Impact of Knowledge Management on the Operational Risk of the Modern Organizations

Giedrė Gudauskienė¹, Asta Mikalauskienė²

¹Master, Vilnius University, Lithuania, giedre.gudauskiene@gmail.com ²Prof., Dr., Vilnius University, Lithuania, asta.mikalauskiene@knf.vu.lt

Abstract. Organizations face a variety of challenges daily that sometimes make their operations risky. It is very important to define the risks and have a plan for managing threats. One way to manage risk is to use knowledge management. An organization is created by people, so maintaining for people is the most important goal of the organization. Brain drain can become significantly damage the organization. It is quite difficult to calculate the specific impact of risk on the organization in terms of qualitative indicators. However, it is unequivocally recognized that knowledge management in organizations - was chosen to find out how knowledge management, in addition to economic decisions, can contribute to an organization's risk aversion. This article aims to determine how the knowledge management process serves the operational risk management of organizations.

Keywords: knowledge management, activities of the organization, operational risks, risk management.

Introduction

Relevance of the article

When it comes to organizational risks, we often think only of economic indicators. But behind the numbers also lie the people, their knowledge and experience. Human resources, employee loyalty, employee turnover, motivation, and knowledge management gain a broader significance. The biggest challenge for modern organizations is to encourage employees to share their knowledge. Knowledge is the currency of today's organizations. Knowledge management is identified as a key competitive factor and a driving force for organizational development.

Level of problem investigation

Authors often analyze either the economic aspects of risk or the aspects of knowledge management in modern organizations. Conversely, knowledge management only hints in general terms that knowledge management helps maintain productivity and increase organizational efficiency. Both acknowledge that it is quite difficult to calculate the specific impact of risk on an organization in terms of qualitative indicators.

Scientific problem

There are not many authors who research economic topics from the point of view of knowledge management. However, it is unequivocally recognized that knowledge management in organizations is extremely important. When analyzing the scientific literature, there is a lack of joint research that would include both risk management and knowledge management as one process.

The object of the article – is that knowledge management process tools are used in organizations to manage operational risks.

Aim of the article – to help organizations manage operational risk using knowledge management as a tool.

Objectives of the article:

- 1. To perform a theoretical substantiation of risks and the impact of their management on the activities of organizations, defining the concept of risk in the activities of the organization and risk management processes and tools.
- 2. Establish knowledge management interfaces with an organization's operational risk management processes.
- 3. Evaluate the knowledge management tools used in organizations.
- 4. Evaluate the impact of knowledge management on the operational risk management of an organization.

Methods of the article

Analysis of literature and scientific sources is used in this article to substantiate the theoretical basis of what constitutes a risk. The concept of risk and its management tools and processes are then analyzed. The paper also analyzes knowledge management, key processes and their impact on risk management. A mixed qualitative research method was chosen: interviews with specialists and qualitative content analysis. After analyzing the answers of interviews, knowledge management tools were identified, and a podcast was analyzed using qualitative content analysis.

1. Influence of risk management on the activities of organizations

Risks in research are explored in a variety of contexts. Risks in the context of organizational governance are focused on a financial assessment. However, the word "risk" itself is not just a financial or numerical expression.

Risk, in its innate sense, means danger. In the scientific literature, risk is assessed differently. Therefore, there are many definitions of this term and it is applied in different situations.

All authors agree that a uniform definition of risk is not possible and depends on environmental factors. The concept of risk usually has a negative connotation in the definitions: loss, unfavourable or undesirable result, damage, negative accidental circumstances, danger, uncertainty, bad event. However, some authors also see opportunities or positive significance in risk: the diversity of results, the possibility that unforeseen events will not happen, the determination to act.

Risk management is an important part of the strategic management of every organization (Osmar & Turrent, 2018). The identification of risks and the measures applied in the organization must be in line with the goals and capabilities of the organization in the case of a specific risk, so it is very important to have up-to-date information and suitably qualified staff.

It is recommended that risk management begins with structuring, which helps the organization identify risks, analyze them, and define how they will be addressed in particular risk. After adequate assessment and identification of threats, they can be managed by creating an appropriate management plan for each organization (Sax, & Andersen, 2019). Risk can be managed, that is, by the use of various tools that allow one to predict the occurrence of a risky event to a certain extent and take measures to reduce the degree of risk (Aven, 2016). The authors propose an analysis of an organization's business processes by dividing the risk into environmental risk, process risk, and the risk of information needed to make decisions.

A risk management strategy should be implemented within the organizational culture, achieved through established policies and rules (Zahra, 2015).

The importance of leadership in a flexible and ever-changing system is emphasized. The head of such an organization must look for new resources and opportunities, and be prepared to make the necessary decisions at any time. This requires constant personal change and the acquisition of new knowledge.

In summary, authors acknowledge in their research that both private businesses and public authorities pay too little attention to naming and managing risks. Business risk management is not an end-to-end process: as the external environment changes and internal organizational changes occur, risk management processes need to be considered and modified as needed. Financial documents, various reports (balance sheet, profit and loss statement, profit and loss statement, cash flow statement), draft budgets, unit price, sales figures, etc. are the most commonly used for research. All of these documents provide an overview of the economic aspects of an organization's operations but do not reflect the situation in the areas of human resources, knowledge management, and communication — the implications of these areas for the organization's processes and activities in terms of risks to the organization.

The scientific literature often mentions the experience and knowledge of top managers. While the influence of managers in managing risk is important, perhaps even more persuasive - managers in an organization need to empower their employees and motivate them to share the necessary experience and knowledge to avoid defined risks.

Experience is classified as a qualitative risk management tool and researchers agree that it is not so easy to measure. In addition, experience and existing knowledge also have a period of validity: changing

markets, changing societies, consumer and other habits, and existing experiences may in some cases not save the situation but damage the organisation's ambitions, results or reputation.

2. Knowledge sharing as a risk management tool

Sharing knowledge means sharing success and failure stories, learning from successes and mistakes. Lessons learned intelligently can lead to better organizational performance and contribute to the wellbeing of an organization. It also helps you respond faster and more effectively to change and act responsibly (Atkočiūnienė, & Radiūnaitė, 2011).

Internal collaboration within the organization is emphasized by Chechen Liao, Shu-Hui Chuang, & Pui-Lai To (2010). To make use of available organizational knowledge, the departments of an organization should collaborate through learning, as working together can lead to significantly better results.

When knowledge resources are distributed through functions and shared between them, an organization receives a return on knowledge resources. The ability to use the available knowledge to make decisions allows an organization to respond more effectively to changes in the environment (Chechen Liao, Shu-Hui Chuang, & Pui-Lai To, 2010).

An important factor in the development and effectiveness of knowledge management in an organization is managerial behaviour (Donate, & Sánchez de Pablo, 2014). On the one hand, leaders can create conditions that allow employees to use their knowledge and skills. On the other hand, the behaviour of a leader can also create certain barriers to knowledge sharing when employees accumulate knowledge but do not share it.

Sharing tacit knowledge can reduce or eliminate certain risks or costs (Girnienė, 2013). However, people do not pass on their knowledge to others automatically. There are many reasons why knowledge is not shared, so the desire to share knowledge is limited. The ability to share knowledge depends primarily on a person's ability to communicate and his or her social behaviour.

Probst et al. (2006) identify several reasons why employees are reluctant to share knowledge: individual reluctance, the influence of organizational culture, use of power, trust in the organization, management.

Culture, among other organizational factors, has the greatest positive impact on knowledge management (Zheng, Yang, & McLean, 2010). This means that to create a knowledge-friendly environment, more attention needs to be paid to the formation of culture in knowledge management practices. The four cultural dimensions of a merged organization — adaptability, coherence, engagement, and mission – have a positive impact on knowledge management.

A study by Zheng, Yang, & McLean (2010) show that an organization's culture, structure, and strategy are closely related. Adaptive organizations that consistently adhere to their values engage employees, and share missions in their culture are also inclined to address challenges and find ways to reduce costs by looking to the future and being proactive in their strategy. Such organizations are more prone to a decentralized structure. These correlations mean that three organizational factors create an interdependent system in which changes in one or two factors can affect the other factor (s). Organizational change is usually required when developing knowledge management projects. It is important to consider all three factors when designing and implementing the expected changes.

The importance of culture is confirmed by a study by Lindner, & Wald (2011) which states that a positive set of values, attitudes, and expectations of knowledge in an organization facilitates people's willingness to share knowledge and trust other people's knowledge. The study found that knowledge culture is the most important factor in explaining the effectiveness of projects. The knowledge culture is complemented by informal communication, tolerance for mistakes, positive project culture and the support of top management. In some cases, if an organization is still young or running short-term projects, the organization's culture may compensate for organizational arrangements and lack of organizational memory.

Knowledge culture is about open knowledge transfer within and between projects. It depends on the willingness of individuals to share knowledge and on mutual trust. Confidence and understanding of the

benefits of personal and organizational knowledge management become a prerequisite for facilitating the activities of potential participants in knowledge management projects (Lindner, & Wald, 2011).

For knowledge transfer to be smooth and continuous, it is necessary to strengthen cooperation inside and outside the organization: the stronger the links between the partners, the more intensive the knowledge sharing. It should be noted that informal relationships when building social networks help to strengthen connections. Individual knowledge through dialogue, the process of knowledge exchange, discussion, sharing of experience and observation strengthens not only the knowledge of the individual, group, organization but also inter-organizational knowledge (Atkočiūnienė, 2010).

Knowledge sharing is also encouraged by various motivational systems: at the group level (when allowed to work with a stronger team with more knowledge and opportunities), at the material level (when agreeing on a specific bonus or other material rewards) and at the individual level (when agreeing on responsibilities). Motivation is an additional element of knowledge-based leadership. Numerous studies show that both explicit (e.g., reward) and implicit (e.g., empowerment) motivation have a positive impact on the development and success of knowledge management. One of the most important tasks for leaders is to realize that different individuals are influenced by different motivational factors. Managers should therefore use a variety of methods, depending on the needs of the members of the organization (Donate, & Sánchez de Pablo, 2015).

Although evaluation and reward encourage knowledge-sharing, those employees who were not responsible for sharing share knowledge very rarely. This shows that encouraging employees alone is not enough, and knowledge sharing does not take place without accountability and knowledge-sharing practices. Also, Wang, Noe and Wang (2014) note that without accountability and control, rare and poor knowledge sharing will be more harmful than beneficial to both employees and the organization itself. This study showed that accountability and encouragement stimulated knowledge sharing. Evaluation and beneficial knowledge sharing have been found to have a stronger impact than conventional knowledge sharing.

A study by Brown, Dennis, Burley, & Arling (2013) states that knowledge coded by an organization did not affect the value of knowledge when people shared knowledge. The study found that the increasing complexity of procedures also increases the value of knowledge sharing, which has a negative impact on the use of digital information. Interactivity is important when transmitting complex knowledge. Therefore, to perform more complex tasks successfully, it is necessary that the direct transfer of knowledge "from mouth to magnifying glass" makes complex tasks easier, thereby realizing the value of the transferred knowledge. Employees receive better help by gaining knowledge according to their needs and sharing information with another person than by using codified knowledge of the organization.

The consequences of knowledge sharing can also be negative. First, knowledge sharing can take a long time to gain specific experience. Second, employees find it difficult to give away their source of power and status to make it available to all members of the organization. Third, the benefits of accumulation should not be overlooked: while accumulating knowledge avoids the risk of passing on knowledge, thus preserving its power and status, the negative consequence is that it does not gain full recognition for what it knows when accumulating knowledge (Hislop, 2009).

Knowledge sharing can weaken the position of the knowledge owner in an organization. In such cases, the organization must have an interest in building trust, in some cases linking knowledge sharing to pay or certain incentives.

Knowledge management practices abound, and a less formal work environment is thought to facilitate efficiency through appropriate informal practices. There is no one-size-fits-all answer: both formal and informal practices are positively valued in research. These practices should focus on the individual: knowledge sharing, fostering innovation, empowerment, various meetings, informal networks, project teams, success stories, and more (Cerchione, Centobelli, Zerbino, & Anand, 2020). The effective sharing of knowledge is also encouraged by an experience-based approach to personalization. (Brown, Dennis, Burley, & Arling, 2013).

In summary, tacit knowledge is an important factor in keeping organizational knowledge up to date. This knowledge "lies" in the minds of employees, so the organization must have an interest in using the tacit knowledge for the benefit of the organization. Knowledge sharing helps an organization avoid a variety of risks by leveraging good and bad experiences. However, employees face a variety of fears that the organization and leader should manage with motivation, clarity, and creating a safe environment.

3. Knowledge sharing in organizations as a risk management tool

Research methods

Aim of the research – explore how knowledge management tools help organizations manage operational risks.

Objectives of the research:

1. Investigate the importance of organizational culture for the expression of tacit knowledge.

2. Evaluate the possibility of using the knowledge of employees for risk management of the organization.

3. Identify what knowledge management tools help maintain valuable knowledge in the organization.

4. Assess how knowledge and experience are accumulated in an organization.

Research methods. After a detailed theoretical analysis of the organization's operational risk management using knowledge management, a mixed qualitative study was performed. The study is in two parts: an interview and a qualitative analysis of the podcast content. The second study follows from the first and is therefore supplemented by recommendations and insights from experts.

Insurance companies operating in Lithuania were selected for the first research and interview. A questionnaire was prepared for the interview and sent to the respondents. Respondents could choose to answer by phone or by mail. The interview method was chosen to find out what specific knowledge management tools organizations use to avoid risks, what risks they face, and how to retain valuable knowledge and experience in organizations, so the interview questions were open-ended, with free-form answers. This prevented respondents from answering with programmed responses.

After analyzing the answers, knowledge management tools were identified, and the podcast $\check{Z}mogiškieji$ iššūkiai (Human Challenges) was analyzed using qualitative content analysis. This method was chosen due to the increased approach of professionals and the validation of existing experience. In addition, the two studies were conducted almost in parallel in terms of time, which allowed for a deeper examination of the specific issues and a proper emphasis on the analysis of the studies.

During the analysis, the following categories were distinguished: organizational culture, the influence of the manager, employee growth. The content of the podcast was analyzed according to these categories.

The research data analysis and the discussion of the results.

Research has revealed how knowledge management helps organizations avoid risk.

The study found that insurance companies do not have a single person managing knowledge flows. However, organizations also protect their business - it is too dangerous to entrust valuable information to one person. In addition, organizations are large, so it would be difficult for one person to cover all the knowledge and information they manage, and it would not be worthwhile to set up a separate department. Therefore, knowledge management functions are taken over by heads of departments or divisions who are professional and knowledgeable in their field.

Respondents confirmed that there are people responsible for specific processes, the loss of which could become a risk to the organization in response to the estimated loss. Confidentiality agreements and other legal remedies are in place for the organization to protect itself from such departures or betrayals. Efforts are being made to turn the knowledge managed by such people into information that is useful to the organization and to capture and turn it into processes. A shift is organized for employees who are important to the organization to consolidate the continuity of information, knowledge and

experience in the organization. Specialists recommend maintaining a constant relationship with these people, talking about career opportunities within the organization and needs.

It has been found that one business organization does not value this aspect of business and feels calm because it has various means of knowledge preservation in place when knowledge is transformed into information and data contained in the organization's databases. Other organizations acknowledge that there are still gaps in the translation of knowledge into information that can be shared. Knowledge, information and data are valued in all organizations surveyed. However, both organizations recognize that the key bearer of knowledge - the employee - needs to be protected in organizations.

The study found that organizations promote knowledge sharing: tacit knowledge in the minds of every employee is completely useless to the organization. Organizations use the following means of knowledge sharing: meetings, various meetings, workshops, team projects, sharing good and bad experiences, learning from each other. It is pointed out that knowledge is also ageing, so in the course of such processes knowledge is updated, new perspectives are learned, new inspiration and ideas emerge from which initiatives are born. Employees of organizations are allowed to learn by organizing various training or seminars or learning from each other. Knowledge is also encouraged to be shared through self-expression, listening to ideas and implementing various initiatives.

It has been investigated that knowledge sharing is most encouraged by organizational culture. If employees in an organization feel safe and not afraid to make mistakes, the sharing of knowledge and experience to avoid important mistakes in the future becomes more open. Effective internal communication, overlapping values and relationships with the manager help to maintain a safe and reliable atmosphere in the organization. The values of the organization determine the culture of the organization, so each employee must live with the existing values or choose the organization according to the values. If the values of the employee and the organization coincide, the employee will willingly share his / her knowledge and experience, as together with the organization he/she will strive for operational efficiency and set goals for both personal and organizational purposes. Effective internal communication, to share important events for the organization, including the experience and knowledge of employees. Using internal communication tools, the received knowledge is captured and made meaningful, as it can be used by other employees of the organization. This process helps the organization avoid mistakes that have already been made and thus streamline its operations.

The study found that managers are the key personnel for retrieving tacit knowledge and preserving it in the organization. The manager's responsibilities are to build relationships with employees, maintain security and, most importantly, set and adhere to goals. A leader is a personality that keeps you in the team (and in the organization) and that often reveals unspoken knowledge. The manager is not a friend, so he must not only listen, but also evaluate, and empower the relevant employees of the organization, giving them responsibility for specific work that leads the organization toward its goals and effectiveness. If the relationship between the manager and the employees is good, he will be able to anticipate the emerging risks associated with employee departures.

Conclusions

- 1. After the theoretical substantiation of the risks and the impact of their management on the activities of the organizations, the operational risks of the organizations shall primarily indicate the risk or potential failure. The authors do not recommend the use of a uniform definition in research, as risks depend on environmental factors. Organizations should be prepared for risk, and have a variety of risk management processes in place. It is most effective when these processes are integrated into an organization's strategic goals. Managers should initiate the implementation of these goals, using not only their knowledge but also the knowledge and experience of the organization's employees.
- 2. Risk and knowledge management processes are designed to implement the set strategic goals of the organization. These processes complement each other to help an organization achieve efficiency in the marketplace. Knowledge must be made available to all employees in the

organization. Only the explicit knowledge becomes an asset of the organization, which allows problems to be solved quickly. As part of the risk comes from the internal processes of the organization, the role of the manager becomes very important. The manager needs to self-assess what knowledge people need for the organization. If a favourable organizational culture is created, employees will not be afraid to share their experience and knowledge to achieve good results in the organization.

- 3. A mixed qualitative study by interview and content analysis revealed, that information is collected during various meetings, projects, initiatives. Organizations do not risk keeping knowledge in the hands of a single employee: information in a specific area is usually shared between different departments, between employees at different levels. However, organizations recognize that there are experts who are given more power and responsibility. Employee turnover destabilizes an organization, damages reputation, and disrupts efficiency.
- 4. The study found that the impact of knowledge management on the organization's operational risk management is positive. The manager has a key role to play in this process. His responsibility is not only to put the team together, but also to broadcast the organization's goals, strategy, vision, and other things that are important to the organization's operations, including the risks that the organization may and does face. One of the main roles of a manager is to communicate with his employees and team members. If the communication is sincere and open, there is no fear of expressing one's opinion and accepting criticism, a positive atmosphere is created in the organization and a work-friendly organizational culture is created.

References

- 1. Aven, T. (2016). Risk assessment and risk management: Review of recent advances on their foundation. *European Journal of Operational Research*. 253(1), 16: 1-13. Retrieved from https://www.sciencedirect.com/science/article/pii/S0377221715011479
- 2. Atkočiūnienė, Z.O. (2010) Žinių vadybos įtaka tobulinant organizacijose kompetencijas. *Informacijos mokslai*, 52, 14-22. Retrieved from https://www.zurnalai.vu.lt/IM/article/view/3198
- 3. Atkočiūnienė, Z.O., & Radiūnaitė, R. (2011) Žinių vadybos įtaka darnaus vystymosi reikšmėms įgyvendinti organizacijoje. *Informacijos mokslai*, 58, 56-73. Retrieved from https://bit.ly/3GQXo0u
- 4. Brown S.A., Dennis A. R., Burley D., & Arling P. (2013) Knowledge Sharing and Knowledge Management System Avoidance: The Role of Knowledge Type and the Social Network in Bypassing an Organizational Knowledge Management System. *Journal of the American Society for Information Science and Technology*, 64(10), 2013–2023. Retrieved from https://bit.ly/35cqf1x
- Cerchione R., Centobelli P., Zerbino P., Anand A. (2020) Back to the future of Knowledge Management Systems off the beaten paths. *Management Decision*, 58(9), 1953-1984. Retrieved from https://www.emerald.com/insight/content/doi/10.1108/MD-11-2019-1601/full/html
- Cervantes-Cabrera, O. & Turrent, G. (2018). The importance of Risk Management Assessment: A proposal of an Index for Listed Companies. *Journal of Accounting Research, Organization and Economics*. 1. 122-137. 10.24815/jaroe.v1i2.11747. Retrieved from https://bit.ly/3GNSPnW
- Chechen L., Shu-Hui, Ch., & Pui-Lai, T. (2010). How knowledge management mediates the relationship between environment and organizational structure. *Journal of Business Research*. 64 (2011) 728–736. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0148296310001529
- 8. Donate M. J., & Sánchez de Pablo, J.D. (2014). The role of knowledge-oriented leadership in knowledge management practices and innovation. *Journal of Business Research*. 68(2), 360-370. Retrieved fromhttps://www.sciencedirect.com/science/article/abs/pii/S0148296314002197
- 9. Girnienė, I. (2013). Žinių vadybos ir inovacijų sąsajos: konceptualūs požiūriai. Informacijos mokslai, 64, 75-89.
- 10. Hislop, D. (2009). Knowledge management in organizations. New York: Oxford University Press.
- 11. Lindner F., & WaldSuccess A. (2010). Success factors of knowledge management in temporary organizations. *International Journal of Project Management.* 29(7), 877-888. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0263786310001328
- 12. Probst, G., Raub, S., & Romhardt, K. (2006). Žinių vadyba. Sėkmės komponentai. Vilnius: Knygiai.
- 13. Sax, J., & Torben, J. A. (2019). Making risk management strategic: Integrating enterprise risk management with strategic planning. *European Management Review 16*, 719–40. Retrieved from https://research.cbs.dk/en/publications/making-risk-management-strategic-integrating-enterprise-risk-mana
- 14. Sheng, W., Noe, R.A., & Zhong-Ming, W. (2014). Motivating Knowledge Sharing in Knowledge Management Systems: A Quasi-Field Experiment. *Journal of Management*, 40(4), 978-1009. Retrieved from https://journals.sagepub.com/doi/abs/10.1177/0149206311412192

16th Prof. Vladas Gronskas International Scientific Conference Kaunas: Vilnius University Kaunas Faculty, 3rd of December, 2021

- 15. Wei, Z., Baiyin, Y., & McLean, G. N. (2009). Linking organizational culture, structure, strategy, and organizational effectiveness: Mediating role of knowledge management. *Journal of Business Research, 63*, 763–771. Retrieved from https://www.sciencedirect.com/science/article/abs/pii/S0148296309001714
- 16. Zahra (2015). An investigation of risk management strategies in projects. *Marketing and Branding Research*. 2. 10.19237/MBR.2015.01.07. Retrieved from https://bit.ly/33QUBpE