

NÓRA OBERMAYER-KOVÁCS – ANTHONY WENSLEY

SOCIAL MEDIA IN ORGANIZATIONS: LEVERAGING KNOWLEDGE SHARING

“Knowledge”, “knowledge management”, “social media”, all these terms have become very popular and even “trendy” expressions frequently used in business. In part, they reflect the increasingly influential shift from an industrial economy to a knowledge economy facilitated by accelerated social change and technological changes in such areas as broadband communications, social media, mobile technologies, and so on. In this context, organizations are faced with an unpredictable economic environment that is becoming increasingly competitive. Furthermore knowledge is increasingly seen as the most important strategic asset and individual knowledge workers play central role in the creation of value by organizations and the development of their strategies. Organizations have an urgent need to focus on innovation with respect new products and services. A fundamental precursor to such innovation is effective knowledge sharing. Of the knowledge possessed by an organization, a significant proportion is in the possession of individual knowledge workers. Thus, it is important to understand what encourages individuals to share their knowledge and what holds them back from sharing knowledge. Although individuals might recognize the importance of knowledge management practices for the success of their daily business life, it might be postulated that their propensity to share knowledge depends on their personal demographic characteristics such as their age. When organizations understand the determinants of knowledge sharing, effective management technologies can be implemented to improve productivity and competitiveness. Social media provide increasingly flexible and powerful channels for collaboration. Furthermore, social media has allowed individuals to contribute to number of issues and generated new possibilities and challenges to facilitate collaboration. Thus, the potential advantage of embracing and implementing social media by organizations is very significant. However, individuals may be reticent to make use of social media because they may not appreciate the power of social media or be concerned with security of reliability. In addition, many organisations do not favour their employees using social media because they may be concerned about the risks and consequences of a potential misuse. The study reported in this paper was conducted with the help of organizations operating in Hungary, applying quantitative research methods. Data was obtained from a total of 299 individuals who completed an online, web-based questionnaire. The survey supports the investigation of how social media technologies are being used for knowledge sharing during work and examines the characteristics of the different generations using these tools by exploring willingness of employees to participate in knowledge sharing. An analysis of the data show that Hungarian organizations prefer not to allow the usage of external social media; but where

the employees are encouraged to use social media tools a high proportion of them do. The paper also provides recommendations to the organizations as to how to motivate employees to use social media technologies for knowledge sharing in a work environment. The subsequent paper provides a short summary of the empirical study, practical implications and potential new research directions.

Introduction

Knowledge has always been seen as potentially one of the key strategic resources that can be the basis for developing sustained long-term competitive advantage for organizations. Knowledge is necessary basis for individual and organizational understanding and facilitate the ability of individual and organizations to act effectively. Knowledge both provides support for regular organizational routines as well as enabling employees to respond to new situations and develop new strategies. Organizations that need to thrive, compete, and operate in an ever changing and evolving environment, cannot leave the development of knowledge within the organization to chance. The exchange of information and knowledge among employees is a vital part of knowledge management. As a result, organizations are faced with the challenge how to get people to share their knowledge.

For several decades, the world's best-known forecasters of social change have predicted the emergence of a new economy where brainpower and knowledge, not traditional sources of energy and machine power is the critical resource. However, this future is already here and the knowledge economy has arrived. This evolving era is characterized by rapid change and uncertainty, the increasing importance of knowledge and knowledge management and the popularity of new information technologies that have the potential to radically change the way organization do business.

The single most significant technological development in the last 20 years has been the Internet. The Internet makes it possible for individuals to connect, collaborate and share knowledge, information, document, photo, video, etc. continuously with anyone in the world. Furthermore, people are able to make use of social media tools in order to increase range and richness of their networks, gather information and nowadays, increasingly organizations are finding ways of integrating social media into their business processes (Gaal et al., 2014).

If majority of people use something on a daily basis, it is natural for the companies to use it as a marketing channel. In addition it is natural for human resource managers to check applicants social networking profiles in addition to their CVs. Actually, we would argue that every aspect of doing business is potentially influenced by these new technologies, such as social media and knowledge management processes and techniques.

As we have noted above organizations have started to use social media tools to facilitate communication, collaboration and knowledge sharing. It is, however, often assumed that the younger generation have a greater willingness to use social media. Baby boomers were the first generation to grow up with the television and a time of dramatic social change. In contrast, members of Generation X have grown up with a rapidly changing technology and most of them are skilled at understanding and using technologies and adapting to new platforms. Generation Y individuals have grown up considering the Internet, instant messaging, and social media as integral components of their natural environment (McHenry – Ash, 2013).

Some surveys have examined the extent to which differences exist among the generations (McHenry – Ash, 2013; Busch et al., 2008), but none of them has investigated how these differences influence the willingness to use these technologies for knowledge sharing. In general, there has been some research about traditional knowledge sharing (Bock et al., 2005; Hansen et al., 2005; Quigley et al., 2007). Some researchers have investigated the use of social media in the workplace for sharing knowledge. There has also been research investigating how IT systems, more generally, have been used to share knowledge (Günther et al., 2009).

Knowledge management

As we have noted above knowledge is becoming a strategically important resource and a very significant driver of organizational performance (Yesil – Dereli, 2013). Either located in the minds of the individuals (tacit knowledge) (Polanyi, 1966), embedded in organizational routines and norms, codified in technological devices (explicit knowledge) (Nonaka – Takeuchi, 1995), knowledge enables the development of new competences (Choo, 1998). Successful companies are those that consistently create new knowledge, disseminate this knowledge throughout the organization, and embody it in technologies, products and services (Gottschalk, 2007; Gaál et al., 2009).

Knowledge management describes the processes of acquiring, developing, sharing, exploiting and protecting organizational knowledge to improve organizations' competitiveness. Negroponte (1995) conceived the concept of "knowledge" as the most recent input factor for business organizations and a key to their future competitiveness. A review of the research literature in Knowledge Management provides many definitions of knowledge and knowledge management distributed among numerous important journals, studies and books.

Our research group adopted the definition of knowledge management utilized by KPMG (2003, p. 4) namely: "*knowledge management is a systematic and organised approach to improve the organisation's ability to mobilise knowledge to enhance performance*".

Many organizations and institutions have recognized the importance of knowledge and knowledge management to the future performance of both businesses and society. For example, the report Europe 2020 sets out a new vision of Europe's social market economy for the 21st century. One of the priorities it puts forward is the promotion of smart growth, that is, developing an economy based on knowledge and innovation. Such smart growth requires among others things the promoting of innovation and knowledge transfer, making full use of information and communication technologies and ensuring that innovative ideas can be turned into new products and services (European Commission, 2010). The emergence of the knowledge economy and the recognition of knowledge as a key factor in the achievement of competitive advantage are making it critical to understand and develop effective approaches to knowledge management.

Organizations around the world have focused on knowledge management and have already developed knowledge management programs in order to improve their performance with varying degrees of success. Clearly one important set of activities involves the defining knowledge and constructing the metrics to assess how effectively an organization is managing (sharing) its knowledge (intellectual capital). The development of this definition and the creation of metrics is clearly challenging but is a necessary first step towards improving knowledge management practices since it has been cogently argued that one cannot improve what one cannot somehow measure (Gaál et al., 2008).

Although a standard global approach to knowledge management does not exist three general activities involved in knowledge management have been identified. These activities are integrated together into the overall knowledge management process. The three major activities are (Figure 1): 1) knowledge capture and/or creation, 2) knowledge sharing and dissemination, 3) knowledge acquisition and application (Dalkir, 2005).

Knowledge sharing

To ensure the success and long-term survival of any organizations effective knowledge sharing is of critical importance (Gaál et al., 2008). Knowledge sharing is potentially a two-way process, in which one entity (individual, team, department, etc.) has access to skills, competencies another entity (individual, team, department, etc.) is provided with access to information and may itself provide information in return (Mohannak - Hutchings, 2007). The nature of the information which is shared depends, in part of the experience of the parties involved (Argote et al., 2000). Knowledge sharing is a two-way process between the knowledge giver(s) and the knowledge receiver(s), who as participants of knowledge sharing, exchange the knowledge found in their minds or the knowledge found in electronic or paper

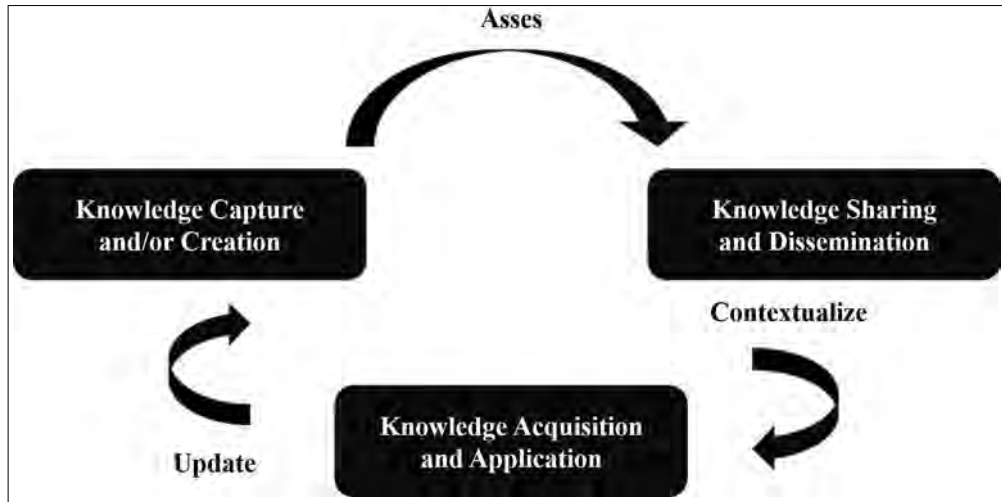


Figure 1. Integrated knowledge management cycle
Source: Dalkir, K. 2005. p. 43.

documents (Gaál et al., 2013). The knowledge sharing process is of mutual benefit to the participants involved (Csepregi, 2012).

Knowledge sharing is characterized by communication processes and information flows. In many social situations knowledge sharing is a common activity but knowledge sharing within an organization tends to be a complex and complicated issue and, as a result, needs to be actively managed. Knowledge sharing is typically focused on activities that involve providing information and knowledge to assist others in solving problems, develop new ideas, or implement processes (Cummings, 2004).

Previous research has suggested that there are three generations of knowledge sharing (Bellefroid, 2012):

- The first generation: the traditional way of knowledge sharing is the concept of codification (Hansen et al., 1999) and storage. This way can easily be supported by information technologies.
- The second generation: focuses on the social component, personalization (Hansen et al., 1999), the way people co-operate and communicate. Formal and informal opportunities to share knowledge can be used like mentoring, coaching or face-to-face meetings. Codification is mostly used as a starting point, where new employees can find out what others know and what knowledge is available. Personalization is used to see the application of the available knowledge.

- The third generation: social networks provide a new way to get in touch with experts and to search for knowledge outside the organization. Using social media tools enable less physical contact between employees.

Knowledge sharing is the process by which the knowledge possessed by individuals is converted into a form that can be understood and used by other individuals. Research has also proposed that there are four factors that influence knowledge sharing (Ipe, 2003):

1. The nature of the knowledge
 - tacit form: located in the individual's mind (Polányi, 1966)
 - explicit form: embedded in organizational routines and norms, codified in technological devices (Nonaka – Takeuchi, 1995).
2. The motivation to share
 - internal factors: perceived power (Gray, 2001) and reciprocity (Davenport – Prusak, 1998)
 - external factors: relationship with the recipient and rewards for sharing (Hall, 2001)
3. The existence of sharing opportunities
 - formal: training programs, team works, technology-based systems
 - informal: personal relationships and social networks
4. The culture of the work environment
 - organizational culture determines values, beliefs, and work systems that could encourage knowledge sharing (Janz – Prasarnphanich, 2003)

In the past knowledge sharing has been materialized in written form through IT systems or via face-to-face communications. In future the next generation of managers have to be able to identify appropriate technologies and techniques for sharing knowledge that will resonate with generation X and Y employees. These technologies and techniques are likely to involve existing and new physical or electronic spaces (Huysman – Wit, 2004).

Gupta and Govindarajan (2000) argue that there are five factors that influence the extent to which knowledge sharing takes place:

1. perceived value of the source's knowledge,
2. willingness of the source to share knowledge,
3. existence and richness of transmission channels,
4. willingness of receiver to acquire knowledge from the source,
5. absorptive capacity of the receiver.

In our research we combined the second and third factors and examine the existence and richness of transmission channels (social media) and at the same time the willingness to share knowledge.

Knowledge sharing behaviour

The stimulating of knowledge sharing among individuals requires us to understand how to understand and develop underlying motivation in individual to share knowledge. Since an individual cannot possess all knowledge and knowledge cannot be hoarded like gold, people should recognize that the old paradigm ‘knowledge is power’ is less and less relevant. One of the ways of motivating individuals to share knowledge is to demonstrate how knowledge sharing can provide support them in completing their jobs more effectively and in helping them in their personal development and achieving their personal goals (Obermayer-Kovács – Csepregi, 2007).

Knowledge sharing behaviour is *“by which an individual voluntarily provides other members of the organization with access to his or her knowledge and experiences”* (Cyr – Choo, 2010, pp. 825).

Davenport and Prusak (1998) categorized the potential motivation behind knowledge sharing behaviour as either pure altruism, reciprocity, or reputation:

- **Altruism:** refers to behaviour that costs an individual and benefit the other person. People donate something to other people without thinking of any returns when showing altruistic behaviour (Chattopadhyay, 1999).
- **Reciprocity:** refers to either a positive or negative response for the actions which one should treat others as one would like others to treat oneself. In general, people suffer from limited time, energy, and other resources and not willing to share their knowledge unless they can get reward from them.
- **Reputation:** refers to a degree of recognition and increased by information sharing among other users. People who share more knowledge receive a higher reputation.

Social media technologies

Social media may be defined in a variety of ways such as “collaborative online applications and technologies which enable and encourage participation, conversation, openness, creation and socialization amongst a community of users” (Bowley, 2009), “web-based tools and practices enabling participation and collaboration based on individuals’ activities (Storey et al., 2010).

Surowiecki (2005) suggested that using social media may be considered to be making use of the “wisdom of the crowd”. Group of people are better at problem solving and decision-making than the individuals alone. Thus the availability of these tools that provide new ways

of inspiring and exploiting knowledge sharing are forcing organizations to expand their knowledge sharing technologies and practices (Mentzas et al., 2007).

Furthermore, it is important to note that these technologies – blogs, video sharing, presentation sharing, social networking service, instant messaging service and groupware – foster a more socially connected platform (Anderson, 2007).

Vuori (2011) characterises social media by considering the extent to which they support communication, collaboration, connecting, completing and combining (5C) (Jalonen, 2014):

1. Communication: social media provides new tools to share, store and publish contents, discuss and express opinions and influence:
 - blogs (e.g. Blogger) and microblogs (e.g. Twitter),
 - video sharing (e.g. YouTube),
 - presentation sharing (e.g. SlideShare),
 - instant messaging service (e.g. Skype).
2. Collaboration: social media enables collective content creation and edition without location and time constraints:
 - wikis (e.g. Wikipedia)
 - groupware/shared workspaces (e.g. GoogleDocs).
3. Connecting: social media offers new ways of networking with other people, socialising oneself into the community:
 - social networking services (e.g. Facebook, LinkedIn).
4. Completing: social media tools are used to complete content by describing, adding or filtering information, tagging contents, and showing a connection between contents:
 - visual bookmarking tool (e.g. Pinterest),
 - news aggregator (e.g. Digg).
5. Combining: social media tools are developed for mixing and matching contents. Combination of pre-existing web services that allow a certain user within a platform to use another application, in a specific window, without the need to get out of the initial website (Bonson – Flores, 2011).
 - mash-ups (e.g. Google Maps).

Postman (2009) identified six major characteristics that provide value to social media:

- Authenticity: for example, the possibility of enabling the real voices of real people to come to the fore.
- Transparency: for example, the ability for shareholders to see the financial performance; through blogs, communities and others information can also be made visible to the public.

- **Immediacy:** for example the ability of companies, members of the public to communicate, and to engage in online conversations in real-time.
- **Participation:** for example, the possibility for anyone to participate in corporate conversation, on the company's blog, independent forums, personal blogs, etc. online.
- **Connectedness:** for example, ability to connect and share in thousand of places and people without physical or temporal constraints.
- **Accountability:** for example, the ability to identify users (they generally leave a trail of IP addresses and other clues).

In other research (Figure 2) user-friendliness, interactiveness, openness and uncontrollability, velocity, and real-timeness have been mentioned to be the main characteristics of social media (Kaplan – Haenlain, 2010; Denyer et al., 2011; Kietzmann et al., 2011; Fournier – Avery, 2011).

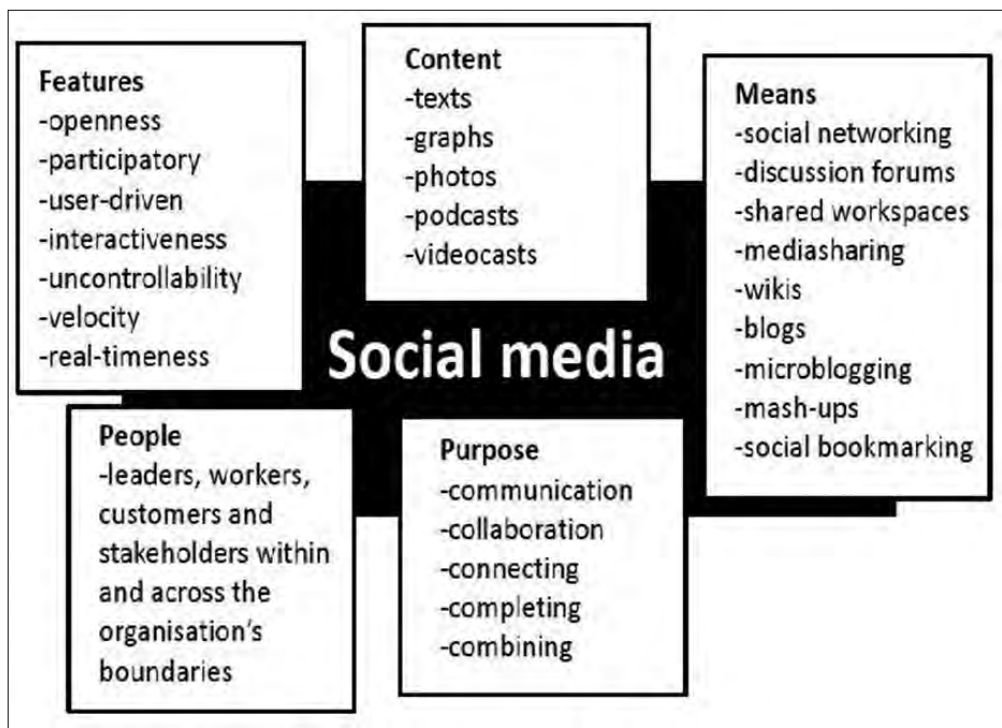


Figure 2. Social media – features, content, means, people and purpose
Source: Jalonon, H. 2014, p. 1372.

Generations

The term “generation” signifies the group of individuals, most of whom are within a similar age group, born in the same time of history and culture, having similar ideas, problems and attitudes (Weingarten, 2009). A person’s age may not always be indicative of their generational characteristics, but as a common group, they are likely to have similarities. Due to the different ideologies, a generation at a certain period tends to be exposed to approximately similar generic life experiences depending on cultural background.

Society is changing constantly which is likely to affect the values and experiences of different generations. Researchers have identified different generations including: Veterans, Baby Boomers, Generation X, Generation Y and Generation Z (Reeves – Oh 2007; Bohl 2009; Weingarten, 2009; Grail Research, 2011):

- Veterans (born between 1922 and 1945) respect for authority, loyalty, hard work and sacrifice for the common good. Their motto is “live to work versus work to live”.
- Baby Boomers (born between 1946 and 1964) grew up with sense that security was taken care of – this left room for exploration and protest. They place high value on youth, personal gratification, health and material wealth. They are generally optimistic, value hope and peace, and believe their generation changed the world.
- Generation X (born between 1965 and 1970) desires balance in their lives, diversity viewed as norm, motivated by money, self-reliant, value free time and having fun. Their motto is “work to live, not live to work”. They assume gender equality in the workplace. This is the first generation that embraces the personal computer and Internet.
- Generation Y (born between 1981 and 1995) is the most globally oriented generation. They combine work ethic of Baby Boomers with the can-do attitude of Veterans and the technological savvy of Generation X. They are interested in health, exercise and body adornment (Weingarten, 2009).
- Generation Z (born from 1995 to present) is having grown up in a digital world where technology was ever present. They are more socially responsible, due to greater access to a large online information pool and always communicate through various social networking channels (Grail Research, 2011).

Not every person in a generation will share all of the various characteristics shown in Table 1 with others in the same generation. However, these examples are indicative of general patterns in the relationships between and among family members, friends and people in the workplace (Hammill, 2005).

Personal/Lifestyle Characteristics	Veterans (1922-1945)	Baby Boomers (1946-1964)	Generation X (1965-1980)	Generation Y (1981-2000)
Core Values	Respect for authority Conformers Discipline	Optimism Involvement	Skepticism Fun Informality	Realism Confidence Extreme fun Social
Family	Traditional Nuclear	Disintegrating	Latch-key kids	Merged families
Education	A dream	A birthright	A way to get there	An incredible expense
Communication Media	Rotary phones One-on-one Write a memo	Touch-tone phones Call me anytime	Cell phones Call me only at work	Internet, Email Picture phones Texting
Dealing with Money	Put it away Pay cash	Buy now, pay later	Cautious Conservative Save, save, save	Earn to spend

Table 1. Personal and lifestyle characteristics by generation
 Source: Hammill, G. 2005. p. 1.

A variety of researchers have identified a serious new set of workplace issues related to interactions between distinct generations — the Veterans, the Baby Boomers, Gen X and Gen Y — working together and often coming into conflict as their paths cross. Individuals with different values, ideas, ways of getting things done and ways of communicating in the workplace have always existed.

Work Place Characteristic	Veterans (1922-1945)	Baby Boomers (1946-1964)	Generation X (1965-1980)	Generation Y (1981-2000)
Work Ethics And Values	Hard work Respect for Authority Sacrifice Duty before fun Adhere to rules	Workaholics Work efficiently Crusading causes Personal fulfillment Desire quality Question authority	Eliminate the task Self-reliance Want structure and direction Skeptical	What's next Multitasking Tenacity Entrepreneurial Tolerant Goal oriented
Work Is...	An obligation	An exciting adventure	A difficult challenge A contract	A means to an end Fulfillment
Leadership Style	Directive Command and control	Consensual Collegial	Everyone is the same Challenge others Ask why	TBD
Interactive Style	Individual	Team player Loves to have meetings	Entrepreneur	Participative
Communications	Formal Memo	In person	Direct Immediate	Email Voice mail
Feedback and Rewards	No news is good news Satisfaction in a job well done	Don't appreciate it Money Title recognition	Sorry to interrupt, but how am I doing? Freedom is the best reward	Whenever I want it, at the push of a button Meaningful work
Messages That Motivate	Your experience is respected	You are valued You are needed	Do it your way Forget the rules	You will work with other bright, creative people
Work and Family Life	Ne'er the twain shall meet	No balance Work to live	Balance	Balance

Table 2. Workplace characteristics by generation
 Source: Hammill, G. 2005. p. 1.

At work, generational differences can affect recruiting, building teams, dealing with change, motivating, managing or increasing productivity. Generational differences (Table 2) with respect to how people communicate, might lead to misunderstandings, high employee turnover, difficulty in attracting employees, etc. (Hammill, 2005).

It seems clear that there are more pronounced differences between the generations today than ever before. Being aware of these differences can help individuals design their communications for maximum effect, regardless of the task, or the relationship — family, friends, workplace peers. The majority of people think the correct way, and the only way, is their way of communicating and acting, but in business or personal life, this is by no means always true. To work effectively and efficiently, to increase productivity and quality, one needs to understand generational characteristics and learn how to use them effectively in dealing with each individual (Hammill, 2005).

As Veterans are in process of retiring and generation Z are not in the labour market yet, participants of our survey belong to Baby Boomers, Generation X and Generation Y.

Research framework

The methodology undertaken in this study was an exploratory research study examining the nature of knowledge sharing activities among Hungarian organizations. The authors at the University of Pannonia, Veszprém were involved in the development and implementation of the “Organizational knowledge sharing in Hungary 2013/2014” questionnaire survey (KPMG Academy 2014), which was executed with the collaboration of the KPMG Academy, Budapest. The main objective of our research is to determine the ways in which social media technologies are being used as knowledge sharing tools.

Data collection

Based on our literature review and our previous study (KPMG-BME Academy, 2006), a large-scale online survey - “Organizational knowledge sharing in Hungary 2013/2014” - was developed (KPMG Academy, 2014), which was carried out in LimeSurvey, a web application. In the short introduction to the survey, it was stressed that the answers would be anonymous, and only used for this study. Respondents could leave their e-mail address in order to be informed about the results later. More than 1500 individuals received an e-mail requesting 15 minutes of their time to fill in a questionnaire about internal and external knowledge sharing tools and practices. The message contained a link to the LimeSurvey.

The survey instrument consisting of four demographic questions and forty-three questions related to knowledge management, divided into three main areas: knowledge management (strategy, initiatives), knowledge sharing (technologies, practices) and leadership practice (this paper does not discuss this topic).

The potential respondents were from KPMG Academy partnership database, networks of University of Pannonia and the researchers' social relations. The participation in this study was voluntary. In the course of the survey, answers from 299 organizations were included in the database, The completed questionnaires were exported from LimeSurvey to Excel files and analysed using SPSS.

Participants

The participating organizations are all operated in Hungary; they are private-owned Hungarian companies, subsidiaries of multinational companies, and other organizations in the field of public administration, but the exact statistical composition is unknown, as the questionnaire did not have questions about industry sectors' classification.

Based on the number of employees, 55% were large companies, 24% were medium-sized enterprises, 10% were small businesses and 11% were micro businesses. Somewhat more than half of the organizations (54%) were domestic subsidiaries of foreign companies, and 46% were Hungarian-owned companies. 27% of the respondents were top managers, 42% were middle level managers and 31% were white collar workers. The participants belonged to three generations; 22% from Baby Boomers, 60% from Generation X and 18% from Generation Y (KPMG Academy, 2014).

Data Analysis

In the following section, we provide an analysis of the data we obtained through the survey. We note that the survey responses demonstrate that Hungarian businesses are beginning to grasp the importance of knowledge and knowledge management but still have a long way to go to fully embrace knowledge management practices (KPMG Academy, 2014).

Knowledge management strategy and initiatives

Organizations in Hungary are just starting to implement knowledge management strategies. Overall, still only 37% of respondent organizations have developed a comprehensive strategy in the form of a written document (it is exactly the same percentage like in our previous

survey in 2006); however, 81% states knowledge as a strategic asset (which is 4% higher than in 2006) (KPMG-BME Academy 2006).

It can be seen that there is huge gap between theory and reality.



Figure 3. Knowledge management strategies and initiatives

Source: KPMG Academy. 2014. p. 8.

However, significant growth can be detected with respect to knowledge sharing programs, initiatives or projects exist in the respondents' organizations (from 46% to 69%). Elaborating knowledge management strategy is still not a typical activity, but it does not mean that organizations are not trying to support the dissemination of knowledge. Almost half of the participated large companies (45%) have developed a formal knowledge management strategy development while this rate is only 29% for the micro, small and medium-sized enterprises. When we compare foreign-owned organizations with Hungarian organizations (27%), 47% of the former have developed a formal strategy whilst only 27% of the latter have (Gaál et al., 2014).

Knowledge sharing technologies and practices

We examined numerous tools of knowledge sharing, several of which did not even exist, or were not widespread in 2005-2006 at the time of our previous research. However, there

were three of them, which we were able to measure now and in the past. In each case we identified strong growth in the use of these tools as we demonstrate in Figure 4.

In the period participation in communities of practices has more than doubled (from 29% to 70%), and a growing proportion of respondents turn to competence center or center of excellence for knowledge (21% to 30%). The usage of document management systems and knowledge repository measurably increased (from 50% to 76%) (KPMG Academy, 2014).

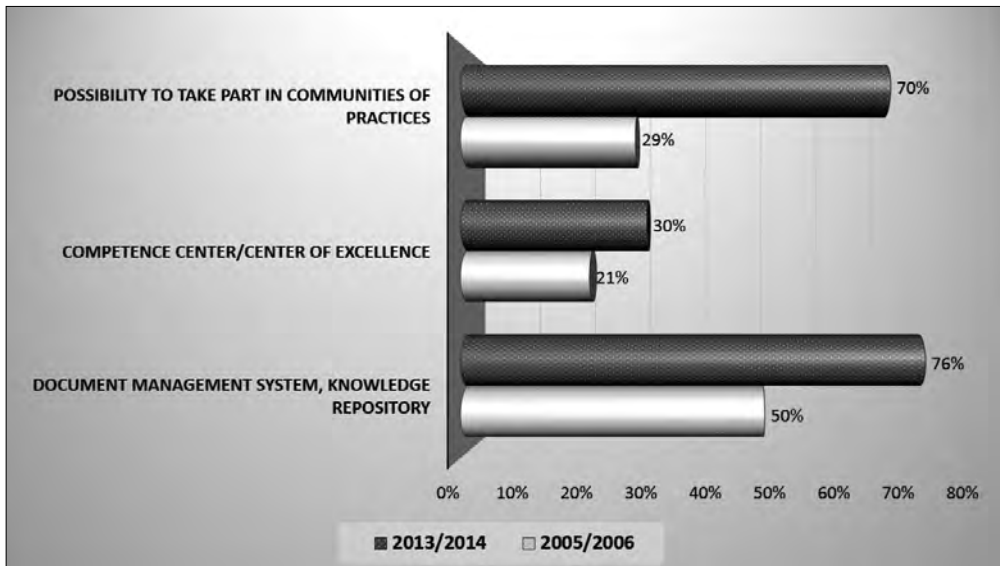


Figure 4. Knowledge sharing technologies/practices in both surveys
 Source: KPMG Academy. 2014. p. 9.

Internal knowledge sharing technologies and practices

The following section provides the results of the survey focusing on the existence and the usage of internal technologies and practices. In this context internal means all in-house technologies which can be self-developed or available essentially pre-packaged through an intranet.

The results of the survey indicate (Table 3) which internal knowledge sharing tools are available to be used by employees for information and/or knowledge sharing internally and which are selected by the employees from the available ones for knowledge sharing purposes during work (KPMG Academy, 2014).

Tool	Meaning	Existence	Usage*
Internal training	A method of preparing an employee to perform a task.	89%	94%
Document management system and knowledge repository	Providing a comprehensive solution for managing capture, index, storage, retrieve of any information.	76%	89%
Participation in the life of a communities of practices	Groups of people who are formed to share and create skills, knowledge, and expertise among employees.	70%	79%
Internal instant messaging service	Facilitating near real-time text based communication between two or more participants.	56%	83%
Presentation sharing	Offering the ability to publish any kind of organizational presentations to a specific audience or the entire world.	46%	80%
Groupware	Enabling group collaboration over a network, providing flexible communication structures.	44%	59%
Internal social networking services	Providing the network's members access to information and knowledge.	35%	78%
Internal blogs	Offering individuals/groups to capture and publish information about specific topics.	33%	63%
Knowledge map	Presenting what knowledge resides where (people) and for demonstrating the patterns of knowledge flow (distribution).	31%	68%
Competence center/ center of excellence	Consultants with specific areas of knowledge and experience.	30%	68%
Internal video sharing	Offering the ability to publish video content to a specific audience or the entire world.	19%	71%

Table 3. Existence and usage of internal knowledge sharing technologies/practices

*Clearly the percentages represent percentages relating to the organizations that provide the various knowledge sharing technologies/practices and therefore provide the possibility that employees make use of them.

The most popular practice for knowledge sharing is internal training, and three-quarters of the participated organizations have a document management system and knowledge repository and have the possibility to take part in the life of communities of practices. Half of the organizations provide support for instant messaging service, but with respect to the other technologies, less than half of organizations were made accessible to employees. However, where the employees are allowed to use any of these tools, a high proportion (in every case more than 50%) of the people utilize them for knowledge sharing during work (KPMG Academy, 2014).

External knowledge sharing technologies and practices

As regards the general accessibility of external knowledge sharing technologies/practices (Figure 5) many organizations demonstrate considerable aversion (KPMG-Academy, 2014).

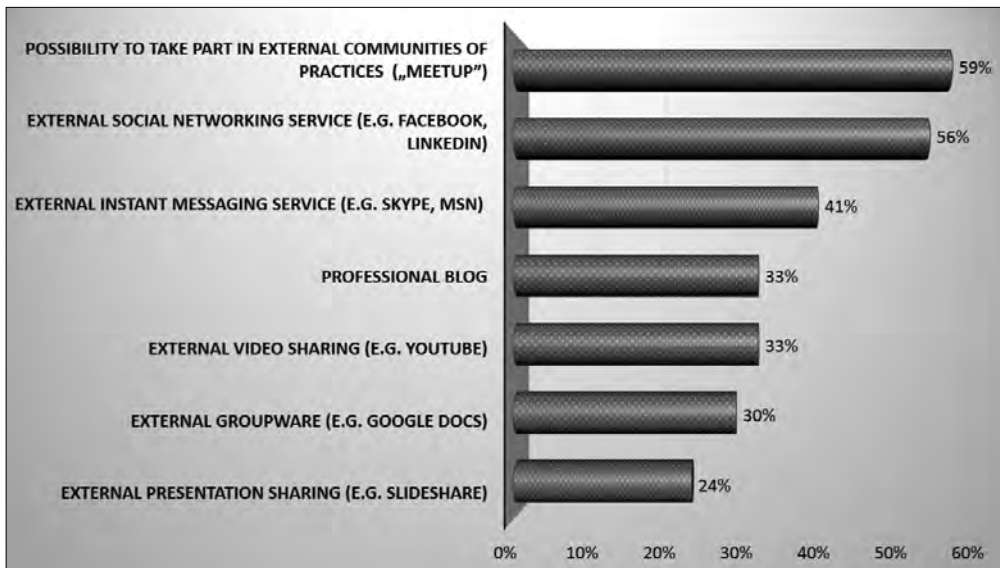


Figure 5. Existence of external knowledge sharing technologies/practices
 Source: KPMG Academy. 2014. p. 10.

There are only two external knowledge sharing tools, which can be found more than half of the organizations, the participation in communities of practices and social networking service, but only third (or less) of the organizations allow the usage of instant messaging services, blogs, video sharing, groupware or presentation sharing.

We were interested in which technologies are used for knowledge sharing during work or for professional development at the participating organizations (Figure 6).

It was an interesting result that the organizations where the employees are allowed to use these tools, a high proportion (concerning six tools out of seven, more than 70%) of the people utilize them. Although interest in social media is increasing, organizations do not tend to allow their employees to use social media technologies. This may be because they are concerned about the risks and consequences of a potential misuse. On the other hand knowledge workers and managers may not appreciate the value of using these tools because of a lack of motivation to share knowledge or they may not be aware of the advantages of using these tools for work purposes.

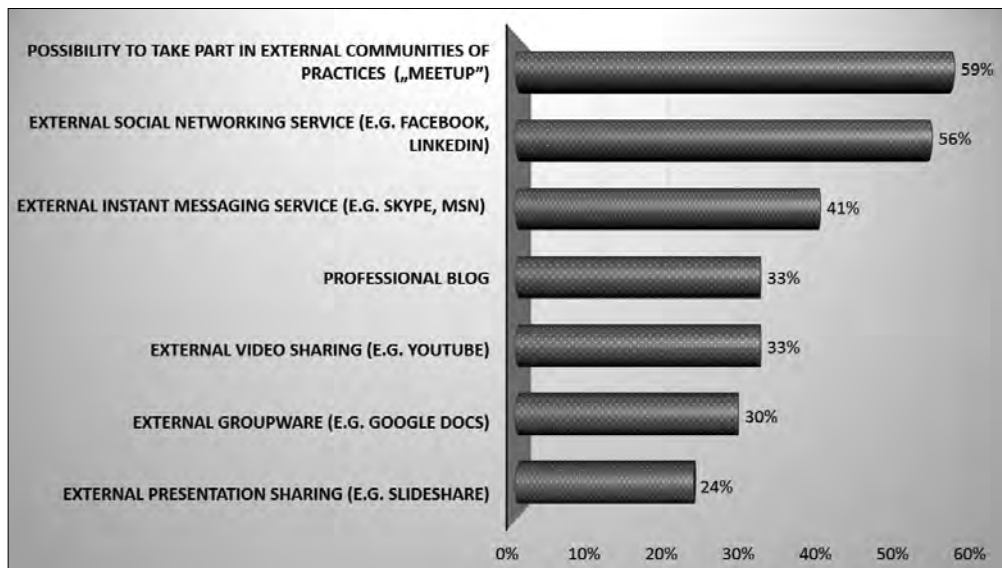


Figure 6. Usage of external knowledge sharing technologies/practices*

Source: KPMG Academy, 2014, p. 10.

*Clearly the percentages represent percentages relating to the organizations that provide the various knowledge sharing technologies/practices and therefore provide the possibility that employees make use of them.

Knowledge sharing behaviour (motivators)

We were interested in to what extent the participants agree with the following statements concerning the factors relating to motivation for knowledge sharing. For each category we identify a specific a statement which were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (KPMG Academy, 2014):

- reciprocity: willing to share knowledge with the colleagues in order to get useful knowledge from them in the future.
- reputation: willing to share my knowledge with my colleagues in order to be known as a knowledgeable person with valuable expertise.
- altruism: I am willing to share my knowledge with my colleagues in order to help them.

Fully 95% of respondents claim that they share their knowledge with others because they want to help them. 66% consider that others have knowledge that they may need at a later date. In our sample only half (51%) agree with the statement that they share their knowledge, to be known as a knowledgeable person with valuable expertise. Thus the most powerful motivators, as identified by our survey, are altruism and reciprocity.

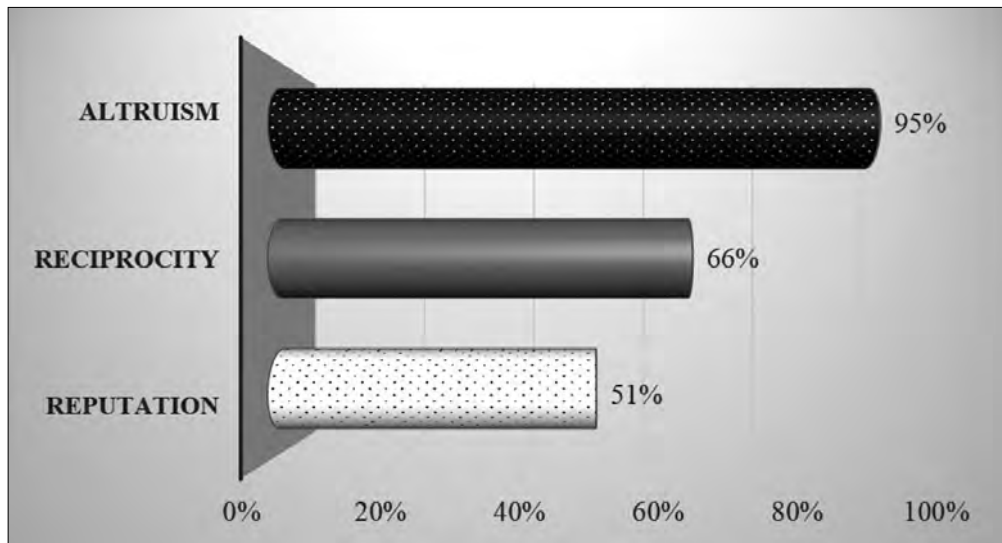


Figure 7. Knowledge sharing motivators

These results run counter to the experience of the study group. In other research that we have been engaged in initially knowledge sharing is enforced by mandatory tools. This is

followed by the next step when people share the result of their successful activity with others, as they are proud of it. Then when members of the community share information with each other on a reciprocal basis. Only few people reach the level of altruism. We can conclude, that the practical experience and the self-assessment questionnaire results do not match (KPMG Academy, 2014).

Individuals' knowledge sharing behaviours in the workplace are divergent and highly dependent on their willingness to share knowledge. As a result it is of critical importance to understand how to foster employees' knowledge sharing has become critical. Our new research will examine the relationship between emotional intelligence traits (Petrides, 2009) and knowledge sharing. The aim of the research will be to define which emotional intelligence factors (well-being, emotionality, self-control and sociability) influence knowledge sharing. We will use a more sophisticated measurement, for each category of knowledge sharing behaviour (altruism, reciprocity, reputation) we will involve 5 component statements which will be scored on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree) (Obermayer-Kovács – Komlósi, 2014).

Personal characteristic correlations

Although individuals might recognize the importance of knowledge management practices for the success of their daily business lives, it might be presumed that the degree of the willingness to share knowledge likely depends on their personal demographic features.

In our exploratory study we examined the correlation between social media technologies – used for knowledge sharing during work – and the personal characteristics of respondents, such as their age and their work position. One typical hypothesis about the affinity of individuals with respect to knowledge management and social media technologies is that the younger generations are likely to have a greater affinity for using them.

Methodology

Using our dataset SPSS, we investigated descriptive statistics, including Pearson's chi-squared test and contingency tables. A contingency table (also referred to as cross tabulation or cross tab) is a type of table in a matrix format that displays the (multivariate) frequency distribution of the variables. Pearson's chi-squared test is used to test the independence of variables. The chi-square test is a useful tool to determine whether it is worth interpreting a contingency table. A significant result of this test means that the cells of a contingency table

should be interpreted. A non-significant test means that no effects were discovered and chance could explain the observed differences in the cells. In this case, an interpretation of the cell frequencies is not useful. Contingency tables are constructed by listing all the levels of one variable as rows in a table and the levels of the other variables as columns, then finding the joint or cell frequency for each cell. The cell frequencies are then summed across both rows and columns (Stockburger, 1998).

Results

We examined the relationship between individual characteristics and usage of internal/external social media technologies (Gaál et al., 2014).

Internal social networking service

Regarding internal social networking service we found relationship with both individual characteristics. As the age of the individual increases, the willingness to use this tool for knowledge sharing during work increases: 25% of Generation Y, 41% of Generation X, 55% of Baby Boomers. We investigate the willingness to use internal social networking classified by position, only 26% of white collar workers, while nearly half (47%) of managers (middle level and top management) utilize the internal social networking service.

The higher one's position is the greater the need for such a tool, which facilitates to establish collaboration with colleagues working in other departments or in other countries at an international organization. Younger people choose open systems and they use applications that provide free access anytime and anywhere and they do not use the term Intranet at all.

Internal instant messaging service

The survey data demonstrates that the usage of internal instant messaging service is used by 58% of top management a little bit more than one third of the middle level managers and white collar workers (38%). We would argue that that, for international organizations, at top management level there are numerous negotiations that take place across national borders, and these tools provide a more cost-effective solution supporting such negotiations.

Presentation sharing technology

We discovered the following utilization of presentation sharing technologies 60% of Baby Boomers, 39% of Generation X, and only 35% of Generation Y. What could be the reason for this result? How many people make presentations nowadays at all? For example, the TED

talks are typically held without any presentation, some photos may be used as an illustration. Or just think about using Prezi, which is an auto-sharing application.

External social networking service

With respect to external social media technologies only one significant relationship was encountered. Regarding the external social networking service (e.g. Facebook, LinkedIn), the higher the position of the individual in the organization, the more frequently they more they make use of external social networking for work- related purposes. Thus, 68% of top management, 59% of middle level managers and only almost the half (49%) of white collar workers use this tool for knowledge sharing during work. However, it is important to make a distinction between Facebook and LinkedIn. With respect to Facebook we would argue that usage would be greater among those in lower positions. However, in the case of LinkedIn we might expect higher usage among higher positions because it is generally known that the executive head hunting companies often gather information from that site.

The result we have obtained is likely a demonstration of the fact that individuals at lower levels of the organization (and likely members of Gen Y) are more likely to make use of external social networking for friendship and informal, personal communication rather than work related activities.

Practical implications

This research was designed to find out more about the relation between social media tools and knowledge sharing within organizations. We can state that all stages (Bellefroid, 2012) of knowledge sharing can be found in the Hungarian organizations, but the third stage (social networks) has not been widely achieved as most of the organizations do not allow their employees to utilize the benefits of the social media tools and do not support to develop social networks through these technologies.

Table 4 presents the possible social media tools that can be used by the communities with the aim to share knowledge with the wider audience and within the organization.

Social media tool	Description
Facebook	Facebook, as an external social networking service enables for a community to create a profile (and topic groups) with the aim to share information/knowledge to the followers (partners, potential customers) of their community page. Specific information should be shared only with the members; for a wider audience, commercials, news, etc. can be published.
LinkedIn	LinkedIn, as an external social networking service can be used for professional way, could be a perfect tool for finding information and experts.
MeetUp	Meetup, as an external communities of practice has online portals that facilitate group meetings in various localities around the world. People are contacting with others generally with the professional aim.
Skype	Skype, as an external instant messaging service is also an online conference tool, which can promote the instant communication and knowledge sharing between the community members. There can be numerous negotiations take place across national borders, and this tool means a more cost-effective solution.
GoogleDocs	GoogleDocs, as an external groupware supports collaborative creation of knowledge. It can be used for sharing the documents without sending them via e-mails, but only sharing the link of the document. Other community members who have access to the GoogleDocs have a chance to modify the materials.
Weblog	Weblog, as a professional blog is an informational site published on the web and consists of posts typically displayed in reverse chronological order. Weblogs of the communities are focusing on partners, employees or everyone with the aim to share information or knowledge.
YouTube	YouTube as an external video sharing site allows users to upload, view, and share videos, and it makes use of Adobe Flash Video to display a variety of individual or corporate media video.
SlideShare	SlideShare as an external presentation sharing is a web-based slide hosting service. Users can upload presentations privately or publicly. The website can be used for businesses to share slides among employees more easily. SlideShare also provides users the ability to rate, comment on, and share the uploaded content.

Table 4. Usage possibilities of external social media tools for knowledge sharing

For organizations that wish to enhance knowledge sharing it is becoming essential that they integrate social media tools into their daily business routines. Employees must be given easy access to such tools and be provide with appropriate training.

We would also observe that there are numerous opportunities to using social media tools in a manner meaningful to organizations:

- communication between employees can be encouraged to support problem solving: if organization needs an expert for a specific task, a post can be placed on a blog and likely receive a response from another employee or search on LinkedIn to find the a person, who can help.
- convert personal knowledge to organisational knowledge: if the senior employees record videos about their work and share it with the new employees, the organization can use these videos instead of expensive training programs to explain the details.
- discuss professional problems: with a group of people who are active practitioners in a particular area, professional communities (communities of practices – CoP) can be useful because they are neutral and can provide a way to share best practices, ask questions of and provide support for each other outside the organization.
- reduce time and money through integrated system: using a “new” technology, the calendar, but not because of the calendar function, but organizing and sharing events, meetings, making appointment in a shorter time (instead of phone calls or sending lots of e-mails).

In general, it is recommended that management support the introduction of social media technologies, establish the terms and conditions of their usage, communicate the benefits and provide the necessary training for their effective use. Moreover, organizations should develop a reward system to provide additional motivation to employees to use social media tools for knowledge sharing.

Discussion and future research

Amazingly rapid expansion of the content sharing technologies has led to many of these technologies becoming an integral part of many people’s daily routine. We can easily collaborate and work with our colleagues at the opposite side of the world with the help of professional, fast instant messaging services in an effective way. Communities of practices’ “Meetup” video can be accessed almost immediately after the event on a video sharing site. Companies have to clearly identify what information and knowledge is to be kept confidential and what is to be shared and made available to others. Such practices as crowd-sourcing and open in-

novation practices have demonstrated the value of sharing information and knowledge that has previously been considered to be confidential.

In future, we expect that both the internal and external usage of the social media tools will increase. In our study, social media emerges a new perspective. Enormous information and knowledge can be shared using powerful tools to a world in which the social factors play an essential role. In our new accelerated world, numerous technologies have been developed to support social capital connections (social networking services like Facebook, LinkedIn) and to communicate in a more effective way (instant messaging services like Skype, Viber).

This paper introduces a survey that explores the usage of social media technologies through an investigation of the willingness of employees to participate in knowledge sharing. In addition, we have explored whether there are generational differences relating to knowledge sharing behaviours. When we consider potential limitations the sample was gathered in Hungary, so we can make statements only for the Hungarian organizations. However, this permitted an in-depth study, and the scope of the survey with 299 respondents was larger than similar previous research studies. Most of our findings were unexpected and are not consistent with stereotypes about the generations.

We have hypothesized that younger generations have a greater willingness to use social media technologies. After our investigations we can state however that the members of Generation Y (younger generation) or employees with lower level position are less likely social media technologies in the workplace. We would postulate that this is because social media tools are more common among young people but they use them for private purposes, while using these tools for work (mainly for knowledge sharing or professional development) is more typical for Generation X and Baby Boomers (elder generations).

In 1993 Drucker predicted how Knowledge Economy will need to progress in order to obtain competitive advantage. He stated that *“the productivity of knowledge is going to be the determining factor in the competitive position in a company, an industry, an entire country. No country, industry or company has any ‘natural’ advantage or disadvantage. The only advantage it can possess is the ability to exploit universally available knowledge. The only thing that increasingly will matter in national as in international economics is management’s performance in making knowledge productive”* (Drucker, 1993, p. 193).

It seems that he predicted the rise of the online, open source, social media tools that can become widely available and prevalent in our modern business life. The willingness to use these technologies by Generation Y (and later for Generation Z) will not be enough. These new generations must be encouraged to make use of these technologies for work as well as for non-work related activities.

Our research could be expanded, as it would be interesting to make a comparison between knowledge sharing practices and usage of social media tools in other countries. The authors are already working on extending their work in this manner.

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Nóra Obermayer-Kovács is an Assistant Professor at the Department of Management, University of Pannonia, Veszprém. She obtained her Ph.D. (Conscious knowledge management in knowledge economy) in Economics and Management in 2008. She won the Best Young Researcher and Scientist Paper Award and received most prestigious Winner of Elsevier Scopus Young Researcher Awards in Engineering category. Nóra has been teaching a variety of management master courses including Strategic Human Resource Management, Globalization and Organizational Culture and Competence Management. She has gained international teaching experience as a participant in the Erasmus Teacher's Mobility Program. In 2013 she was a visiting lecturer at Fontys University of Applied Sciences in Eindhoven (The Netherlands) and had seminar focused on strategic human resource management and leadership. This year she is going to give lectures at the University of Lapland, Faculty of Social Science in Rovaniemi (Finland) in the field of Knowledge Management. Since 2004 she has worked as a researcher;



as co-leader at “Knowledge Management in Hungary 2005/2006”, „Organizational Knowledge Sharing in Hungary, 2013/2014”, Knowledge sharing and emotional intelligence 2014/2015” national research and as recipient at international „Global Knowledge Survey 2012/2013” research. She is member of Committee on Economics (Knowledge Management) of Hungarian Academy of Sciences (MTA), and of the Program Committee of the European Conference on Knowledge Management. She has published numerous papers and presented at national and international conferences.

Anthony Wensley is a Professor at the University of Toronto Mississauga and Director of the Institute of Communication, Culture and Information Technology. He has degrees from the University of Cambridge, the University of Surrey, McMaster University, and the University of Waterloo. His academic training includes studies in Philosophy, History of Science, Finance, Operations Management and Artificial Intelligence/Knowledge-based systems. He has been instrumental in the development of innovative undergraduate programs in Communication, Culture, Information and Technology. His research focuses in enterprise computing, health care, knowledge management and small business. He has also written extensively on issues relating to Intellectual Property Law. He is the Executive Editor of *Knowledge and Process Management* and has published widely during his career.

