Ensuring of Knowledge Continuity in Organizations in the Czech Republic

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Abstract: In the current knowledge economy employees are considered to be the key competitive advantage because their knowledge represents the most valuable asset of the organization. When employees leave an organization, they take their knowledge with them. The loss of knowledge represents a potential threat for organizations, in particular if employee with critical knowledge leaves to join a competitor. The article concentrates on the ensuring of knowledge continuity as a possibility of eliminating the threat of loss of knowledge, in case of personnel changes. The objective of the article is to examine the level of ensuring of knowledge continuity in organizations in Czech Republic and to identify the factors affecting the ensuring of knowledge continuity. Ensuring the knowledge continuity was analyzed by means of the quantitative and the qualitative survey. The organization, in which the knowledge continuity is systematically ensured, if an employee leaves, the organization will not lose his/her critical knowledge since it has already been transferred in some form to other employee. In result the quality of organization processes can be preserved and development and decision-making improved.

Keywords: Employees · Knowledge · Knowledge Continuity Management · Organizations · Survey

Jel Classification: D83

1 Introduction and literary survey

In society, there have always been employees that can be categorised as knowledge employees. During the last years, however, developed economies have seen a steep increase of their share with respect to the total number of employees. In compliance with the resource-based approach to achieve a competitive advantage, knowledge employees are considered a unique resource and valuable asset for all organizations (Grant, 1996; Beijerse, 2000; Kachaňáková and Stachová, 2010). Applying the knowledge continuity management has an important role not only in the knowledge transfer process, but also for the individual processes that help the organization to ensure its competitive advantage (Beazley et al., 2002).

The objective of the article is to examine the level of ensuring of knowledge continuity in organizations in Czech Republic (CR) by means of quantitative and qualitative survey and to identify the factors affecting the ensuring of knowledge continuity. A partial objective is to test dependencies between selected qualitative variables in relation to knowledge continuity ensuring and to confirm their validity or reject them at the selected significance level. Ensuring the knowledge continuity was analyzed in the Czech Republic by means of the quantitative and the qualitative survey.

Knowledge continuity is an area associated with knowledge management (KM) and defines the ratio of knowledge retained by the organization when a knowledge employee leaves the organization and the knowledge leaving together with the knowledge employee. Knowledge continuity management (KCM) is a branch of knowledge management. While knowledge management focuses on the capturing and sharing of know-how important for colleagues who have similar tasks in the or-
ganization, knowledge continuity management is targeted at the transfer of critical knowledge\(^2\) from departing employees to their successors (Beazley, 2003; Kalkan, 2004).

Effective transfer of knowledge between present employees (horizontal transfer) throughout the organization can solve some organizational problems and promote success. However, vertical transfer of knowledge (among generations of employees) is a complex task, which, if fails, can lead to a crisis. According to Szulanski (2000), the vertical transfer is much more complex than horizontal transmission. Future research should focus on the informal knowledge transfer in the knowledge continuity which would not only greatly contributed to the effective knowledge continuity management, but also to support the continuity of processes that cannot be ensured without the knowledge of employees with critical knowledge.

Figure 1 represents an optimal frame of transferred knowledge level (vertical and horizontal transfer) in time.

**Figure 1** Horizontal and vertical knowledge transfer

[Diagram showing horizontal and vertical knowledge transfer]

Source: own research

Knowledge continuity management is very important for organizations as it increases the willingness of new employees to gain new experience, reduces stress and improves their morals (Stam, 2009). It is essential for employees to transfer and share their knowledge in the course of their work, on a regular basis, but certainly before leaving the organization. The aim of knowledge continuity management is to find a suitable successor for the departing employee to prevent any loss of knowledge or to eliminate it to the maximum possible extent (Beijerse, 2000; Eucker, 2007; Grant, 1996; Johannessen and Olsen, 2003; Stam, 2009).

If organizations want to use their knowledge potential efficiently, it is crucial to ensure a continuous transfer of knowledge in particular within the organization and no later than at the time when employees leave the organization (Beazley et al., 2002). At this time the organization should already have a successor who possesses the same critical knowledge necessary for the work as his/her predecessor does. By ensuring maximum knowledge continuity, it is possible to eliminate the negative consequences of knowledge loss (for example, an employee leaving to join a competitor, retirement, an employee’s death, etc.).

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\(^2\) Critical knowledge = the knowledge necessary for the exercise of his/her position.
Without a suitable process for retaining this knowledge and its transfer to the successor, this knowledge is lost for the organization and thus the performance of the organization is endangered. Performance means an ability to achieve personal, procedural, team and company goals. As a result, newcomers who replace leaving employees spend more time to start working as important findings and information of their predecessors is lost. The problem of unsecured transfer leads to time and material losses in the quality of process management. This paralyses organizations’ abilities to act flexibly and keep track (Stam, 2009; Szulanski, 2000, Stachova and Stacho, 2010).

According to Stam (2009), organizations are facing a crisis of knowledge management which is to ensure that employees will not leave the organization before transferring their experience. This means that organizations are facing a “knowledge preservation crisis” as organizations’ knowledge is threatened. In this respect knowledge continuity management becomes a key means of reducing the risk of loss of critical knowledge (Urbancová and Königová, 2011).

Identically, also Beazley et al. (2003) assesses the loss of knowledge as a serious threat. A method of confronting this threat is to introduce a structured program for the transfer of critical knowledge (see Figure 2). Three sets of knowledge have to be taken into account (Urbancová, Königová, 2010). Individual knowledge (tacit K1), which can incorporate critical knowledge, is the knowledge that is more difficult to share, for example because the holder refuses to share it or does not know about it or the recipient is unable to accept it. Individual knowledge also includes critical knowledge that is associated with the performance of a certain position; it represents a competitive advantage for the given employee. Partly shared knowledge (K2) is the knowledge shared by a narrow group of people. Generally shared knowledge (K3) refers to knowledge that is easily accessible and transferable (most frequently in an explicit form).

It is evident that not all knowledge may be collected and transferred, but that is not the goal. The goal is to transfer solely the critical operational knowledge related to the work position that would, in case it is lost, endanger the operation of the organization.

**Figure 2 Knowledge sharing**

![Knowledge sharing diagram](image)

Source: own research

### 2 Material and Methods

The first part of the article deals with theoretical approaches to the knowledge continuity ensuring in organizations while the second part analyses the findings of surveys carried out in the Czech Republic.

The article has been processed based on the analysis of secondary and primary sources, outcome synthesis and the evaluation of results of a questionnaire survey and the evaluation of results of a qualitative survey with 19 managers of organizations in small and large organizations. Research
has shown large differences in the sizes of these organizations and the strength of different effects of individual factors to ensure the knowledge continuity.

The data for the evaluation of relationships between potential threats of organizations from the loss of knowledge and identification variables has been gathered through a quantitative survey, i.e. a questionnaire survey, in which 167 higher and middle management managers from various organizations took part; the branch in which the organizations operate has not been taken into account. The questionnaire contained 19 questions (15 closed and 4 semi-open) on the knowledge sharing and knowledge transfer and 8 identification questions. The questionnaire was distributed to 814 respondents. The overall questionnaire return was 20.52 %, i.e. 167 respondents took part. 55.1 % holds a senior management position, 68.9 % have university education, 45.5 % are in the age group 46-62 years, 70.1 % are employees of Czech organizations, 51.5 % work in tertiary sector and 38.9 % work in the primary sector. 76.6 % of respondents were male. The data have been processed by means of absolute and relative frequencies using the LimeSurvey application and the Microsoft Office Excel 2007. Testing is done by Pearson Chi-Square test in association table and contingency table. The power of dependence is determined by the correlation coefficient and Cramer's coefficient.

3 Results

The ensuring of the knowledge continuity between generations of employees

The survey has shown that all respondents share their knowledge with colleagues in their organization, however, the extent differs. 45 respondents (26.9 %) said they share knowledge, but not all of it, as they are the only ones who can possess this knowledge. This concerns, for example, auditors, IT employees with security checks, etc. who have to possess a certificate authorising them to perform their job and is issued based on their education, experience and practice. Other managers (17.4 %) responded that they share only some knowledge since they want to preserve a certain advantage of knowledge ownership and keep a competitive advantage over other employees. Only 55.7 % of respondents try to share all their knowledge.

A total of 149 respondents out of 167 (89.2 %) are willing to train a young promising employee who could become their successor. A total of 44.9 % of respondents have had a mentor who trained them for a managerial position.

The survey has also revealed that 70.1 % (117) of respondents transfer knowledge to other colleagues because they feel some satisfaction if they transfer knowledge to the rest of the organization, so-called altruism. For a total of 25.7 % of respondents the main reason for knowledge transfer is the expectation that if they provide a piece of knowledge to someone else, they will be provided with another piece of knowledge later in the future (when they need it) – so-called reciprocity. Only 4.2 % of respondents stated that the reason for transferring knowledge is to improve their image (reputation).

When an employee leaves the organization for reasons of retirement or joining a competitor, organizations provide a successor in 66.5 % of cases to enable the successor to take over the knowledge and experience of the leaving employee. Another 34 respondents (20.4 %) stated that when a person left, they determined and recorded selected (critical) knowledge and experience that was important for the given organization.

Also, 61.7 % of respondents are motivated or stimulated to transfer knowledge to a successor once they decide to leave; out of which 38.3 % of the addressed managers stated that they were stimulated by their organization to share and transfer knowledge. Respondent had the option to list the ways in which they were stimulated and subsequently motivated to share, transfer and preserve knowledge. Most of respondents stated that leaving employees are offered financial compensation. Respondents also mentioned that the company also applied sanctions in case leaving employees
were not willing to transfer knowledge and experience relevant to the position to the successor. One fifth of respondents said that knowledge and experience sharing, transferring and preserving (document archiving, handover documentation, database completion, initial training of the successor, checking (supervising) the trained successor, etc.) when leaving the organization were required, however, this was not incorporated in the organizational culture. In cases where the issues of knowledge continuity ensuring are not anchored in organizational culture, organizations rely on a good long-term working relationship with the leaving employee and personal arrangements with this employee stimulating their willingness to train their successor.

Based on the findings from the questionnaire, it is possible to say that organizations place more emphasis on the transfer of tacit knowledge compared to explicit knowledge (that is easier to obtain and gather). The survey has revealed that tacit knowledge is usually transferred through informal meetings, as mentioned by 59 respondents, i.e. 35.3 %. The transfer of explicit knowledge is most frequently ensured by e-learning applications.

**The identification of the factors affecting on the knowledge continuity ensuring**

All respondents univocally realise that organizational climate is essential for the sharing and transferring of knowledge and ensuring its continuity. Based on the findings, it is possible to state that 52.6 % respondents mentioned that their organizations placed much emphasis on efficient communication and personal contacts ensured from above. However, it is necessary to add that if organizations lack a friendly, relaxed and non-conflicting atmosphere among colleagues as well as superiors, i.e. the right organizational climate, it is impossible to ensure efficient communication.

On the basis of interviews and the quantitative survey carried out it can be said that the concern of employees to share knowledge with their colleagues prevails since they are worried that they might lose their competitive advantage. On the other hand those who are about to retire see sharing and transfer of knowledge to their successors as highly positive. Respondents from small organizations all agreed that purposeful creation of appropriate organizational climate is essential for ensuring the continuity of knowledge. In total 87.5 % of respondents said they are trying to create appropriate organizational climate for knowledge transfer.

Furthermore, all respondents responded that poor organizational climate was one of the biggest barriers preventing knowledge continuity ensuring. If an employee does not feel like transferring knowledge, for example, if they do not trust their colleagues, then the employee will not share it and the organization cannot do anything about it. It should therefore support other factors, such as motivation, to make employees more willing to transfer knowledge. The majority of respondents (87.5 %) do not need to be stimulated by the organization as far as knowledge transfer is concerned; they are motivated by the fact that they are employed by the organization and want the organization to operate also in the future regardless of the fact whether they will be part of it or not.

Respondents from large organizations gave similar answers, respondents stated that they realised the necessity to ensure a suitable organizational climate. 63.6 % of respondents stated that in large organizations it was necessary to build organizational culture in the long run and this was to be done by selecting (by an executive or the human resources department) candidates who by their nature were willing to share knowledge as soon as they joined the organization. The survey has also revealed that employees in large organizations are more worried about losing their position than employees in small organizations (81.8 %) and therefore are less motivated to share its knowledge and

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3 Organizational climate = is how employees perceive the functioning of the organization (Schein, 2009). There are always some ways to work with information, knowledge, experience and a certain evaluation of organizational resources and capabilities.

4 Size of organization (sections are given by Czech Stats Office): small - up to 19 employees, middle - 20 to 99 employees and 100 to 249 employees, large - 250 or more employees.
know-how with their colleagues. They are worried that their colleagues might overtake them and get their position. It can be therefore stated that for large organizations the integration of issues of knowledge continuity into their organizational culture is more important than for small organizations.

All of the above-stated reasons determining the level of knowledge continuity ensuring may be considered reasons determining the level of affectivity in relation to circumstances that affect an employee’s decision to leave the organization to join a competitor or to retire. The rule of direct proportion applies: the more affective the employee, the less knowledge s/he will be willing to transfer to his/her successor and the lower the level of knowledge continuity ensuring.

**Comparison of the knowledge continuity ensuring in small and large organizations**

A total of 50.3 % of respondents involved in the survey said that they had never come across the concept of knowledge continuity ensuring. We can therefore say that the issue of knowledge continuity ensuring has not been discussed in organizations in the CR yet. The highest number of respondents that have at least once experienced knowledge continuity ensuring work for organizations with more than 250 employees (71.7 %). The survey tested three specified hypotheses $^5$ (H$_1$, H$_2$, H$_3$).

The survey tested a dependency between a threat arising from the leaving of an employee and majority ownership interest in the organization (H$_1$). Based on the survey results it can be said that a total of 29.1 % respondents in Czech organizations think that an employee with critical knowledge who leaves will threaten the organization and 64 % of respondents from foreign organizations or organizations with Czech participation are of the same opinion. 44 respondents (37.6 %) from Czech and 12 respondents (24 %) from foreign organizations see the threat in the utilization of the knowledge by competitors. Using extracted data there was tested a dependency by applying of Pearson’s Chi-Square Test ($\chi^2$ test). As the p–value calculated by means of the $\chi^2$ test of 0.000 is lower than the selected level of significance $\alpha = 0.05$, null hypothesis has been rejected. The dependence between respondents’ opinion regarding the endangering of the organization caused by the leaving of an employee with critical knowledge and their ownership interest in the organization is statistically important at the 5% significance level. With respect to the values of contingency coefficient, it is possible to say that the proven statistical dependence between the features monitored is direct (with respect to its positive value) and medium (with respect to the calculated absolute value of correlation characteristics close to the value of 0.3), see Table 1.

The survey also tested a relation between a threat arising from the leaving of an employee and size of the organization (H$_2$). Based on the $\chi^2$ test, the null hypothesis has been rejected and the degree of dependence is 0.334 (see table 1).

The third hypothesis reflects a relation between a threat arising from the leaving of an employee and the sector of economy (H$_3$). Based on the survey results it can be said a total of 47.7 % (41) of respondents from the tertiary sector think that it would threaten the organization and 27 (31.4%) see the threat in the utilization of the knowledge by competitors. The second most numerous category is the primary sector where 19 respondents (29.2 %) are convinced of the threat and 21 respondents (32.3 %) state that the threat lies in the utilization of the knowledge by competitors. As the p–value calculated by means of the $\chi^2$ test of 0.037 is lower than the selected level of significance $\alpha = 0.05$, null hypothesis has been rejected. The dependence between the endangering of the organization caused by the leaving of an employee with critical knowledge and the sector of economy is statisti-

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$^5$ Threat = the organization loses the knowledge, the employee can use the knowledge with competitors. 
Ownership interest = organization in terms of majority ownership (entirely Czech organization entirely foreign organization, Czech organization with foreign participation). 
The sections of the industry classification of the economic activities according to NACE (level 1, total of 10 sections) were merged into three sectors for realization of the Chi - Square test, i.e. primary, secondary and tertiary sectors.
cally important at the 5% significance level. Based on the above, it is evident that the biggest threat arising from the leaving of an employee with critical knowledge is felt in the tertiary sector, i.e. the sector of services. Secondly most threatened category is the primary sector. With respect to the values of contingency coefficient, it is possible to say that the proven statistical dependence between the features monitored is direct (with respect to its positive value) and weak (with respect to the calculated absolute value of correlation characteristics close to the value of 0.2). Based the survey results it can be summarized that:

1) A threat arising from the leaving of an employee with critical knowledge for the organization is dependent on their ownership interest in the organization (direct dependence, medium).
2) A threat arising from the leaving of an employee with critical knowledge for the organization is dependent on the size of the organization (direct dependence, medium).
3) A threat arising from the leaving of an employee with critical knowledge for the organization is dependent on the sector (direct dependence, weak).

Table 1 The results of the quality characteristics test

<table>
<thead>
<tr>
<th>Order</th>
<th>Null Hypothesis H0</th>
<th>Test depending</th>
<th>Rejection of H0</th>
<th>Power dependence test</th>
<th>Dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A threat arising from the leaving of an employee with critical knowledge for the organization in not dependent on their ownership interest in the organization.</td>
<td>0.000</td>
<td>YES</td>
<td>0.332</td>
<td>medium</td>
</tr>
<tr>
<td>2</td>
<td>A threat arising from the leaving of an employee with critical knowledge for the organization in not dependent on size of the organization.</td>
<td>0.005</td>
<td>YES</td>
<td>0.334</td>
<td>medium</td>
</tr>
<tr>
<td>3</td>
<td>A threat arising from the leaving of an employee with critical knowledge for the organization in not dependent on the sector.</td>
<td>0.037</td>
<td>YES</td>
<td>0.248</td>
<td>weak</td>
</tr>
</tbody>
</table>

Source: own research

4 Discussion

A total of 73 % of respondents mentioned that an employee with critical knowledge who wanted to leave the organization represented a threat. Each organization has a different approach to knowledge continuity ensuring and the problem of loss of knowledge may occur. At present, organizations do not possess any personnel or financial reserves. They do not realise that an employee with critical knowledge may leave and they will have to train a newcomer, which is costly. However, if an employee leaves and the organization is unable to find a replacement, it is impossible to quantify what has been lost in that person.

These results are in accordance with Bersin & Associates research study (O’ Leonard, 2009) which states that succession planning is critical to the long-term health of any organization. Only 26 % of organizations say they have successors identified for the majority their executive positions. It is troubling, given the number of impending retirements within most organizations. They do not realise that an employee with critical knowledge may leave and they will have to train a newcomer, which is costly. However, if an employee leaves and the organization is unable to find a replacement, it is impossible to quantify what has been lost in that person.

These results are in accordance with Bersin & Associates research study (O’ Leonard, 2009) which states that succession planning is critical to the long-term health of any organization. Only 26 % of organizations say they have successors identified for the majority their executive positions. It is troubling, given the number of impending retirements within most organizations. These organizations will likely find themselves responding reactively to changes in leadership, relying on the external market for succession candidates – or on ill-prepared internal candidates. In addition, a formalized succession management process helps an organization retain its best people. Organizations with such a process have 50 % lower turnover among high performers, who are more likely to be committed to a career with an organization if they are being groomed for a future position.
Factors at the individual and organizational levels affect the level of knowledge continuity ensuring. On the basis of the survey it is possible to say that in relation to knowledge continuity there is a positive impact of the factors at the individual level (internal motivation, previous experience with knowledge sharing and trust) (see Figure 3). It is also possible to say there is a positive impact of the factors at the organizational level (climate in the organization, stimulation (remuneration system), communication process, willingness to invest in employee training). By supporting these factors leading to ensuring the knowledge continuity can increase the performance of individual processes. Knowledge continuity can thus be considered as a factor enhancing the performance of organization

**Figure 3** Factors which influence the knowledge continuity ensuring

<table>
<thead>
<tr>
<th>Internal factors which influence the knowledge continuity ensuring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual factors</strong></td>
</tr>
<tr>
<td>Motivation</td>
</tr>
<tr>
<td>Willingness to knowledge sharing</td>
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<tr>
<td>Willingness to take in</td>
</tr>
<tr>
<td><strong>Organizational factors</strong></td>
</tr>
<tr>
<td>Stimulation</td>
</tr>
<tr>
<td>Organizational culture</td>
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<tr>
<td>Organization climate</td>
</tr>
</tbody>
</table>

Effective communication

Source: own research

**Figure 4** Progression of employee knowledge in organization

<table>
<thead>
<tr>
<th></th>
<th>Length depends on experience and knowledge</th>
<th>Continuously when employee gains critical knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>New employee at new position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knowledge sharing with colleagues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee has critical knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained successor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical knowledge sharing with successor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Threat of knowledge loss for organizations

Source: own research

It is also possible to say that in organizations there is pressure to ensure knowledge transfer between employee generations, however, in reality it is not implemented sufficiently. Based on the survey, it is possible to state that the majority (63.2 %) of organizations do not ensure knowledge...
Ensuring of knowledge continuity in organization in the Czech Republic

Ensuring knowledge continuity intentionally and systematically. The transfer of knowledge necessary for the performance of the position usually takes place only when an organization finds out that the relevant employee is about to leave the position. This is, however, an unfavourable phenomenon as knowledge employees who are almost indispensable for the organization leave quite quickly once they decide to join a competitor (see figure 4).

**Figure 5** The flowchart of process of employee knowledge in organization

![Flowchart of process of employee knowledge in organization](source: own research)

If employees leave because of negative experience (for example, if they fail to reach an agreement with their superior, the organizational climate among colleagues is bad, colleagues receive better financial compensation than they do), they will not be willing to share knowledge with their successors are rather keep it to themselves and leave taking their knowledge with them. This aspect is identical in both large and small organizations. The working environment in organizations is often characterised by employees’ fear and that decreases their certainty as regards their job. As a result,
they are not willing to share knowledge. It is possible to state that if an employee is not satisfied in the organization, s/he will not transfer knowledge. As a consequence, the organization will face the threat of loss of knowledge.

Organizations must create a stimulating environment for their employees to gain their loyalty and eliminate the risk of losing critical knowledge of the departure of knowledge employees. Managers at all levels of management in organizations must realise that the time and costs associated with the manners of the new knowledge worker (which actively educates) are much higher than investments in stimulating the sharing and transfer of critical knowledge among existing employees. When the organization will ensure knowledge continuity, it will not lose the critical knowledge of leaving employee since it has already been transferred to another employee. In flowchart in figure 5 are shown particular phases from figure 4 expanded to specific activities of organization.

4 Conclusion

In compliance with the resource-based approach to competitive advantage development, it is the employees who become, due to their competencies, an important source for achieving a competitive advantage. At present, there are more demands placed on employees and their competencies (i.e. specific knowledge, abilities, skills, traits, motives, attitudes and values) than ever before and these are crucial for their successful participation in the organization and strengthening the organization’s position in the market. With respect to the fact that competencies also include knowledge, the process of working with knowledge leads to continuous organizational learning. The durability of a competitive advantage therefore derives both from unique knowledge as well as the abilities to use this knowledge.

Based on the research it can be said that the need for knowledge in organizations is constantly growing and knowledge continuity ensuring depends on size of organization, ownership and sector of economy. The large organizations generally have higher power factors at the organizational level, in small organizations at the individual level factors which support knowledge continuity. The organization now must work to ensure the expertise of its staff in order to maintain competitiveness in times of economic crisis.

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