantly rise.

But, even though neither of the suggested methodologies is perfect, we decided to use both and have additional "safety procedure" incorporated. We decided to eliminate from the analysis those observations (cases in different points in time) that deviate from average for more than one standard deviation. Effectively – under assumption of normal distribution of the observations – we end up using 66% of all observations for which the cost of debt was possible to be estimated.

In order to get as homogeneous groups of observations, we tested the rationale of clustering the data into groups. In order to do so we used cluster analysis with Ward's method of clustering. Eventual significant cluster grouping is included in the regression analysis using set of dummy variables (their number is set as number of clusters less one).

At first sight the panel data analysis seems a natural way of analyzing the relationship between cost of debt and financial leverage (for *i* and *t*). However, because of some gaps in the data, we could not estimate all costs of debt (for all *i* and *t*). Therefore, panel data analysis came out of the question, and simple (OLS) regression analysis became obvious. We still tested the relationship between estimated cost of debt and financial leverage[2] controlled for time and cluster specific effects, so we tested in fact:

$$_{a}\hat{r}_{i,t} = \alpha + \beta \cdot FL_{i,t-1} + \gamma \cdot t_i + \Gamma \cdot CLU_i \, , \qquad (3)$$

where:
$FL_{i,\ t-1}$ … financial leverage of company *i* in the year *t-1*,
β … effect of financial leverage on cost of debt,
t_i … time dimension of the data for company *i*,
γ … time specific effect on cost of debt,
CLU_i … set of dummy variables to represent the clustering, and
Γ … the matrix of regression coefficients for "cluster dimension" of the data.

5. Results and discussion

As explained above, the analysis was performed using two methodologies for estimation of cost of debt. Table 1 shows descriptive statistics for the first set of data (interest rates estimated according to eq. 1).

Table 1: *Descriptive statistics for the first set of data*

	N	Min	Max	Mean	Standard deviation
FV	47	17,63	244,84	86,08	65,71
$_{d}r_{i,t}$	47	0,40%	15,98%	5,20%	2,55%

As it can be noted the variability of the data is quite high, and to some level also unexpected. This holds especially for the estimated cost of debt, which ranges from 0,4% to 16,0%. Therefore we eliminated – as noted before – the observations for which the estimated cost of debt deviate from average for more than 1 standard deviation. Descriptive statistics for filtered first set of data is shown in Table 2.

Table 2: *Descriptive statistics for filtered first set of data*

	N	Min	Max	Mean	Standard deviation
FV	41	17,63	244,84	90,18	66,71
$_{d}r_{i,t}$	41	2,69%	6,82%	4,62%	1,22%

With filtering the data we eliminated from the analysis the "tails" of the data, ending up with a set of observations with relatively normal levels of estimated cost of debt and financial leverage. However, cluster analysis reveals that data can be clustered into two more homogeneous groups. The dendrogram for this set of data is shown in Figure 1.

Finally, the data is confronted in regression analysis. In this first regression we included financial leverage as (theoretical) explanatory factor of the cost of debt, controlled for both time and cluster specific effects. Results are presented in Table 3.

Table 3: *Results of regression analysis for filtered first set of data*

Model	Regression coefficients	*t* statistics	R^2	*F statistics*	*Sig. of the regression*	*DW* statistics
${}_a\hat{r}_{i,t} =$						
α	0,0441	$5{,}730^{**}$	0,32	5,28	0,02	1,33
$+\beta \cdot FL_{i,t}$	-0,0006	-1,313				
$+\gamma \cdot t_i$	0,0071	$3{,}411^{**}$				
$+\Gamma \cdot CLU_i$	-0,0146	$-2{,}327^{*}$				

*** - significant at 5%**
*** - significant at 10%**

As we can clearly see, the hypothesis cannot be confirmed with the use of this set of data. Even though the regression function as such is statistically significant, its explaining power is relatively low (determination coefficient is slightly more than 0,3). Looking partially, the regression coefficient for financial leverage is the only not significant one (the exact significant level is 0,2), therefore we cannot confirm the hypothesis that financial leverage effects the cost of debt[3]. Other factors, which we denoted as controlling variables turned out to be statistically significant at low levels of significance.

Further we used the second set of data[4], where we used the cost of debt, calculated as "additional interests paid relatively to increase of debt". Descriptive statistics for unfiltered data is presented in Table 4.

Table 4: *Descriptive statistics for the second set of data*

	N	Min	Max	Mean	Standard deviation
FV	34	17,63	244,84	85,96	69,23
${}_d r_{i,t}$	34	-61,38%	228,06%	5,61%	43,06%

Obviously this methodology has even more drawbacks as the first one. The estimated cost of debt ranges from -61% to 228% (!). Taking into consideration estimated the standard deviation its clear that the use of [Δ-Δ, Δ+Δ] would not help eliminating the spurious observations. Therefore we decided to take into consideration only observations where the estimated cost of debt was higher than EURIBOR+50bps and lower than interest rate for late payments. This should be a normal interval of interest rate on bank loan a public corporation has to pay for its debt. Relevant descriptive statistics is shown in Table 5.

Table 5: *Descriptive statistics for filtered second set of data*

	N	Min	Max	Mean	Standard deviation
FV	8	25,26	158,71	76,90	56,56
${}_d r_{i,t}$	8	4,17%	9,79%	6,46%	1,99%

Even though we ended up with only 8 observations, the cluster analysis shows that (again) two groups of corporations should be taken into consideration (see Figure 2).

Using this set of (well reduced) data, the ending result is more or less obvious. The regression in not statistically significant (see Table 6), which is normal due to low number of observations in the analysis. Therefore we cannot confirm the hypothesis we have tested; we cannot statistically correctly conclude on relationship/correlation between estimated cost of debt and financial leverage of the selected publicly traded corporations. Nevertheless, we can assume that with gathering more data and using the same methodology we might be able to come to some more firm conclusions. Scatterplot between financial leverage and estimated cost of debt (including inserted linear fitted line[5]) shows that the tendency of the relationship might be positive, which would confirm theoretical expectations also for Slovenian case. This is left for further research, where the database should be expanded heavily with inclusion of other companies, not only publicly traded corporations.

Summary

The capital (debt and equity) is the essential part of corporations' (long-term) financing; it is one of production factors. Capital, either debt or equity is scarce and is therefore not a free commodity. Due to higher risk equity capital is usually a more expensive source of financing that debt capital. In capital budgeting decisions managers could be stimulated to finance a portion of the total capital needs of the company with debt capital at expected lower costs. The use of debt capital tends to lower weighted average cost of capital, but induces an additional risk: due to fixed obligations that come together with debt financing, the company becomes more risky. We denote companies that use debt capital as financial leveraged companies. Higher the financial leverage, higher the risk of the company and higher (in normal terms) the cost of debt.

The aim of the presented research was to establish and analyze the relationship between financial leverage and costs of debt financing in Slovenian publicly traded corporations. Due to the lack of primary data on cost of debt, we estimated the cost of debt using two different methodologies and involved regression analysis to analyze the relationship between the two variables. We also included two sets of controlling variables: time variable and cluster classification variable(s).

Our analysis could not prove a statistically significant relationship between estimated cost of debt and financial leverage. However, after we filtered the data, we could find some form of possible correlation between the two variables, but the relationship was not statisti-

Table 6: *Results of regression analysis for filtered second set of data*

Model	Regression coefficients	*t* statistics	R^2	*F statistics*	*Sig. of the regression*	*DW* statistics
${}_a\hat{r}_{i,t} =$						
α	0,1205	2,055	0,62	2,17	0,23	2,40
$+\beta \cdot FL_{i,t}$	-0,0003	-0,960				
$+\gamma \cdot t_i$	0,0062	0,445				
$+\Gamma \cdot CLU_i$	-0,0642	-1,743				

*** - significant at 5%**
**** - significant at 10%**

1 **Analytically financial leverage is calculated as the quotient between EBIT (earnings before interests and taxes) and EBT (earnings before taxes).**
2 **It is assumed that a financial leverage of the previous year affects the cost of debt in the current year (if there is such correlation at all).**
3 **The reason is simply accounting based, because the relevant data in current year is available for the last day of previous year. For the selected sample.**
4 **Because of the calculation method we lost about one third of available data.**
5 **Without any consideration to statistical significance, though.**

cally significant due to a very low number of observations (n=8) in this analysis. We can interpret the results as not confirming the initial hypothesis, but the last analysis stimulates further work in gathering more data and analyzing thoroughly the phenomena. One of the explanations could also be the extensive competition in banking sector in last couple of years. Although we could not find a statistically significant relationship between estimated cost of debt and financial leverage some ending results gives impulse for future work.

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Figure 1: *Dendrogram using Ward Method for filtered first set of data*

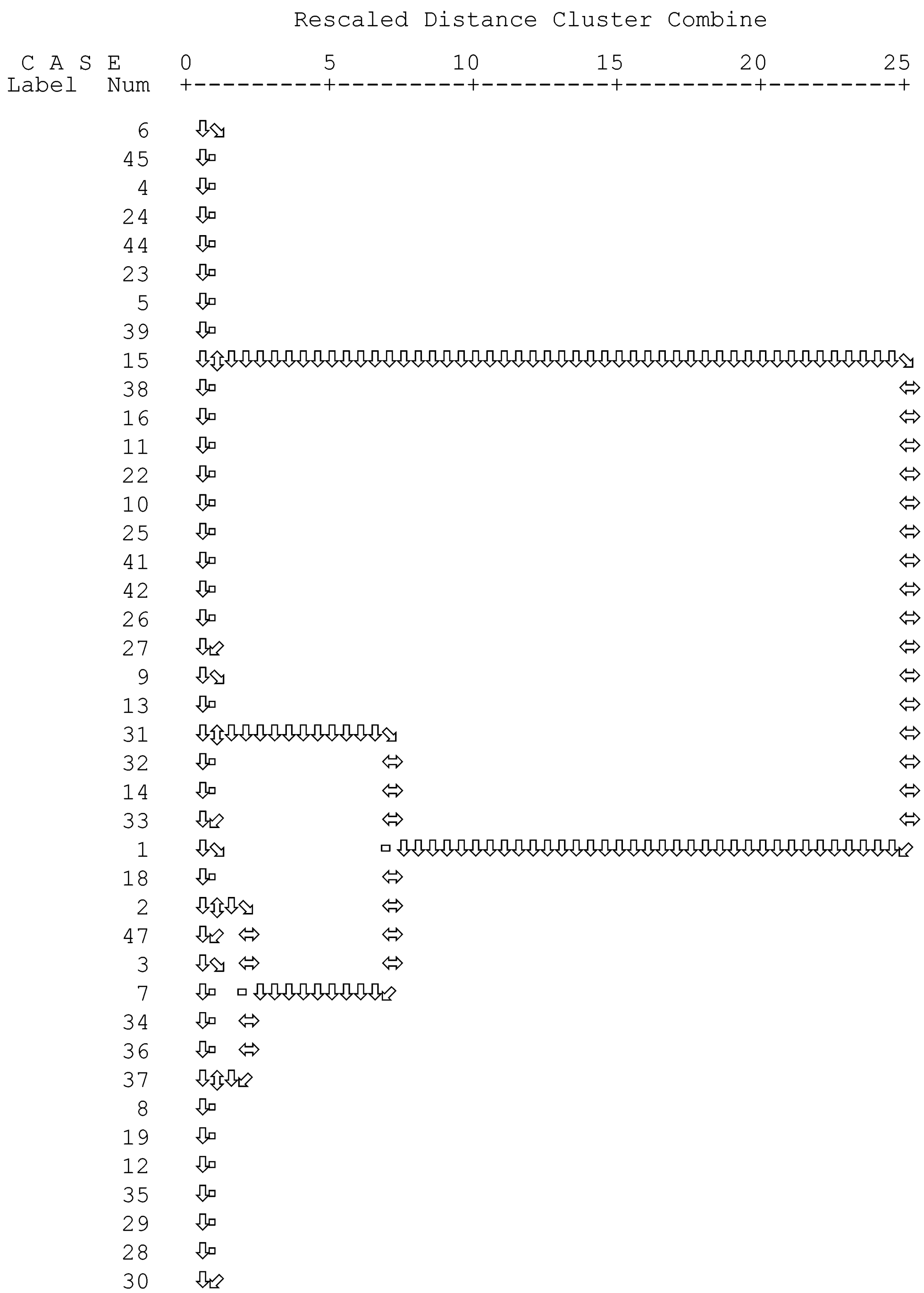


Figure 2: *Dendrogram using Ward Method for filtered second set of data*

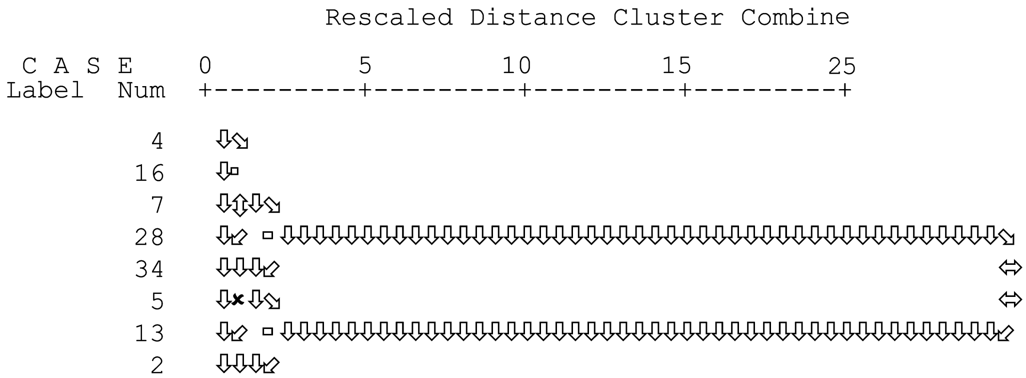
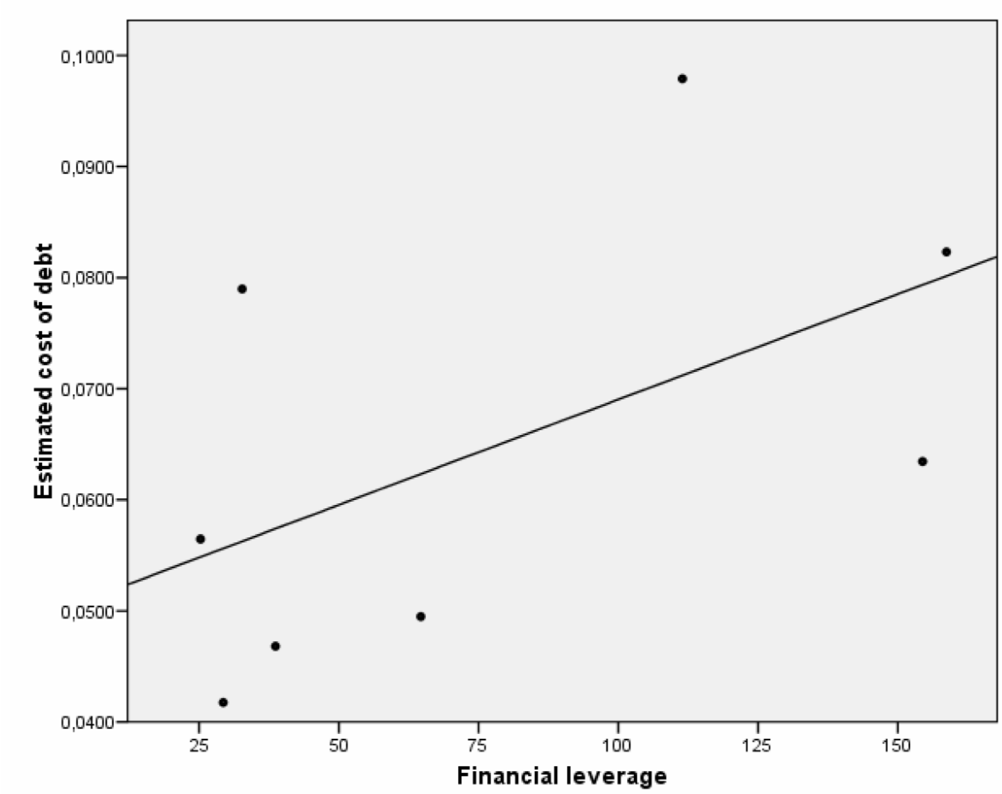


Figure 3: *Scatterplot between financial leverage and estimated cost of debt*



Implementation of advertising strategy

UDC 659.11

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One of the most important components of an integrated marketing communications program is the advertising. Advertising can be used to create images or associations and position a brand in the customer's mind. The advertising strategy is based on several factors, including identification of the target audience, the basic proble or issue the advertising must address, the major selling idea the message needs to communicate, as well as creating and positioning of the advertising message. From the marketer's perspecteive, the advertising message is a way to tell consumers how the product or service can solve a problem or help satisfy desires or achieve goals. The media plan, as an integral part of the advertising strategy determines the best way to get the advertiser's message to the market.

1. Defining the goals of advertizing

The advertizing strategy has to allow for the process of communication between the company and prospective customers in order that such an attitude be created towards certain products and services, so as they should be favoured in the market[1]. The entire procedure of creating and executing the adverising messages has to be based on the results of a complex marketing research (research into the market, into motivation, into an appropriate wording od the message, media, etc.). The basic issue is that of ***defining the concrete goals of advertizing*** that can be directed towards: raising the number of prospective customers who are already informed about a certain product or service, improving the image, differentiation of the products and services, increasing the extent of preferences, etc. The goals of advertizing directly depend upon the extent to which the prospective customers are informed about a certain product or service (completely uninformed, partially informed, strongly inclined towards a certain product or service, or highly satisfied and willing to use a certain product or service).

The advertizing strategy is affected by the following factors: *the key idea*, which will become the central issue of the promotive campaign and *the target audience*. In order that the advertizing strategy should be efficiently realized, it is necessary to determine *the procedure of promotional activities execution*:

- *define the issue of the advertizing campaign;*
- *define the target audience;*
- *collect any relevant information and define the key idea of the message;*
- *create and position a genuine advertizing message.*

Defining the advertizing campaign issue

The advertizing campaign is a set of interlinked and coordinated marketing activities directed towards a specific issue and idea that apperas in various media, in a designed period of time[2]. The defining of the genuine issue on which the entire advertizing campaign will be based is the main task of the advertizing strategy. By their very nature the advertizing campaigns are time limited; the campaign issue is created to last much longer. The issue of any advertizing campaign has to be based on an ***authentic idea*** which is in fact the central message directed towards the target audience. In practice, the advertizing campaign issues are often short lived since their authenticity is unexpectedly affected by the acts of competition or by fast changes in the market. Well-planned issues in some advertizing campaigns, however, may last for years, as is the case of the issue of the Phillip Morris' “Marlborro Country“ advertizing campaign that has lasted for more than 40 years.

Similarly, some companies may cooperate with different marketing agencies, the campaign issue remaining unchanged for years, as is the example of the “BMW“ company which has changed a number of marketing agencies in the past 30 years, remaining faithful to the issue of its advertizing campaign.

Defining the target audience

A large number of marketing agencies conduct various psychographic and etnographic annual research into the profile of the users of certain products and services, applying different methods and techniques of research (in-depth interviews, focus groups, etc) in order to get a clearer insight into a certain target audience. When defining the target audience it is ***especially important to determine*** the following: the users' attitude towards the

1 Dr Savo Vasiljevic, Upravljanje marketingom železnice 1999, p.425
2 Burnet, J., Moriarty, S., Introduction to Marketing Communications - An Integrated Approach, 2003, p.251

products that are the subject of advertizing campaign; the prevailing factors in the choice of a certain brand; and the extent to which their needs are satisfied.

On the basis of the results of the marketing research obtained for the purposes of defining the advertizing messages and the goals of the planned marketing activities, the concrete target audience is determined (a specific group of prospective buyers, one segment of the market, more segments of the market, etc.). As regards the type of the target audience to which the message is directed, ***it is necessary to define the following elements:***

- *the key idea and contents of the message;*
- *the way of promoting the message;*
- *the term in which the message is to be broadcast;*
- *the media to be used in message broadcasting.*

Defining the key idea

The procedure of marketing research (qualitative and quantitative) and of collecting all relevant information for the promotional purposes started in the 1960's and 1970's in Great Britain, subsequently spreading to Europe and Asia. The techniques of collecting useful information vary, and any available sources are used (professional literature, reports, articles, publications, sales personnel, customers, etc.). John Still, the vicepresident and the director of a well-known marketing agency in San Francisco, wrote a book "The Truth, Lies and Advertizing" in which he maintains, among other things, that collecting all relevant information is the precondition for making a correct decision and defining an authentic advertizing message.

The nature of advertizing requires that each member of the marketing team think creatively, and the greatest challenge they face is determining a genuine "great idea" that should be powerful enough to attract the attention of large audience, cause a desired response and differentiate the product from those offered by the competition.

One of the most successful authors, David Ogilvy, states: "*I do not believe it is possible to create more than one great idea in 100 advertizing campaigns. I am said to be one of the most proliferous creators of great ideas, however, in my long career I have not come to more than 20 such ideas, if that many at all*"[3].

Although the task od creating a genuine and interesting idea to present a product is a really difficult one, numerous ideas have become a basis of successful advertizing campaigns, as is the case of the "Pepsi Generation" promotional campaign, with the variations that followed, "The taste of a new generation" and "Generation next". The inspiration for "great ideas" does not come easy, and it is even more difficult to teach people who work in marketing how to do that. Jeremy Jeweller, the author of the book „The Creative Advertizing Strategy", maintains: "The idea of advertizing campaign should be the main argument of the product or a service. Once you define the message, make sure you can live with it and it will be a leading idea of any subsequent advertizing campaign"[4].

Creating and positioning advertizing message

The concept of positioning the advertizing message that is meant to be the basis of the advertizing strategy was first applied by Jack Trout and Al Rise in 1970's. The basic idea is on the "positioning" of the product or service in the consumers' minds. The positioning process is equally used for companies as well for brands. Products may be ***positioned on the basis of***: main characteristics, quality, method of use, price, etc. Different approaches to the advertizing message positioning may be used as basis of a successful creative strategy. A unique advertizing message is aimed to arouse the desires and interest of prospective customers and set them to action.

The process of a unique advertizing message creation is a very important task the accomplishment of which ***meets the following conditions***:

- *stating the message contents;*
- *defining the message structure and form;*
- *selecting the message.*

The marketing research conducted for the purpose of creating the contents, structure and form of the message involves the testing of a certain number of the product or service consumers, thus checking the success of the message solution (TV spots, films, verbal messages, advertisments, artistic solutions for posters, etc.).

Using various techniques and methods we learn about the extent to which the message attracts attention, to what extent it can be understood, what the consumers' basic complaints are, etc. Such tests help design the sequence of prepared messages according to the quality, contents, clarity, etc[5].

The advertizing message may be directed towards rational or emotional motives of prospective customers. The message focusing upon the ***rational approach*** advocates the development of practical and functional

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[3] **Burnet, J., Moriarty, S., *Introduction to Marketing Communications – An Integrated Approach*, 2003, p.251**

[4] **Burnet, J., Moriarty, S., *Introduction to Marketing Communications – An Integrated Approach*, 2003, p.251**

[5] **George E.Belch & Michael A. Belch, *Advertising and Promotion: An Integrated Marketing Communications Perspective*, 2003, p.256**

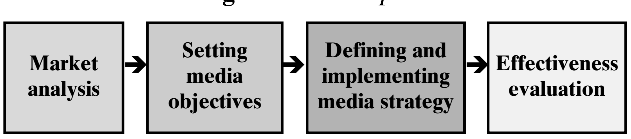
needs for certain products or services. The ***emotional approach*** offers the customers to satisfy their social and psychological needs by purchasing a certain product or service. Numerous advertisers maintain that the effect of emotional messages is by far greater and longer-lasting compared to that of the rational ones, which is further proven by the research whose results show that positive feelings and moods are directly associated with the affirmative way of evaluating customers.

2. The media campaign of the company

Media are the basic advertizing means, using a variety of methods (posters, advertisments, brochures, etc.) to convey certain information (advertizing messages) to the customers. The access to information and media control become the key points on which the economic power of the company lies. Without the means of communication, the news on certain products, services and ideas could not reach certain segments of the public. The most frequently used mass media are television, radio, exhibitions, fairs, newspapers, magazines and other publications, while varied elements of a promotional mix (direct marketing, interactive media, sales promotion, advertizing and personalized sales) provide the universal media support to the company. The ***media plan*** implements its strategy to transfer information on the company to a certain target audience in a most efficient and most inexpensive way. Figure 1 presents the sequence of activities (market analysis, setting media objectives, defining and implementing media strategy and effectiveness evaluation) in the process of media plan creation.

The media plan creation process is usually characterised by the following problems: incomplete information, inadequate terminology, time limits and difficulties in measuring plan effectiveness. A host of information circulates the media, however, media planners usually need more information on the company than they have access to at the moment. The ***lack of information*** is generally characteristic of smaller advertisers who for different reasons are unable to acquire the required information, so their decisions are frequently based on limited or obsolete data. Some information remains unavailable due to the fact that it is either imposible to conduct the necessary research in a given period of time or the price is too high.

Figure1: *Media plan*



Source: George E.Belch & Michael A. Belch, *Advertising and Promotion: An Integrated Marketing Communications Perspective*, 2003, p.306

The problem of ***inadequate terminology*** arises as a result od using different methods and discrepancies in the standards in media research, and sometimes even different terms are used as synonyms, which makes the confusion greater. ***Time limits and pressures*** are frequently the consequence of different competitive activities that require prompt responses and efficient media reactions. Although it sometimes does happen that the urgency in the execution of a certain job results in unexpected time limitations which practically force people to make urgent media decisions, without a clear plan and a detailed market analysis. The ***measurement of the effectiveness*** of various media is a difficult task, since not all media decisions can be measured quantitatively, and therefore managers sometimes make decisions without having previously acquired enough alternative solutions.

2.1 Market analysis and media objectives defining

Defining a media strategy requires that a market analysis be conducted, focusing upon media and information. The market analysis includes research into the competitive strategies as well as examining the internal and the external factors meant to provide the answers to the following questions: *which target group is the advertizing message directed to, which type of internal and external factors affects the media plan and which geographical segment should be focused.*

In order to define the target market it is necessary that a basic research be conducted, as well as an analysis of any available secondary data sources (publications, brochures, studies, etc.). The media parametres obtained should be presented as percentage and index values showing the real situation of the market conditions. The choice of media strategy is certainly conditioned by internal and external factors too. ***The internal factors include****: the amount of media budget, the competence of management and administrative structure* within the media department of the company or the hired marketing agency. ***The external factors include****: economic indicators* (media price) and *technological facilities* (availability of new media).

Companies often direct their advertizing expences towards the geographical segments which bring the greatest profit and through which they will acieve their goals most easily. The basic task of the media analysis is to identify the specific media goals to be achieved by a media strategy.

2.2 The media strategy determining, implementation and effectiveness evaluation

Media planners make a decision on the selection of the appropriate media strategy they will use to achieve the set media objectives. According to Joseph Ostrow, the media strategy is an art, rather than a science, since it contains the following activities: media mix, coverage of target public, geographical coverage, media scheme, the scope of the target public included, the frequency of media coverage, creative aspects, flexibility and the budget. Advertizers have access to varied media, the choice and combibation of which depend on various factors, such as: the set media objectives, the characteristics of products or services, the budget, the company preferences, etc.

The use of the media mix guarantees the advertizers a free access to media strategies, since each of the media has specific advantages. By combining more types of media, they achieve a higher level of target public coverage and increase the probability of achieving the overall communication and marketing goals. The task of a media planner is to increase the media and geographical coverages by choosing an appropriate media strategy. Many companies need to use their advertizers to constantly remind prospective buyers of their brands, however, it is impossible to achieve, not only because of the funds, but also because it is not necessary. But it is necessary to employ ***the media scheme method*** to determine appropriate terms for certain advertising activities, and these should coincide with the periods of potential demand for the given product. It is not easy to define the media scheme for some products, while for others, it is a simple task. The media planners use three methods for that purpose: *the continuity method, the interruption/time-out method and the pulsation method* (Figure 2).

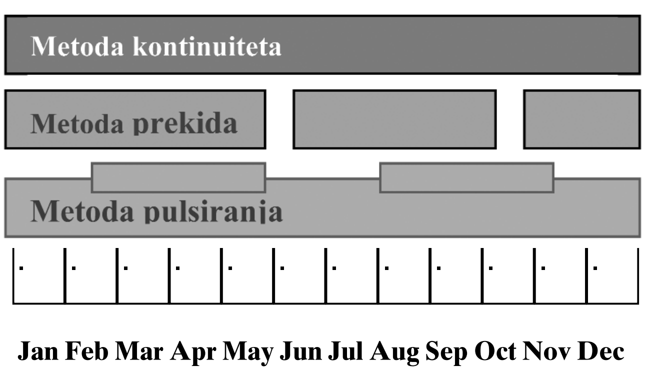


Figure 2 : Media scheme methods
Source: George E.Belch & Michael A. Belch, *Advertising and Promotion: An Integrated Marketing Communications Perspective*, 2003, str.316

- ***The continuity method*** is used in lasting, constant advertizing which may be *daily*, *weekly* or *monthly*, regardles of coinciding with the period of demand for the product. This strategy is mostly used in advertising chemicals, food and other products.

- ***The interruption method*** is a form of *interrupted periods of advertizing*, depending on the season of demand for certain products or services. For example, banks usually use the media services during a better part of the year, excluding the summer period.

- ***The pulsation method*** is a *combination of the above two methods*. Here, there is a continuity in advertizing, with the intensity of advertizing activity increasing in certain periods. The “Coca-Cola“ company, for example, advertizes its carbonated beverage of the same name, increasing the intensity of the advertizing campaign during the summer period.

The selection of the appropriate media scheme method depends on the set media objectives, purchasing cycle, the company's budget and other factors. Since the advertizers have different media objectives and limited budgets, it is necessary that a correct decision be made concerning the scope of the target public coverage and the frequency of media coverage. New brands require a higher level of media coverage so that the new production programme should be introduced to as many prospective buyers as possible.

There is no method, however, that could predict whose scope of coverage is required to ensure a sufficient support of the consumers, nor is there a method by which an insight into the extent to which a certain target public is informed could be obtained. In his studies Joseph Ostrow has found that the *frequency of advertizing greatly increases the knowledge of the product, however, it does not directly affect the change in behaviour and attitudes of prospective buyers*[6]. He recommends the following ***tactics for increasing the effectiveness of the advertizing results***:

– to achieve an effective frequency of advertizing messages, it is necessary *to analyse the set media objectives.*
– instead of the average frequency of the advertizing messages, it is necessary *to determine the frequency minimum* for achieving effective advertizing results, and then *gradually increase the scope of the covered target public and the frequency level*.

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6 **George E.Belch & Michael A. Belch, *Advertising and Promotion: An Integrated Marketing* Communications Perspective, 2003, p.255**

Some media strategies require that certain types of media be used, such as is the case with television, which is, due to the picture and sound, by far a more influential medium in rousing different emotions in spectators compared with some other media.

A genuine, creative campaign may greatly contribute to the success of a new product. However, in order that an appropriate creativity should be obtained, it is necessary to select the type of media that can adequately convey the advertizing message and support a concrete strategy.

A successful media strategy requires an extent of *flexibility* due to prompt changes in the marketing environment. If the media plan is not flexible enough, the company may miss the opportunity to successfully respond to new challenges. *Budget* allocation is absolutely one of the most important decisions to be made in developing a media strategy, and this is affected by the above mentioned factors (target public coverage, message frequency).

Promotive prices are classed into two groups: absolute and relative. ***The absolute media price*** is the total amount of price, depending on the media type (for example, the price of the advertisment in colour covering the entire page in the "Time" magazine amounts to $200000). ***The relative price*** is the amount determined by the price of the advertisment and the scope of the target public covered. The relative price is convenient because it allows for the adjustment and optimization of target public with the budget.

The effectiveness of media strategy is determined by two factors:

- a successful achievement of the set media objectives;
- a contribution of the media plan to the overall achievement of the set marketing and communication objectives

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Development of slovenian local self-government in the new public management perspective

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Abstract: *From the first half of 1990s' Slovenian local self-government was involved in the ongoing process of public administration reforms. In this context main emphasis was on modernisation of public administration at all levels. Two main elements were influencing these processes. First it was tendency to fulfil criteria of the European Union concerning effective and democratic political and administrative system. Second one was theoretical background of New Public Management (NPM), that was present in Europe for longer period of time but in Slovenia it emerged only after 1990. In this context paper will try to show all the main elements of local self-government reforms in the context of New Public Management approach as the criteria of desired form and functioning of public administration. We will evaluate Slovenian local self-government via main elements of NPM, namely effectiveness, client-friendliness and economic performance.*

1. Introduction

Citizens around the world are awakened as never before to their right to an effective government, to a government that can perform honestly and efficiently. This awakening is the greatest source of pressure for better public policies, administrative reform, and a "New Public Management." Administrative reform is now an unquestioned priority of the international community, of OECD, of the World Bank, of the European Union, and of many regional bodies. This is also the case in Slovenia.

Since the Independence of Slovenia in 1991, there was a strong need for reform of public sector, connected to the new situation where some institutional structures and practices had to be replaced with more democratic and flexible ones. Former communist – Yugoslav institutional framework was destroyed and inappropriate for unified small state trying to adopt democratic tradition of Western Europe and to enter the European Union as final instance of its formal democratization. If first years after the Independence were mostly burdened with revitalizing Slovenian economic system and defining major shape of political and administrative institutions, only after the 1995 and due to accession to European Union Slovenia started to think about more effective and customer oriented public administration.
Slovenian reform of public administration was mostly theoretically supported by the New Public Management approach defined by Lane and Osborne and Geabler (1993) as most influential writers on reforming public sector in the way opposite to bureaucratic organization. Slovenian researchers and academics prepared different studies on how to implement ideas on more flexible, effective, economic and user oriented administration in Slovenia. Under the pressure of public dissatisfaction with public administration performance and after quite loud academic debate on reforms and under the pressure of European Union Slovenia started with more serious public sector reform in 1997. The reforms of Slovene public sector can be divided in four basic periods of development.

In this overview of Slovenian public sector reform we will try to define basic characteristics of Slovenian public administration reforms in its historical aspect, stressing basic shifts towards more effective, better organized, more user-friendly and less clientelistic and bureaucratic practices of work. With other words we will try to define best practices and warn from some missteps on the way towards better public administration in Slovenia.

Contemporary public administration is headed towards a concept of new public management that is overshadowing old Webers' bureaucratic administration. In this manner, new values like networking, flexibility and efficiency were introduced and are replacing old hierarchical and inflexible organizational structures that were not able to effectively manage problems in an unstable world.

Snellen (2003: 129) is defining change in administrative relations as a move from vertical towards horizontal. According to this change, public servants have to change their attitude from hierarchy toward cooperation and flexibility. Contemporary issues and problems require new approach; preferably networking of institutions. Lane (1995: 195) is defining basic changes in understanding public administration and its role. Written procedures and rules, sticking to old habits and law are updated with more flexibility, efficient and client friendly orientations.

Efficiency is defined as relation between used resources (input) and results (output); administration is at its most efficient when fewer resources are used for the same amount of output. Efficiency, in other words, is measure of better economic use of resources at the same level of the output (Žurga, 2001: 82-83). However, we can also argue that efficiency can be understood in context of relativity. In this case, more resources can be introduced but output has to grow exponentially and not linearly.

At the same time, it is important to notice that some public services cannot be translated into monetary value, because of very nature of output. Such case is also the value of information. The value of information is not equal to the expense (in money and time) of producing the same amount of information. The value of information can be much higher than the value of resources spent to produce information.

2. Historical development of local self-government in slovenia

Historical development of Slovenian local government started already in the Middle Ages when some Slovenian cities already had some kind of communal infrastructure administration (created under the influence of neighbour political entities). From Slovenian "župa" and monarchical feuds "neighbourhoods" came out as ancestor of Slovenian administrative municipalities. Despite administration was opposing local self-government in the area of Slovenia on June 24th 1850 in Leše first municipal representative organ was elected (Vlaj, 2006: 32). Under strong influence of Hapsburg monarchy and absolutist regime in the area of today's Slovenia there were 348 municipalities (reduced from 501 in 1866) and they had relatively strong self-governance (Vlaj, 2006: 32-33). In the area of Slovenia there were village and city municipalities, districts and "Kresije". Based on law from 1870 municipalities were responsible for municipal property, finances, and public safety, especially in the field of healthcare, cleaning streets and creeks, fire-fight brigades, maintaining municipal buildings, local paths and roads, bridges, wells, inspection of municipal border, food supply, etc. Legal state, organisation and functions are defined by municipal orders, accepted at the level of land. Local government layer above municipalities were administrative districts, with at least 16.000 inhabitants, and regional administrative units. Municipal representative organs were elected by male of age inhabitants of each municipality. After the fall of Meternich absolutism bigger cities were entitled to get their own statutes and privileged status of so called statutory cities. Namely they were Ljubljana, Maribor, Celje, Gorica, Celovec and Ptuj (Vlaj, 2006: 33). In the beginning of XIXth century there were many political changes that strongly and frequently reshaped Slovenian sub-national administration (as well as national) that ended only in 1955 whit introduction of decentralised communality system that sets municipality as basic socio-economic cell that is also main unit of state government (see Vlaj, 2006: 34).

Great municipalities with 31.740 inhabitants and 321km2 (in average) were created as institutions responsible (according to the constitution) for implementation of all federal and state acts if there was not set differently by specific law. Despite municipalities are primarily responsible to deliver public services that are important for local inhabitants, in Yugoslavia municipality was simultaneously governing and self-governing institution that was mainly providing services for the state and it was used as first level implementer of public policies (Vlaj, 2006: 35-36). In 1960s' municipalities were abolished and tasks were moved to regional centres. Local problems were addressed through newly shaped local communities that never gained importance of municipalities but especially in the case of rural areas they served public needs relatively effectively. In Slovenia there were 62 municipalities – communes that supplemented districts (in Slovenia finally abolished in 1965) that had representative organs elected on general and anonymous election, executive institutions and administrative services, connected to the central state administrative institutions (especially in the sense of legality supervision) but relatively autonomous under strong influence of different local interests (Vlaj, 2006: 36-41).

In 1991, with new constitution of independent Republic of Slovenia local government system in Slovenia returned back to classic role of municipality as foundation of local self-governance, where people manage their public matters of local importance (Vlaj, 2006: 41). Slovenian constitution is defining local government as important part of Slovenian political system. In this manner article 9 of Slovenian constitution (2001) argues that "in Slovenia assured local self-government". Further on, chapter 5 (articles 138 – 145) on self-governance defines that people can fulfil their right to self-governance in municipalities and other local communities. According to the constitution, municipality is self-government local community consisting form place more places connected together with common needs and interests of population in defined area.

According to second paragraph of 139th article of Slovenian constitution, municipality can be created by the law based on referenda carried out among local citizens. Next to defining basic competences and financing of municipalities (which are defined by different laws) there is also important article on broader self-governing structures combined of more municipalities joined together in order to provide services of broader importance, that is still not national. This is important element that enables creation of regions. Regions in Slovenia are one of most important issues since independence.

If we want to quantify development of Slovenian municipalities we can see need to decentralise local government on smallest parts possible. Slovenia made four reforms of local governments that caused rise on number of municipalities for more than 333,3% form 63 before 1994 to 210 in 2006. From the initial situation in 1993 only 13 municipalities were unchanged, while on the other hand, initial municipality Ptuj was in 15 years divided on 16 mostly rural municipalities with insufficient financial and human resources for successful further development. These two examples can be seen as indicator of lack of serious financial, development and any other analysis prior to establishing new municipalities. In order to additionally support the argument about political nature of local development in Slovenia we can describe the case of Koper municipality (its area was not changed from the initial situation in 1993). In every cycle of establishing new municipalities (1994, 1998, 2002, 2006) there were many attempts to divide Koper into smaller municipalities, some of those attempts were initiated even by National Assembly and Koper citizens refused such ideas on referenda. If we know that Koper is costal municipality with sea-port and it is one of those municipalities that is realising budgetary surplus and has sufficient revenues to cover all expenses without additional state support it can be clear indicator that there is limited logic in the process of creating small and state-dependent municipalities.
Slovenian administrative system accepted new public management reform approach already prior to the entering the EU. Slovenian scientists wrote about introducing new public management elements into the work at all levels of Slovenian public administration already in the late nineties of previous century (e.g. Kovač, 1999, Kovač, 2004). At the turn of the century Slovenia introduced complete reform of Slovenian public sector that followed some basic ideas on more modern, effective and user-friendly public administration that was strongly related to the Slovenian efforts to enter the European Union. Despite there are some areas that can be understood as examples of good practices (some forms of e-government (see Vintar, Kunstelj, Leben, 2004)), Slovenia still can be more or less passive observer and learner of user friendly and effective public services to the citizens. Different attempts to reorganize work of Slovenian public administration at all levels were mainly concentrated on changes of legislation. On the other hand there was no systematic effort to change administrative culture that is in fact basic element of every successful change and should be connected to the development of appropriate system of motivation for civil servants. This can be supported by the research on use of e-mail in Slovenian public administration. Where basic finding was that institution of public administration are not answering citizens' e-mails despite they are legally requested to do so. From this point it is evident that in this point of view legislation is not the reason of complete change of public administration and that much more attention should be paid to "soft" methods of motivation in combination with legal demands.

3. Legislative reforms of public sector in slovenia

In first years after the independence the strategies for the reform were placed. This preparational period for the reform of public administration was quite long and also demanding. The result of preparational period was the scheme of organizational structure of new Slovenian public administration and timeline needed for the reforms to be implemented. Due to the accession to European Union in 1997 and demands of administrative environment for greater efficiency of public administration and better quality of public services, the reform of public administration became urgent and it has been carrying out since then. The role of public administration was very important in the process of the Slovenian accession to the EU because Slovenia needed to develop and adapt the administration systems to the point that they were able to work in the framework of European administration integration (so called common European administrative space).

So, during the years 1996 - 1999 the reform was based on the implementation of two main goals written in previous mentioned strategy: to increase the effectiveness of public administration and to adjust its structure and functions to the needs of uniting with European community.

The core institution for the implantation of the reforms was Office for organization and development of government, which combined four different sectors: sector for organization and activities of public administration, sector for normative activities, sector for inspectors and governmental academy. The Office represents strategic and performing part of the whole public reform process later on.

During 1996 - 1999 period the process of decentralization of decision making and organizational structures started, strive for professionalization was obvious, the inclusion of improvement of vertical and horizontal coordination of work happened and much clearer division of work between parliament and government was seen. In those years also the status of para-state institutions was clarified. Next to this, positive was also change in legislative part of the reforms. There were first changes in administrative legislation such as Law on Government, Law on public sector, Law on public agencies, Law on civil servants and legislation on local self-governance. According to the previous legislation in this area, much more clear relations between institutions were defined as well as their competences and work control possibilities.

However, the European Commission stated in its 1998 annual report on Slovenian pre-accession reforms: »Slovenia has made progress in the construction of some governmental institutions, but it still hadn't made enough progress in legislative area and jurisdiction. Slovenia was more concerned of economic reforms and less in short time priorities for membership«. So at the end of 1998 Slovenia was still not enough prepared for the membership in EU from the public administration point of view.

3.1. Preparing for the EU - Reforms during 2000 and 2003

The reforms during this period were not written down in a special strategy like those that were happening in the years 1996-1997, but the effects of the reform were obvious in various legal documents and laws that were accepted and implemented during this period. Some most important laws that were accepted or significantly changed are: Law on civil servants, Law on system of payments in public sector, Law on public agencies and public structural funds, Law on Local government and changes of General Administrative procedure act. Basic characteristic of change in this part was more accountability of public sector and higher level of transparency that was requested especially in public spending concerning payments of civil servants and public procurements.

In the year 2001 also enactment of public operation with clients was accepted. Enactment foresees the public informer, the complaints book, unified schedule of public administration units across the country and across different branches (Administrative units, Units of social security services, tax offices, etc.), informing the clients on procedures, rights, their work, etc. According to this, there are special civil servants (so called informators) in Administrative units, who are providing all necessary information to citizens concerning their procedure (like what one needs to get ID card, passport, driving license, etc.). Informators helped especially administrative units to reduce unnecessary long waiting time at counters, only to get basic information on how to begin procedure for some specific document. Positive effect was double, civil servants at counters could become more concentrated on procedures and citizens got information on how to act in specific procedure, which forms to fulfill in much shorter time (we have to understand that citizens are mostly not familiar with work of public administration and procedures before administrative organs).

Books of complaints must be not only exposed at visible location in institution but also regularly checked and signed by director of administrative unit or manager in other institution. Citizens have also right to get the information on how the complaint about the institution or his/her subject was resolved. Right to complain or to get the information were not completely new (book of complaints was present for longer time), new was obligation of high civil servants to solve the problem and to inform citizens on what was done about complaint or about some indicative. This forced civil servants to take book of complaints much more serious as before what resulted in improving quality of providing social services to the citizens.

Also a special program for diminishing administrative obstacles and law about gaining information was introduced, empowering the citizens to access all the information that are collected about them by different governmental institutions, with only limited exceptions of those information that can be proved as matter of state security. This pack of anti-bureaucratic reforms introduced new understanding of public administration in Slovenia as more client-oriented and client friendly as opposition as previous model of state-oriented services. Change of legislation on civil servants payments also introduced more effect rewarding payment system and de-secured their jobs and positions. Special concern was paid to the Small-medium enterprises – public administration relations in the way to simplify possibilities to register company (within 3 days instead of month or more at it was previous case), and to automates most of the processes possible (e.g.: entrance in multiple databases (register of companies, tax office database, etc.) is done automatically by competent institution for registering new companies and it is not obligation of new-established company).

At the same time Slovenian government also introduced norms of quality in this time. The administration uses European standards of evaluation, called CAF (Common Assessment Framework) ISO standards and internal control of work quality. Combination of higher public control over public administration work, introduction of objective quality control mechanisms and destabilization of security of job in public administration created environment suitable for change of public administration.

By 2003 Slovene legislation was already in accordance to the European Union legal system (acquise communautaire). Slovenian government has also accepted Strategy for further development of Slovene public sector. Strategy is based on New Public Management, Good governance approaches and European legislature. New systematization of civil servants passed. It divided civil servants by names and status.

Former officials of different rank were sorted in five different career classes; administrative civil servant (ranked I – IV), higher administrative civil servant (I-III) adviser (I – III), senior adviser (I –III), secretary general (I-III). Connected with the title are proper education, responsibilities and wages. Wage system becomes much more defined, despite still not achievement oriented (major rule of raising wage is still seniority with almost automatic promotions every three years). Rewarding good practices in public administration is still not the case in Slovenia. Sum of money reserved for rewarding good civil servants is still divided between all the employees in the organization in order to prevent tensions between workers. In this sense, the civil servants reform is a crucial part of administrative reform that failed. The reform has experienced many corrections and interventions with the main effect of higher inefficiency and lack of clearness that enabled old administrative structures to more or less keep their positions or at least wages.

Civil servants system reform was from the beginning closely connected with integration to the EU, being one of the main goals of the Slovenian Government strategy, successful enough to enter EU and ineffective enough that Slovenia still did not make complete shift from classical bureaucratic public administration to more flexible one.

Next to the more or less blurred civil servants system reform there was also another much more important and successful reform that enabled Slovenian government to plan development more in advance. For the financial years 2002 and 2003 Slovenian government for the first time prepared two-year budged that enabled government to plan financial expenses and development in advance what was important for stabilization of state-supported and financed projects. Rebalance of budget caused by two-year-budget approach caused some political instability in 2002 because of misunderstanding of public finances. However, on long run, since 2002 Slovenian public finances become much more transparent and stable.

In providing more user-friendly services great progress was made via introducing information technology into administrative processes and procedures. We already discussed role of information technology in Slovenian government in previous issues of The Public Manager, but we will again pay some attention to this topic.

Quick development of Slovenian e-government from isolated attempts to organized reform flow towards e-governance introduced not only more diversified options to access public services such as e-taxes or e-government portals but also more user-oriented administrative culture.

We can see that the reform of Slovenian public administration has moved from structural and organizational changes also to human resource management, the potential of civil servants and orientation towards their professional development. Main goals of the reforms in public sector were then its modernization, effectiveness and the beginning of communication with users through modern IT technology.

3.2. Reforms after 2004: Re-politization of public administration reforms

Reforms of Slovenian public administration after 2004 need some additional explanation to readers. Slovenia joined the European Union, and only month later elections to the European Parliament were held. Twelve-year period of medium left coalition was challenged but nobody put too much attention to electoral result. In the autumn 2004 there were also national parliamentary elections, where previously mentioned coalition absolutely lost its position. New, moderate right coalition stepped into a government and started great reforming processes in different areas including economy, public media and public administration (especially state administration). Some of more indisputable reforms were already planned in previous terms (2002 and later) while others were absolutely politically motivated consequence of changing relations in political arena.

Main reforms in this period connected to the Slovenian public administration can be divided into client/citizen oriented and into administration oriented. Among client oriented positive reforms in this period we can find slow erosion of territorial competence, meaning that citizens can go to the any administrative unit in the territory of Slovenia and ask for some services such as registration of car or getting the ID or passport. Prior it was only possibly to ask for these and other documents at administrative unit covering the area of individual permanent address. Second such improvement in the work of Slovenian public administration was connected to the state of e-government in Slovenia that was detailed described in previous issues of The Public Manager. Here we can only say that in this sense government stimulated e-communication with citizens, introducing more and more services available on-line (main example is e-income tax form). In the field of e-public services latest achievement in Slovenia is e-car registration. Procedure that previously took more than half day running from office to office at the area where car was registered for the first time now take significantly less time. Citizen now only have to pass test of car reliability (bakes check, CO pollution, lights, noise of engine) and all the other paper work can be done from their couch and signed with digital signature. Via internet application they can access public unite, insert data confirming that car passed the test, register car, and also insure it at the same moment (previous it was necessary to go to the insurance company and wait in row again), pay via e-banking system and so they complete whole transaction for the one year, without spending holiday leave for absence from work (because administrative units have official hours when citizens are at their jobs).

However, on the local level there was no systematic change in the way citizens' inclusion into policy processes or to enhance other forms of participation in policy-making processes. Institution of local government slowly introduced use of Information and communication technologies in their work with citizens in form of different e-forms that can be downloaded and fulfilled. They improved also other forms of ICT communication with citizens, despite their results are still far from satisfactory.

Second part of reforms was connected to the system of civil servants and reforms in this part took place only after few months of new government in role. If secretary general in pre-2004 government responsible for public administration was trying to provide as politically independent public administration in Slovenia as possible, after his appointment to the position of minister for public administration he started to destroy his own system of civil servants positions; officially in the name of more flexible public administration. Main measures in field of civil servants system were connected with payments, responsibility and stability of employment in public administration. There were attempts to better connect payments in public administration with effectiveness of civil servants, and limit automatic rewarding of civil servants, what is positive. Main part of his civil servants system reform was enacted within document giving to the minister of public administration the power to dismiss high civil servants without any reason and appoint new individuals within first few months after being appointed to the minister position. Slovenian tradition of relatively apolitical and stable job in public administration was strongly endangered with this document. This case went to the constitutional court that ruled out that such act is completely against of existing legal system in Slovenia and it could cause stronger political influence on professionalism of Slovenian public administration.

After initial period after 2004 elections only some smaller systemic changes were enacted (one of them was also act requesting to treat e-communication with citizens equally to the other forms of communication) with unsuccessful to reduce number of employees in Slovenian public sector, especially in the state administration, were we are witnessing growing number of civil servants connected to the preparations for 2008 Slovenian presidency in the European Union and we can expect new wave of civil servants with introduction of second (regional) layer of governance.

4. Political reforms of slovenian local governance

Municipalities made significant development form rural type of running local affairs to more sophisticated way of dealing with development problems. If first set of municipalities in 1994 was mainly concerned with establishing democratic practice of political activities one can argue that in 1998 local election and later on, specific pattern of local political culture emerged and is developing. Number of municipalities was steadily growing from 63 before 1994 to 144 after 1994. In 1998 number of municipalities grew to 192 and later on in 2002 to 193. Increasing number of municipalities caused serious reorganisation of local governance especially with correlated growing financial and human resources needs. In this sense it is possible to connect inflation of municipalities (that are in general not financially and human resource self-sufficient) with two different development strategies of new municipalities. First one is interest of those searching for political opportunities to establish themselves as part of (at least local) political elite. Second reason for the inflation of municipalities is money flow within the individual municipalities where most of money was invested in development of municipal centre, while municipal periphery was systematically forgotten in investment plans. In these cases it was only logical solution to split form the centre and establish new municipality with independent financial resources form taxes and granted state support. Despite initial effect in first and second kind of establishment of new municipalities are similar the difference is more than evident when one observe long run development success. Municipalities established on the basis of the second "Cause" are decade later are redistributing large share of budgetary money to investments compared to material and work expenses, are more successful in attracting additional state and European money for investments and municipality has positive statistics in every kind of development (infrastructure, services, social environment, etc.)On the other hand, municipalities established on the basis of private interests are in general spending highest percent of money for work and material expenses while investments are low. We can hardly say if this pattern is also significant for one municipality established in 2002 and even less for those 17 established in 2006. However, according to the 2006 local election we can observe new phenomenon in Slovenian municipalities and local politics.

4.1. New local management?!

As it was mentioned above, in 2006 new wave of municipalities brought 17 new ones to the sum of 210 Slovenian municipalities. Despite we are talking about relative young municipalities we can connect to the 2006 local election also important change in the local political arena that will probably strongly influence further development of Slovenian municipalities. Burdened with changes in national political arena and opportunity offered by first general election may of previous managers decided to enter the politics at the local levels as well as other independent candidates. But surprising thing was change in trend of electorate that under the uncertainty at the national level elected much higher proportion of independent candidates (or those who were not explicitly supported by any of major national political parties). De-politization of local politics brought new way of runnsionalism of Slovenian public administration.

After initial period after 2004 elections only some smaller systemic changes were enacted (one of them was also act requesting to treat e-communication with citizens equally to the other forms of communication) with unsuccessful to reduce numbZoran Janković was appointed manager (state had strong stock share in this company) of Mercator system in late 1990s, made international "imperia" from small weak system of local grocery stores. After 2004 change of ruling coalition on national level he was resigned, despite there was no business reason. In late 2005 he announced to enter politics and run for the local election in 2006. He established political group "List of Zoran Janković" and started with defining crucial problems of Ljubljana municipality and its inhabitants. List of "22 things to be changed or done" become his political program when he started campaign for the mayor position. His personality created in era of Mercator manager position was unbeatable. People (in Slovenia in general) loved him, they knew that he is employing thousands of employees or students. His economic success was combined with constant smile on his face and personal touch with all employees (also shop clerks). On the day of the local election in 2006 he was absolute winner, gaining 62,99% of votes, beating 15 other candidates. List of Zoran Jankovič won 41,37% of votes and 23 out of 45 seats in municipal council. He got mandate of absolute ruler. He kept his first promise and block his mayor salary for one year (whit his other resources it was easy to do so) and decided to get paid on the basis of his success in first year of his mandate measured with support of citizens to his activities. His popularity was growing because Ljubljana started to regain its capital nature that was almost abandoned in previous mandates due to political disputes and inactivity. Janković restructured municipal administration, finances and life in the city. His list of 22 things to be done is becoming more and more checked as fulfilled and even expensive and unrealistic projects as new football stadium (that is certainly necessary but expensive investment) are becoming reality (Stadium is under construction in second year of Jankovićs' mandate, after mandate or two of thinking what to do). He is breaking all the public administration procedures and rules. Strongly supported by his list in municipal council, and his managerial ability enables him to change the system as well as Šrot in Celje municipality and Popović in Koper municipality did it already before and endangered Ljubljana position of central city (for some time before 2006 election there was some whispering that some of central institution could move out form Ljubljana). If other municipalities with weak political arena and strong managerial leaders will follow his example we can expect change in local governance principles that will brought potential to influence also national level of public administration and state institutions or they will more and more ignore state level and organize development independent form state development strategies.

4.2. Regionalization

Debate on regionalization in Slovenia exists since reform of local governance. In different waves intensity of regionalisation efforts increases and declines, but in general, for 15 years no significant progress was made. Last attempt to establish regions as second layer of sub-national government was going on in second half of 2007 and first half of 2008 and it failed. Main reason for the constant inability to create regional governmental structure is strongly connected to different political interests and lack economic sustainability (not even thinking of social or environmental one). Drafts of regional plans are not including clear goals that should be measured and evaluated in easy sense what blurs role of the regions as accelerators of development. This makes regions politico-administrative octopus that will re-direct money flow from municipalities and create new level of civil servants and bureaucratic decision-makers who will certainly not be supportive for investments and development. Basic argument in favour of this opinion can be sole nature of hierarchical decision-making processes according to which each new level of bureaucracy demands additional time and money in order to make decisions. With such situation it seems much better to use Slovenian statistical regions as equivalent to political regions (at least development performance will be easily measured) or to keep current situation and strongly support better cooperation among municipalities.

5. Concluding remarks

In general one can say that there was significant progress in the area of local self-government reform connected to the public administration reform. On the other hand there is still great lack of clear idea what is main mission of local self-government defined in the context of the new public management. Slovenian local self-government lacks of organizational, financial and human resources in order to provide appropriate level of effectiveness, efficiency, economy, and user-friendliness. From the presented reform way it is obvious that main source of reforms is legislation and not administrative processes. 2007-2008 period was strongly marked by regionalization debate that shows real impotence of Slovenian local self-government reform. If we know that regionalization debate started already in 1992 we can see that only limited progress towards new legislation was made with no consensus on number and role of regions. Slovenia is still facing (on all levels of government) intensive political influence of administrative work and management. Regions in Slovenia will (according to the current situation) cause additional bureaucratization of local administrative processes instead of shift towards providing better administrative environment for the development of local governance and social inclusion into local policy processes.

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Raspberry marketing channel on the example of arilje cooperative and "jugoprom" factory

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The paper is an attempt to explain the complexity of the internal relations governing the agricultural produce. It is an analysis of raspberry specific nature, its marketing channel structure, the problems of forming prices and of promotion depending on marketing channels relations, conducted through the benchmarking analysis of these two factories. Sprecific features of fruit marketing channels are presented thoughout the marketing process or through individual marketing activities having in mind the characteristics of certain sorts of fruit.

In terms of spatial coverage, agricultural production can be defined as unevenly spread and seasonal in character (especially in case of the primary agricultural production). On the other hand, the need for the agricultural produce is rather continual. In addition to the specific features of the marketing channels for the agricultural produce, it is necessary that the specific nature of the marketing channel for each sort of agricultural produce be analysed within the overall industry, and for the purpose of satisfying the demend of end users in the best possible manner. Another fact that supports our assumption on the necessity to analyse the specific feature of each of the agricultural produce is a different perishability rate, storage period, territorial coverage, time of offer which is conditioned by a natural production process each sort of the produce has. The empiric analysis of the Jugprom, d.o.o company and the Arilje Cooperative is intended to explain a different combination of marketing mix and the company marketing channels, especially in case of raspberry, implemented to achieve both the companies' goals and the customers' demand.

Raspberry counts as one of the most important export produce, a key feature of rural development in some parts. The present and the future of Serbia is branding the raspberry. Serbia is one of the world's largest producers of raspberry, covering one fourth of the total production of raspberry worldwide. The income statement for raspberry presented below allows for a conclusion that there is a tendency in increasing the number of actively yielding bushes, however, the yield generally remains unchanged. This highlights great potentials of Serbia, which are still not appropriately put to use, due to inadequate agricultural engineering measures. The analysis of exports and consumption reveals a stagnation trend over the years, with the rise of prices in its wake. We can draw a conclusion that it is an insufficient production of raspberry that triggers the rise in prices and consequently a smaller share it has in human consumption. The export stagnation is also the result of too small a quantity of raspberry produced.

Table 1. – *Raspberry production balance*[1]

CATEGORY	UNIT OF MEASURE	1999	2000	2001	2002	2003	2004 (Projection)
Number of actve bushes	1.000 bushes	12.996	13.519	14.753	15.293	16.354	17.000
Yield	Kg/bush	4.14	4.14	5.27	6.15	4.83	4.71
Total production	1.000 tons	53.81	56.00	77.78	93.98	78.97	80.00
National production	1.000tons	54.00	56.00	78.00	94.00	79.00	80.00
Imports	1.000tons		0.03	0.19	0.19	0.00	0.30
Total quantities at disposal	1.000tons		56.00	78.00	94.00	79.00	80.00
Industry consumption	1.000tons		1.32	4.98	3.99	3.03	3.50
Consumption in human	1.000tons		1.17	11.06	7.26	5.13	5.50
Per inhabitant	Kg/inhabitant		0.12	1.12	0.73	1.10	1.10
Total national	1.000tons		2.49	16.05	11.24	8.16	9.00
Loss	1.000tons		2.80	3.89	4.70	3.95	1.00
Exports	1.000tons		50.71	57.84	78.04	66.86	70.00
Total consumption	1.000tons		56.00	78.00	94.00	79.00	80.00
Average market price	din/kg		35.34	73.81	80.11	93.09	95.00
Currency rate	din/$USD	11.66	66.84	64.19	57.43	57.27	58.00

[1] **The Republic Statistical Institute, Customs Administration, Industrial and human nutrition use, calculated by the *USAID* method, loss estimated**

Together with blackberry, raspberry is one of the most recognizable Serbian brands in the world. This position is achieved due to a good quality and competitive quantities and prices. The positioning of raspberry in the world is related to the perception of Serbia and its political and social system abroad. Therefore, the greatest contribution to improving our brands worldwide may come from our politicians and ministers. A favourable attitude towards Serbia as a reliable partner and a steady socio-political environment may significantly help our exporters throughout the world and in the media. The following table will give an idea of the Serbian raspberry quotation on world market. The following shows that Serbia has excellent conditions to increase the production of raspberry. However, to improve its position on the world market, Serbia has to renew old plantations and to be more efficient in introducing world standards, since in this area it is still at the beginning, wheras Chile is at the very top in using protection control. There is a positive correlation between a high level of protection control and standard implementation.

Table 2. - *Comparative analysis of raspberry production in the world* [2]

DESCRIPTION	CHILE	SERBIA	POLAND
Raspberry sort	*Miker*	*Vilamet, Miker*	*Polana*
Potential annual production of raspberry (t)	45.000 - 55.000	55.000 - 80.000	45.000
Form of lots organization	Large lots	Small lots	Grouping into larger lots
Type of plantations	Old and new plantations	Old plantations with few new ones	New plantations
Standards on the lots	EU, USA, Japanese	YUS	EU, Beginnings of setting the USA and Japanese
Use of machinery	High level	Low level	new
Succession	100%	Start	70%
Protection control	100%	Impossible	90%

With their effective placement of raspberry on the world market the Arilje Cooperative and the Jugprom, d.o.o company improved Serbian quotation significantly. We will conduct an analysis of the raspberry marketing channels compared to other marketing instruments via benchmarking analysis of the Arilje Cooperative and the Jugprom, d.o.o, to explain the work of the Serbian raspberry market.

Arilje is widely known for the production of berry fruits, especially raspberry, therefore it is often referred to as the raspberry metropolis. The growing of raspberry is an industry employing the entire population of the municipality. Arilje also shows the greatest concentration of raspberry plantations in the world, it houses the largest fruit cold-storage plant in Europe ("The Arilje Cooperative").

The company Jugprom d.o.o, Leskovac, was set up in 1984 as a private carrier. The founder and owner is Mr. Slobodan Stojanović, who was already in the business of transport, organization of agricultural produce purchasing and cooperation with the fresh fruit producers in the area. In a short period the business was extended, to get the present name in 1992 and become engaged in the production and sales of frozen fruit, which still is the basic line of business in the company.

1.1. Specific nature of products and marketing channels structure

The selection of marketing channel is significantly conditioned by the stages of the life cycle in the raspberry production in the company Jugprom, d.o.o. and the Arilje Cooperative.

Jugprom, d.o.o. stocks the frozen or pre-frozen fruit products, of different types and quality. In addition to raspberry, they produce deep frozen and pre-frozen plum as well as deep frozen and pre-frozen sour cherry. Their target market are the juice, jam and preserves producers. The company also offers its products on export market. The basic feature of the export market is its demand for high quality finished products, as well as of the entire production process. Among the largest buyers of Jugprom raspberry are: Descours, France (20%), Agrana, Belgium (20%), Crops, Belgium (20%), Sentis, Germany (20&), and Melzer, Germany (20%).
The Arilje Cooperative sells raspberry and raspberry processed produce to Descours (40%), Paulos, Belgium (30%), and to a group of smaller buyers (30%).

[2] **Author's own presentation**

The customary period from the beginning of sales negotiations (signing the letter of purpose or agreement for sale) is April, when the condition of plantation is known, that is, the yield is estimated. The contracts, stipulating the range of products, the quantity, the price and the delivery rate, are signed towards the end of May. It is much more difficult to ensure a firm long-term contract by which conditions for more accurate planning would be created.

In this main area of business the company is facing fierce competition, both locally and internationally. Only in a couple of past years have almost 20 cold-storage plants been set up (70 are in private ownership) which clearly explains the profitability of the business. International competition comes from Bosnia and Herzegovina, Bulgaria, Poland, Hungary, Russia and Chile. From 1996 till 2002 the average export from Serbia amounted to 63,000 tons of frozen raspberry, at the average price of €0.989 per kilo. The production in Russia exceeded that of Serbia – the Russians produced 96,000 tons, however, more that 90% of the production is consumed in the producers' households. Besides Russia, the world's three larger producers are Serbia, 80,000 tons, Chile, 45,000 tons and Poland, 40,000 tons. Out of the total of the quantity produced, Serbia exports 70,000 tons, Chile exports 40,000 tons, Poland exports 35,000 tons, whereas the total exports of Hungary, Bulgaria and BIH amount to 10,000 tons. According to the abovestated, Serbia occupies the second top position in production and the very top position in the exports of frozen raspberry in the world (the Serbian share in the world's exports of raspberry ranges around 45,16%)[3].

On the regional level, the two cold-storage plants face competition from 220 other cold-storage plants, while locally, Jugprom, d.o.o. is rivalled by Porečje Vučje, and the Arilje Cooperative competes with 80 cold-storage plants on the territory of the Arilje municipality whose lager capacities amount to 100 to 4000 tons each. Competition actually comes from companies and cooperatives that buy raspberry and forest fruit for their own purposes, but also on behalf of the processing industry companies.

Table 3. – *Frozen raspberry exports in the 2002 do 2005 period*[3]

Year	Exported frozen raspberry in tons
2002.	94.000
2003.	67.900
2004.	57.600
2005.	71.700

Jugprom d.o.o. plans a market share of 1,000 tons of raspberry for the following year, while the market share of Arilje Cooperative is planned to be 4,000 tons.

There is a threat coming from the backwards horizontal and the vertical integrations. Competition on the basis of the horizontal integration would come from the cold-storage plants, while the vertical integration would mean the building of cold-storage plants by the companies that deal in further fruit processing. However, since the largest buyers come from the European Union, and they do not have the opportunity of vertical integration, this is not supposed to be a serious threat to the business.

Table 4. – *SWOT analysis of the conditions and capabilities of the Arilje Cooperative*[4]

STRENGTHS	WEAKNESSES
- picking period lasts 50 days (due to differences in height above sea level) - fair and correct relationship with suppliers - quality products - vicinity of supply source - hygienic conditions of work - concern about the employees - the greatest lager capacity in Serbia	- lower level of promotive activities
OPPORTUNITIES	**THREATS**
- building long-term cooperation with export buyers - lower cost of workforce - improving Serbia's reputation in the world	- high level of competition - long way Serbia has to go to join the EU - new standards and processing technologies

[3] www.fao.org
[4] Author's own presentation

The production of raspberry is subject to oscillations, however, we can talk of the production growth trend due to the implementation of a modern method of growth.

From the above presented, a conclusion can be drawn that the capabilities of the companies subject to our analysis are great, however, due to a low level of promotional activities and an insufficient implemantation of standards, the business efficiency does not reach the value of 100%.

Table 5. - *SWOT analysis of the conditions and capabilities of Jugprom d.o.o.*[5]

STRENGTHS	WEAKNESSES
- picking period lasts ABOUT 25 days - fair and correct relationship with suppliers - quality products - vicinity of supply source - hygienic conditions of work - concern about the employees - own transport vehicles	- lack of raw materials base in the south of Serbia
OPPORTUNITIES	**THREATS**
- building long-term cooperation with export buyers - lower cost of workforce - improving Serbia's reputation in the world	- high level of competition - long way Serbia has to go to join the EU

The following tables show the percentage of the raspberry programme shares of Jugprom, d.o.o. and Arilje Cooperative in sales for the year 2006, in which Jugprom,d.o.o sold 500 tons, and Arilje Cooperative sold 3,500 tons of raspberry.

Table 6. – *Participation of Jugprom d.o.o. raspberry programme in percentages*[6]

number	Program title	Purpose	% perticipation in 2006
1.	Deep frozen rolend raspberry (whole fruit)	Cakes, bakery industry, yogurts, jams	50%
2.	Deep frozen groats raspberry (groundraspberry)	Jams, marmelade, toppings, jellies, yogurts, aromas	35%
3.	Deep frozen bruch raspberry	yogurts	10%
4.	Deep frozen block raspberry	juices	5%

Table 7. – *Participation of Arilje Cooperative raspberry programme in percentages*[7]

Number	Program title	Purpose	% participation in 2006
1.	Deep frozen rolend raspberry (whole fruit)	Cakes, bakery industry, yogurts, jams	55%
2.	Deep frozen groats raspberry (ground raspberry)	Jams, marmelade, toppings, jellies, yogurts, aromas	40%
3.	Deep frozen bruch raspberry	yogurts	2%
4.	Deep frozen block raspberry	juices	3%

[5] **Author's own presentation**
[6] **Author's own presentation**
[7] **Author's own presentation**

The entire production programmes in both cold-storage plants, are in the growth stage, since the demand for raspberry in the world steadily increases. Jugprom, d.o.o does not plan market evaluation, since climate and geographical conditions in the south do not allow for the growth in raspberry production and consequently, intensive distribution and adjusting to the changes in demand are out of the question. The Arilje Cooperative is another matter. Geographical and climatic conditions in the Arilje area offer an opportunity for the growth of production and to planning the market coverage evaluation due to increased demand. The main obstacle to the Arilje Cooperative to select a specific marketing channel may be the absence of HACCP and EUREPGAP standards.

The Arilje Cooperative and Jugprom d.o.o. can undertake planning the extension of the raspberry programme range, mainly by asepic and purée raspberry. In this case, the most appropriate strategy of marketing channel selection in planning and introducing the new programmes, for both companies would be: engaging all members in generating asepic and purée raspberry, adapting new programmes to the existing channels, estimation of the roles of Decours, Agrane, Crops, Sentis, Melzer, Grunword, SVZ, etc. in the diffusion of asepic and purée raspberry.

1.2. Price problems and marketing channels relations

The prices of agricultural produce in the world may often exert a crucial influence upon forming the prices at home. For example, every year, in the eve of raspberry picking we witness the producers speculating about the buying price of raspberry. In the last two years the producers demanded that the price be €1 a kilo of fresh, raw raspberry, whereas the buyers' unions offered half the price, explaining this by the level of prices on the world market which absorbs a larger quantity of the production.

Exports and imports are good instruments to compare home market prices with the level of prices achieved on the world market. This fact has to be paid special attention to since the world prices of agricultural produce are defined by the countries in which agriculture is highly developed. Countries with a less developed agriculture try to lessen or surpass the discrepancy between the home prices and the lower, world prices by closing the national frontier or by introducing protective measures (agricultural protectionism).

The problem of prices in agriculture can be described as rather complex and sensitive, from the points of view of both the consumers and the producers and the state, since it is on the issue of prices that their interest clash, and these interests are different and often opposing to one another.

All the freely formed prices are extremely dynamic and changeable. They are especially important in observing the phenomenon of prices disparity. The prices disparities emerge as a consequence of the economic policy measures applied, not as a result of the differences in the real cost of reproduction of certain products. By way of demand and offer, the market has the power to not only determine the price of a product, but also to establish a balance among various products, in that it gives a stronger stimulus to the production of one or another product. The mechanism fails to act in this way only when it is hindered by some social measures in the market and prices areas, and this is how price disparities emerge.

Fruit processing in the Republic of Serbia suffered serious oscillations resulting from the shrinking of market caused by the dissembling of the former SFRY, the economic sanctions, the customs and non-customs barriers imposed by the EU, but also by the fall in domestic demand due to the overall fall of the standard of living. The price of raspberry depends on the quality achieved. The fruit is classed into categories and the prices are determined according to the category concerned. Prices for certain categories vary a great deal from one reagion of Serbia to another. The last year (2006 picking) prices for category I amounted to around RSD 55 per kilo, and for category II they were around RSD 50 a kilo.

Since the majority of products of the companies are placed on the export markets, the price is primarily conditioned by economic events on the world stage. The demand – offer relations also have an impact upon the price. The table below presents the prices of the "Rawland" type of raspberry on the "free receiver" parity in the previous years.

Table 8. - *Izvozna cena maline*[8]

Year	Export price of raspberry in EUR/kg
1998.	1,167
1999.	0,997
2000.	0,948
2001.	0,843
2002.	1,094
2003.	1,35
2004.	1,64
2005.	1,4
2006.	1,55

[8] **Source: www.serbiafood.co.yu, www.poljoprivreda.co.yu**

Table 9. – *Sales price of raspberry*[9]

Year	Export price of raspberry in EUR/kg
1998.	1,167
1999.	0,997
2000.	0,948
2001.	0,843
2002.	1,094
2003.	1,35
2004.	1,64
2005.	1,4
2006.	1,55

Table 10 – *Comparative analysis of fall and growth in the purchasing and exports prices of raspberry*[10]

Year	Purchasing price of raspberry in EUR/kg	Difference in amounts fo purchasing prices EUR/Kg	Export price EUR/Kg	Difference in amounts of export prices EUR/Kg
2002	0,545	+0,023	1,094	+0,251
2003	0,733	+0,188	1,35	+0,256
2004	0,697	-0,036	1,64	+0,29
2005	0,613	-0,084	1,40	-0,24

From the above presented comparative analysis a conclusion can be drawn that the rise and fall o channel may be the absence of HACCP and EUREPGAP standards.

The Arilje Cooperative and Jugprom d.o.o. can undertake planning the extension of the raspberry programme range, mainly by asepic and purée raspberry. In this case, the most appropriate strategy of marketing channel selection in planning and introducing the new programmes, for both companies would be: engaging all members in generating asepic and purée raspberry, adapting new programmes to the existing channels, estimation of the roles of Decours are deprived of such aid. This disproportion in prices further results into a fall in the production of fresh raspberry, since the producer is not stimulated to develop the business. The programme of allocation and use of subsidies for the year 2007 includes resourcing of input into the field crops and vegetable production by 5,632,000,000 dinars.

The price flexibility of demand in the primary processing of fruit is primarily preconditioned by the price flexibility for final products. Since the price flexibility in the consumption of jams and juices in Serbia is still significant, having in mind the quality of living here, the lower prices of inputs in their production have an impact upon the quantity demanded. On the world market, however, the demand for semi-frozen and frozen fruit is primarily conditioned by the price and the quality. Serbian raspberry still remains more competitive compared to Chilean, Polish, Hungarian, Russian and Bulgarian raspberry, therfore Jugprom,d.o.o. and the Arilje Cooperative implement the strategy of high and low price. The higher sales price is achieved by the direct contact and sales to industry buyers. Thus a greater impact upon buyers and a longer-term cooperation are achieved, gaining significant sources of information along the way.

The companies, the subject of our analysis, calculate the raspberry and raspberry products costs, in the following manner (example : average costs of yield 2007).

[9] **Source: www.serbiafood.co.yu, www.poljoprivreda.co.yu**
[10] **Author's own presentation**

CALCULATIONS FOR D/F RASPBERRY ORIGINAL

A.			
1.	Raw materials price eur/kg (95 din) – 1 eur = 79 din.		1,202
2.	Costs of purchase eur/kg		0,060
3.	Loss of weight 1% to purchase price eur/kg		0,012
4.	Loss of weight freeze-processing – max. 7%		0,084
	TOTAL A	**1,358**	
B.			
1.	Receipt, unload, freeze, shake, ,package,int. trans., electricity,water,gas eur / kg (PLATE)		0,055
	TOTAL B	**0,055**	
C.			
1.	Packaging for receipt for 2 years eur/kg		0,020
	TOTAL C	**0,020**	
TOTAL		**1,433**	

The deep frozen (D/F) raspberry original makes the first stage of processing, which entails the change of fresh raspberry into the frozen form, without finishing processing.

A

1. The raw material price is the price of fresh raspberry in the given moment.
2. The buying costs include the organization of purchase and the transport of fresh raspberry to the cold-storage plant.
3. The 1% loss of weight at purchasing price is the raspberry weight lost during the transport.
4. The loss of weight in the freezing procedure of the processed material is the weight lost by in fresh raspberry during the freezing process.

B

1. The costs of the first stage of processing.

C

1. The costs of packaging used as primary packaging in the first stage of processing.

CALCULATIONS FOR D/F RASPBERRY ROWLAND 4?2,5

A.				
1.	Shaking up, manipul. Eur /kg	0,005	0,005	0,005
2.	Processing, packaging. eur /kg	0,350	0,250	0,200
	TOTAL A	**0,355**	**0,255**	**0,205**
B.				
1.	Packaging:box,bag, tape,stretch foil eur/kg	0,006	0,006	0,006
	TOTAL B	**0,006**	**0,006**	**0,006**
C.				
1.	Transport	0,004	0,004	0,004
	TOTAL C	**0,004**	**0,004**	**0,004**
	PRICE FOR D/Z RASPBERRY ORIGINAL	**1,433**	**1,433**	**1,433**
TOTAL		**1,798**	**1,698**	**1,648**

The D/F raspberry original is transformed into Rawland raspberry and is packed into cardboard packaging of 10 kg each (4 bags of 2.5 kilos each). The Rawland D/F raspberry means: whole, sound, unified produce with no traces of impurity. To obtain the price for Rawland D/F raspberry the calculation for D/F raspberry original is used, adding the costs of Rawland D/F raspberry processing.

A

1. D/F raspberry original stored in chambers enters the processing procedures that also include shaking and manipulation.
2. The processing means the selection of sound whole units of produce and conditioning.

B

1. The costs of new packaging, such as box, bag, tape, stretch foil.

C

1. The cost of transport.

The costs of processing will vary in accordance with the quality of raw materials. The higher the quality of raspberry, the lower the input into the workforce and consequently the lower the prices are.

CALCULATIONS FOR D/F RASPBERRY (BRUCH)

A.			
1.	Shaking up, manipul. Eur /kg		0,005
2.	Processing, packaging. eur /kg		0,321
	TOTAL A	**0,326**	
B.			
1.	Packaging:box,bag, tape,stretch foil eur/kg		0,052
	TOTAL B	**0,052**	
C.			
1.	Transport - eur/kg		0,004
	TOTAL C	**0,004**	
	SALES PRICE FOR D/F RASPBERRY ORIGINAL		**1,433**
TOTAL		**1,815**	

The D/F raspberry of the bruch type contains 50% of whole fruits, 25% of industrial litter and 25% of raspberry groats (ground raspberry). The D/F bruch raspberry is absolutely pure fruits, withnno traces of impurity. The total costs ofr D/F bruch raspberry start from the calculation for D/F raspbery original to which the costs of D/F bruch raspberry are added.

CALCULATIONS FOR D/F RASPBERY GROATS - OF ALREADY SEPARATED MASS

A.			
1.	SHAKE UP, MANIPULATION	EUR/KG	0,005
2.	SELECTING FROM THE MASS FOR GROATS	EUR/KG	0,100
	TOTAL A		**0,105**
B.			
1.	GROUNDING	EUR/KG	0,037
	TOTAL B		**0,037**
C.			
1.	PACKAGING:CARDBOARD BOX,PE BAG,TAPE, STRETCH FOIL	EUR/KG	0,055
	TOTAL C		**0,055**
D.			
1.	TRANSPORT	EUR/KG	0,004
	TOTAL D	**0,004**	
	PRICE OF D/F RASPBERRY ORIGINAL		**1,433**
TOTAL		**EUR/KG**	**1,634**

The D/F groats raspberry is entirely made up of litter resulting from the freezing process, malformed fruit items, dark fruits, which in total makes the material for groats. This mass is subjected to further grinding the result of which is the D/F groats raspberry mass.

CALCULATIONS FOR D/Z RASPBERRY BLOCK

A.			
1.	SHAKE UP, MANIPULATION EUR/KG		0,005
2.	GROUNDING, PACKAGING		0,085
	TOTAL A	**0,090**	
B.			
1.	PACKAGING: - KRAFT PAPER BAG 25/1		0,012
2.	CARDBOARD BOX,PE BAG,TAPE, FOIL - EUR/KG		0,055
	TOTAL B	**0,012/0,055**	
C.			
1.	TRANSPORT - EUR/KG		0,004
	TOTAL C	**0,004**	
	PRICE OF D/Z RASPBERRY ORIGINAL	**1,433**	
TOTAL – kraft paper bag		**1,539**	
TOTAL – cardboard box		**1,582**	

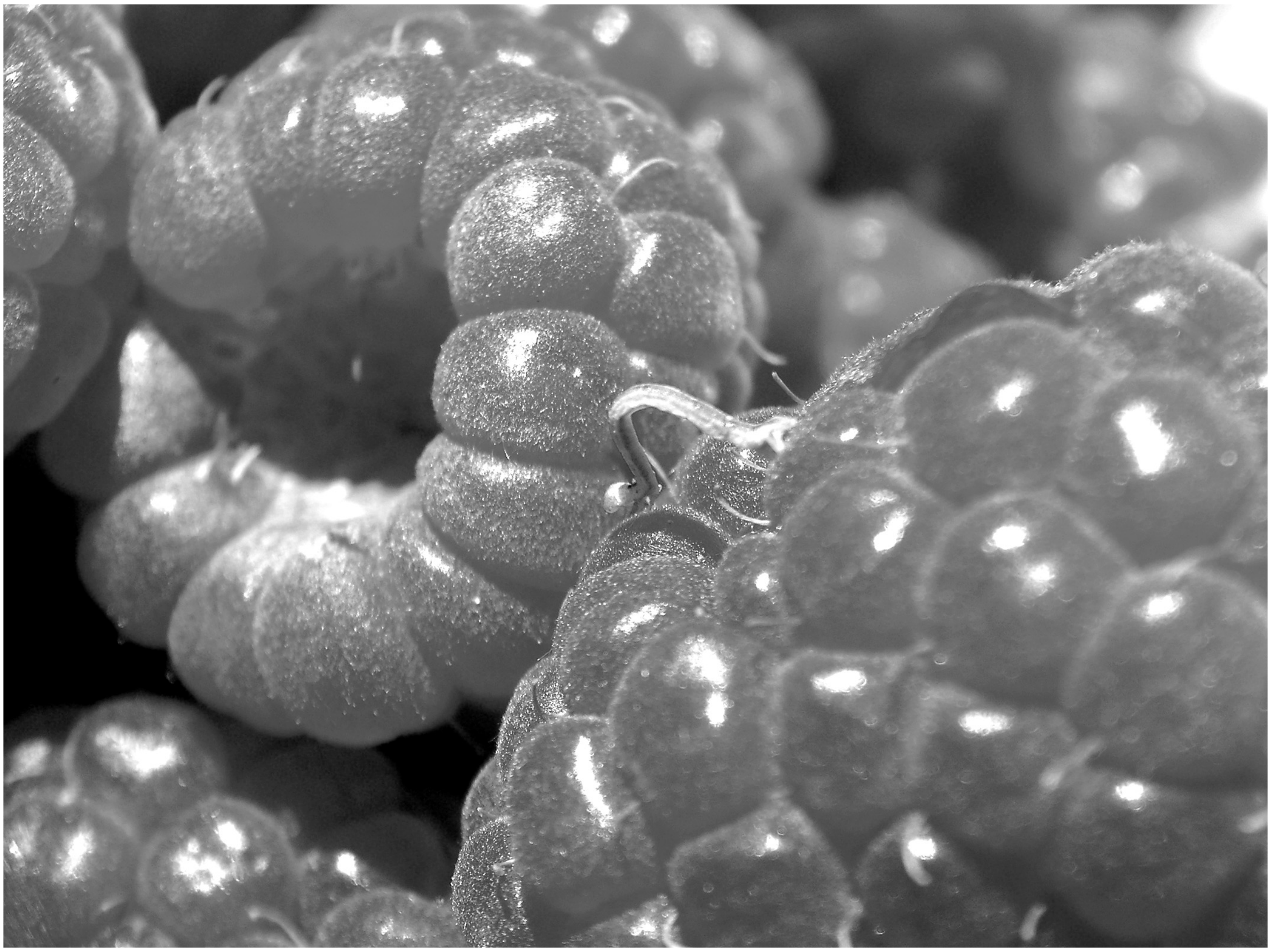
The block raspberry is whatever remains of D/F raspberry Rowland, the D/F bruch raspberry and the D/F groats raspberry. These are malformed fruit items which include: rotten fruits, half-rotten fruits, burned fruits, overripe and fermented fruits. Such malformed fruits are further subjected to a process of making semi-products by grinding. Two types of packaging are used for this raspberry semi-product: kraft paper bags of 25 kilos or cardboard boxes and bags.

Promotion in the marketing channels

The position and the role of promotion are very important. The promotion (as a marketing mix instrument) is efficient if the other instruments (product, prices, sales channels) function adequately. For example, if by its properties an agricultural produce is below the market criteria (e.g., the price is too high, the sales channels inefficient), these flaws cannot be compensated by the promotion, so the promotion will not be as efficient as it is planned.

It is important to know that the raspberry and raspberry products of Jugprom, d.o.o and of the Arilje Cooperative are meant primarily for export buyers. The communication with this category of buyers differs from that with the end buyers. Having in mind all the promotional elements (economic advertising, personalized sales, sales improvements, public relations) we can say that Jugprom d.o.o. implements the sales promotion. In this field the company takes part in FAIRS, CONGRESSES. For these purposes the company has prepared a promotional catalogue, since it communicates mostly with the export buyers. Economic advertising is not the dominant kind of mass communication in the area of frozen fruit placement. Personalized sales concentrate on direct introducing the buyers to the plantations, to the production process, and to the quality of the produce on offer, which is what the Jugprom d.o.o. cold-storage plant does. One aspect of communication and presentation could is also a web-site on the Internet.

A short marketing channel that entails a direct contact contributes to making a higher impact upon the buyers, as well as to building a longer-term collaboration, and accessing significant sources of information along the way. The company uses the telephone and the Internet facilities to contact the mediators, and also uses the "medium" in addition to short marketing channels. The Jugprom d.o.o. company, Leskovac, uses the short marketing channel, since it has its own rolling plant consisting of 6 trucks of 25 tons transport capacity and the cold-storage plant. This allows for the transport to be conducted smoothly, both in case of purchasing from the producers to the cold-storage plant and in case of the finished produce transport to end buyers throughout Europe.



Promotional activities for the Arilje Cooperative are identical, and as both cold-storage plants sell the raspberry and raspberry produce to industrial buyers, the strategy of promoting the produce at fairs, congresses and promotional catalogues is satisfactory from the promotional standpoint. Since the sales in both plants are created through the stock system, the strategy of raspberry produce promotion proves to be a relevant strategy in this field as well.

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Approaches to Non-verbal Communication in the Management of Organisation

**UDC 005.57:159.925
658.310.42(437.6)**

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Non-verbal communication – communicating meanings by means of non-verbal clues (facial expressions, gesticulation, posturics, proxemics) is an inseparable part of communication in corporation. Apart from supplementing verbal communication it unmasks emotional part of personality of communicators . In this article we focus on the mapping of superiors' use of facial expressions and proxemics in communication with subordinates in a transport company in Košice. We analyse data collected by means of a questionnaire.

Introduction

Interpersonal communication is interaction by means of symbols (Vybíral 2000, p. 19). By symbols we mean not only language (applied in verbal communication), but also facial expressions and gestures (used in non-verbal communication).

Nonverbal communication could be defined as sharing messages by means nonverbal clues (facial expressions, gesticulation, posturics, proxemics; Ferjenčík, 2001, p. 7, 8). **Facial expressions**–‚face language' (winking,raised eyebrows,pouted lips,' language of eyes, etc.) are based on innate programmes (in contrast to other forms of communication we do not have to learn them).They send out information about emotions (fear, joy, suprise etc.). **Gesticulation** is communication by movements of arms, legs or head. Like facial expressions it provides others with information about emotions. However ,it is determined by upbringing and acquired by experience to a larger extent (nodding head , pointing finger etc.) .We consider **posturics** to be a language of body postures as it communicates an attitude (relation) of a communicator to their partner in communication, to themselves and an object of communication (slouched body and stooped shoulders, bowed head–submissiveness, meekness, resignation; upright posture, raised head and chin – dominancy superiority, etc.). **Proxemics** (the language of distances) pays attention to the position of communicators in space and the maintenance of mutual distance (intimate, personal, social, public; Bašistová – Treščáková, 2007, p.93-95).

All components of non-verbal communication are objects of interest of many scientific reflections due to their uniqueness. In this paper we focused our research on the finding of usage of non-verbal communication (specifically facial expressions and proxemics) in the transport company in Košice.

The aim of the paper

The aim of the paper is to ascertain the current status of the non-verbal communication of management representatives in the transport company in Košice and to propose changes which would improve non-verbal communication and remove communication imperfections.

Research methodology

We carried out research by means of a questionnaire in two departments of the transport company in Košice (for the purpose of this paper we designated them as a department A and a department B) in autumn 2007. The questionnaire items mapped the overall situation in vertical and horizontal communication in the organisation. For the purpose of this paper we evaluated the part aimed at the finding of non-verbal communication between the superior and subordinate employees.

Research question

What distance do the superiors maintain when they communicate with the subordinates at the workplace?

Hypothesis

H1: 80% of the repondents think that the superiors maintain social distance: 1,2–2,1 m when they communicate with them at the workplace.

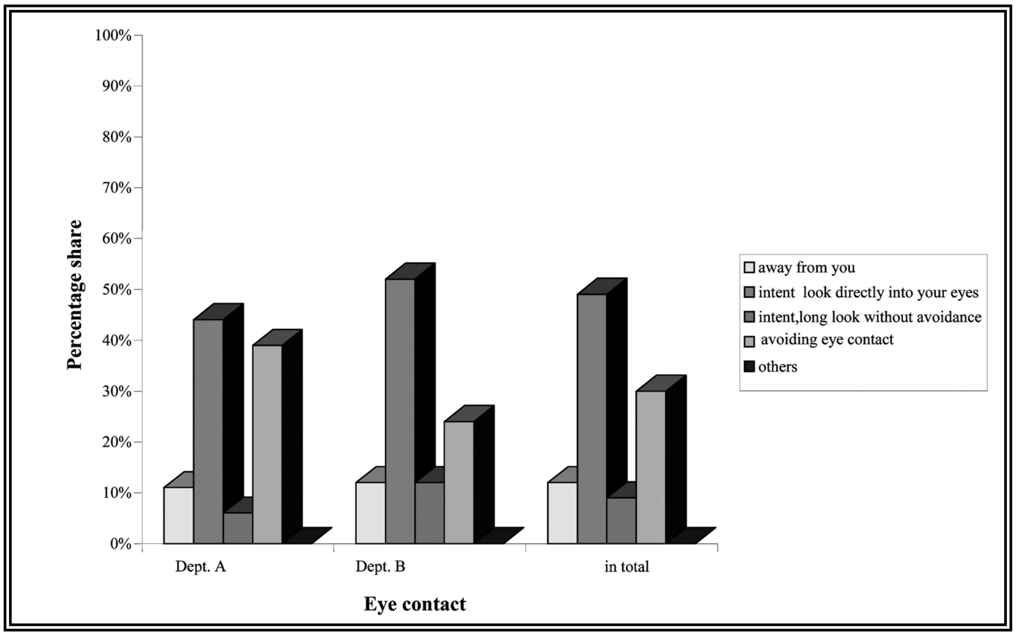
Research sample

Research sample was formed by the 43 – superior and subordinate employees of the transport company in Košice. The employees of the two departments took part in the research (department A – 25 respondents, department B – 18 respondents). There were 51 % of males and 49 % of females. The respondents with university education constituted 60%, with secondary education 40 % and with primary education 0% of all the enquired. Concerning the numbers of years in the company, the employees who have worked in the company for 1 – 5 years made up 49 %, the employees who have worked in the company for 6 – 10 years comprised 37 %. The employees who have worked in the company for less than a year made up 14 % of all the respondents.

Analysis of research results

In this part we analyse the data focused on non-verbal communication, specifically the use of facial expressions (eye contact) and proxemics in communication between the superiors and the subordinates of the explored company.

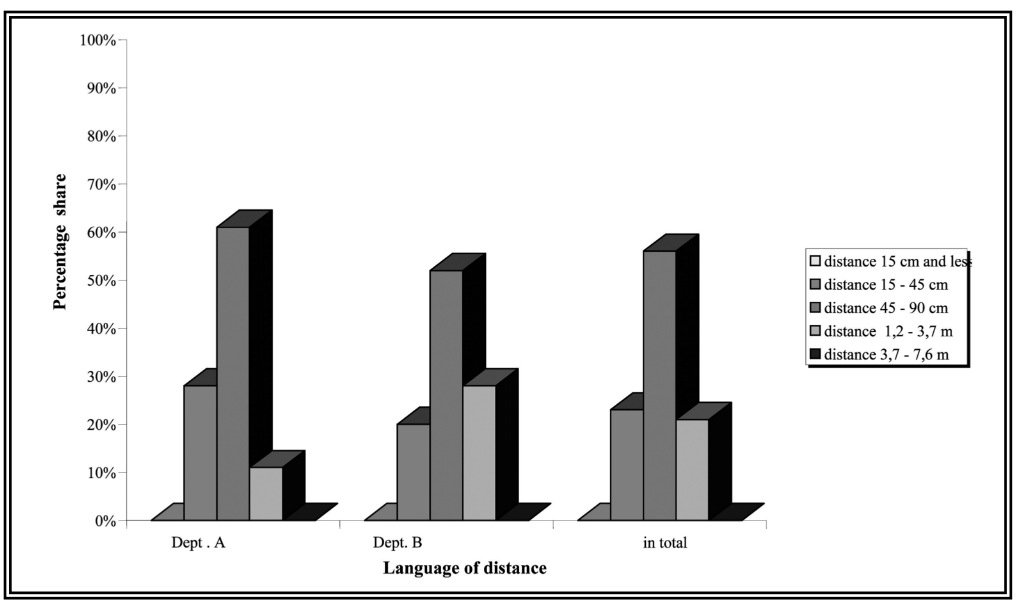
Question number 1: Where does your superior look when he or she communicates with you?



Graph 1 ***Eye contact of the superior in communication with the subordinate***
Source: *Own graph*

Of a total number of the respondents 49 % stated that the superior looks directly into their eyes in communication with them. 9% of the respondents selected the option – intent, long-lastning look without turning away. 39 % of the respondents from the department A, and 24% of the respondents from the department B said the superior avoids eye contact with them.

Question number 2: What distance does your superior maintain in communication with you?



Graph 2 *Distance in communication*
Source:*Own graph*

In both department A and B the superiors move within the personal zone most often when they communicate with the subordinates. They keep personal distance (space 45–90 cm) – this option was chosen by 56% of the total numer of the enquired (61% from the department A, 52% from the department B). 23% of the respondents stated that the superior communicates with them in intimate distance. Only 21% of all the examined reported that the superior communicates with them in optimal (social) distance – distance 1,2 – 3,7 m.

Hyptheses verification

On the basis of the result analysis we refuse hypothesis H1: 80% of the repondents think that the superiors maintain social distance: 1,2–2,1 m when they communicate with them at the workplace,as the most respondents (56% - 61% from the department A,52% from the department B) stated that the superiors move most often in personal zone in communication with the subordinates , they maintain personal distance (distance 45 – 90 cm) .

Suggestions and recommendations in the field of non-verbal communication

Scientific studies prove that a person perceives approximately 80 % of information by sight.The act of looking signifies interest in the object and the other way round.Our culture requires eye contact in communication.The fact that the superior and the subordinate look directly into the eyes in communication (49% of the respondents selected this option) indicates interest in feedback, which can be highly appraised in an organisation. On the other hand the superior´s avoidance of eye contact in communication (in total 30% of the respondents chose this option) could result into the subordinate´s feeling of insecurity and give the impression of superior´s disinterest.This could cause communication breakdown and conflicts at the workplace.Thus, it is necessary to prevent such undesirable phenomena by for example communication training sessions.

Exploring the positioning of the communication participants we found out that in both department A and B the superiors use personal zone (distance 45 – 90 cm) most frequently in contact with the subordinates. Although this is the most common distance in the explored company the superiors should maintain mainly social zone (1,2 – 3,7 m) in formal communication with employees. Such a distance provides communication participants (in our case maily the subordinate employees) with the feeling of psychic security.

All leading employees should master necessary communication skills, they should be led to self-refection and to personal development in this field (Butoracová Šindleryová, 2006). As a result we suggest that the company start in-company training and education in the field of non-verbal communication or more precisely communication training. The training should be focused not only on the improvement of verbal and non-verbal communication, but also on the identification and elimination of the most frequent flaws in communication. After undergoing the communication training the leaders will demonstrate better knowledge and information in the field of verbal and non-verbal communication ,which could significantly help the company increase the work productivity (Mrvová, 2006, p. 270) and improve relations at the workplace.

Conclusion

Body language, non-verbal communication can put the finishing touches to the meaning of exchanged information since posture, facial expressions or gestures add emotional charge to the content of communication. They can highlight ,question,gloss or utterly deny the content of the information. A manager should be familiar with the forms of non-verbal communication so that he or she could apply them within vertical communication (in relation to subordinates), but also in horizontal communication (in contact with employees in the same position) appropriately and effectively.The mastery of non-verbal communication would enable managers to eliminate signals revealing their weaknesses and decode non-verbal communication of other coworkers in the organisation.

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Mutual funds as a long-term financing source of the enterprise

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336.1.07**

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Mutual funds are nonbanking financial institutions that collect savings of individual investors in order to invest capital on financial market.
Capital market in Serbia is underdeveloped and shallow, characterised by a chronical shortage of quality long-term capital sources, and there are only few enterprises listed on the Stock Exchange A list attractive to mutual funds. The offer of quality shares, known as "blue chips", is rather poor, however great demand for them is.
In such circumstances companies are often faced with the problem of how to raise capital in case they do not have enough of their own. National companies still opt in favour of long-term loans (often under extremely unfavourable conditions), although the capital raising through IPO (initial public offer) and listing on the stock exchange would be a much more profitable solution in the long run. Banks and international monetary institutions are still the main creditors in Serbia.
The mutual funds make decisions on investing into a company on the basis of financial statements, plans and projections, rather than on the basis of the prospectus. Companies are advised to make efforts to atract mutual funds which are considered to be long-term capital sources and the best way to do that is doing business transparently and constantly improving business results.This would contribute to reducing costs of company financing, improving the current market position, as well as capturing new market segments, improving the quality of the products and services, and financing new development projects. It is important that there be a mutual interest shared by both the management of the fund and that of the company, and this is, above all, the profit.

1. Introduction

Mutual funds are non-banking financial institutions that collect savings of individual investors and invest the collected capital on financial market. On the basis of the funds invested, the investors become the co-owners of the investment fund portfolio. Mutual funds are a most appropriate form of capital mobilization. They appeared by far later compared to commercial (business) banks; however, as financial institutions, they contributed greatly to the in-depth growth of the capital market and its further development.

The facilities offered by mutual funds are numerous, such as:

1. Professional management, through experienced professionals who manage the portfolio in a way better than any individual investor would, even upon a detailed market analysis.
2. Diversification means that the mutual fund portfolio contains various issuers' securities, by which the risk is reduced in case some issuers' financial results prove to be unfavourable. This is so because the share of their securities in the entire portfolio is small, so they cannot induce any serious harm to the whole of the portfolio.
3. The simplicity of (re)investing, which means that there is no preconditioned minimum amout of investing, whereas there is a possibility of further purchase of additional shares, even in case when the investor is not in possession of any larger sum of financial assets. Mutual funds also offer a possibility of automatic reinvestment of dividends, as well as plans for financial assets withdrawal.

2. The mutual funds phenomenon

2.1 Mutual funds on developed countries financial markets and on those of former socialist countries of Europe

The mutual funds phenomenon is so widely spread that their net property worldwide at the end of 2007 amounted to $26.2 trillion, and the number of open mutual funds reached 66,350. Almost half of the total number of funds are funds containing shares, bonds and funds on the money market. The three types of funds we mentioned above are evenly spread, the rest are the balanced and other types of funds. According to the territorial spread, more than half of the total number of funds in the world come from the U.S.A., about one third of the number are from Europe, whereas the rest are of Asian origin. The U.S.A. also has a large number of the so-called *fund families*, where there is a large number of different types of funds under one umbrella. The developed countries of Europe follow the rising trend of popularity of funds that governs the American market.

During the 1990's, in almost all the former socialist countries od the Central and Eastern Europe, a model of mass voucher privatization (MVP) was implemented as a method of privatization of state or public-owned enterprises. The point of MVP is that the citizens are given free (or at a minimal comission) vouchers they could use to purchase the company shares, that is, exchange them for the stakes in the privatization-investment fund. The mass voucher privatization is the fastest and very popular privatization technique, aimed to ensure as just as possible a distribution of state or public property among all the citizens of a country who are of age. The MVP effects vary depending on the state, the economic and political situations in the period the MVP is conducted, as well as on the consistency of its implementation.

Outstanding results have also been achieved in former socialist countries in which the funds achieved the value of tens of billions euros in a very short time, with a large number of citizens inveszing in mutual funds. In Croatia, for example, 11 years upon their appearance, such funds control the net property of about €4 billion, with 95 open funds being active. In Slovenia, about €3 billion was invested into mutual funds, with about one hundred different types of funds actively working.

2.2 Mutual funds on the Serbian financial market

Serbia is the only country in these parts in which the privatization is not carried out using the MVP model. The question is: why did we use other methods of privatization and would the implementation of the MVP model result in fairer effects of privatization, as a majority of citizens would be included. Throughout the privatization period there was no obligation to verify the origin of capital with which a large number of enterprizes were privatized in Serbia. Until a couple years ago Serbia was one of the few countries in Europe where enterprises with a significant development and profit potential could be bought at low investment, and this was the main reasom the *venture* funds emerged.

The investment logics of *venture* funds says that during a number of years of presence in the company, these funds invest rather substantial sums of capital and supply the necessary management knowledge, in order to raise the market value of the company they took over. Then, the shares of the "cured" company are sold at the stock exchange at a price several times higher than the innitial, purchase price, and the *venture* funds withdraw from the ownership in the company, taking their share in the income in proportion to the funds invested (about 80% of profit belongs to the investors, the rest goes to the professional management). The expected revenues are high and range from 15% to 20% annually, over a 5 to 7 year period, however, these investments are highly risky and amounts of less than \$200 million are rarely invested. In the former socialist countries, in which the financial market has come to life in the last 10 to 15 years, there was a real "battle" going on between multinational corporations and *venture* funds concerning the takeover of the companies that could, with a substantial „financial injection" and professional management, be successfully restructured and sold in a later period, at a prospectively high profit for the investors.

After a decade of Serbia's lagging behind the countries in the region, the Investment Funds Act was passed and enforced towards the end of 2006. Given the obvious fact that such funds achieved outstanding results on the capital markets of neighbouring countries, it would have been much better if this Act had been enforced at an earlier time, and especially before the first *venture* funds invested their capital.

The Law in this country provides that three types of funds are allowed to operate: the open funds (which are organized), closed funds (which are founded) and private funds. The minimum amount of equity capital for open and closed funds is €200,000, whereas for the private funds it amounts to €50,000 (in dinar equivalent value on the day of subscription). A wide range of financial instruments into which the fund property may be invested is stated. The Law also defined the upper limits of investments in certain types of securities of one issuer, the costs and incomes the fund achieves in the course of its operations, the method of fund management, the obligation of giong public with the prospectus and the minimum of its information contents, as well as any other issues included into the legislative of this relatively new field. The following types of funds are mentioned to operate in the future: a) funds for raising the value of property; b) balanced funds and c) funds for retaining the value of property.

The first mutual fund in Serbia was founded in February 2007. It was a balanced fund, and all the rest were the funds for raising the value of property. The value of property of these funds on 25th June, 2008 amounted to 3.5 billion dinars or approximately €45 million. During the early months of operating, the investment units of the majority of funds reached the price by 30% to 40% higher compared to their innitial price. Following these, two closed mutual funds started their operations, and in the second half of the year a new close fund will start, investing into real estate.

Closed funds raise capital by public sale of shares, they invest long-term and are generally more profitable compared to open funds, however, the innitial investments into closed funds are much higher (shares are significantly more expensive) and investors should be informed beforehand on the investment logics of these funds. With the rise of the number of closed funds, the Belgrade Stock Exchange plans to organize a separate segment of quotation. It is a fact that open funds are much more available to a greater number of small investors in possession of smaller amounts of capital to invest through the mutual fund. In case of both open and closed funds the investors are advised to invest over a period of a minimum 3 to 5 years, since the advantages of investing into mutual funds can be felt and the stock exchange oscillations reflected on the fund performances can be annulled only over a longer period of time. A growing number of mutual funds is an indicator of a positive trend on the domicile financial market, which is mirrored in the growing diversity of investment possibilities, where every owner of capital will be in a position to find a mutual fund according to his investment objectives and the risk tolerance. A number of funds from Croatia and Slovenia are also licenced on the Serbian financial market, and an increased interest of mutual funds from the more advanced countries in this reagion to invest in the domicile financial market is expected.

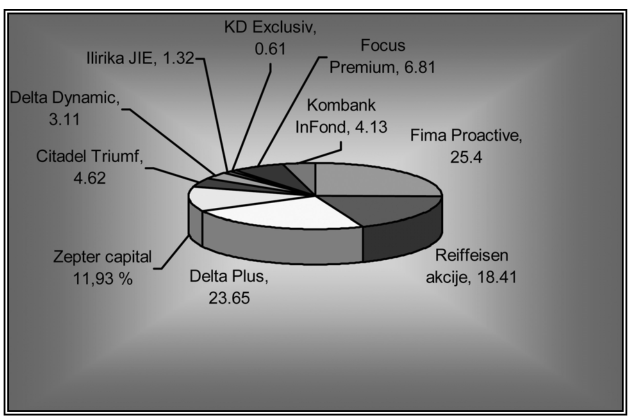

Figure 1: *Participation of certain mutual funds on the Serbian financial market on 25th June, 2008*

Figure 1 shows that out of the total of invested capital into mutual funds, ¼ belongs to each of the funds that were the first to be founded and start operations on the financial market of this country, and these are one balanced fund ("Delta Plus") and one for raising the value of property ("Fima Proactive"). All the other funds were founded somewhat later, therefore their market share is smaller. As well as in other countries in this region, it is banks who lead in founding the funds, which is a proof of banks'growing interests in investment banking and their response to an ever fiercer competition coming from the part of institutionalized investors. It is also evident that the citizens are becoming increasingly interested to direct their savings towards mutual funds and other institutionalized investors due to higher revenues compared to classic fixed-term deposits with the banks (average revenues of mutual funds range from 8 to 15%).

2.3 Mutual funds as long-term financing source of domicile enterprises

The problem with our capital market is that it is rather "shallow"; that is, there is no adequate offer of financial instruments into which mutual funds, but also other institutionalized investors would invest. The listing of public corporations in the fields of telecommunications, electric power supply, oil industry, on the Stock Exchange would greatly improve the quality of offer of securities, since their shares are considered to be of high quality, and are known as "blue chips". There is a shortage of firms interesting to the mutual funds on capital market at the moment and, unless the situation develops in that direction, a possible scenario may be that the investment funds raise capital on the domicile market and place it on the foreign capital markets. Such an outcome would be very unfavourable for the development of national economy, since mutual funds can be a very prolific long-term financing source of the enterprise.

The interest rates paid to bank loans in Serbia are significantly higher compared to the average interest rates in the countries in this region. One of the reasons is a high risk of the country and a low credit rating, due to which the domicile banks borrow capital on the world markets under rather unfavourable conditions. Another reason is a restrictive monetary politics conducted by the Central Bank, aiming to control inflation and reduce credit expansion by ways of increasing the effective interest rate, the rate of statutary reserve on foreign currency deposits and other instruments. To these should be added the bank margins, all of which together result a high price of borrowing and a heavy burden for the firms. With the growing competirion among banks and a more significant role of institutionalized investors (investment, pension and insurance funds) on the financial market of Serbia it can be expected that the price of borrowing will fall. All this, however, should be observed in the context of movements on the global market and the presence of macroeconomic (in)stability in Serbia. For example, the mortgage crisis has for months been present on the U.S. market, the recession is possible, and these conditions have greatly diminished the offer of capital.

Enterprises are still reluctant and not knowledgeable enough as regards the execution of the initial public offer of shares (IPO), although that could be a most inexpensive and a very efficient way of financing the growth of the enterprise. The Security Commission is ready to face the initial public offers of shares, however, our firms do not show enough interest in it. The initial public offer is the first appearance of shares on the financial market, the primary one, that is. In this way the firm offers its shares to a wide range of prospective investors and raises capital necessary in financing the development of business operations. If the domicile firms opted for the initial public offer more often, the range of investors would equally often include large institutionalized investors too, e.g., mutual funds, which would in this way place the capital raised by the sale of the fund's investment units.

Mutual funds, similarly to other institutionalized investors, can influence the development of small and medium companies (SME) by participating in the long-term sources of financing the company, either as majority or minority proprietors, and over a limited or an unlimited period of time. That would enhance the efficiency of a firm, the strenghtening of the existing market position, as well as capturing new market segments, improving the quality of products and services and financing new development initiatives. It is important that there is a mutual interest shared by the management of the fund and the management of the company, and this is, first and foremost, the profit. An additional motive can be a sector or regional economic development. The funds make decisions on participating in the SME capital primarily on the basis of financial statements, plans and projects, on the basis of prospecti, while the companies should try to attract mutual funds as reliable long-term financing sources by their transparent business and a continual improvement of performance. An additional motive for the mutual funds to invest into companies will also be the termination of the privatisation process, when a clearly defined ownership structure, profit guided business, business objectives and growth orientation of the company will become the factors on the basis of which the mutual funds will decide on investing into concrete companies. All these should be viewed in the context of the growing indebtedness of Serbian companies; namely, only in the first quarter of this year the liabilities (debt) of national companies increased by 10% and amounted to €8.5 billion, whereas the net indebtedness in the same period also increased in comparison with the previous years and amounted to €525 million. Due to an increasingly more difficult debt servicing both from the point of view of the state and that of the companies, decisions should be made more in favour of the alternative sources of capital instead of classic bank loans.

Recently, the SEAF fund (Small Enterprise Assistance Fund) came to Serbia. This is a fund providing aid to small enterprises. The SEAF provides the capital and operational support to the companies that have no access to traditional sources of capital, and operate on the developing markets. The SEAF also helps the chosen company to make contacts on a global level and improve its credibility, which makse the development and profitability of the company faster. Although by investing into a chosen company the SEAF becomes a co-owner of it, the advantage the company gains is that there are no high costs of borrowing (as in traditional bank loans) and threats to liquidity. After a number of years the fund sells its share and withdraws from the ownership structure, achieving higher revenue rates, in accordance with the risk taken. A greater number of such funds could be very useful for small or newly established firms with a solid growth potential, a genuine product or service, but lack in capital, managing experience and contacts to facilitate their appearance on the foreign market.

2.4 Conditions for a more important role of mutual funds on the Serbian financial market

In order that the capital market develop and the quantity and quality of the offer and demand of financial instruments be improved, it is necessary that the corporative management be raised to a higher level. Transparency in business doing does not mean only reporting the financial statements in mass media or on the Internet. It means a continuous communicating all the events relevant to the company performance and its results to all the present and prospective shareholders (co-owners) of the company. Medium and large companies (in this country) are also obliged to review their financial statements. A majority of activities that are understood as corporative management make at the same time the conditions for including a company into the A listing of the Belgrade Stock Exchange. The companies listed on the Stock Exchange only following legal regulations, most often fearing the competition, still fail to reveal their reports. With no reports on the performance of such companies, investment funds will hesitate to invest in them. Out of the total number of newly incorporated shares, only a small number of market active securities is expected. In some large, successful corporations that were privatized earlier (breweries, dairies, cement works, etc.) the majority ownership ranges up to 90% of the total capital, which diminishes the possibility that these so-called "blue chips" will soon become an issue of secondary trading. Such conditions also affect the operations and structure of the mutual funds portfolios, which, although interested in investing into quality securities, will not face an adequate offer. The fact is that a lack of quality market material still remains a crucial problem and a limiting factor of the domicile capital market growth. Apparently, inclusion of new companies into an off- market trading will improve quantity, rather than quality of the market offer, which may hinder the development pace of the domicile mutual funds.

In order that a company's shares be included into the A listing of the Belgrade Exchange, it is necessary that the company operate for a period of at least three years, that its minimum amount of capital be €10 million, the review of financial statements be performed in accordance with the Ministry of Work of Serbia and judged as positive without reserve, that the minimum of 25% of totally issued shares be engaged in "free" trade, and that the dividends are paid to the owners of preference shares. By May 2008 only three national companies were incorporated into the A listing of the Stock Exchange or in the BELEX BEST index. Viewed from the standpoint of the capital market, the society and the national economy, the more conditions for inclusion into the exchange listing the company meets, the safer, more reliable and the more attractive the market will be for national and foreign investors. The exchange index BELEX15 is made up of the shares of 15 most liquid national companies and banks whose shares were traded most.

However, due to unstable political conditions and to uncertainty as regards further development of Serbia, foreign investors hesitate to invest into national securities. The participation of foreign investors in the overall trade and in share transactions in the past year was around 40%, it was only in April that it rose to around 80%, to plumet to around 35% in May. For a substantial period the exchange indices kept falling, which directly influenced the fall in the value of funds' investment units. In such circumstances, following excellent initial results in the work of the funds and the capital owners' increasing interest in investing through new financial intermediators on the financial market of Serbia, it is very hard to motivate prospective investors to invest into funds. From the moment the parlamentary elections in Serbia were announced, the exchange indices were falling constantly, and the values of the investment units of all funds fell under their initial nominal value. Investors are advised to invest into funds over a longer period (a couple of years) to neutralize the losses and achieve revenues above the fixed-term deposit revenues with the banks, for example. Evidently, the inhabitants of Serbia enjoy a financial suficit, since DM8 billion were converted into a new currency, euro (€) in the course of 2002. Similarly, new foreign currency savings of our citizens amounts to over €3 billion, which means that there is a free, dispersed capital that ought to be employed through investment funds.

In order that the quantity and quality of offer on the capital market be improved, it would be useful if the cities, municipalities or the state issued low-risk hipotecary securities, worldwide known as municipal bonds ("*munis*"), by which they would make themselves less dependents on the classic financial sources (the budget or bank loans). This is especially recommended having in mind a constant budgetary deficit and still very expensive long-term bank loans.

3. CONCLUSION

Funds will best justify their presence on the financial market and accept the trust they are granted if they enable the owners of the investment units to achieve the revenue rate above the fixed-term deposit interest rates with the banks. An opportunity to earn more, with a relatively acceptable risk is a safe instrument to attract new investors and larger amounts of capital into funds. It should be pointed out that on financial markets in the region, where investment funds have been around for a number of years, the revenue rate amounts between 20% and 30% on an annual level, which is several times more compared to the average annual interest rate on fixed-term deposits with commercial banks.

A larger number of investment funds on the domicile financial market and a larger amount of raised capital will ensure that investment funds, according to their investment objectives, invest into various sectors, activities, enterprises that have already shown high productivity or that are still to develop. Thus the investment funds, as large institutionalized investors become co-owners of enterprises, however, they simultaneously grant an easier and less expensive access to long-term sources of capital, which are often scarce. Due to fiercer competition and their taking over a classic function of loans from the banks, mutual funds contribute to improving the quality and reducing the price of financial services and capital. All this mentioned, it is important that companies, with their profitability and transparent activities, growth potential and quotation on the Exchange, become attractive to investment funds, since this is certainly an easier way to raise the necessary capital. It is also necessary that the companies be adequately informed about the advantages of the initial public offer of shares (IPO), as an inexpensive and efficient way of raising the necessary capital and financing the company's development. In addition to all mentioned above, also important is the political stability in the country and in the region and a comittment to European integrations as one of the preconditions for a normal functioning of financial market and all its participants and the realization of their roles on this market.

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The role of hrm function in serbian companies: challenges and limitations

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The renewal of the transition process, the liberalisation of economy and the entrance of foreign companies caused, altogether, considerable changes concerning the development of the HRM function in Serbia. Regardless of the changes which have taken place in the last few years, there is still no relevant research in Serbia which will confirm or disprove this trend. Thus, the aim of this paper is to investigate what the role of the HRM function in Serbia is today, and whether there are some limitations to the faster convergence of Serbian HRM practices toward contemporary HRM trends. In order to examine the role of the HRM function in Serbia, we carried out an exploratory research in 38 companies (with more than 66,000 of employees) which operate in Serbia, by using a questionnaire. The research results pointed out a few important conclusions indicating some changes did occur regarding the organizational position of the HRM function. However, Serbia still lacks competent HRM specialists regardless of the fact that Serbian HR departments are overstaffed.

1. Introduction

The renewal of the transition process in Serbia towards market economy, at the beginning of 2001, its opening towards the world and the entrance of foreign companies with their management practices and technologies onto the Serbian market meant remarkable turnpoints in the development of the HRM function in this country. The function of HRM in many Serbian companies is still known as the personnel "function" and includes whatever it included in the first half of the twentieth century world, however, there have been significant changes in a number of Serbian companies which can freely be said to mark the beginning of the transformation of the personnel function into the HRM function. One innovation is that the HRM function is legally introduced into the public administration. Nevertheless, regardless of the changes that have taken place in the past years, there is no research in Serbia to confirm or disprove the change. There even are some signs that the HRM function is still limited to a number of basic activities, to the administrative part in particular, such as: announcmenets for recruitment of prospective candidates, the employees' files, observing the regulations in the field of labour and labour relations, scheduling vacations, tracking absences of the employees, organization of sporadic training programmes for certain employee groups etc. Many important areas of HRM are therefore neglected, among them: human resource planning, rewarding, employee performance evaluation, permanent training and development of the employees, development of the employer – employee relations, etc. The consequence of such a scope of work of the HRM function in the Serbian companies is its specific organizational positioning in the company structure. A usual solution is to group the "personnel" activities together with the administrative and legislative activities within the administrative, legal and personnel department. The microorganizational structuring, regardless of the company size, is generally in charge of two positions: Personnel manager and Personnel officer, with a smaller or larger staff, depending on the company size and the number of employees. To do these jobs the officers need the secondary education, or, in case university education is required, the job is usually performed by the lawyers. Some activities in the field of hunam resource management are sometimes performed by the company attorney – a position within the legal department – whose responsibility is drawing and keeping work contracts. The result of such an organizational solution is that this function becomes neglected, the development of these jobs is hindered, and so is the specialisation of professionals who would otherwise deal with this function in a proper way. Furthermore, since the specialisation of the professionals meant to do the HRM jobs is inadequate, and so is their position in the company organization, all important decisions in the HRM field – on recruiting staff, on firing staff, on the amounts and structure of wages, etc. – are made by the managing director of the company.

Our aim in this work is to find out whether the personnel function in Serbia is really beginning to turn into the HRM function, i.e., which position and role of the HRM function in Serbia occupies, as well as whether there are any obstacles to a faster convergence of Serbian companies to modern trends in the development of this function. In order to learn about the position and role of the HRM function in Serbia, we analyse the facts on the position and role of the HRM function on a sample of 38 companies operating in Serbia.

2. Modern tendencies in the hrm function development

The human management (HRM) is not only a well defined scientific discipline exploring all aspects of employment in the organization (Heneman, 1969; Dulebohn et al, 1995), but also a significant business and management function in the organization. The HRM function is made up of varied activities directed towards the personal aspects of people management in the organization, which have gradually developed over time and in accordance with the needs of the practice. The human resources management is a relatively new term, adopted towards the end of 1970s and in the early 1980s, mainly under a strong influence of American literature. The previous term was personnel function. The change in the name actually marked a qualitatively new phase in the development of this function – the focus shifts from the operations costs control towards the understanding of the employees and their competences as an important resource in the organization and assigning strategic importance and role to the managing of these resources in the organization (Tyson, York, 1996).

In order to understand the level to which the HRM function in Serbia developed, it is necessary to define the phases in its development first. For the time being, there is a general understanding that the HRM function has so far developed through four principal phases (Cascio, 1995).

Phase I is the period from the beginnings (the period of the World War I) until the 1960s. The focus was upon drawing and storage (keeping) the personal files of the employees. This phase is characterised by introducing a specific organizational unit to deal with the HRM matter. The typical activities in this period were the following: testing the candidates for a job, creating and conducting the guidance programmes for the newly employes, collecting and storing personal data of the employees (date of birth, working life period, education level, etc.), organization of socializing among the employees and informing the employees about important events in the organization.

Phase II begins in 1964, when the Civil Rights Act in the U.S.A. was enacted. The focus now shifts towards the increased responsibility of the state in the field of labour force and labour relations, hence the laws on retirement insurance, health insurance, as well as the laws protecting the employees from any discrimination on their workplace. The newly passed laws increased the importance of the HRM function, since every area of employment had to be regulated by respective legal acts, as the organizations realised that it was important to avoid any expensive law suits and negative propaganda. This also resulted in the managers being much more included in almost all the aspects of HRM. New jobs, and consequently new workposts emerge within the organizational unit (department) in charge of the HRM, such as: an expert (specialist) in rewarding, an expert in education and training, an expert in labour relaltions, etc.

Phase III is related to the periods of 1970s and 1980s and is characterised by shifting of the focus towards costs control and increased efficiency of the HRM activities. Especially stressed are the permanent training of the employees, alternative methods in managing ethnically diversified employee structure, as well as efficient bridging of cultural differences, since 1980s were the scene of a large number of mergers and acquisitions a consequence of which was a cultural diversification of the employees, and, on the other hand, the HRM put it as a challenge to formulate and implement a unique strategy and policy of the HRM on the corporate level.

Phase IV starts in the early 1990s and lasts up to the present day. It focuses upon using the employees to create a competitive advantage. All the management levels in the organization and the experts in the human resources department become specific strategic partners in the processes of costs control, incresing competitiveness and added value creating. In the last years, the focus in the HRM function development has strikingly shifted towards: reducing the number of people employed within the HRM function; a high level of work division between line managers and the employees in the HRM function (Brewster et al., 2004); dislocating the HRM activities to external consultants and agencies (Lawler III et al., 2004); the growth of budget allocated for the development of the employees; the professionalisation of the employees in th HRM function and a strategic position and role of the function in the organizational hierarchy structure and in strategic decision making, so that in the majority of companies the manager is directly included into the managing board, and therefore into the process of strategic decision making. In order that the HRM function be understood as important, the indicators of the quality of management in different aspects of human resources management have been developed for years (Fitz-enz, Davison, 2002), based on a developed and unique human resources information system. This provided a clearer insight into the relationship among the corporate strategy, the business results achieved, and the investment into human resources (Becker et al., 2001).

Such trends and shifts in the organization and in the functioning of the HRM function are the result of the tendencies in the modern environment in which companies operate, and which make companies face numerous challenges for which there are no ready made recommendations nor solutions. Fast changes in the market characteristics, expected to intensify in the XXI century have influenced the changes in the strategic goals and the nature of problems the companies face, which has had significant implications on the employment rate and consequently on the HRM policy in the organization (see Fifure 1).

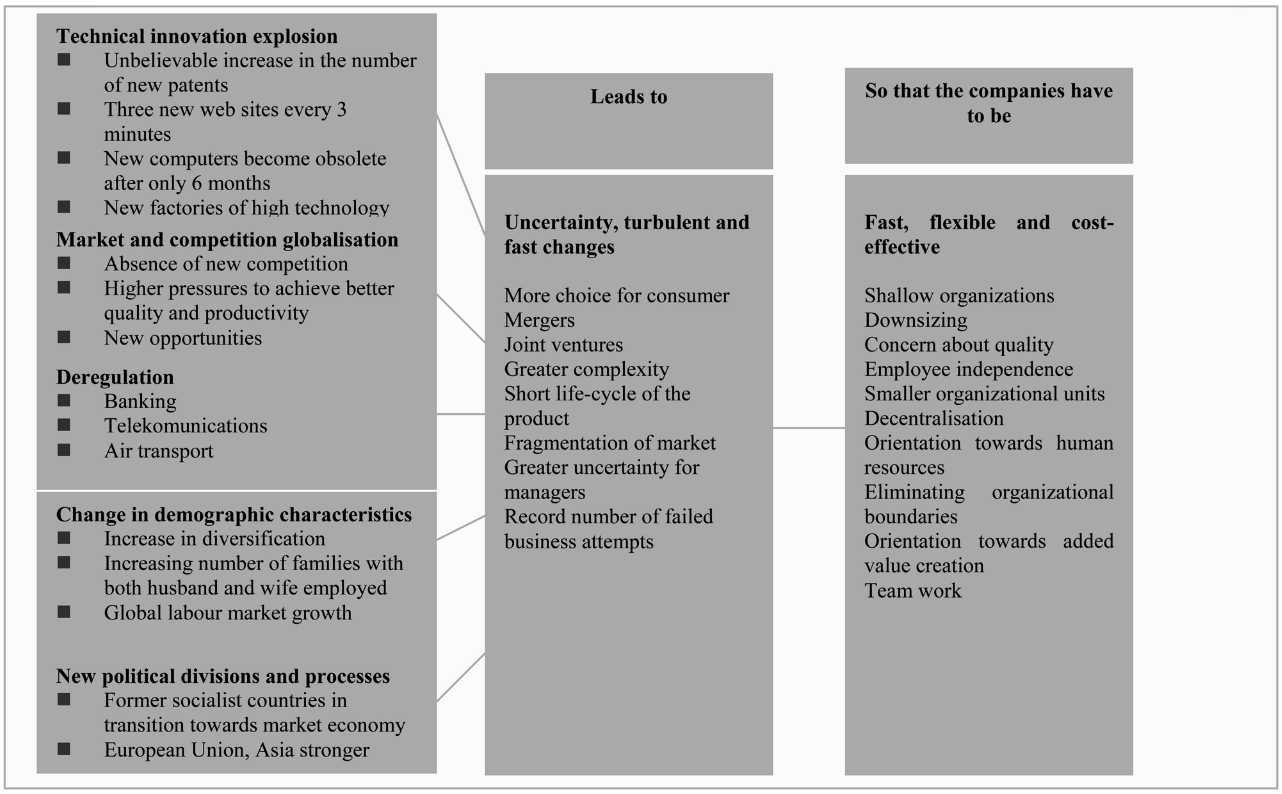

Figure 1: *Challenges the managers face*
(Source: Adapted after Dessler, G., 2000, *Human Resource Management*, 8th ed. Prentice Hall, p. 14)

Among the trends that have significant implications for the HRM surely most important are the following: the slowdown of economic growth, the Internet revolution, the globalisation, the changes in legislation and the changes in the labour force characteristics (Bernardin, Russel, 1998; Fisher et al., 1993; Gomez-Mejia et al., 2001; Dressler, 2000).

Slowdown of economic growth. All the lower economic growth rates have, in the course of the 1990s, triggered a strong wave of downsizing and firing of a large number of employees. Some research has shown that out of 600 organizations observed in the early 1990s, as many as 60% or 70% analysed the prospects of downsizing.[1] The focus in business increasingly shifts towards: costs reduction, quality and difference in comparison to competition, transfer of business and dislocation of certain business functions, change in the nature of jobs, change in the demands for individual skills and knowledge, change in the structure of employees and of the management by temporary employment, flexibility and creation of shallow organizations in order to eliminate unnecessary levels of management, the problem of employees' lack to identify with the

[1] See: 1991 Survey of Human Resources Trends, p. 18
[2] See Human Resource Compensation Survey, 1993, Dearfield, III: William M. Mercer, Inc; see also "Human Resource Compensation Survey", Bulletin to Management, July 22, 1993, pp. 228-229

company they work with and massive dismissals. It is to be expected that the HRM will become the management's key instrument in adapting to the predicted changes through attracting and recruitment of the required profiles of employees, ensuring the corporate ethical and social responsibility, the increase in productivity, supporting the employees' independence, reducing the negative consequences of an increasing uncertainty of employment, reducing the probability of losing deficient profiles of experts, etc.

The Internet revolution. An incredibly fast development of the Internet in the last few years is certainly one of the greatest changes in the environment, bearing strong implications for organizations and their HRM policies. While the term "web economics" was still something new in mid 1990s, today, only a few years later, it has become a commonly used phrase in business circles. Statistical data in the developed countries show thet the "web economics" is not an exagerration any longer. For example, according to some data, the American economics investments into the Internet technology doubled in the 1998 – 2000 period, and are going to be five times larger by 2004, amounting to US$300 billion (Anders, 1999). In some departments, such as transport and services, wholesale, and constructions, the investments into the Internet technology increased by more than 70% in the 1998 – 2000 period. At the beginning of the 21st century, as many as 80% of American companies use the Internet. The Internet revolution had a powerful influence upon employment, the most important being: the development of literacy and communication competences in the employees, the redefinition of a large number of jobs, the barrier elimination on the labour market, a more satisfactory treatment of the employees in order to reduce the likeliness of their leaving the organization, disseminating the on-line learning practice. All these will require the implementation of a more generalised managerial focus in the HRM field, due to the increased possibility of doing a larger number of different activities.

Globalisation. One of the greatest challenges the companies face at the beginning of the 21st century is competition from foreign companies, both on national and on international markets. The development of the Internet significantly accelerates the globalisation process and the greatest number of companies entered joint ventures to form international corporations, either to start a new business or to ensure their presence on the markets of other countries, without establishing subsidiaries. Some companies collaborate with foreign companies on specific projects, or dislodge production into other countries. This was enhanced by lowering commercial barriers among developed countries. The intensification of the linking trend among the companies worldwide is a significant challenge for the HRM function in terms of creating a balance between the need to conduct a uniform HRM strategy and policy on the level of the entire company and the need to comply with the local regulations and customs. That is why more and more companies worldwide find international human resources management increasingly important.

Changes in legislation. One of the most important sources of the HRM function development is, according to many authors, related to the corporate obligation to observe strict law regulations in the field of labour and labour relations (Gomez-Mejia, 1994). The changes in legislation in the last years are directed towards shifting a number of social and political goals from the state to the employers. This is especially true in the area of respecting the rights and ensuring equal treatment of minorities and other "sensitive" social groups, such as: women, individuals of other races, individuals with special needs, AIDS victims, war veterans, employees older than 40, etc. It often happens that the law serves to achieve certain objectives of population policy: employers are forced to pay wages during the maternity leave, to equalize the salaries of men and women, etc. Introducing the social function into organizations will require the changes in the human resources management towards complying with new demands.

Changes in the labour force characteristics. The changes in the labour force characteristics are being directed towards the increase in the diversification levels among the working-age population in two dimensions: (1) *primary*, including age, gender, race, nationaliy, physical skills, sexual orientation and (2) *secondary*, such as education, previous work experience, parental status, marital status, religious beliefs, army experience, geograpgical location, income. Perhaps the most important changes in the labour force characteristics are reflected in the increase in women participation in the working age population as well as the increase in the average age of the employees. According to some estimates, by 2010, 25% of American population will be older than 55 , and 14% of the total population will be older than 65. This brings a challenge for the HRM, on one hand, to devise the ways of training and further qualifying the elderly employees to be able to follow technological changes, and, on the other hand, to create opportunities for the young to advance along their career paths, regardless of a large number of their older collegues at higher hierarchy positions.

3. Position and role of hrm function in serbia

3.1. Research methodology

Our aim in this work was to explore the position and role of the HRM function in Serbia. The research method was chosen to suit the purpose of the research – it was the *explorative research* method – which is used to explore the phenomena and situations which we know little or nothing about (Reaves, 1992, p.9). We used the questionnaire method on the sample of 38 companies currently operating in Serbia to analyse the position and role of the HRM function. The research was conducted in the 2006 – 2007 period and the questionnaire contained 15 questions concerning the position and role of the HRM function, complemented by 21 questions concerning general information on the company, such as the size and "age" of the company, the type of activities and the industry field, the number and structure of employees according to age, education, profession, the main problem areas in the HRM department, etc. The questionnaire was completed during the direct interviews with the managers of organizational units, who are in charge of HRM activities. The data obtained from the questionnaires were further processed using the descriptive statistics methods. The companies included in the sample employ 66419 people, 819 of whom work in the human resources departments (personnel departments). The companies in the sample came from various industries, of various sizes and ages and various ownership structures. The sample had 63% Serbian and 37% foreign companies, the average age of the company being 43.9 years. The ownership structure in the companies is presented in Table 1.

Ownership type	Share in the total number of included companies
Private	57.9 %
State	26.3%
Mixed	15.8%
Total	100%

Table 1. *Ownership structure in the processed sample*

3.2. Research findings

The results obtained in the reesarch have shown that the majority of the companies (86.8%) have a separate organizational unit engaged in human resources management issues, or personnel matters. Personal data on the HRM managers included in the processed sample show that in 43% of these companies the HRM managers have less than five years of work experience in the HRM field. In almost all the companies in the sample the majority of HRM positions are occupied by women, therefore their share in the total sample in the number of the employed in the HRM function amounts to 75%. This result coincides with the findings of Hofstede, that in the so-called female cultures, as is the Serbian national culture (Hofstede, 2001) there is a clear division between the "male" and "female" professions (Hofstede, 1984), therefore the jobs in the HRM in Serbia can conditionally be classed as "female" professions.

The findings obtained from the answers to the question on where the HRM function managers are recruited from have shown that in most companies they are generally recruited internally, either from the HRM department itself (in 32% of companies) or among other professionals in the company (26.3%). Approximately 23.7% of companies recruit the managers for the HRM department externally, among the experts in this field.

The research results also show that in the majority of companies (75%) the HRM department manager is generally not a member of Managing Board or the Board of Directors. In most companies (60%) the managing director general is the highest authority in decision making in the field of HRM, whereas in the 40% of remaining companies this authority belongs to the administrative director.

According to the data processed, the role of the HRM function in business strategy creation in the companies is of rather small or no importance at all. The role of the HRM function somewhat gains in importance in the business strategy implementation stage (in 36.4% of companies in the sample). The HRM department, however, is not included in either the creation stage or the implementation stage of the company's business strategy in 21.2% of the companies from the sample. In 24% of the companies the HRM department's attitude was only requested concerning the business strategy.

The number of employees in these organizational units included in the sample is strikingly large and ranges from 0.3 to 9.4, that is the average 1.8 employed in the HRM department per 100 employed in the company. Having in mind that the average size of companies measured by the number of employees is 1748, a conclusion can be drawn that the main characteristic of these departments is that of being overstaffed. For the comparison purposes: the same ratio for this size of company in the U.S.A. is 0.82.

Regardless of a large number of employees in the human resource management department, these departments still do not perform all the key activities of this function, the central responsibility still remaining within the administration department. A large number of companies (76.3%) have no written documents defining the company policy in various HRM areas. The Serbian companies mainly do have defined policies in three basic areas: earnings (71.1%), employment (57.9%) and training and development (57.9%). The facts prove that these are the three most highly developed areas in the HRM field in Serbian companies. These are simultaneously the areas in which these companies hire external consultants on demand: earnings (33.3%), recruitment and selection of candidates (25%) and training and development of employees (55.6%). Only 27% of companies from the sample do all the HRM jobs by themselves. Here it is important to point out that in case of the companies hiring external consultants for training and development of the employees, the company hires the trainers, not the consultants who would systematically do the jobs of training and development for the company.

The data from the questionnaire show that only 50% of companies from the sample have the HRM strategy in writing, whereas one third of the companies (34%) never evaluate the quality and performance of the HRM department. In the companies that conduct the evaluations, the job is usually performed by the top management (70% of companies).

As regards the authority in making important decisions in the field of HRM, the research findings show that the highest authority in decision making in the HRM field (either independently or upon consulting the HRM depertment) in the Serbian companies is the line manager, which further stresses the little importance the HRM function is given in the hierarchy of the company (see Table 2).

	Line management	Line management in coordination with the HRM sector	HRM sector in coordination with management	HRM sector
Salaries	45.16	22.58	25.8	6.45
Recruitment and selection	33.33	23.33	30	13.33
Training and development	36.67	13.33	33.33	16.67
Industrial relations	53.85	15.38	19.23	11.54
Downsizing	36.67	36.67	20	6.66

Table 2. *Authority in decision making in the HR; field (% of companies)*

To the question on whether the authority in making key decisions in the HRM field has changed in the last three years, the answer of the majority companies (80%) was that it has not, while in the 20% of companies the answer was that the responsibility of the line management has even increased. The interviews with the HRM department managers show, however, that line management according to their understanding is not presented by the real line management, but mostly by the managing director of the company, which reveals a high level of centralization in decision making in the HRM department.

3.3. Discussion

The research findings pointed to some important conclusions as regards the position and role of the HRM function in Serbia today.

Firstly, a large majority of the companies from the sample (86.6%) have a separate organizational unit dealing with HRM (personnel) issues. This is an ample change compared to previous organizations of personnel departments, generally within or in coordination with the administrative department. The organizational independence of these jobs shows that the HRM function has gained a far greater organizational power and that its further importance and a more important role in decision making in the hRM field are to be expected, however, only in the field of strategic decision making. Naturally, this will hardly be achieved in the near future, since the research findings show that Serbian companies have yet not developed the written documents in human resource strategy, that the HRM departments have not yet been included in the process of company strategy creating, nor in the business strategy implementation process. Instead of the human resource departments and the line managers, the managing directors still have the last say in capital decision making in the HRM field in Serbian companies.

Secondly, Serbia is still deficient in experts specialised in the HRM field, since in almost half of the companies from the sample, the department manangers' work experience in the HRM field is less than five years. The poor competence of the HRM departments staff in Serbia is an important factor influencing the present position and level of development of the HRM function in Serbia (Sparrow, Hiltrop, 1997). This means that in the years to come a new generation of HRM professionals will have to grow, which will require certain changes in the education curricula offered at the universities in Serbia.

Thirdly, compared to the US model of HRM, the findings show that the HRM departments in Serbia are overstaffed – the ratio is 1.9 employed in the HRM department per 100 employees, compared to the 0.8 ratio inntensification of the linking trend among the companies worldwide is a significant challenge for the HRM function in terms of creating a balance between the need to conduct a uniform HRM strategy and policy on the level of the entire company and the need to comply with the local regulations and customs. That is why more and more companies worldwide find international human resources management increasingly important.

Changes in legislation. One of the most important sources of the HRM function developmeve department (service). In some companies, even the staff engaged in training and development of the employees are placed outside the HRM department. If this dislocated staff were added to the staff in the HRM departments, it is fairly possible that that the facts on the employment in the HRM departments would be even more dramatic. Finally, this large staff in the HRM departments is even larger if we have in mind the fact that the HRM departments from the sample are still mainly engaged in administration, leaving them out of many an HRM activity, such as: human resource planning, employee development, employee relations, evaluating employees' performances, fringe benefit development, the earning system development etc. On the other hand, some European countries, too, are overstaffed in the HRM departments (Brewster et al., 2004) in comparisom to the U.S.A., so we can conclude that we are, at least in the HRM sector, closer to the European than to the American companies.

Fourthly, the most developed areas intensification of the linking trend among the companies worldwide is a significant challenge for the HRM function in terms of creating a balance between the need to conduct a uniform HRM strategy and policy on the level of the entire company and the need to comply with the local regulations and customs. That is why more and more companies worldwide find international human resources management increasingly important.

Changes in legislation. One of the most important sources of the HRM function developmes, since the employee evaluation does not coincide with a high level of collectivism in the Serbian national culture (Triandis, 1995), therefore the development and implementation of this HRM activity will probably be one of the greatest challenges for the HRM experts in Serbia.

Fifthly, if we try to locate the phase in the development of the HRM function in the Serbian companies, we can draw a conclusion, on the basis of the findings, that we are still somewhere in between the first and the second phases, with not even the first phase being completed in some companies. The development of the HRM function will require that this function be absolutely independent, its scope of work be well defined and the specialists in certain HRM areas be trained, apart from their work in the company.

Sixthly, if we analyse the HRM function in the Serbian companies from the point of view of comparative human resource management, i.e., to find out whether we are closer to the European or to the American companies, or we are absolutely specific, the situation becomes rather complax. The research findings clearly show that in the HRM function Serbia diverges from the American model. The divergence observed can be axplained by several factors, such as: the role and competence of the HRM professionals, institutional and cultural factors (Sparrow, Hiltrop, 1997; Holden, 2001; Hoffman, 1999; Rollinson, Broadfield, 2002; Schuler et al., 2001; Hofstede, 1980; Gomez-Mejia et al., 2001; Schwartz, 1004; Schuler, Rogovsky, 1998). These findings coincide with the findings in the previous article (Clark at al., 1999, p. 529) in which, on the basis of the review of articles published in the leading journals in the fields of human resources management, organisational conduct management and other relevant journals in the fields of social sciences, we established that according to almost 50% articles, the reasons for the differences or similarities observed in the HRM practices are the cultural (21.8%) and the institutional (19%) contexts or the combination (10.4%) of the two.

The fact, however, that an increasing number of companies in Serbia introduce the HRM department as an independent organizational unit, and that a majority of them are engaged in certain crucial HRM activities may be taken as a promising sign of convergence towards the American model. On the other hand, if we analyse the European HRM model (Brewster, Larsen, 1992) that includes two dimansions, the integration and the decentralization of the HRM, Serbia could, at first glance, be placed together with some European countries, within a quadrant designed "the Wild West type of HRM" (Brewster, Larsen, 1992, p. 414). This HRM type means that „...managers are free to develop relations with the employees, and that in extreme cases they will be empowered to hire or fire, reward or invest into an employee as they please", which in turn may cause "incoherency, inconsistency and a fierce response of the employees" (pp. 414-415). The reasearch findings have shown further that the extent to which the HRM function is integrated into the business strategy is very small, although the level of decentralization of HRM activities and decisions towards line managers is rather high, given that the primary responsibility for the HRM decisions lies with the line management, either entirely or in coordination with the HRM department. These findings place Serbia directly into the right bottom corner of the matrix, together with the Netherlands and Denmark. Having in mind, however, that according to the interviews, the line managers are in reality not authorised at all to make important HRM decisions, since such authority, in most companies, lies with the managing director (a high power distance) we believe, in spite of the findings, that the real decentralization of the HRM function through a wider inclusion of line managers is really on a very low level. Simultaneously, contrary to the Brewster and Larsen model, this fact does not automatically mean that the HRM managers in Serbian companies have all the power in decision making. Actually, we have a situation in Serbia that the model described cannot be applied, since the decentralisation as defined in the model, cannot be implemented.

4. Conclusion and implications for the management

This work is an attempt to understand the position and role of the HRM function in Serbia today. According to the research findings, some changes did hapen in the past years as regards the organizational independence of the HRM function and its gaining professional potential. These are, however, insufficient, therefore we are still far away from modern trends in the development of the HRM function, both in Europe and in the U.S.A. the reasons for a poorly developed HRM function should certainly be primarily observed in the incompetence of the staff employed in the HRM department, but also in the features of Serbian national culture and institutional context. It is to be expected, however, that further competition and entrance of foreign companies, as well as closer relationsntensification of the linking trend among the companies worldwide is a significant challenge for the HRM function in terms of creating a balance between the need to conduct a uniform HRM strategy and policy on the level of the entire company and the need to comply with the local regulations and customs. That is why more and more companies worldwide find international human resources management increasingly important.

Changes in legislation. One of the most important sources of the HRM function developmeaken with some reserve, due to several limitations. In the first place, the research conducted on the sample of only 38 companies is a significant methodological limitation for a broader generalization of the results obtained. In the second place, the research was conducted in a short period of time – during 2006 and 2007 – which prevented us from observing the development of the HRM function in time. This research, however, is only the first step in understanding the position and the role of the HRM function in Serbia and the way in which the transitional countries behave and face the implementation of Western management systems and technologies. Further research should follow in the direction of including a larger sample and a more detailed analysis of some HRM activities in order to obtain more substantial information on the features of the Serbian HRM model.

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Managing risk: factoring influence on the enterprise value

UDC 005.334

Grzegorz Michalski [1]

The basic financial purpose of an enterprise is maximization of its value. Operating cycle management should also contribute to realization of this fundamental aim. The enterprise value creation strategy is executed with a focus on risk and uncertainty. This paper presents the consequences for the firm that can result from changes in operating cycle and operating risk that are related to using factoring as instrument to short target operating cycle of the firm and advantages resulting in risk reduction caused by transferring it to factor.

1. Introduction

Managing the operating cycle of the enterprise requires providing with the appropriate level of cash as well as other current assets: accounts receivable and supplies. Keeping current assets generate costs, and so it influences the profitability of the company. Factoring is one of tools allowing to shorten the operating cycle which relies on the fact that the factor is purchasing present and future accounts receivable (amounts due of the enterprise), on one's own suffering the risk of the overdue regulation liabilities. Enterprise after presenting a duplicate invoice to the factor, receives the majority of money from him (up to the 80% of the amount), and the rest part in the moment of regulating the liability by the customer. Factor in exchange for the commission takes over all duties of the enterprise resulting from the sale on the principle of trade credit[2]. There is many varieties of the factoring enterprise, most beneficial of a point of view of the functionality of the enterprise exist, there is a full-service factoring which is embracing with one's scope three functions:

(a) financial (the immediate payment for financial documents received from the enterprise using the factoring and later cribbing purchased amounts due from the debtor),

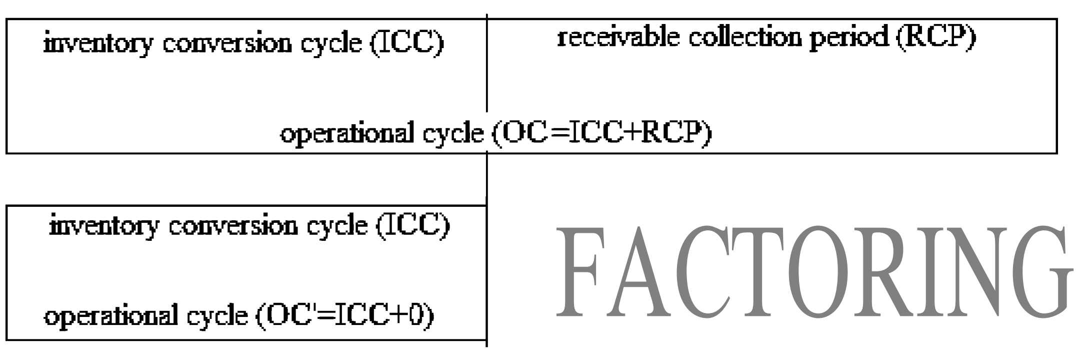

Fig. 1. Influence of the factoring on the operating cycle (CO)

Source: own study

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[2] **L. Stecki, The Factoring in the commercial practice (in Polish: Faktoring w praktyce handlowej, Dom Organizatora TNOiK, Toruñ 1995, s. 52.**

(b) lowering the risk (guarantee, consisting in moving on of factor of the risk of trade credit resulting from the impossibility of cribbing the liability from the customer using the purchase on the principle),

Factoring is sometimes misused synonymously with financing of accounts receivable process. In this paper factoring is a transaction in which a firm of factor client sells its accounts receivable at a discount. Factoring is not a kind of bank loan, in fact it depends on the value of the accounts receivables and by it depends on the factor client clients not the firm of factor client itself.

In factoring process we have three parties involved: the factor client (the seller of the goods or work performed), credit purchaser of the goods (the debtor), and the factor. The factor client is owed money by the purchaser of the goods sold. The factor then sells its invoices at a discount to the factor to obtain cash faster. Next the client of the factor client directly pays the factor the full value of the invoice. As we see on fig. 2, in factoring process, relation between factor and its client (the firm which sells on trade credit and uses factoring to free cash tied in its accounts receivables) is a kind of swap.

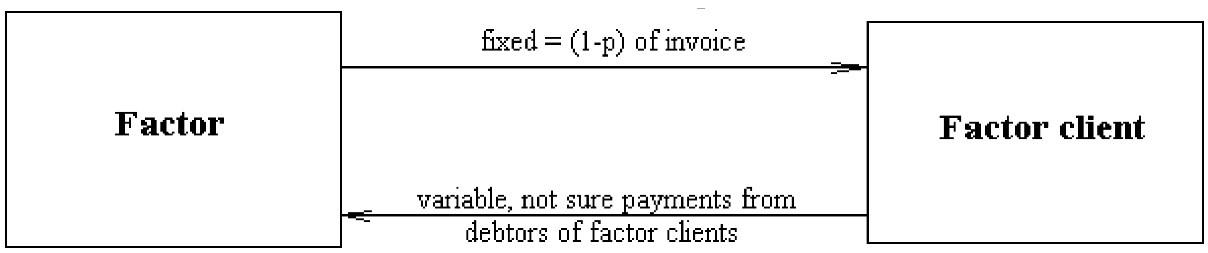

Fig. 2. The factoring as the SWAP. Exchange of assets about unsure of the size to the influences devoid of the uncertainty. Source: own study.

(c) services (the factor leads to the thing and on behalf of accounting for the customer accountants connected with the accounts receivable management). Many other varieties are also factoring, omitting some elements of the full factoring are numerous. Using these services causes, that more effectively it is possible to manage reserves of the liquidity, because influences of amounts due are far more predictable and manageable.

2. Relation of the length of the operating cycle to the firm value

The effectiveness of operating cycle management decisions and the level of assets can be measured in a few ways. One of them is focusing on the influence on the net profit and its relation to the shareholders' equity, total assets or other item of assets. Second, assess

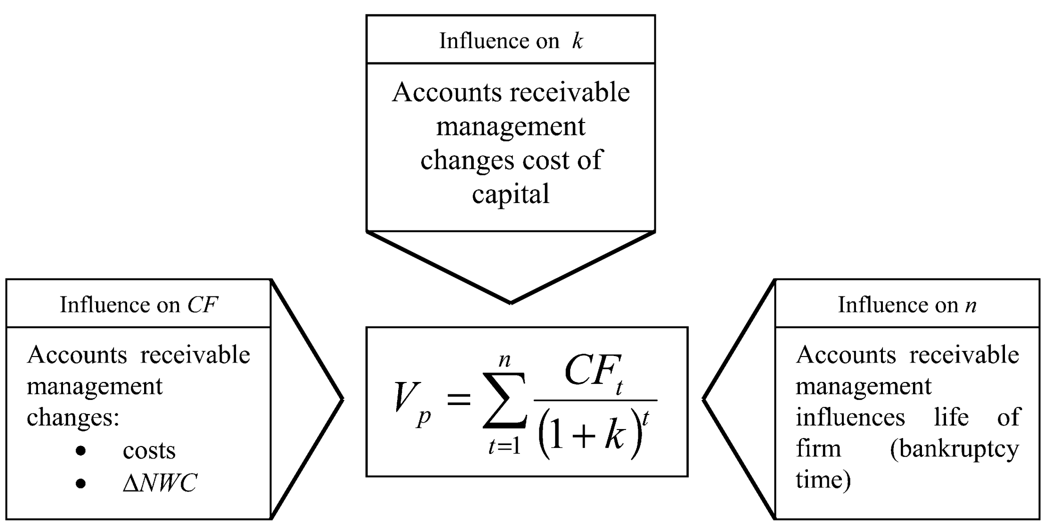

Fig. 3. Influence of account receivable policy on the value of the company
Where: CF – free cash flows, ΔNWC – increase in the net working capital, k – cost of capital financing the enterprise; t – period in which generated free financial flows will be.
Source: own study

profitability in a way that it relates to the value of the company. If given commitment of means to liquid assets, will help to increase the value of the enterprise, it will be profitable, but if it influences lowering, will be spelling unprofitable investment (in liquid balances).

As shown in fig. 3, individual elements influencing decisions in scope of the length of the operating cycle, influence the level of free cash flows (*CF*), and thus the value of the firm.

3. Influence of the factoring the value of the company

From a point of view of managing the operating cycle of the enterprise, should be considered making use of factor services, or insuring the liability too as the most desired in every production company, whose sales sizes to allow credit.

The entrepreneur has an opportunity to feed with financial means of the enterprise resulting from using of factoring services. Factoring relies on it, that enterprise, causing the sale on principles of trade credit, is not expected to rafting amounts due for sold products and/or services, but receives due financial means resulting from the sale from a subsidizing financial institution services of factoring. After the time of the maturity have passed, a financial institution is regaining means handed over to the enterprise, by collecting the amount due from recipients. A commission is remunerating for the institution serving for the factoring. The enterprise, carrying the sale out on principles of trade credit which uses services of the factoring, called the supplier. The supplier should decide to use from services of the factoring, only if the use of this service influences an increase the firm value. The providing services of the factoring, named institution is a factor. Fig. 4. a scheme is describing action of the factoring in the case of applying the promotion method.

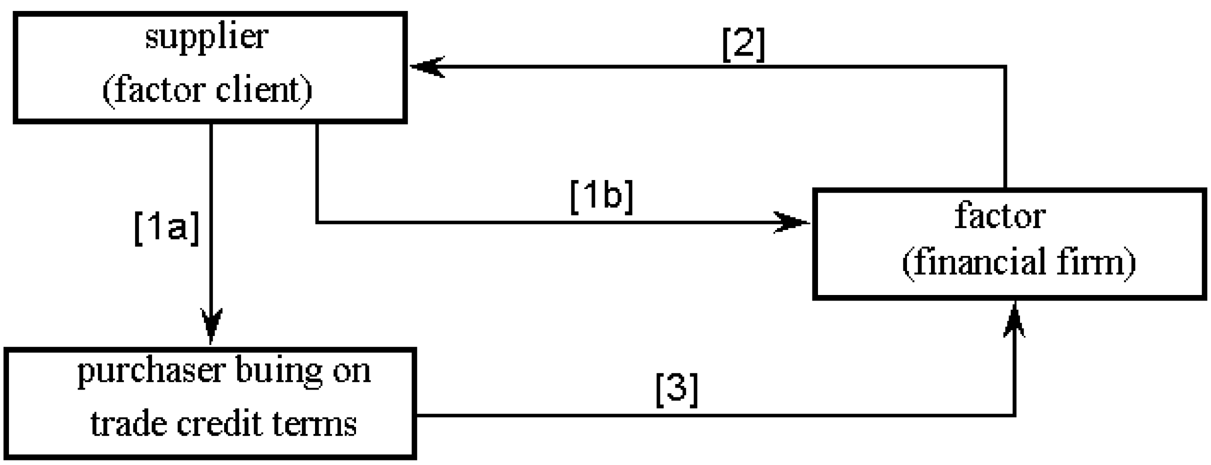

Fig. 4. Mechanism of the factoring – traditional method.

Labels: [1a] - the firm is carrying the sale out on trade credit principles handing down to the recipient products or services, [1b] - the information about the transaction is being passed on to the factor, Š2Ć - the factor is handing the equivalent over to the supplier near to 80%-90% of the amount due directly after the transaction, and rest (reduced for the commission) in the more late time, [3] - the recipient is transferring the amount due for purchased products or services to the account of the factor.

Source: A. Skowronek -Mielczarek, *Sources of financing the SME* (in Polish: Ma³e i œrednie przedsiêbiorstwa: Ÿród³a finansowania), C.H. Beck, Warsaw 2003, s. 98

[3] A. Skowronek-Mielczarek, *Ma³e i œrednie przedsiêbiorstwa. □ród³a finansowania*, C.H. Beck, Warszawa 2003, p. 99.
[4] The topic of nonfinancial functions of the factoring and more accurate discussing its types contain: J. Grzywacz, *The Factoring* (in Polish: Faktoring), Difin, Warsaw 2001, p.42 -103.

A key function of the factoring, is the securing financial means for the enterprise carrying the sale out is on principles of trade credit. Practicing the factoring has this virtue, that even if enterprise carrying the sale of its products out, isn't qualifying to receiving of bank loan, because of too low of the own credit credibility and/or the lack of credit rating, it is often possible applying the factoring and lending money up to the pledge of the amount due or the sale amounts due. Factor is, in the first row, isn't judging the enterprise carrying the sale out, but institutions which from it they are purchasing and it is a quality of their amount due is a base for establishing the cooperation on principles of the factoring.

Two essential methods of the transfer of financial means exist between the factor and the supplier[3]. The first method relies on it, that directly after presenting a documenting duplicate invoice causing the sale on principles of trade credit, the supplier is receiving a down payment from the factor in the height about 80%-90% of the invoice value. The second method, works in the way in which the factor is purchasing amounts due and immediately pay the whole of the amount due reduced for the discount resulting from the fact amounts due will be received by it later and reduced for the commission for services provided for the supplier.

The main idea of factoring at first assumed realizing the financial function. At present however, they require in order to object of the factoring apart from the assignment supplemented was also as least with two different additional services because otherwise, in the case of very financial function, a duty of making stamp duties is arising because such a factoring is treated as the transfer amounts due, in spite of, that assignment made without the factoring, differs from the factoring in it, that at the transfer, cessionary (e.g. bank which by the enterprise amounts due stayed for ceded)[4] is an owner of the amount due, but of them taking down is responsibility of a transferor (of enterprise which made the transfer), while in the case of the factoring, most often with the owner of the amount due and the subject responsible for attracting them, is a factor.

In addition to major benefits, such as reducing investing funds in the net working capital and reduction of costs of collecting receivables, using the factoring is connected with such burdens as[5]:

- interests, in the case of providing credit, similar with height up to a bank loan,
- the front-end fees dependent on the limit of factoring,
- commission for assuming the risk of the bankruptcy of recipients depends on the level of the assessed risk,
- administrative commissions depend on the amounts of the liability, for providing additional services in the scope of the bookkeeping, the debt collection, the term credit rating of debtors, of monitoring debtors of the enterprise and the consultancy.

Moreover, for the firms weakening contacts with customers can have grave consequences. Most often, the direct acquaintance of customers with his owner is playing a significant role. Takeover through of factor of many functions bound with the accounts receivable management and the sale on trade credit terms, is weakening this bond. Moreover a threat resulting from the problem of the agency and the asymmetry is arising of information.

In cases, when all contacts with recipients, will be taken over through of factor (which will be making selection of recipients being able to use from trade credit), straight out lowering the sales revenue is possible, enterprises resulting from the too rigorous assessment of customers and of the lack of fitting the offer to needs of recipients which would have the greater chance of identifying in the case of traditional forms of the contact.

Example 1. The enterprise had amounts due in previous years from recipients which made purchases before the season, on level 70000€. Recipients usually received postponing the payment lengths of 45 days from the moment of the purchase. The firm took advantage of services of the factor, arranging to meet with him, that in the moment of causing the sale, a 95% will receive sale values from it (that is gave her amounts due from the 5% with discount).

In order to estimate the cost of this solution, one should divide the per cent of the discount by the per cent of the amount get from the sale after applying the factoring, that is:

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[5] T. S³oñski, *Financing current financial decisions* (In Polish: Finansowanie dzia³alnoœci bie¿¹cej), [in:] SME Finance (in Polish: Finanse ma³ych i œrednich przedsiêbiorstw), W. Pluta (ed.), PWE, Warszawa 2004, p. 186–189.

$$\begin{matrix}\text{Efektivni}\\ \text{troškovi faktoringa}\end{matrix} = \left(1+\frac{5\%}{95\%}\right)^{\frac{360}{45}} - 1 = 50{,}73\%$$

Next, knowing that the average payment is finding its way to the enterprise after 45 days, and at the assumption that the year has 360 days, we receive the effective annual cost of the factoring:

$$\begin{matrix}\text{Nominalni}\\ \text{troškovi faktoringa}\end{matrix} = \frac{5\%}{95\%} = 5{,}26\%.$$

So cost of the factoring applied by the firm, is considerable and it is likely that it is exceeding the cost of financing this company.

We should however remember, that of applying the factoring in the result, the company is not having incur the costs connected with the vindication of the amount due, amount 70 000€, directly will inflow into the firm and, what is more important, the factor takes the risk connected with the financial problems and eventually bankruptcy of firm customers from it. If costs of the vindication of the amount due we will mark as [A], amount of the amount due of the enterprise as [B], opportunities cost connected with freezing funds in amounts due as [C], and risk as [D] (it will lower as a result of applying the factoring), it about applying the factoring in the following way will influence the influence of the decision to the value of the company:

$$NPV = -\Delta NWC \Leftarrow [\mathrm{B}\downarrow] + \sum_{t=1}^{n\Leftarrow-[\mathrm{D}\downarrow]} \frac{\left(-\,troškovi \Leftarrow \{[\mathrm{A}\downarrow]+[\mathrm{C}\downarrow]\}\right)\times(1-T)}{\left(1+k \Leftarrow [\mathrm{D}\downarrow]\right)^{n\Leftarrow-[\mathrm{D}\downarrow]}} - \begin{pmatrix}\text{Troškovi primene}\\ \text{faktoringa}\end{pmatrix}$$

Costs of the vindication of the amount due [A], lowering, can influence lowering of costs (but they must not, if the cost connected with the factoring exceeds them), and it influences value of forecast financial flows and the firm value. Level of the amount due [B], as a result of lowering, is increasing the firm value as a result of freeing the amount previously tied in the working net capital. Opportunities cost [C] lowering, they are increasing the level of forecasted free cash flows and by it influence the firm value. Assumed risk through of factor [D] first influences the expected firm lifetime (n), and what behind it is going, contributing to the height of the value company, at the same time fall in the risk, can influence the rate of cost of capital raised by the company from different sources and in this way, by lowering it after which forecasted free cash flows are being discounted, the value of the firm is changing.

Example 2. The firm is considering use of the factoring in order to shorten the operating cycle.
Data concerning the example is in Table 1.

Table 1. Influence of the factoring on the firm value

	without the factoring	with the factoring	change
CR (Cash revenues)	720	720	0
CE (Cash expenses)	316,8	324	7,2
NCE (non-cash expenses)	50	50	0
EBIT (earnings before interest and taxes)	353,2	346	-7,2
NOPAT (net operating profit after taxes)	286,092	280,26	-5,832
NCE (non-cash expenses)	50	50	0
? NWC (net working capital growth)	0	0	0
Capex (capital expenditures)	50	50	0
$CF_{(1\ldots n-1)}$	286,092	280,26	-5,832
RCP	30	0	-30
ICC	20	20	0
fixed assets	350	350	0

	without the factoring	with the factoring	change
Accounts receivable	60	0	-60
Inventory	40	40	0
Cash	21,6	21,6	0
nonfinancial current liabilities	20	20	0
k_e (rate of the cost of the shareholders equity)	30%	29%	-0,01
k_d (rate of the cost of the debt)	11%	10%	-0,01
participation of the debt in capital (D/(D+E))	50%	50%	0
$CF_{(0)}$	-451,6	-391,6	60
$CF_{(n)}$	737,692	671,86	-65,832
Rate of the cost of capital	19%	19%	-0,00905
Expected period (in years)	10	10	
NPV	846,7047442	915,1060078	68,40126361

Source: hypothetical data

In this example was assumed that a full factoring was being considered. Hence we have the reduction in rates of costs of capital financing the firm resulting from the fact that the part of the operating risk is taken over through of factor thanks of the guarantee function. In another way, the effect of the reduction in the risk would be smaller in rate of the cost of capital, and result in firm value change could not appear.

As can be seen, in the example, applying the factoring is contributing to the increase in the value of the firm (NPV increase).

Conclusion

Steering the operating cycle is counting and he influences the value of the company. Applying the factoring which can also influence is one of methods of shortening this cycle for curbing the operating risk but because of that for lowering rates of the cost of capital financing the enterprise.

The basic financial purpose of an enterprise is maximization of its value. Operating cycle management should also contribute to realization of this fundamental aim. The enterprise value creation strategy is executed with a focus on risk and uncertainty. This paper presented the consequences for the firm that can result from changes in operating cycle and operating risk that are related to using factoring as instrument to short target operating cycle of the firm and advantages resulting in risk reduction caused by transferring it to factor.

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Summary

The basic financial purpose of an enterprise is maximization of its value. Operating cycle management should also contribute to realization of this fundamental aim. The enterprise value creation strategy is executed with a focus on risk and uncertainty. This paper presents the consequences for the firm that can result from changes in operating cycle and operating risk that are related to using factoring as instrument to short target operating cycle of the firm and advantages resulting in risk reduction caused by transferring it to factor.

Carbon Market

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Abstract: *The corporate social responsibility is a process driven by globalization, deregulation and privatization. Proponents of corporate social responsibility are keen to demonstrate that the businesses have responsibilities beyond the production of goods, services and profit making, and that socially responsible businesses can help solve important social and environmental problems. Hence, businesses perform best when they play a strong role in the communities in which they operate. Awareness of financial implications by climate change is growing among participants in the financial sector, especially after the ratification of the Kyoto protocol. The majority of regulations constrain emissions of greenhouse gases (GHG), and on the other hand they enable a purchase of the so-called emission credits within and out of the regulated area. All this led to the growth of market called "carbon market", Carbon transactions are the contracts between two parties, where one party purchases a certain quantity og "emission" credits that it can further use as a buyer, from the other party. Emission credits are traded on the climate exchanges. Participants on the carbon market are various, such as corporations, individuals, and institutional investors. Carbon credits represent significant potential for investments, and investors can also diversify their portfolio with it, because this asset class shows low correlation with other asset classes. Potential benefits and risks associated with this asset class are yet to be researched.*

1. Introduction

The corporate social responsibility is a process driven by globalization, deregulation and privatization. The companies that act in a socially responsible manner define and conduct activities related to human resources management, activities related to an active participation in a broader social community, activities related to consumers management as well as activities related to environment protection. Ecology and environment protection are becoming increasingly important in companies' long-term investment decision making. On one hand, the emissions of certain gases are becoming a scarce resource, and therefore an attractive investment, whereas on the other hand, the investors now tend to prefer the companies that do business in an environmentally responsible manner and such companies become their choice when it comes to investing capital.

Different countries, companies and individuals started reducing the greenhouse gases emissions. This was the consequence of the signing of the Kyoto Protocole and introducing a number of regulations [5]. As the greengouse gases uniformly spread through the atmosphere, the reduction in their emissions is, from the environmental point of view, independent from political frontiers and can be performed anywhere in the world. In accordance with the regulations concerning such emissions, emission credits may be bought within and without the defined areas. All these led to the creation of the so-called "carbon" market [5].

The costs related to introducing the equipment for pollution reduction purposes are lower in the developing countries, therefore the carbon market contributes to the sustainable growth, attracting new public and private investments into "pure" technologies into transition countries, as well as into the developing countries [5].

2. The carbon market structure

We find it necessary to define the notion of carbon transactions in the first place. The carbon transactions are the contracts by which one party accepts the obligation to pay to the other party a certain amount of money in return for a stipulated amount of emission credits which the purchaser can use for his purposes [5]. Carbon transactions can be classed into two categories [5]:

- Emission permits, or credits, such as AAU[1] and EUA[2]. This type of emission transactions is created and assigned by regulatory bodies. One regime under which they are assigned and disposed of is the so-called cap-and-trade[3] regime.

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[1] Assigned Amount Units (AAUs) – the assigned quantity is a total quantity of pollutant gases (GHG) which the Annex B countries (members of OECD, Central and Eastern Serbia and the Russian Federation) are permitted to emit in accordance to the Kyoto Protocole (AA), whereas the Assigned Quantity Unit is a unit to be used in trading, and equals the quantity of 1 ton of carbon-dioxide [13].

[2] European Union Allowances (EUA) – the quantity unit allowing the emission of 1 ton of carbon-dioxide. This credit, too, was approved of following the emission credit transaction scheme (EU ETS) [12].

[3] Cap-and-trade – the scheme by which a limit is set to the total amount of GHG emission, after which the companies are granted emission permits in the form of emission credits [9].

- Transactions based on projects are those by which the purchaser participates in finansing the project meant to reduse the emission of gases causing the greenhouse effect, i.e., gases responsible for global warming. According to the effects of the realization of the project, the purchaser is assigned a certain quantity of emission credits. There are two types of assets within this category, projects intended for complying with the Kyoto Protocole and those that do not belong to this group.

There is a number of emission credit transaction schemes at the moment, and they are binding for the companies from certain industry branches. Failing to comply with the quoted obligations incurs penalties the companies will have to pay. These are not the sole expenses incurred in relation to emission credits and emission of pollutant gases that cause global warming. If a company wishes to double the electricity production, it will have to either buy the additional emission credits to cover for the additional carbon-dioxide emission, or to invest a substantial amount of capital into a technology emitting a low level of carbon-dioxide and thus prevent excess emissions. To emit carbon-dioxide, a company has to invest substantial capital [8].

The carbon market can be divided into the primary and the seconrady markets. The primary carbon market is a market of forward contracts where there is no guarantee the emission credits will be assigned upon project realization. The secondary market is the so-called spot market, where the emission credits are approved. The risk of emission credits delivery is a risk of exploiting a beforehand defined quantity of emission credits. This risk is reflected in the difference in prices on the primary and the secondary markets. The primary market has recently witnessed the rise in prices due to an increased interest of investors, as well as of a limited offer of large projects [3].

3. Carbon market segments

The best known regulation related to the carbon market is surely the Kyoto Protocole, the document requesting industrialized countries and transitional economies (the Annex B countries) not to exceed the target level of GH gases emission in the 2008 – 2012 period.

The Annex B countries are allowed to purchase a certain amount of Assigned Amount Units and also implement the projects to reduce the pollutant gases emission, called the Joint Implementation projects [5]. The Joint Implementation projects are a mechanism defined by the Kyoto Protocole allowing the countries to which the GH gases emissions are limited, i.e., the Annex B countries, to earn the Emission Reduction Units (ERU). This they can do by the realization of a project by which the GH gases emission in another Annex B country is reduces or eliminated. Each ERU equals one ton of carbon-dioxide and is regarded as achieving the emission objectives defined in the Kyoto Protocole. Such a type of project is a flexible and cost effective solution in fulfilling the obligations related to the Kyoto Protocole. The party acting as host in the realisation of such projects benefits from foreign investments and technology transfer [14].

The countries that do not belong to Annex B may implement projects by the Clean Development Mechanism [5]. The Clean Development Mechanism is the one defined by the Kyoto Protocole and allowing the Annex B countries to implement a project in a developing country to reduce the global warming gases emission. Such projects may earn the country the sertified emision reduction credits (CER), each of which equals one ton of carbon-dioxide. The projects that can be implemented by this mechanism are, e.g., electrification of rural regions by using solar energy or installation of energy efficient boilers [15].

The European Emission Trading Scheme[4] includes large scale emitters from the European Union assigned a certain number of European emission credits by the government of the countries members of the European union, to trade throughout Europe. The relation between the European Emission Trading Scheme and the Kyoto Protocole (directive 7) is in that the entities under the European Emission Trading Scheme may, under certain conditions, use the emission reduction credits from either Joint Implementation Projects or Clean Development Mechanism projects [5].

Other Annex B countries, primarily Canada and Norway, created a cap-and-trade scheme as their strategy for achieving the Kyoto Protocole objectives. Under this scheme, the entities subject to the limitation of GH gases emission would be allowed to implement mechanisms based on projects to reduce or completely aleviate the amount of their obligations [5].

In addition to these international regulations guided by the Kyoto Protocole, there are other regulatieons,

[4] **EU Emissions Trading Scheme – EU ETS**

independent from the Protocole, such as regulations created in the U.S.A. and Australia. These regimes are different and less rigorous compared to those defined by the Kyoto protocole [5].

Some companies chose to join the carbon transaction market out of their own free will. One reason for this is the adoption of voluntary emission objectives, or there may be some strategic reasons. Their participation is mainly connected to transactions based on projects. The Chicago Climate Exchange (CCX) is a private and voluntarily created market for emission permits trading among a number of companies [5].

In addition to the abovementioned segments, the carbon market also has a so-called retail market. The players on this market are the companies and individuals without significant emission activities and are therefore excluded from regulation under a household regime. They join the carbon market to demonstrate their social responsibility or to promote a certain brand. The players on the retail market buy small quantities of emission credits [5]. In order that the volume and the importance of a growing carbon market be clearly understood, Table 1 presents the facts on the volume of emission trading, the number of projects for the project based transactions, as well as facts related to emission credit (amounts) transactions [5].

Table 1: *Volume of emission credit trading in the 1998 – 2004 period*

	Vignette volume by 2012		Number of transactions		Average volume of transaction
	1998-2004	2004	1998-2004	2004	1998-2004
Total amount of project based transactions:	293.611.881	64.870.588	360	44	848.589
1.Transactions under the Kyoto Protocole	151.890.882	61.394.093	126	67	1.234.885
2. Voluntary engagement	139.148.129	2.299.050	124	9	1.209.984
3. Retail market	1.493.870	98.445	108	6	14.093
Emission credit trading	7.218.183	2.088.408	765	97	9.436
Total value of carbon market transactions	300.830.064	66.958.996	1.125	141	267.405

4. THE CARBON MARKET PLAYERS

The Japanese private companies count as the largest buyers of emission credits on the carbon market. One reason is their sense of responsibility, but such a state also reflects their uncertainty as to the regulations that will be implemented in Japan and the way the process will be conducted [5]. The second biggest buyer in this market is the Dutch government, while the third is the Carbon Finance Business, trading through its funds. In the period from January 2003 till May 2004, these three groups were responsible for 88% of the total volume of trade [5].

The share of the US and Canadian buyers had a decreasing trend by 2004. The U.S.A. does not have federal regulations, although certain states are trying to limit greenhouse gases emissions, which results in their limited participation on the carbon market. Similarly, the Canadian trend decreased, but the decrease was mainly conditioned by the uncertainty as to the final form their national programme of emission credit trading will take [5].

In the early years, while the carbon market was still being created, the majority of project based transactions were conducted among industrialized countries. Since 2001, however, the situation has changed significantly and the share of the developing and transitional countries increased, from 38% in 2001 to 93% in 2004. The largest number of projects in the 2003 – 2004 period came from Asia, followed by Latin America, with the East European region occupying the third position. In this period Russia and Ukraine did not take part in the project based transactions. The smallest transaction scope was reported in Africa [5].

The European buyers dominated the market of projects realised on the basis of the Clean Development Mechanism (86% of overall realised transactions) in 2006. This year also makes a turnpoint since in the previous year the Japanese and the European buyers had equal shares in this market. The Japanese buyers were sensitive to the change of project prices and more cautious in negotiations. The European buyers were willing to pay a higher price for a certain CDM mechanism project. In 2006, 90% of purchasing transactions were performed by the private sector participants from Europe. Contrary to the CDM implemented projects, the projects implemented following the Joint Implementation Mechanism were domonated by the public sector buyers from the Netherlands, Denmark and Austria. Their share in the overall scope of effected transactions amounted to 92% in 2006, whereas in 2004 and 2005 it was around 80%. If the project based transactions were observed cummulatively, the European countries' share on this market amounts to 70%, whereas the share of Japan is around 30% [1].

As far as the foreign offer in the carbon market transactions is concerned, the dominant role belongs to China. In 2006 China achieved 61% of the total of transactions, observed from the position of sellers on the carbon market. In 2005 its share amounted to 73%. The second top position of sellers is occupied by India, with a share of 12%, which represents a rise of 3% compared to 2005. The largest sellers on the carbon market are the Asian countries, followed by the Latin American countries, dominated by Brasil. The overall share of Latin America amounts to 10% from CDM based transactions. The share of the African continent is 3% [1].

4. The carbon market players

The majority of project based transactions are based on the commodity model. The commodity model means that the carbon buyer purchases emission credits generated by the project, and the transaction is carried out as any other transaction, of any good or services. Only a few transactions were conducted under an investment model, by which the buyer invests the shares or a debt into a certain project and gets emission credits as part of revenues realized on the basis of the investment [5].

The implementation of an appropriate model is important for the very financial structure of the project. If in a purchase a commodity model is used, the buyers pay for the carbon upon delivery and thus decrease the exposure to risks borne by the project itself. These project demand innitial financing. The sales of emission credits are effected in hard currency and their buyers' credit rating is always high which enhances the confidence of a financier and allows for the project capital to be increased through loans [5].

In the 1996 – 2001 period one fourth of contracts were made as purchasing options, which allowed for the purchase of emission credits in a certain future period at a previously stipulated price. Upon adoption of the Marakesh Accord, the purchase is effected in the form of forward contracts. On closing such contracts, the buyer gets a number of future vignettes expected to result from the project [5].

The actual form of a certain contract arrangement between the parties will depend on how different types of risk will be allocated between the seller and the buyer. The risks that may occur in such transactions are the risk implied by the project itself (that the project will not give expected results and will not achieve the expected reduction of emissions), the risk of the country, and the risk related to the Kyoto Protocole (that the project will not be registered under its conditions). The risks are allocated between the buyer and the seller using a variety of contractual features, such as monitoring plans, guarantees, penalties etc. [5].

5. Project based transactions structure

Price is only one of the features of the contracts to be closed, and, due to the lack of standardization in contract closing matters, an adequate comparison among prices of different transactions is not possible to perform. If the contract stipulates that a larger portion of contracted amount shiuld be paid in advance, then the nominal price of carbon-dioxide per ton will be lower. If the payment is effected immediately upon the delivery of emission credits, in determining the amount of payment the appropriate discount factor must be taken account of, and in such a case the buyer is more exposed to the risk borne by the project itself [5].

In a majority of cases the prices are not publicised, and the manner of reporting[5] among buyers is not uniform. A largest number of companies in the role of the buyer are obliged to report the contracted price, whereas the private individual buyers are not bound by the same obligation [5]. In some countries, e.g., the U.S.A. and Great Britain, there is an obligation for the companies to report on the expenses on environment protection, on obligations and on future risks.

Such a type of reporting aims to inform the investor on the nature and type of effort the company takes when making decisions on environmental care [4].

In transactions generating emission reductions and in accordance with the Kyoto Protocole, we make out two classes of transactions [5]:

Transactions by which the buyer takes on the risk of "registration", i.e., the buyer purchases the Verified Emission Reductions (VER[6]), and will continue to purchase them although the project is not registered according to CDM or JI;
Transactions by which the seller takes on the largest portion of "registration" risk, the buyer purchases CER or ERU and can waive the contract under certain conditions, is the project fails to register.

The transactions conducted within either category may differ greatly. Transactions may be structured in a way that payments will cease if the emission reductions fail to register as CER or ERU, while other transactions may provide that the seller be liable to ensure an adequate replacement of emission credits at a prevailing market price unless the project ensures the CER or ERU. The price of the transaction depends on the concrete goods traded, therefore the price for projects bearing emission credits that do not conform to the Kyoto Protocole may vary from $0.37 to $3.00 per ton of carbon-dioxide. In case of the transactions conforming to the Kyoto Protocole, if the buyer takes on the risk of "registration", the price of VER amounts to $3.00 to $4.25. in case the seller takes the "registration" risk, the price is slightly higher and ranges between $3.00 to $6.37 [5].

6.1. Price features

The better the guarantees the seller can grant in terms of obtaining emission credits, the higher the transaction price. Besides guarantees, there are other features determining the transaction price. Among the key determinants collected from the players on the carbon market Lecocq quotes the following [5]:

- The project sponsor's credit rating and experience, as well as the reliability of the project itself;
- The confidence in the quality of carbon resources management and consequently the delivery of emission credits during the life cycle of the project;
- The contract structure;
- The emission reduction vignettes (only a few are capable of meeting the demands of the protocole);
- The verification and the potential certification costs;
- The host country's support and willingness to cooperate;
- The additional ecologic and social benefits.

The majority of academic models that define the factors determining the carbon-dioxide price suggest that the price of energy and time factors do have an impact upon the forming of the emission credit prices. According to the research conducted by Mansanet-Bataller et al., the most important factors affecting the change in the prices of carbon-dioxide are the changes in the prices of natural gas and the Brent oil. It was also found that extremely hot or extremely cold weather in Germany influence the carbon-dioxide price in a positive way. The change in the price of the most intensive source of carbon-dioxide – coal – was found not to affect the change in the price of carbon-dioxide itself. The study findings confirmed the existence of a certain rationality of the carbon market, reflected in that the daily value of forward contracts mirrors the micro-level conditions [7].

7. Emission credit market

Emission permits can be traded on four markets. These are: the UK Trading Scheme, the EU Emissions Trading Scheme, the Chicago Climate Exchange, as well as the New South Wales GHG Reduction Scheme [5].

7.1. The UK Emissions Trading Scheme

Great Britain introduced the emissions trading scheme before the European Union. The scheme was launched in March 2002. Participation in this market was on voluntary basis [1]. The government negotiated with companies on the issue of the Agreements related to climate changes (CCA), and the companies agreed to set ener-

[5] About 85% of reporting on the corporate social responsibility is related to climatic changes. The majority of reports present information on the amount of GH gases emission resulting directly from the company's operations, while only a small number reports on indirect amount of GH gases emissions. The sources of indirect GHG emissions used in reporting are the amount of electricity purchase, transport or emission resulting from the use of products or services a company offers. Many companies report on the basis of a wide range of activities conducted for the purposes of reducing the emission of gases that cause global warming [2].

[6] Verified Emission Reductions (VER) – the unit or reduction of GHG emission verified by an independent auditor, but that has not passed the verification procedure to obtain CER or ERU according to the Kyoto Protocole. The buyers take on the risk and pay the discount price for VER. One VER equals the amount of one metric ton of carbon-dioxide equivalent.

gy related objectives in the form of absolute amounts or percentage limitations, either related to the GHG emission or to these companies' energy consumption, in exchange for 80% exemption from taxation related to industrial or commercial energy consumption[7]. The type of the limitations agreed upon defines the market rules the company will have to observe as well as the period in which the governmant will grant the company the emission credits to trade [5]. The companies with CCA objectives used the UK Emissions trading scheme to buy emission credits or to sell the amounts of emission credits that are in excess in the company. The penalties enforced for disregarding the agreement were the deprivation of tax exemptions as well as the allowed level of pollutant gases emissions. This market allowed only the transactions with the national credits [1]. In the years when the companies had to honour their obligations, a significantly larger volume of trading was observed. March 2007 was one of the deadlines the companies had to observe in relation with a defined level of GHG emissions. In the period preceeding this deadline, from December 2006 till february 2007, the majority of transactions were effected [1].

7.2. The European Union Emission Trading Scheme

The European Union Emissions Trading Scheme (EU ETS) commenced on 1st January, 2005 and is the framework of the European Union policy towards implementation and the Kyoto Protocole observing. In the first stage of its existence, from 1st January, 2005 until 31st December, 2007, the EU ETS regulated 40% of the total carbon-dioxide emissions in Europe, and the amount of emission was limited to 6,600MtCO_2 during the period. In terms of allocation of emission credits of the European Union (EUA) across the states-participants on this market, it is clear that within the first stage Germany obtained almost a quarter of the total number of credits for the first stage, while Great Britain, Italy and Poland each obtained approximately 10%. If the allocation of emission credits is observed across the industry branches, the energy sector obtained almost 55% of credits, the mining and metal industries obtained 12% each, while the petroleum and gas industry obtained around 10% each [1].

In April 2004, the European Parliament passed a directive relating the EU ETS with the Kyoto Protocole, in that the introduction of ERU and CER credits into the EU ETS market became possible under certain conditions [5].

In the second year of its presence on the European Emissions Trading Scheme the overall scope of credit trading reached 1.1 million of emission credits, or €18.7 billion which is three times as much compared to the first year in which the overall value of trading amounted to €6 billion. The increase was achieved in spite of the 10% fall in prices compared to the first year, i.e., from €19 to €17. Within the first stage of emission credit trading the number of conducted transactions increased on monthly basis. With the acceptance of new member-states into the European Union, the number and the type of players on this market also increased [1].

The operations on the EU ETS market in the first stage of trading helped draw significant conclusions that will contribute to the development of trading in the subsequent stage. One of the most significant contributions of this market is that the market players became aware of the limitations as regards carbon, contrary to the period prior to the formation of this market, when their emissions of carbon were unlimited. Various studies confirmed that these activities led to real reduction of carbon-dioxide emissions [1].

The impossibility of transferring the unexpired emission credits of the first stage into the second stage led to a collapse. For that reason, stage two allows for the unexpired emission credits transfer or "banking". As the limitations in the field of carbon-dioxide emission become ever stricter from stage to stage, the carbon emission reduction becomes a permanent part of the companies strategic management, playing an ever more important role in long-term investments decision-making [1].

7.3. The Chicago Climate Exchange (CCX)

The Chicago Climate Exchange (CCX) is a cap-and-trade system created as a group of North-American companies (13 in number) formed a voluntary organization to reduce the emissions of pollutant gases that cause global warming [5]. Among the founders of this exchange were the companies such as American Electric Power, DuPont, Motorola Inc., as well as the City of Chicago [10]. These companies can fulfill their obligation to reduce GHG emissions through internal reductions, through the purchase of emission credits from other companies that are also limited as regards the levels of pollutant gases emissions, or through the purchase of emission credits from projects that reduce the emission while meeting certain conditions [5]. The companies – founders of the Chicago Climate Exchange were the first in the world to accept a legal

[7] **Climate Change Levy**

obligation concerning all six pollutant gases causing global warming. This exchange is the only system of emission credit trading for all GHGs and also the only system of emission credit trading in North America. Today, the Chicago Climate Exchange has almost 300 members from all industry fields [10].

The transactions effected at the Chicago Climate Exchange in 2006 reached the scope of 10.3MtCO_2 which is seven times as much compared to 2005. The value of the transactions effected amounted to €30 million [1].

7.4. The New South Wales GHG Abatement Scheme

New South Wales, Australia, has a greenhouse gas abatement programme[8] the purpose of which is to regulate the energy sector and be operative until 2012. Both small and large New South Wales consumers of electricity are, as of 1st January, 2005, obliged to achieve the statutory defined target pollutant gas emissions causing global warming, the emissions incited by the production and consumption of elestrical energy. The energy sector companies that have the obligation to reduce emissions can achieve their objectives by purchasing a certificate generated through conducting activities such as a low level of emission during the electrical energy production process or the improved generator efficiency, activities resulting into the reduction of electrical energy consumption or implementation of sequestration. The programme allows for the existence of the Renewable Energy Certificate. No other forms of credits, such as credits generated through project based transactions are allowed on this market for the time being [1]. If a company exceeds the granted limit of pollutant gases emission, it is subject to penalties [5].

After the European Emission Trading Scheme, the New South Wales Scheme counts as the second largest market with the trading scope of around 20.2 million certificates during 2006, the total value of which amounted to €173 million. The size of the2006 market shows a rise compared to the size of 2005 market. The trading scope increased by 3.3 times compared to 2005, whereas the total value of the transactions effected increased by 3.8 times compared to the previous year. There is also an increased interest in the voluntary sertificate market of New South Wales [1].

8. Carbon market development

Carbon is something more than just a new type of goods to be traded in; it is becoming a specific class of assets [6]. Only a few participants in the period until 2006 sold their emission credits, which led to discrepancies between the offer and the demand and to the forming of higher prices, instead of the market players having adopted the sales strategy in terms of a more regular sales of credits. The results of the study published in the European Power News journal show that it is very likely that 63% of the emission credit reserve a certain company owns will be sold, while the additional 33% will probably be sold, whereas only 4% of emission credits will certainly be retained within in the company [11]. The UN forecasts that in 2012, 2.5 billion emission credits will be offered on the market. An investment race is predicted for the period to come, for the purpose of investing into projects in the early stage of execution, showing a strong likelihood of obtaining a formal approval from the United Nations Framework Convention on Climate Change (UNCCC). At the moment the approval process is very slow, due to the shortage of qualified evaluators. This is the cause of the current pressure upon the price [6].

There is a positive effect of the selection of credits created using CDM mechanisms by the participants voluntarily involved in the carbon market. The buyer who is under obligation to observe a defined target value of the pollutant gas emissions, finds CER to be just CER, no more. The participants who are voluntarily involved in the market have a different view of emission credits. The wind energy based project are in greatest demand, and also the absorption of metane in the Brasilian agricultural communities, by which electricity and heating are provided for distant communities. The social aspect of the project is a significant characteristic valued by the participants voluntarily involved in the market. Therefore the highest quality projects can be expected to bring in a substantial premium, while the credits earned by less desirable projects will be more difficult to sell [6].

There is an increasing interest in the carbon market shown by institutional investors, not only in terms of potential rise in the emission credit price, but also in terms of a diversification of their portfolios. The carbon market displays a low amount of correlation with other segments of financial market in the short-term and the long-term periods. A low level of correlation between carbon and corporative debtor securities, shares and goods is observed [5]. Institutional investors, especially pension funds, are in some countries obliged to report on the social responsibility and environment protection, and show how much they

8 NSW Greenhouse Abatement Scheme (GGAS)

have taken these into consideration when investing their capital. The legal obligations of institutional investors in some countries force these investors to pay special attention to climate changes in their analyses as to which companies they will invest into [4].

In the early days the market makers regarded carbon as definite goods, however, as market develops, their attitudes change. Fundamentally, we can say there is no limited amount of carbon.the most important fact is that this market is established by the governments of various countries and it is not subject to classic laws of offer and demand in some goods. All this shows that carbon becomes a specific type of assets [6].

Due to the failure of credit market in the previous year, hedge funds invested substantial capital into emission credits. A significant increase in demand is expected, which led to the emergence of instruments to manage risk on the carbon market. One instrument is the structured product (CDO) which enables the investors to select a risk level they are willing to accept. Insurance companies, too, have begun to offer insurance policies in case the emission credit delivery fails to be effected [3].

9. Conclusion

Ecology in its broadest sense and climate changes in their narrower sense count among the areas of socially responsible companies' activities. Carbon market is a relatively new market, artificially created to help fighting climate changes. Companies can enter this market either of of their own will or in accordance with the regulations issued by the Kyoto Protocole or one of the trading schemes. Emission credits can be obtained either from the government of the country in which a company is located or through the project execution, or by purchasing them on the market. Due to the increasing growth of this market and its passage into the second stage in which certain target values of pollutant gases emission (EU ETS) must be observed, companies will be obliged to take into consideration the projects to be executed either through the Joint Implementation Mechanism or through the Clean Development Mechanism in their long-term investment decision making. In order that the projects and emission credits they realize earn a substantial premium, it is necessary that they have certain social implications, which are in accordance with the concept of socially responsible organization. In making decisions on investing into certain companies the institutional investors are obliged to report on how much they take into consideration these companies' care about environmental protection. Similarly, institutional investors become the players in this market for the purpose of diversification of their portfolios. Carbon market is developing daily. A further growth of the market is reflected in the introduction of various financial instruments to protect the carbon market players from risk.

Companies which have the obligation of limiting their carbon-dioxide emissions have to allocate substantial capital to honour that obligation. All these affects their investment decisions. Such companies are not only burdened by the expences related to regulating the pollutant gases emissions; their socially responsible conduct may attract investors, a new capital, and may result in a more favourable financing they achieve. Such conduct does impose an obligation, however, carbon market offers numerous opportunities for more favourable investments, earning substantial premiums in emission credit trading. Above all, the development of this market contributes to environmental protection and the companies that are involved in it announce their resolution to behave in a socially responsible manner.

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The effects of fiscal policy on development of companies

UDC 005.336.4

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The research within this work is aimed at determining the effects of allocating larger funds for university education upon the development of companies. The corporate development can be based on the rise in the number of employees who are studying for the doctoral degree and attend the courses in permanent training and education. The analysis of the transmission mechanism of alternative measures of fiscal policy used to increase the funds allocated for the university education will help establish whether the larger funds allocated for the university education can be justified.

1. Introduction

The starting point of the work is the belief that the larger funds allocated for the purpose of financing university education will have a positive effect upon the development of companies. Here we will analyse the effects of alternative measures of fiscal policy the aim of which is the increase in funds to finance university education in Serbia. From the point of view of corporate competitiveness, special importance is attached to the realisation of doctoral studies and permanent training programmes. The existing machanism of allocation defined in the Decree (the Government of the Republic of Serbia, 2005) does not recognize nor does it ensure the allocation of funds for financing either doctoral studies or permanent training programmes.

The attitudes on the need for neutral allocative role of fiscal policy can be given emphasis to on an academical level, however, in practice, the measures of fiscal policy directly influence the private sector (Rothbard, 1981). If the need to increase the funds for the purposes of financing university education be adopted as a goal, it will be necessary to determine whether and to which extent it is possible to allocate additional funds in the budget (Johnstone, 2003).

One potential channel for increasing funds for university education is adopting the measures that will stimulate companies to increase the allocation of funds for university education. The relationship between the university education and economy should function on the feed-back principle:

1. a quality and efficient university education enhances the development and improvement of the competitiveness of economy
2. by employing university graduates economy gives a feed-back information on the quality of the existing study curricula, or on the necessity that these curricula should be adapted to the changing demands of economy.

2. Effects of increase of funds for university education upon the development of companies

The field of reasearch into the university education financing will focus upon the financing of doctoral studies and the permanent training programmes, since the current academic programmes display the following characteristics:

1. Doctoral studies

The importance of doctoral studies is reflected in the very contents of the teaching process, which consists of the educational and the scientific-reasearch work. Hence having completed the doctoral studies, the students are competent to conduct reasearch independently. Apart from universities and institutes, the reasearch can be conducted in companies as well. The reasearch work of the employees may be a significant factor of improving competitiveness and development of companies.

2. Permanent training programmes

Permanent training programmes play a very important role in improving and modernizing the knowledge of the employees who completed their education processes and have since never been in contact with new theoretic and empiric achievements.

The structure of tuition at the doctoral studies and the permanent training programmes forms the basis for a sustainable economic growth over a long-term period. The competitiveness of companies whose employees follow these programmes grows as a result of developing innovation (doctoral studies) and a continuous improvement of knowledge and skills (permanent training).

In numerous studies a qualitative reasearch was conducted into a cause-effect ratio between the effect of an increased level of education upon qualification and the resulting rise in the individual's income on the micro plane. The reason for this attitude is based on equalizing investments into people to investments into capital. Hence the increased investments result in increased productivity (Becker, 1975). It is necessary, however, to determine to which extent the increase in the level of education affects the rise in the individual's income, i.e., whether the increase in the education level has a crucial impact upon the rise of the individual's income.

The alpha factor marks the correlation of additional education share in the rise of the income an individual earns (Glennester, 1998). In this work we present a hypothesis that the value of the alpha factor = 0.6 (that is, that 60 per cent of additional income is the result of additional education, whereas the remaining 40 per cent of additional income is earned on the basis of natural capacities). Therefore, the prevailing role in the individual's income increase is directly related to the increase in the level of education.

Although the reaserch so far can be conditionally approved of, due to the arbitrary calcualted alpha factor (and the variables affecting the alpha factor), the increase in education clearly has a dominant impact upon generating additional income.

Natural capacity, albeit an important factor of production, only forms the basis necessary for the production process to be performed. An important aspect is also the awareness of a manifest fact that the offer of natural capacities is limited. Unless these natural capacities are upgraded by modern knowledge and skills, the productivity will obviously decrease. On the basis of the attitudes presented we can draw a conclusion that an optimal effect upon the economic development can be achieved only if conditions are created for a continuous improvement of the employees' knowledge and skills.

3. Possible solutions to the issue of increasing funds for university education

Increasing funds for financing doctoral studies and permanent training programmes is possible to achieve by either increasing public expenditures or determining tax reliefs for the companies.

On the academic level, the decision of the state on the increase in public expenditures for the purpose of financing the doctoral studies and the permanent training programmes has a negative impact upon the budgetary balance, decreases the level of national savings, consequently putting pressure towards increasing a balanced interest rate and decreasing investments. The accumulation of budgetary deficits in a long-term period increases the level of public debt, shifting the burden of too big present public expenditures to future generations. On the other hand, in practice, the increase in public expenditures for the abovementioned purposes would not have any significant negative effects upon the budgetary balance over a short-term period.

The analysis of potential negative effects of the increase in public expenditures upon the macroeconomic stability in a short-term period has to be supplemented by the long-term effects. Namely, in case the gross national product increases over a long-term period as a consequence of larger investment into education, then a resulting increase in public revenues will make it possible to service the accumulated public debt.

The transmission channel of increasing public expenditures for university education is specific (Stiglitz, 2004), since the period in which the effects will be visible cannot be foreseen at the moment the measures are adopted. The basic obstacle for predicting the effects is that it is not possible to establish the average duration and success of studies, especially not finding employment upon graduation. The positive effects of the increase in public expenditures on macroeconomic stability can therefore be expected only upon the completion of the study cycle of the first generations which is financed according to a new system and upon their employment.

The changes in taxation can influence the changes in the behaviour of the private sector (Feldstein, 2008). The majority of Serbian companies are not yet sufficiently aware of the need to invest into the additional knowledge of their employees, therefore it is necessary that these companies be in a short-time period stimulated by tax reliefs, so that they can allocate part of their funds into improving their employees' knowledge. The desired effect, the increase in the funds for the purpose of financing university education, can be achieved by fiscal policy measures by which the companies will be encouraged to finance the studies and attendance of given academic programmes for their employees.

A most appropriate form of taxation for enforcing the proposed measures is the capital gains tax. It is necessary that the limit (a given amount in percentage) be established to which the company expenditure for financing doctoral studies and permanent training programmes would be exempt from the tax base of the corporate capital gains tax (tax deductions).

It is necessary that the allocation mechanism of public expenditures be compared to the allocation mechanism of the tax concessions. On an academic level, it is possible to identify the arguments in favour of either approach, however, in the case observed, the decrease in taxation would create a significant external effect. The transfer of resources allocation from the public into the private sector would allow for the creation of a feedback between the private sector and the university education by establishing the study curricula/programmes that offer the knowledge and skills required and applicable in the corporate evelopment and business.

The proposed solution has four advantages compared to that of the increase in the public expenditures:

1. in case the public expenditures are increased, the effect upon the budget deficit is direct, since the overall increase in the public expenditures increases the budgetary deficit, whereas in the case of tax deductions (decrease in public revenues) the effect upon the budgetary deficit is indirect.
2. the increase in the public expenditures for the purpose of financing university education is strongly irreversible, since in unfavourable market conditions it is very difficult to enforce the decrease in public expenditures (such measures would cause the dissatisfaction of the employees, the blockade of the already launched projects ...).
3. the approval of tax incentives is reversible, since certain forms of tax incentives (among which the solution proposed) are of temporary character - they last only until the market has improved the resources allocation.
4. part of the resources allocation is transferred from the public into the private sector thus promoting the competition among universities and colleges, which has a positive effect upon improving the quality of study programmes.

4. Conclusion

Investments into university education results into the increase of the human capital, which enhances the competitiveness of the economy. The challenges to the development of small economies will be based on improving the existing resources management, development of innovation and continual development of knowledge. Therefore the prerogative of any society that tends to develop and improve the standard of living is to increase the funds allocated for financing university education on the macro level.

To achieve the set objective - a positive effect of fiscal policy measures upon the corporate development - it is necessary to adopt incentive measures of taxation policy which are a superior allocation mechanism compared to the increase in public expenditures.

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F. Malerba, F. S. Brusoni, ed., Perspectives on Innovation, Cambridge University Press, 2007

The book is a collection of works of eminent and widely known scientists in the field of technology and innovation management, as well as in industrial engineering. Richard Nelson, Jan Fagerberg, Timothy Bresnahan, Bengt-Ake Lundvall, Giovanni Dosi, Stan Metcalfe – these are only some of the authors that dedicated their work to eight basic areas: innovation and economic growth, microdynamics of innovation processes, innovation and industrial dynamics, innovation and institutions, the relationship among innovation, organization and business strategy, innovation and entrepreneurship, innovation and the university system, innovation and public policy. Already in the introduction of the book the editors point out that the discussion on innovation will remain an issue of the hour and be in the focus of academics' and practitioners' attention in the future. New developments and results, as well as answers to numerous open-ended questions are to be expected.

The selection among the titles of some issues and the book structure are a contribution in themselves, dince upon a many a decade of research from various aspects and using a number of approaches, there arises the issue of the basic theoretical framework of this field. The authors deal with the innovation and the economic growth in the first section of the book, and this is simultaneously one of the earliest fields of study, primarily in the economic science. We have long been aware that technology is the main source of economic growth. The contribution of Marx ans Schumpeter serves as the foundations in the study of this relationship, after which comes a period of no significant results, until the times when this topic becomes a subject of study of Christopher Freeman, Nathan Rosenberg, Richard Nelson, Moses Abramovitz and others, whose research findings make a basis and an incentive for a new swing in this field. Thus the foundations were built for a new theory of growth that contributed to obtaining results in the ensuing economic growth. However, numerous questions are still unanswered and they attract the attention of the scientists, such as a crucial question: which are the ways the innovation conditions the economic growth and developmet; what causes the unequal development that is reflected in the non-uniform income and productivity recorded by some countries in comparison to the others as well as which analytical tools are necessary to understand economic growth. Attention should certainly be paid to a set of questions related to a selection of an adequate level of research – macro, mezzo, or micro – as related to the study of the influence of technology and innovation upon the economic growth and development. Which is the way to achieve thoroughness in the study and does the modern theory provide a satisfactory answer? In his contribution to this book Bart Vespargen systemically puts and monitors the development of the various growth theories in the last fifty years, stressing the basic antagonism of the neo-classic and evolutionary theories . The neoclassic growth theory is usually related to the contribution of Robert Solow, presented in his article published 1956, at the time when other works with similar concepts appeared, which basically promote the basic message of neo-classical approach that says that economy is viewed as a set of a large number of selfish actors who are "perfectly informed" and who trade their goods and services in order that they should maximize their individual profits. Solow points out that it is in such circimastances that balance, stable and unchanged conditions are achieved in which work productivity remains unchanged as well. Although the accumulation of capital – the substitution of work for the capital – may lead to a short-term growth in producivity, it does not pay in the long run. This theory concludes that every growth in productivity is a result of the impact of exogenic factors, the development of science and technology, for example. In terms of economic policy a conclusion is drawn that a long-term economic growth with full employment can be realised as long as the market forces are allowed to act freely. The central hypothesis of post-Keynsianism that the sustainable economic growth demands an extensive state intervention has been at least temporarily neglected. As it was difficult to understand the explanation that the long-term economic growth is based on non-economic factors and since the practice disproved the hypothesis that given the same conditions everybody will make a long-term progress to an equal extent, a new theory of growth emerged during the 1980s and 1990s, strongly relying on formal mathematical methods. The central hypothesis of this new theory says that individual investment into new technologies brings positive effects, not only as regards the investor himself, but also because it results into spillovers, hence the effects of the falling revenues to investments, which is the key hypothesis of Solow's model, will assume a directly opposite direction. Contrary to the stationary state of balance, the new theories introduced the model of "moving balance" in which the growth is achieved on the basis of encouraging investments into new technology (of knowledge) and the spill-overs from these investments.

The analysis of innovation processes has long been focal to the researchers, there are arguments on the importance of the model of the "pushing technology" and the "dominant demand" model, as well as of the linear and chain models. Linking innovation to industrial dynamics is discussed as a separate issue and the importance of this field in the last decades is stressed. One topic of discussions is also the dynamics of certain branches development in relation to the analysis of life cycles and to the extent of innovation in the new, compared to the already established firms. As to the impact of innovations upon the firm's organization and strategy, the authors point out the increasing importance of this link in establishing a new theory and practice of modern firms' business. Special attention is paid to the issues of cooperation and joint strategies of firms that work rogether in order to use the joint resources, competences and capabilities to achieve competitive advantage. Entrepereneurship is the environment for successful innovations so an entire chapter is dedicated to the analysis of entrepereneurship which is approached in different technology, sector, local and national contexts. A very important field of research is the analysis of the particular role of universities in the innovation processes, therefore this issue is thoroughly analysed in the light of the fundamental contribution of the universities by developing scientific knowledge, but also by the different roles the universities play in diffusion and commercialization of new knowldge. Universities are expected to increasingly undertake enterpreneural roles in launching innovations, the so-called "spin-offs".

Entrepereneurship based on the contributions of the university is discussed as a separate field, where there are also analysed the performances that can serve to measure the achievement and contribution of the university. The performances are to be clearly defined, the question is whether they are scientific publications, patents, innovation launching, trained academics reasearchers (number), or practitioners (who are capable of implementing new technologies). The key issue that is analysed refers to the type of data, the indicators and the methods that can be used in measuring the output of university research. The contribution of knowledge and the knowledge based economy in the public policy shaping is the focus of a separate part of the book that deals with the macro aspects of the public policy in the light of the new role of innovation and technology in economic growth and development. The conclusions are drawn that openness, interdisciplinary approach, a dynamic character and cultivation of difference in approaches are the key features of the innovation and growth fields.

B. Laperche, D. Uzundis, N.V. Tunzelmann, ed., The Genesis of Innovation – Systemic Linkages Between Knowledge and the Market, Edward Elgar, 2008

Technologic innovation and entrepereneurship are the bases of the economy and society of the modern times, and the development of science and knowledge are the basic incentives and the strenghts to achieve modern growth. A holistic, systemic approach to innovation and development points to a set of relevant factors, relations and influences that help produce new technologies of products, services and processes, new markets, new organizational and managerial practices. This general, holistic approach is presented in this book in three genaral parts. The first is about the key links in the emergence and development of innovation and about the knowledge factor within this process; the second describes the innovation networks in the basis of which is a military complex, while the third is concerned with the systemic linkage between knowledge and the market. Sixteen authors present their research conducted at universities, institutes, research centres in France, Spain, Switzerland, Australia, the U.S.A., Greece and The United Kingdom. The book "The Genezis of Innovation" shows that the relations and linkages established within the networks of various actors are of essential importance for the success of innovation and of achieving social development. The conclusion of the analysis is that special actors in this network, such as the state and the companies, have their specific and respective responsibilities and roles, however, they simultaneously accomplish important tasks in the processes of knowledge and technology diffusion, coordination and standardization. Institutional and entrepreneural networks play a fundamental role related to employers-entrepreneurs and employees in order that all the complex goals of modern innovative business should be achieved. A permanent innovative corporate strategy needs a continuous inflow of scientific and technologic inputs. The selection of the location for the firm is one of the preconditions of a succesfull strengthening of its innovative capacities, the findings have shown. Location is very important if the firm is to access new markets and complex networks that include other relevant organizations, research centres and other institutions. Creating permanent, systemic relations within the networks becomes the "conditio sine qua non", due to the permanent pressure to improve the products, services, and processes, which creates the conditions of a continuous competition on the market. The costs and risks related to the building up of competences, knowledge acquisition and the development of new technologies rise, and endless innovations and change are becoming the reality of the modern times and the only path to achieving competitive advantage. It is in such circumstances that the issue of collaboration within a network becomes essential and in this book it is paid special attention to, especially in the discussion of the issue of the benefit from outsourcing and independent units, clusters, corporate strategies, decentralisation, external benefits and external investments, relations among the firms of different sizes and innovations, transaction costs, direct foreign investments etc.

The issue of appropriateness of the research is dealt with from the point of view of the typology of reasearch activities in the context of the knowledge based economy. The state system for research and development were subject to fundamental change after the 1980s. By the adoption of the Lisboa strategy, European countries adopted the principles governing the knowledge based economy and society. The change observed in the domain of research and development are primarily a decisive orientation towards the needs of the economy and society, as well as towards the protection of the research findings, and a better link with the private sector. An increasing level of networking when conducting innovative activities calls for ever more subtle approaches in the intellectual property protection. Marc Isabelle analyses the issue of the relationship between the protection and an open access to knowledge as contrasting strategies. The research have shown that a greater stress on the intellectual property protection in the public research organizations results in conflicts in the scientific communication among the organizations themselves as well as within laboratories. Alfredo Ilardi and Blandine Leperche investigate into the possibility of establishing of an integrated patent system of Europe. They point out that the efforts in the harmonization of the domain of intellectual property protection have been present in Europe for more than a century and that they fit into the globalization models. The main obstacles in achieving the goals of harmonization are said to be related to the conflict of interests.

One interesting issue that is analysed is the role of the political and economic power in the innovation processes. Particular attention is paid to the research into the conditions of free market economy in encouraging innovative processes. The research findings clearly state that military programmes and military industry are one of key sources of innovation that marked the development of the civil society economy throughout the post-war period. Their role is proved to be more important than the contribution of large corporations or the regulatory influence of the state.

Starting from the importance and the central role that the research and development within military sector has in generating radical innovations in developed economies, the second part of the book is entirely devoted to the analysis and function of innovation systems in the military and civil sectors. Claude Serfati analyses the achievent of innovations in the military sector that were implemented in the civil sector, and this direction of influence is called the "spin-off". The conclusion is drawn that the number of transfers from one sector to another is almost equal. The situation changes after the 1980s, the transfer of new technologies from the commercial into the military sector is ever more important, and this is marked as a "spin-in". This opposite direction of the innovation spill-over resulted from the fact that the countries with large military budgets were experiencing the falls in their competitive power, while the countries with modest military budgets became more competitive. The representatives of the first group were the U.S.A., France, and the United Kingdom, whereas the other group included Germany, Japan, Sweden. The commercial technologies have improved to such a great extent that they began to be implemented for the military purposes. Their low price and high fidelity are adapted to the decreasing allocations for the military budgets to such a great extent that these technologies became extremely important. A new concept that is developed is the "dual implementation of technology" which is different from the "technological spill-off" from one sector into another. The dual implementation of technology that also means the development and implementation of technology for both military and space purposes is increasingly thought about, together with the possibilities that they be used in the civil sector. Elena Castro Martinez et al. analyse a growing orientation towards commercialisation in the state owned military laboratories. The establishment of the Defence Diversification Agency in the United Kingdom is linked with the commercialisation processes in military research and is part of the effort to reform the state research projects, primarily by introducing the principle of greater value for the money invested.

The third part od the book deals with the systemic linkages and relations on the local level, which are part of a long chain connecting knowledge and the market. Dimitri Uzunidis explores the innovative environment that, according to him, is based on the interactivity among firms, institutions and human resources. There is a separate part in which Boutillier, Laperche and Uzunidis study entrepreneurship as a specific type of innovation. Their research deal with why Schumpeter's approach to entrepreneurship can no longer be considered prevailing, pointing out that innovative environment and concrete geographical, historical and other sets of circumstances are important in accomplishing the entrepreneurial function. The potential of resources that are at entrepreneur's disposal is no longer a stable precondition of his success, but the entrepreneurial success depends on the networks the entrepreneur creates. The author calls this set of different factors the "organic entrepreneurial square" where time limits and territorial dependance stand out as key dimensions of the enterpreneurial function.

Paul Sommers deals with the issue of clusters and other forms of linkage among firms. He quotes a classical model of clusters set up by Michael Porter, where the focus lies in the competition going on among the firms within a certain industry in which they all struggle to meet the customers' needs, as well as among the suppliers of these firms, who are linked by the locations they are at. Other approaches, however, stress the importance of collaboration among the firms and the key institutions belonging to a regional cluster. Both these approaches stress that the firms and institutions in a cluster are well aware of their interdependance and that they use competitive or collaborative mechanisms to achieve advantages of such dependance. Sommers concludes in that he offers the possibilities of varied strategic alternatives for the clusters based on research activities. In such cases there is a high level of dependance on powerful state or regional organizations for development so as to achieve both short-term and long-term goals.

"The Genesis of Innovation" presents valuable research and conclusions, the most significant among which is the necessity that a holistic, systemic approach to innovation is necessary, since the innovation systems at all levels are in fact open-ended systems whose strength lies in the thickness of internal relations and links, but also in their capabilities of changing and adapting in accordance with the external principles of development.

Dr Maja Levi-Jakšić

Manual for Authors

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

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[2]Faculty of Economics in Belgrade

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

1. INTRODUCTION

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

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

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

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

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

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

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

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

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

3. SUBTITLE (example: COMPARATIVE ANALYSES)

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

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

4. CONCLUSION

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

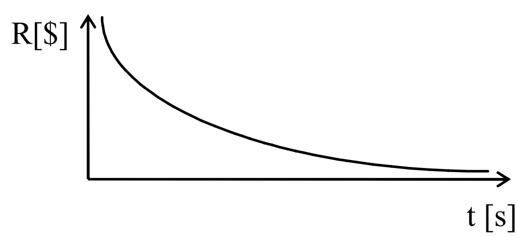

Figure 1. Graphic presentation of results

REFERENCES

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

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

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