Knowledge Management for Knowledge Workers

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Abstract: Knowledge workers represent more than half of all employees in advanced economies. In general knowledge workers are people who, when working, use their brain more than their muscles. Agricultural and industrial worlds depended on the work of manual workers and the life standard of their inhabitants and the success of agricultural and industrial organizations grew due to the increase of manual worker productivity. Existing knowledge economy depends on the work of knowledge workers and the labour productivity they can achieve. Knowledge is a major resource and tool that knowledge workers use to create values. Therefore, the way work with knowledge is organized in an organization influences the productivity of knowledge workers. This article discusses the results of research on knowledge management in organizations in the Czech Republic. This research started at the University of Economics, Prague in 2004 and continues today.

Keywords: knowledge, tacit knowledge, explicit knowledge, knowledge worker, knowledge sharing

1. Introduction

Knowledge is a major creative force of the knowledge worker. The quality of work of knowledge workers depends not only on their ability to create, distribute and share knowledge but also on how the work with knowledge is organized in their organizations. Knowledge is a changing system with interactions among experience, skills, facts, relationships, values, thinking processes and meanings (Veber 2000). It consists of two dimensions, explicit and tacit. The explicit dimension of knowledge can be expressed in formal and systematic language and can be shared in the form of data, scientific formulae, specifications and manuals. The tacit dimension of knowledge is highly personal and difficult to discover and formalize. Explicit knowledge and intuition is created by mental models, experience, abilities, and skills etc. It is deeply rooted in action, procedures, routines, commitments, ideas, values and emotions. It is difficult to share and communicate.

Knowledge workers work with both dimensions of knowledge. Explicit knowledge is usually present in the form of data in some information system; tacit knowledge is linked to its human holder or holders. Organizations do not usually have a problem to organize work with explicit knowledge. ICT and modern information systems offer many solutions on how to adjust work with explicit knowledge to the needs of knowledge workers of individual organizations. Tacit knowledge is more problematic. Organizations tend to underestimate it and do not create or even inhibit the environment that is necessary for its sharing.

This paper gives a description of the concept of the knowledge worker and explains the basic problems of knowledge work. It also explains the link between the work of knowledge workers and the quality of knowledge management in their organization. Special attention is paid to four factors that either support or inhibit the work of knowledge workers; knowledge strategy, organizational structure, the knowledge market and trust. The paper is organized in the following chapters. Chapter 2 gives basic information on the concept of the knowledge worker. It explains who are knowledge workers and their importance for today's world. Chapter 3 explains the main differences between knowledge and non-knowledge work. Chapter 4 provides explanation of the link between knowledge and the work of knowledge workers. Chapter 5 explains the objectives, methodology and tools of the research. Chapter 6 explains the theoretical roots of the research. Chapter 7 provides the results of the research. The paper is finalised by chapter 8, "In Conclusion".

The results of the research are not optimistic; 23% of interviewed organizations do not have an organizational structure compatible with their knowledge strategy, which inhibits knowledge creation in an organization; 44% of organizations reported that they have the type of organizational structure that inhibits knowledge sharing and other knowledge management activities. The majority of organizations, 64% do not have functional knowledge markets. Inconvenient types of organizational structure, inhibited knowledge sharing and dysfunctions of the knowledge market limit the work and productivity of knowledge workers.

2. Knowledge workers

Generally, the most valuable knowledge in an organisation is in the heads of the employees (Kokavcová, Malá 2009), so called knowledge workers. Literature specifies that knowledge workers represent more than half of all employees in advanced economies. In general, knowledge workers are people who, when working, use their brain more than their muscles. Knowledge workers can be identified in any culture and in any phase of humankind's development. However, technological and social changes in the 20th Century caused a marked increase in their numbers in organizations in advanced economies.

Definitions of knowledge workers differ. Different authors understand knowledge workers differently.

Peter Drucker (Drucker 1954) was the first to use the term knowledge worker. Knowledge worker, by Drucker's definition is:

- A person who has knowledge important for the organisation and is often the only person who has it
- A person who can use the knowledge in their work
- The knowledge is partly subconscious; the worker may not know about it or may not understand its importance. Other employees of the organisation have a limited approach to the knowledge, they cannot learn it (it is demanding on time or finances or is impossible as they do not have the knowledge or skills to develop it) or they cannot or are not allowed to use it (knowledge is linked to some certificate or diploma)
- Knowledge workers often work intellectually, but this is not a rule.

Alvin Toffler (Toffler 1990) understands typical knowledge worker as being scientists, engineers or a person who operates sophisticated technology. Toffler says a knowledge worker must be able to create and improve his or her technological knowledge or manage the technological knowledge of co-workers.

Jack Vinson from Northwestern University wrote that a knowledge worker is every employee who uses his brain more than his hands. Knowledge workers depend on their knowledge and the ability to learn, even though they work with their hands (Vinson 2009).

Thomas Davenport (Davenport 2005) sees knowledge workers as people with high degrees of expertise, education, or experience. Davenport says the primary purpose of a knowledge workers' job involves the creation, distribution, or application of knowledge. Knowledge workers think for a living (Davenport 2005).

Jonathan B. Spira in an internet discussion concludes: "We can, in part, describe knowledge workers in terms of what they are not. They are not factory workers, they are not labourers, they are not farm or field workers (the term "out in the field" notwithstanding). But that doesn't tell us very much. Many, but not all, knowledge workers are office workers. Some, but not all, are managers or white-collar workers. Some, but not all, are professionals, such as doctors or lawyers." (Spira 2008).

Other authors even think that the term 'knowledge worker' is now a meaningless concept in developed countries because of the shift Drucker started to notice in the '50s away from jobs requiring manual work to jobs requiring knowledge work, is now complete (Allee 2002, Shawn 2007).

This article understands adopts Jack Vinsons's approach to knowledge workers.

3. Knowledge work

Specifics of knowledge workers can be explained on the difference between knowledge and non-knowledge work. Knowledge work differs from non-knowledge work in many parameters.

Table 1 shows that the differences between knowledge and non-knowledge work is considerable.

The major raw materials for knowledge work are not material elements but knowledge. Contrary to non-knowledge work, the most important part of knowledge work happens in the heads of employees even though the final result of their work has a manual character. It cannot be observed and

controlled, and it is not linear. Many knowledge workers talk about the BBB (bed, bath or bus) syndrome. The BBB syndrome means that the best ideas and solutions are often not invented during working hours in the office but when an employee finally relaxes. Managers do not have the opportunity to influence this process.

Table 1: Knowledge against non-knowledge work

Knowledge against Non-Knowledge Work		
Characteristics	Non-Knowledge Work	Knowledge Work
Major Raw Material	material elements	knowledge
Process of Work	obvious	hidden
Work Visibility	high	low
Links to Results	direct and immediate	non direct, effects delayed
Knowledge	concentrated in the hands of managers	diffused in the heads of employees
Power based on	position of the employee in formal and power structures of the organization	profession, knowledge and position of the employee in power structures of the organization
Work is	linear	non linear
Way the employee responds to various situations	based on position and task	employee evaluates the situation and decides the way to respond to it himself
Standards are developed	by others	employee himself
Control is directed to	employee	work and results of work
Performance is measured by	accordance with standards	employee contribution
Role of employee	tool	agent

The results of knowledge work may differ from the short and long term perspective, which causes problems with standards, measurement and evaluation. Knowledge work usually requires employees with much better education in a certain field. Due to the intangible character of knowledge it also requires a person who can work and make decisions independently.

The growing importance of knowledge work also changes power relations in organizations. Managers used to be the people who had more knowledge, more decision making rights and the right to control their subordinates. Where knowledge work is involved, power shifts from managers to subordinates. They have more knowledge and they often understand what they are doing much more than their managers. Many of them make the final control of their product or service themselves.

Even though the intangible character of the tacit dimension makes knowledge work difficult to manage, managers can influence the quality of knowledge work by focusing on important factors that can work as enablers or inhibitors of knowledge work.

4. Knowledge workers and knowledge

Knowledge is a major tool and the raw material of knowledge workers. Knowledge can be defined in many ways. For example Tobin defines knowledge as information plus intuition and experience (Tobin 1996); Beckman sees knowledge as information plus selection, experience, principles, limitations and learning (Beckman 1997). Veber understands knowledge as a changing system with interactions around experience, skills, facts, relations, values, thinking processes and meanings (Veber, 2000).

It is the role of organizations to prepare an environment where knowledge workers can create, share and use both explicit and tacit knowledge. Knowledge management helps organizations to meet this role. Knowledge management can be defined as the performance of knowledge processes (Wiig, Hoog, Speck 1997), or as a managerial approach of organisational leadership. It is also defined as the creation of an organisational environment and the achievement of organisational objectives based on the alignment of knowledge and processes through the usage of knowledge resources and the appropriate methods, techniques, and tools (Bureš 2005). Liebowitz and Megbolugbe understand knowledge management as the utilization of knowledge resources and intellectual capital (Liebowitz, Megbolugbe 2003). The style of organizational knowledge management influences the work with the intellectual assets of an organization and should be tailored to the needs of its knowledge workers.

This article cannot cover all aspects of knowledge management that influence the work and productivity of knowledge workers. Four important factors were chosen out of many: the type of

knowledge strategy and its compatibility with organizational structure, the type of organizational structure, the functionality of the knowledge market and trust. When these factors do not fit the needs of knowledge workers, they fail to access the knowledge they need to fulfil their tasks and to be productive.

5. Our research

The research on knowledge management in organizations in the Czech Republic started in 2004 and is still continuing today. The intention of the research is to monitor the development of knowledge management activities in our country, to identify best practices and to evaluate the potential of our corporate environment for knowledge workers. Organizations are chosen randomly; they come from different industries, including public administration and government areas. The size of organizations also differs; we have interviewed both large multinational organizations and SME's. The only prerequisite for an organization to be included in the research is the location of its premises in the Czech Republic. This article covers the results of 131 organizations.

The research is a qualitative research and it is based on a questionnaire. The questionnaire mostly consists of closed questions with the option of adding comments; some Likert scale and opened questions are supplied too. Questionnaires are filled in at interviews with the respondents from chosen organizations. Interviews are supervised by trained interviewers. The quality of the questionnaires is controlled.

The questionnaire is divided into the following sections.

Section 1 covers questions on the character of the interviewed organization – name of the company, description of its major business, annual revenues, number of employees, and the educational profile of employees. We also ask organizations if they are owned by foreign capital and if they export to markets abroad.

Section 2 is focused on questions that analyse the profile of the human resources of the organization in more detail; such as the structure of employees by age and sex. A major part of section 2 consists of questions on the important structural prerequisites of knowledge management; knowledge strategy, the type of organizational structure, cooperation, and the relation of the organization to knowledge, and trust.

Section 3 asks questions on ICT. Its role is to find out the means the organization uses to support the work with explicit knowledge.

Section 4 is focused on the style of work in the organization and includes questions on the type of meetings, job descriptions, communication and communication channels. This section helps us to found out whether or not the organization has an environment for the sharing of tacit knowledge.

Section 5 asks questions on traditional apprenticeship programs. Section 6 enquires how organizations train new employees. This section helps us to discover the intensity of knowledge work in the organization. Not only do we ask questions about how the organization trains newcomers but also on how the newcomers' knowledge fits the organizational needs and requirements.

The next three sections are dedicated to the tools of work with tacit knowledge and tacit knowledge sharing. All three traditional tools for tacit knowledge sharing are examined (Mládková, 2005). Section 6 asks questions on coaching and mentoring. We are interested especially in the average time of coaching activities, the style of relationship between a coach and a coached person and how the organization rewards coaching activities.

Section 7 analyses communities. We are interested in both formal and informal communities and whether they are physical or virtual. Organizations are also asked about the typical dysfunctions communities tend to suffer.

Section 8 is the last section and it asks questions on storytelling. The existence of negative and positive stories in the organization is checked. We also ask if stories are used in the company purposefully and where they are usually told.

The questionnaire provides us with detailed information about work with knowledge and knowledge management in the interviewed organizations. It helps us to identify best practices, mistakes and problems and gives us a picture about the quality and functionality of the knowledge market in the organization. Some questions are interlinked; answers to them should be compatible. These questions are important as they validate the questionnaire. The reason of incompatibility of answers to such questions is always strictly followed-up and the interviewer is asked to explain the reason in detail. In case of any doubts the questionnaire is rejected.

The questionnaire provides us with detailed information about work with knowledge and knowledge management in the interviewed organizations. It helps to identify best practices, mistakes and problems and gives us a picture about the quality and functionality of the knowledge market.

As stated above, this article covers only part of the research.

6. Theoretical background of the research

Knowledge management literature offers various definitions and concepts of knowledge. Knowing well the reality of business in our country and having in mind the fact that final users of our work are our managers, we decided to use a simple knowledge concept. The definition of knowledge we use is build on Veber's approach. For us knowledge is a changing system with interactions among experience, skills, facts, relations, values, thinking processes and meanings (Veber 2000). Knowledge is always related to human action and emotion. Knowledge is highly subjective.

As for knowledge itself we work with Polanyi's concept of two dimensions, explicit and tacit (Polanyi 1966).

We explain the explicit dimension of knowledge as knowledge which can be expressed in formal and systematic language and can be shared in the form of data, scientific formulae, specifications, manuals, etc. It can be processed, transmitted and stored. We support the idea that explicit knowledge is actually information and can be transferred to data. E.g., explicit knowledge can be formalized and stored and distributed as data (Mládková 2005). Data is usually distributed and stored in some ICT these days. It means that when working with explicit knowledge we often work and manage work using technology.

The tacit dimension of knowledge is perceived as highly personal and hard to discover and formalize. Explicit knowledge and intuition, mental models, experience, crafts, skills, etc., create it. It is deeply rooted in action, procedures, routines, commitment, ideas, value and emotions. It is always related to a person or to the group and is difficult to share and communicate (Mládková 2005). We agree on Polanyi's statement that tacit knowledge is problematic to externalize because the process of externalization damages it (Polanyi 1966). Managing tacit knowledge means managing people.

From our point of view the concept of two dimensions has an important practical advantage – it helps us to explain to managers that tacit knowledge cannot be managed in the same way as explicit knowledge. This mistake is quite common in our traditionally hierarchical environment.

7. Results of the research

7.1 Knowledge strategy and its impact on the work of knowledge workers

Literature offers two types of knowledge strategy, codification and personalisation strategy. Codification strategy is convenient for organizations whose activities are based on repeated processes and standardised procedures. Their product is stable and minor changes are made only when the customer requires it and technology allows it. The company is usually orientated to mass production or has to solve a similar problem again and again. Companies similar to this create wide, high quality and reliable databases which allow the storing, generation, adapting and combining of huge volumes of data and the creation of statistics, etc. The reuse of knowledge saves work and reduces communication costs. Codification strategy is focused on work with explicit knowledge.

Companies orientated to solutions of special unique problems, high level advice and those that provide expert solutions should use personalisation strategies. Their products are specific, often tailored to special requirements of the customer. The company works most of all with tacit knowledge and the database has only a supportive role because the sharing of the tacit dimension of the

knowledge cannot be systemised. Personalisation strategy is focused on work with tacit knowledge and puts stress on work with people.

Knowledge strategy should be based on the clear definition of customers' needs and the company's products or services (are they standardised or customised?), e.g., they must have a relation to the corporate strategy. Prior to the choice of strategy, managers must also identify which type of knowledge their people use - is it tacit or explicit knowledge? As table 2 shows, 52% of organizations reported a personalization knowledge strategy, 47% of organizations reported a codification knowledge strategy.

Table 2: Knowledge strategy in organizations in the Czech Republic

Knowledge strategy in organizations in the Czech Republic		
Type of strategy	No. of organizations	
Personalization strategy	68	52%
Codification strategy	62	47%
Organization that chose both options	1	1%
Total	131	100%

Knowledge strategy also has a relation to the organizational structure of an organization. Codification strategy fits well together with a top-down organizational structure. On the other hand it is absolutely contra productive with bottom-up and combined types of structure.

Table 3 shows that 23% of interviewed organizations have an organizational structure incompatible with their chosen knowledge strategy. An improper type of organizational structure inhibits work with knowledge and knowledge sharing in an organization.

Table 3: Knowledge strategies contra-organizational structures in organizations in the Czech Republic

Knowledge strategy contra org. structure in organizations in the Czech Republic		
Compatibility	No. of organizations	
Compatible	96	73%
Not compatible	30	23%
Organization did not provided information	5	4%
	131	100%

7.2 Organizational structure and its impact on the work of knowledge workers

Organizational structure is a backbone of an organization. It predetermines what an organization can and cannot do. From this point of view organizational structure is an important factor of knowledge management and the management of knowledge workers. It influences knowledge and communication channels, the functionality of the knowledge market, trust, permeability of borders between departments and many other factors. As for the typology of organizational structures, we adopted the classification of organizational structures by Nonaka and Takeuchi (Nonaka, Takeuchi 1995) for our research. Nonaka and Takeuchi classify organizational structures into three groups: top-down structures, bottom-up structures and combined structures (Nonaka and Takeuchi call combined structures the middle-up-down model). Being aware of the fact that many of our organizations are adjusting their organizational structures to a changing environment and that change of the organizational structure is a difficult process that cannot be done in one moment, we added two transitional types of organizational structures to our research; transition from a top-down to a bottom-up structure and transition from bottom-up to combined structure. We do not analyze how far organizations go in the transformation but it is generally expected that they are at least in the middle of the process.

Table 4: Organizational structures in organizations in the Czech Republic

Organizational structures in organizations in the Czech Republic		
Type of structure	No. of organizations	
Top-down	58	44%
Transition from top-down to bottom-up structures	16	12%
Bottom-up	20	15%
Transition from bottom-up to a combined structure	6	5%
Combined structure	31	24%
Total	131	100%

The result of the research indicates that 44% of our organizations have a hierarchical top-down structure. From the point of view of knowledge management and management of knowledge workers, this type of structure is the least convenient. It is based on a strict division of labour and limits cooperation and knowledge sharing. The power and decision making competencies are concentrated in the hands of top managers who create basic concepts, ideas and objectives and distribute them as tasks to subordinate levels of the organization. The role of the employee is limited. Knowledge channels are opened only in the top-down direction and only simple explicit knowledge can pass through them. Subordinate levels do not communicate on the horizontal level and the co-operation of individual hierarchical levels is also limited. A bottom-up flow of knowledge is problematic. Hierarchical borders damage the knowledge. The knowledge loses its context and different departments explain it differently. The flow of tacit knowledge is restricted even more. Tacit knowledge exists only in the heads of individuals, and is owned and shared in specialized parts of departments (Mládková 2005).

Bottom up (27% of organizations, together with a transition to a bottom-up structure) and combined structures (29% of organizations, together with a transition to a combined structure) provide much more convenient environments for the work of knowledge workers. Bottom-up structures are flexible, flat organizational structures where decision making is related to knowledge (Mládková 2005). Knowledge is localized in the middle or bottom level of the organizational structure. They support creativity and work with both dimensions of knowledge; they are beneficial especially for work with tacit knowledge that is naturally shared in teams and communities. Their only disadvantage is barriers between departments that limit across border sharing.

A combined organizational structure is a structure built on three layers. The vertical layer is responsible for the management of the company (both day-to-day and strategic) and can be hierarchical. The horizontal layer is responsible for the creation of major values of the organization. It creates, distributes and uses knowledge (both tacit and explicit). The horizontal layer consists of project teams. The third layer, the knowledge layer, is responsible for archiving and recording knowledge, both explicit and tacit. A combined structure allows creating and using the full potential of different relationships in the company and fully supports its knowledge management activities (Mládková 2005).

Table 5: Interrelation between organizational structure, knowledge sharing and cooperation

Interrelation between organizational structures, knowledge sharing and cooperation							
Type of structure	Number of Organizations	Employees share knowledge		Cooperation, Interest in Others Yes		No	
Top-down	58	32	55%	28	48%	30	52%
Transition from top-down to bottom-up structures	16	9	56%	12	75%	4	25%
Bottom-up	20	15	75%	16	80%	4	20%
Transition from bottom-up to combined structure	6	6	100%	6	100%	0	0%
Combined structure	31	27	87%	27	87%	3	10%

Cooperation and interest in other people are important prerequisites of knowledge sharing. People do not share their knowledge with people with whom they do not communicate and who they are not interested in. When examined in relation to the type of organizational structure, cooperation and interest in others are much higher in bottom-up and combined structures. E.g., organizations that decide for these structures provide a better environment for knowledge sharing (table 5) than top-down structures. The same result was reported for knowledge sharing itself; the less hierarchical was the structure, the better knowledge sharing was reported by the organization (table 5).

Results of the research on organizational structure, cooperation and knowledge sharing prove inconvenience of top-down structure for knowledge management and the work of knowledge workers. Still, 44% of our organizations chose this type of structure, even though it is not beneficial. We explain this high number as a cultural factor. Top-down structures are traditional structures in our country and many organizations naturally choose them without taking into account their advantages and disadvantages.

7.3 The knowledge market and its impact on the work of knowledge workers

The knowledge market is a physical and virtual market where people exchange their knowledge (Davenport, Prusac 1998). Or knowledge markets are formal or informal community contexts, platforms, or environments (real or virtual) used to promote knowledge, commerce, trade and exchange, demand and supply, between knowledge buyers and sellers (Knowledge Market Consortium 2010). Prusac and Cohen think that internal organizational knowledge markets have similar features as other markets (Prusac, Cohen 1997). In organizations, both explicit and tacit knowledge is exchanged there. Knowledge workers benefit from a functional knowledge market. But knowledge markets in organizations often suffer various pathologies:

- An organization does not know if they have certain knowledge or not
- Knowledge is asymmetrically spread in an organization; people who need it do not have access to it
- Employees search for the knowledge they need only within the people of their close circle and do not trust knowledge from people they do not know well

Pathologies that lead to typical knowledge market dysfunctions:

- Knowledge monopolies
- Artificial knowledge shortages
- Knowledge barriers (Davenport, Prusac 1998)

The research on the functionality of the knowledge market was undertaken indirectly by questions on knowledge ownership that mapped knowledge monopolies and questions on knowledge flow, and communication channels that mapped access to knowledge in an organization. In table 6 all percentages are calculated from 131 organizations.

Table 6: Functionality of knowledge market

Functionality of knowledge market		
	Number of organizations	
Knowledge is perceived as personal ownership	27	21%
Knowledge is perceived as the ownership of an organizational group	23	18%
Knowledge flow is free, open book management	63	48%
Knowledge flow is limited	68	52%
Knowledge flow is limited, we need free knowledge flow	21	16%
Knowledge flow is limited, we do not need free knowledge flow	14	11%
Communication and communication channels are open	76	58%
Communication and communication channels are not open	57	44%
Communication and communication channels are not open, we need it	17	13%
Communication and communication channels are not open, we do not need it	13	10%

When examining the free flow of knowledge through organizations, we discovered that 63 organizations (48%) have so called open book management (knowledge flow is free). Sixty eight organizations (52%) reported limited knowledge flow. Twenty one organizations out of these 68 (31%) think that they need free knowledge flow, 14 organizations out of 68 (21%) think that they do not need free knowledge flow. It is only 11% out of 131 interviewed organizations.

Open communication channels were reported by 76 organizations (58%) and blocked communication channels by 57 organizations (44%). We also asked organizations whether they need free communication channels and 17 organizations out of 57 (30%) recorded that they need it and 13 organizations out of 57 (23%) said they do not need free communication channels.

The knowledge market can be functional only when employees share knowledge; knowledge flow is free and communication channels are opened. All three requirements were met by 47 organizations out of 131 (36%).

Results of the research show that the majority of interviewed organizations do not manage their knowledge markets properly and that their knowledge markets suffer serious problems. Some organizations even block their knowledge flow and communication channels intentionally. To illustrate the situation, none of those organizations needed limited knowledge flow and they blocked

communication channels due to security reasons. It is sad because an ineffective knowledge market inhibits knowledge sharing and the work of knowledge workers.

7.4 Trust and its impact on the work of knowledge workers

Trust is a factor that influences work with knowledge and knowledge sharing, especially sharing of tacit knowledge. People do not share their knowledge with people who they do not trust. E.g. knowledge workers who do not trust each other tend to keep their knowledge for themselves and build knowledge monopolies. As a result they inhibit their performance.

There are many definitions of trust. We understand trust as defined by Fukuyama and Robinson. Fukuyama and Robinson think that trust is the expectation of regular, honest, and cooperative behaviour based on commonly shared norms and values (Fukuyama 1995, Robinson et al 1996).

Trust can be classified to certain groups. Deterrence trust is derived through the presence of sanctions for opportunistic behaviour (Rousseau et al 1998). Knowledge based trust is based on knowing other individuals and being able to predict their behaviour (Shapiro et al 1992). Identification based trust is derived through empathy and sharing of common values (Shapiro et al 1992). Relational trust is derived over time through information of the trustee within the frame of the relationship (Rousseau et al 1998). Calculus based trust is calculated on the basis of deterrents and intentions and competence (Rousseau et al 1998). Economic factors based trust is derived from a rational decision based on costs and benefits (Kim, Prabhakar 2000). Institutional trust is a feeling of confidence and security of the institution (Ford 2003). Personality based trust is trust based on the personal and professional character of an individual (Mládková 2010).

We asked organizations which types of trust are applicable for them. In our opinion knowledge, identification, relational and personality types of trust support knowledge sharing and the work of knowledge workers. Deterrence trust inhibits especially tacit knowledge sharing because it creates fear. In the case of calculus and economic trust, knowledge is a power and is not shared. Institutional trust does not influence internal knowledge sharing in organizations; it was involved due to our curiosity.

Table 7 gives us an overview of the types of trust our respondents mentioned as the most applicable for them, e.g., trust in their organization is mostly based on that type. Fifteen organizations (25%) from the total did not answer this question or the answer was unclear. All percentages are calculated from 131 organizations. The table shows the types of trust in relation to the type of organizational structure adopted by the organization.

Table 7: Trust

Types of trust and organizational structure												
Type of trust/Type of structure	Top down structure		Transition from top-down to bottom-up structure		Bottom-up structure		Transition from bottom-up to combined structure		Combined structure		Total	
Deterrence	7	12%	0	0%	1	5%	0	0%	0	0%	8	6%
Knowledge	17	29%	6	38%	6	30%	2	33%	13	42%	44	34%
Identification	1	2%	0	0%	1	5%	2	33%	2	6%	6	5%
Relational	12	21%	3	18%	4	20%	1	17%	3	10%	23	18%
Calculus	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Econ. factors	1	2%	0	0%	1	5%	0	0%	1	3%	3	2%
Institutional	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
Personality	5	9%	1	6%	0	0%	0	0%	5	16%	11	8%
No answer	15	25%	6	38%	7	35%	1	17%	7	23%	36	27%
No. of organizations	58		16		20		6		31		131	

The most reported type of trust is trust based on knowledge, 34% of organizations reported it. The second most reported type is trust based on relationships, 18%. These results show that people tend to trust people who are known to have certain knowledge and people with whom they have good relationships. Except for one organization with a bottom-up structure, trust based on deterrence was mentioned only by organizations with a top-down structure (12%). This result is logical. Top-down

organizational structures are based on hierarchy and sub-ordinance supports this type of trust. Being aware of the historical and cultural consequences of our region, it was no surprise that identification based trust was reported only by 5% of organizations even though this type supports corporate-wide knowledge sharing.

8. In conclusion

Knowledge workers are people who, when working, use their brain more than their muscles. Knowledge is their important asset and tool. Knowledge workers can be productive only when their organizations create a convenient environment for cooperation and knowledge sharing and support them with the knowledge they need.

The objective of this paper was to inform about the research on knowledge management in organizations in the Czech Republic. The paper covers the results of 131 interviewed organizations. The research was conducted by the University of Economics, Prague. It is qualitative research based on a questionnaire. The questionnaire mostly consists of closed questions with the option of providing comments; some Likert scale and open questions are supplied, too. Questionnaires are filled in at interviews with respondents from chosen organizations. Interviews are supervised by trained interviewers. The quality of questionnaires is checked.

The results of our research indicate that organizations in the Czech Republic do not create an environment and knowledge management systems supportive for their knowledge workers.

44% of organizations that participated in our research reported a top-down organizational structure that inhibits knowledge sharing and knowledge management activities. The organizational structure of 23% of interviewed organizations does not match their knowledge strategy. The majority of organizations, 64% do not have functional knowledge markets; mostly due to blocked communication channels (44%) and limited flow of knowledge through organization (52%). The knowledge market can be functional only when employees share knowledge, the knowledge flow is free and communication channels are opened. All three requirements were met by only 36% of interviewed organizations. As for trust, the most reported type of trust is trust based on knowledge, 34% of organizations reported it. The second most reported type is trust based on relationships, 18%. Only 5% of interviewed organizations reported identification trust, an important pre-requisite of corporate-wide knowledge sharing.

An inconvenient type of organizational structure, inhibited knowledge sharing and dysfunctions of the knowledge market limit the work and productivity of knowledge workers. An over 25 year-long research of the Gallup Organization focused on employees' performance and loyalty to their organizations (Buckingham, Coffman 2005) shows that the performance of employees depends also on the availability of materials and equipment they need for their work. In the case of knowledge workers, it is not material equipment but knowledge they need. A lack of necessary information, knowledge and contacts or difficult access to them is frustrating and humiliating for knowledge workers. Many knowledge workers can work with old tools and equipment but they cannot do anything without knowledge. A proper environment and knowledge management provides knowledge workers with all the knowledge assets they need. A knowledge-hostile environment and improper knowledge management restricts knowledge workers' access to their most important asset.

The results of our research are fully compatible with the fact that the Czech Republic has serious problems with innovativeness. Our research points at one of the possible reasons – Czech organizations manage their knowledge in a very poor way which inhibits productivity of their knowledge workers.

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