

Organizational knowledge management conception from the perception of employees

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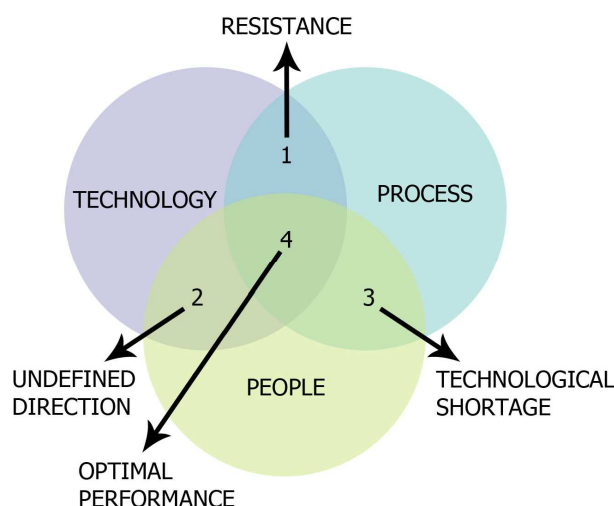
Abstract - This paper represents pilot research oriented to theoretical and empirical approach to knowledge management in small and medium-sized enterprises. The aim of the research was to analyze the concept of knowledge management and organization of knowledge management according to activity and legal status of organization. The sample included 90 examinees from the population of operative management and employees of Helath Centre (N=30), Preschool Teacher Training College (N=30) and Wood Processing Plant in Sremska Mitrovica (N=30). Questionnaire with 5 items with three level scale of Lijbert's type was applied as measuring instrument. Descriptive statistical procedures and Kruskal-Wallis test for comparison of the results of items for three organizations set statistically significant difference at significance level of 0,01. The analysis of statistically significant result with Mann Whitney U test showed that significant difference between three organizations has strong correlation and values of $r = 0,80$. The analysis of the results shows that concept of knowledge management from the perception of employees who do not belong to top and middle management of organization, is still at the beginning developmental level. Therefore, business intelligence and business strategy of development of observed organizations, especially of Wood Processing Plant have not (yet) achieved competitive organizational market value as the consequence of such structure of knowledge management system.

Key words - management, knowledge, operative management, organization

I. INTRODUCTION

Proper action at the right moment, with appropriate resources, at right place represents evolutionary paradigm of strategy of development of human activities. Conceptions of knowledge management, their implementation and monitoring in contemporary modern organization represent key factors of achievement and maintaining of its competitive advantage. According to Albrecht, the origin of the concept of knowledge management can be found in Hertz's conception 'Knowledge Managements' (Hertz,1998). Former labels of similar intention (according to Albrecht, 1994) can be found in Zand's *Managing the Knowledge Organization* (Zand,1969) and Drucker's *The Age of Discontinuity* (Drucker, 1969). Unique and only possible platform of organization and knowledge management implies cycle which represents unity of three components: people, processes and technology (Macintosh,1995) from the very beginnings of this concept in the previous century

until the starting level of active management of knowledge resource in organizations. Focus at processes and technology would be met with resistance of human factor and holders of knowledge management would be excluded. On the other hand, neglectation of the processes would result with the lack of management direction, whereas the lack of technological operations would disable efficient process management. (Picture 1).



Picture 1. Knowledge management dimensions (Endres,2000)

Such context implies that strategy of knowledge management development in XXI century should include creation, capture, storing, sharing and application of knowledge in the way which would contribute to creation of additional value for organization. This vision of building of system of knowledge management enables organization to create and identify future priorities of key knowledge domains either in the form of implicit or explicit knowledge. Joining of two concepts - knowledge and management should express intention to organize the knowledge. However, there are numerous questions that should be answered: What kind of knowledge should be organized? What kind of knowledge could be structured and shared? Which knowledge system should be most efficiently implemented? How should organizational memory be used (Lehn, 2000) and how should reversible process of communication at all organizational structural levels be maintained? Research studies done by Fraunhofer Institute (Bullinger, 1998) and Delfi Group

TABLE 1. STRUCTURE OF THE SAMPLE OF EXAMINEES

Activity-organization	Operative management	SSE	Number	Employess	SSE	number	Σ
Health- Health Centre	Head nurse - technician	10	VI	Medical nurse-technician	IV	20	30
Education – Preschool Teacher Training College	head of administration, main clerk, librarian, board chairmen	10	VIII1 VII2 or VIII	Lectures, senior lecturer, professor	VII2 or VIII	20	30
Industry-Wood Processing Plant	Section head, section manager	10	VI or IV	Industrial section employee	IV or III	20	30
Σ		30				60	90

(Delfi,1997) showed that more than 50% of organizations recognized knowledge as an important factor of production at the end of XX century, and that more than 98% of organizations will invest in knowledge management at the beginning of XXI century. Some questions that occurred before, during and after economic crisis were: what would be the percent of investments, innovations in knowledge elements or knowledge clusters, has private sector become fully aware of the usefulness of knowledge management or the process of privatization in Serbia included only the change of the owner, does public sector implements newly-developed systems of knowledge management and in which pace? This pilot research will try to give answer to one segment of knowledge management by analysis of (only) one component of knowledge system which refers to the structure and forming of knowledge management system and organization of knowledge management according to activity and legal status of three organizations.

II. METHOD

The sample included 90 examinees (Table 1) from the population of operative management and employees of Health Centre in Sremska Mitrovica (N=30), Preschool Teacher Training College (N=30) and Wood Processing Plant in Sremska Mitrovica (N=30).

All subsamples included equal number of examinees, but examinees, section heads and employees did not have the same level of education. The techniques of questionnaire was used for gathering information on research problem. Questionnaire with 16 items with tree-level scale of Likert's type with set of alternatives which denote frequency: rarely, sometimes, and very often, was used as measuring instrument. Set of alternatives in form of three level scale: I do not know, department/sector, as a project/ in some other way, was offered for items number 1. and 2. The questions in the questionnaire referred to organization of knowledge management and they were formulated as follows:

1. In which way has knowledge management been organized in your organization?
2. Which section in your organization is responsible for knowledge management?
3. Are you willing to continuously gain new knowledge and to be submitted to professional training?

4. Do you respect achievements of other teams and groups in your organization?
5. Knowledge exchange improves chances for professional advancement/career
6. In which extent does your organization strive for knowledge transparency?
7. In which extent does your organization strive for the change of organizational culture?
8. Do better communication and cooperation represent goals of organizations in your surrounding?
9. What is the level of professional personnel training in your organization?
10. Has the way of knowledge preservation been improved in your organization?
11. Has an approach to existing knowledge sources been improved in your organization?
12. In which extent does your organization set inventiveness as its goal?
13. In which extent does your organization pay attention to cost lowering?
14. In which extent does the organization try to make better turnover due to knowledge selling?
15. Does knowledge management lead to better productivity?
16. Do concepts of knowledge management bring forth better motivation of employees?

We have applied descriptive statistical procedures and discriminative nonparametric procedures (Kruskal-Wallis test and Mann-Whitney U tests) in this research in order to set significance of difference of arithmetic means according to the variability of all items.

III. RESULTS AND DISCUSSION

Since initial procedure for each analysis represents showing of basic statistical procedures, which are very important for subject matter of this paper, we have presented frequencies and percents of answers of all 90 examinees in tables 2 and 2a.

TABLE II. DESCRIPTIVE PARAMETRES OF THE RESULTS AT THE LEVEL OF ENTIRE SAMPLE

Questions	I do not know		Department/section		As a project/ in some other way		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
1.	26	29	22	24,5	42	46,5	90	100
2.	71	79	19	21	10	11	90	100

TABLE IIA. DESCRIPTIVE PARAMETRES OF THE RESULTS AT THE LEVEL OF ENTIRE SAMPLE

Questions	Rarely		Sometimes		Very often		Total	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
3.	14	15	56	63	20	22	90	100
4.	28	31	34	38	28	31	90	100
5.	21	23,5	18	20	51	56,5	90	100
6.	38	42	34	38	18	20	90	100
7.	59	65,5	18	20	13	14,5	90	100
8.	61	67,5	13	14,5	16	18	90	100
9.	64	71	18	20	8	9	90	100
10.	48	53	21	23,5	21	23,5	90	100
11.	44	49	17	19	29	32	90	100
12.	46	51	8	9	36	40	90	100
13.	8	9	10	11	72	80	90	100
14.	76	84,5	11	12	3	3,5	90	100
15.	28	31	16	18	46	51	90	100
16.	25	28	23	25,5	42	46,5	90	100

The analysis of items stated in the questionnaire shows that questions number 2,3,7,8,13,14, which represent indicators of organizational knowledge conception, have the highest frequency (more than 50 f). The analysis of the results of descriptive statistical procedures leads us to real, but worrying status of knowledge management conception of employees in three analyzed organizations about the concept of knowledge, function, goal and importance of knowledge management. Because of different levels of education of employees and their different answers, we have applied statistical procedures which imply application of discriminative nonparametric procedures - Kruskal Wallance test and Mann Whitney U tests (Tables 3,4, and 5).

TABLE III. MEAN VALUE OF RANK

Questionnaire	Organization	Number of examinees	Mean value of rank
	Health Centre	30	48,29
	Preschool Teacher Training College	30	59,43
	Wood Processing Plant	30	34,18

Mean (average) values of the ranks of groups (Table 4) show that Preschool Teacher Training College has the highest rank, whereas the Wood Processing Plant has the lowest.

TABLE 4. KRUSKAL WALLACE TEST

	questionnaire
Chi-Square	8,36
Degrees of freedom	2
Significance level	0.018

Kruskal Wallance Test (Table 4) showed statistically significant difference between the results of three groups (organizations) at the level of significance of 0,018.

Additional group comparison by Mann Whitney U tests (Table 5) showed the results of Z value to be higher than theoretical maximum value of 2,58, as well as statistically significant difference at the significance level of 0,01 and strong correlation between the variables (r = from 0,73 to 1).

TABLE 5. MANN WHITNEY U TESTS FOR COMPARISON OF THREE ORGANIZATIONS

	Z	Significance level (p)	Correlation (r)
Health centre – Preschool Teacher Training College	-8,89	0,01	0,98
Health Centre – Wood Processing Plant	-6,61	0,01	0,73
Preschool Teacher Training College –Wood Processing Plant	-9,01	0,01	1

IV. CONCLUSION

Pilot research showed present conception, function and application of management knowledge in two organizations in public sector and one organization in private sector. Each of above mentioned organizations does not show noticeable market advantage according to capacities and resources. The analysis of the results of research shows that concept of knowledge management from perception of employees who do not belong to top or middle management of organization, is still at the beginning developmental level. Therefore, business intelligence as well as business strategy of development of observed organizations, especially of Wood Processing Plant have not achieved competitive organizational advantage (yet), as the consequence of such structure of management knowledge system. The solution should be

found in the first step of creation and designing of knowledge and infrastructure in the form of organizational units which would gather and organize sources of knowledge and distribute them according to the needs of the organization. That would not be easily achieved in these three organizations which have not still adopted combined functional - staff type of organization. Adoption of collective knowledge in order to obtain business goals should become the paradigm of modern organization, but the results of market competitions will show if everything will stay in the domain of theory or knowledge management will be implemented in practice.

REFERENCES

- [1] Albrecht, F (1993). Strategisches Management der Unternehmensressource Wissen Frankfurt am Main
- [2] Boljanović, Đ. J. (2008) *Ključni faktori uticaja na efektivnost programa menadžmenta znanja*, doktorska disertacija, Univerzitet „Singidunum“, Beograd
- [3] Capshaw, S., Koulopoulos, T.M. (1999) Knowledge Leadership, DM Review Magazine, maj 1999.
- [4] Cavaleri, S., Seivert, S., Lee, W.L. (2005) *Knowledge Leadership. The Art and Science of the Knowledge – based Organization*, Elsevier, str. 6-8
- [5] Drucker, P. (2002) *Upravljanje u novom društvu*, Adižes, Novi Sad
- [6] Hetz, D. B.(1988) *The Expert Executive*, New York
- [7] Hill, L.A., Where Will We Find Tomorrow's Leaders?, *Harvard Business Review*. Leadership & Strategy for the Twenty – First Strategy, januar 2008., str. 123 – 129.
- [8] Holsapple, C.W., Singh, M. () The Knowledge Chain Model: Activities for Competitiveness in *Handbook on Knowledge Management*, Holsapple, C.W. (ed.), Springer, str. 220 – 247.
- [9] ERIMA (1999) The Management of Corporate Knowledge-Summary of Eirma Working Group 54, Paris, www.eirma.asso.fr
- [10] Lončarević, R. Mašić, B., Đorđević – Boljanović, J. (2007) *Menadžment. Principi, koncepti i procesi*, Univerzitet Singidunum, Beograd, str. 145.
- [11] Macintosh, A. (1995) *Position Paper on Knowledge Management, Artificial Intelligence Applications Institute*, University of Edinburg, str. 139.
- [12] Malhotra, Y. (1997) *Knowledge Management in Inquiring Organizations*, Proceeding of 2RD Americas Conference on Information System (Philosophy or Information Systems – in Track), Indianapolis
- [13] Ristic, D. (2010) *Osnovi menadžmenta*, Novi sad, Cekom
- [14] PriceWaterhouseCoopers (2008) 11th Annual Global CEO Survey "Compete & Collaborate. What is success in a connected world?". Dostupno na www.pwc.com/ceosurvey. Preuzeto sa sajta 10.06.2011.
- [15] Sajfert Z. (2004). Menadžment ljudskih resursa- apologija humanog kapitala, Tehnički fakultet „Mihajlo Pupin“ Zrenjanin
- [16] Sajfert Z, Zivoslav A, Cariša B.(2005). Menadžment znanja, Tehnički fakultet „Mihajlo Pupin“ Zrenjanin,
- [17] Santosus, M., Surmacz, J., *ABC of Knowledge Management*, dostupno na www.cio.com/research/knowledge/edit/kmabc.html , preuzeto sa sajta 10.06.2011.
- [18] Бошко Мијатовић - Приватизација реалног сектора, у *Четупи године транзиције у Србији*, ЦИ/ДС, 2005 http://www.clds.org.rs/pdf-s/4_godine_tranzicije.pdf, preuzeto sa sajta 1.07.2011
- [19] Sveiby, K.E. www.sveiby.com/Portals/0/articles/K-era.htm. Preuzeto sa sajta 6.07.2011.
- [20] www.wikipedia.org