

ORGANIZATIONAL CREATIVITY MANAGEMENT BASED ON THE INTELLECTUAL CAPITAL

Jelena DEMENTJEVA¹, Rimantas STAŠYS^{2*}

¹ Klaipeda University, Management department; jelena.dem@gmail.com, ORCID: 0000-0002-6857-6845

² Klaipeda University, Management department; rimantas.stasys@ku.lt, ORCID: 0000-0002-3991-5940

* Correspondence author

The aim of this research is the determination of the creativity management level in the organization and directions of its improvement.

Methodology: The empirical study was conducted using an integrated research method, i.e., using quantitative and qualitative research. A conceptual link between creativity and intellectual capital phenomena has been identified to underline the importance of *comprehensive* management of an organization's creativity.

Findings: Based on the system approach, a conceptual model of organizational creativity management based on intellectual capital has been developed. This model's core feature is six organizational creativity management areas that interact with intellectual capital components and management functions. The methods allow investigating the specificity of organizational creativity management and evaluating the overall creativity management level, making it possible to identify the guidelines for the improvement of organizational creativity management.

Originality/value: In this article, creativity is explored in the context of intellectual capital structure, emphasizing the importance of the comprehensiveness of organizational creativity management in terms of organization management. The integrated empirical research allowed recognizing the importance of organizational creativity management areas, their links, and interactions and assessing the organization's creativity management level.

Keywords: creativity, organizational creativity, intellectual capital, creativity management level.

Category of the paper: research paper.

Introduction

The phenomenon of creativity as a hardly tangible resource acquires a horizontal and interdisciplinary dimension, as it is crucial for management, economics, and other sciences and practical human activities. In recent times, the phenomenon of creativity has been interpreted

as a social and cultural aspect emphasizing the necessity of organizational creativity management for the effectiveness and continuity of an organization's operations. The ability to generate and implement new ideas, adapt quickly and flexibly to varied external conditions and make an upgrade are today's challenges for organizations. Integrating creativity as an organization's resource into the value chain and management is becoming a key factor in increasing the value-added of an organization to gain a competitive market advantage. Managing creativity creates an intangible value that increases the intellectual capital of an organization forming its specific knowledge, skills, and abilities.

The relevance of organizational creativity management presumes the conduction of a scientific research involving the identification of the connection between creativity and intellectual capital, the creation of an organizational creativity management model and methodology to assess the specificity of organizational creativity management and to establish the level of creativity management. This methodological tool will enable organizations to manage creativity effectively in pursuit of unique competencies and competitive advantage in markets over the long term.

The aim of the scientific research is the determination of the creativity management level in the organization and directions of its improvement based on the methods of the assessment of organizational creativity management developed based on intellectual capital.

The specificities of creative organization and organization's creativity and its management aspects are investigated by G. Morgan (1989), F. Damanpour (1991), D. Goleman, P. Kaufman, M. Ray (1992), G. Morgan (1993), L. Gundry, J. Kickul, C. Prather (1994), I. Nonaka, H. Takeuchi (1995), I. Nonaka, T. Teece (2001), T.A. Stewart (1997), R.E. Caves (2000), J. Henry (2006), A.M. González (2003), K. Starkey, S. Tempest, A. McKinlay (2004), I. Meriam (2005), C. Henry (2007), M. Jifeng, P. Gang, L. Edwin (2008), S. Madsen (2009), M. Dobson (2010), L. Girdauskienė, A. Savanevičienė (2010), J. Lerner (2012), N. Šedžiuvienė, J. Vveinhardt (2011), J. Almonaitienė (2011), L. Girdauskienė (2011, 2012), M. Bettiol, E. Di Maria, R. Grandinetti (2012), B. Litovchenko (2016), L. Bam, P.J. Vlok (2016), J. Antony (2016), I. Grabner, A. Klein, G. Speckbacher (2018) and others. The aspects of organizational creativity management in the context of economic sectors has been studied by D. Araya, M.A. Peters (2010), R.G. Kraus, J.E. Curtis (2000), M. Кольчугина (2008), A. В. Шевырев, М.Н. Романчук (2008), J. Howkins (2013) and others.

However, the scientific research related to the interpretation and analysis of creativity as an almost intangible resource and the systematic management of creativity is somewhat fragmented, especially in the context of intellectual capital and its management (L. Edvinsson (1997), G. Roos & J. Roos (1997), T.A. Stewart (1997), N. Bontis (1998), R. Florida, (2003), A. Bradburn & E. Coakes (2004), R. Florida & J. Goodnight (2005), D. Grundey & D. Varnas (2006), E. McWilliam & S. Dawson (2008), V. Barkauskas (2009), L. Uziėnė & J. Staliūnienė (2009), J. Howkins (2010), M. Cabrita & C. Cabrita (2010), A. Amiri et al. (2011), S. Krätke

(2012), A. Bonfour & L. Edvinsson (2012), C. Mellander & R. Florida (2014), Y. Chien (2015), F. Luiza (2016), B. Obeidat et al. (2017), H. Hussinki et al. (2017), S. Abuallooush et al. (2018)).

The genesis of the creativity and intellectual capital

The concept of creativity in scientific literature is analysed as a person's trait, ability to solve problems, as a process or product of creative activity, and also as an interaction between the environment and the creator. It represents the modern diversity of interpretation of the creativity concept and the tendencies of creativity as a phenomenon. According to M. Rhodes (1961), creativity can be interpreted in four ways: 1) person means creativity as a person's trait; 2) process means creativity as a process (motivation elements, perception, learning, communication); 3) product means as a result of activity; and 4) press (environment) means creativity as a relationship of the creator with the environment.

The analysis of the concept of creativity in the context of organization's management shows that the phenomenon of creativity is interpreted from a social and cultural point of view emphasizing the necessity of creativity management for society, economy, business and organization management and efficiency of operations. Thus, it is obvious that the complexity of the creativity phenomenon in terms of management of organizations is reflected in the field concept and includes the social and cultural system approach.

The authors of the research state that the organization's creativity is an organization's ability to generate and implement ideas using internal and external competencies to achieve a competitive advantage. Organization's competences are the symbiosis of knowledge, skills and abilities of its internal and external participants. Organization's creativity is associated with the phenomenon of intellectual capital. Intellectual capital is a knowledge-based organization's resource, an effective management of which provides it with a special competitive advantage. The category of intellectual capital has three main features: 1) it is almost intangible or hardly tangible (Brooking, 1996; Sveiby, 1997); 2) therefore, it is difficult to calculate (Amiri et al., 2011; Howkins, 2013); 3) due to unclear identification it is difficult or almost unreproducible for competitors, which gives the organization a competitive advantage in the market and enables to create added value (Bradburn & Coakes, 2004; Užienė & Staliūnienė, 2009).

According to the identified features distinctive to intellectual capital, it can be stated that those features can be attributed to the phenomenon of creativity. The following is a model of the structure of intellectual capital (see Figure 1) depicting the place of creativity in the structure of such inexhaustible capital. It has been found that, subject to the interpretation of the concept of creativity, it is found in different structural parts of intellectual capital.

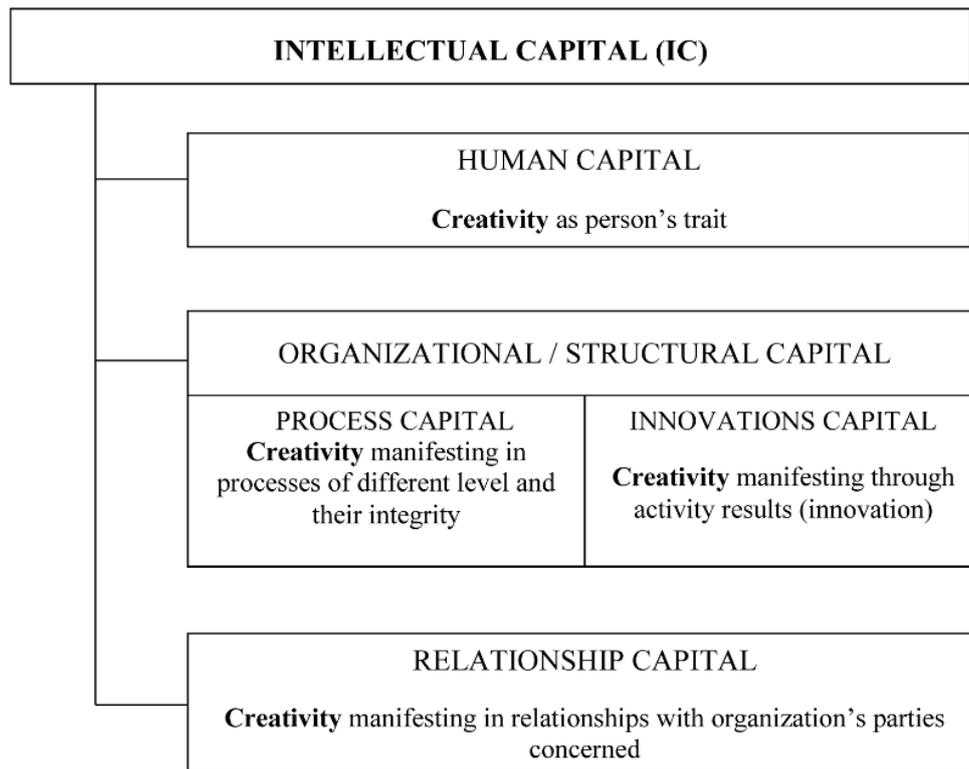


Figure 1. Manifestation of Creativity in the Structure of Intellectual Capital. Adapted from: L. Edvinsson (1997), K.E. Sveiby (1997), T.A. Stewart (1997), E. Campos (1998), J. Nahapiet & S. Ghoshal (1998), W. Johnson (1999), R. Mikulėnienė & R. Jucevičius (2000), H. Agndal & U. Nilsson (2006), P. Flöstrand (2006), G. Kamath, (2007), L. Vaškeliėnė & J. Šelepen (2008), A. Znakovaitė & A. Pabedinskaitė (2010), A. Amiri et al. (2011), G. Aryanindita & A. Budi (2011), S Abualoush et al. (2018).

The identification of creativity in every segment of intellectual capital gives rise to a systemic factor and the need to manage creativity, which is particularly important for profit-making organizations. The established points of interaction between creativity and intellectual capital clearly demonstrate the link between creativity and intellectual capital in a complex approach and provides a justification for the importance of organizational creativity management (see Figure 2). This Figure illustrates the relationship between creativity and forms of intellectual capital expression, which suggest the category of creative capital. This is actually the origination of the concept of creative capital.

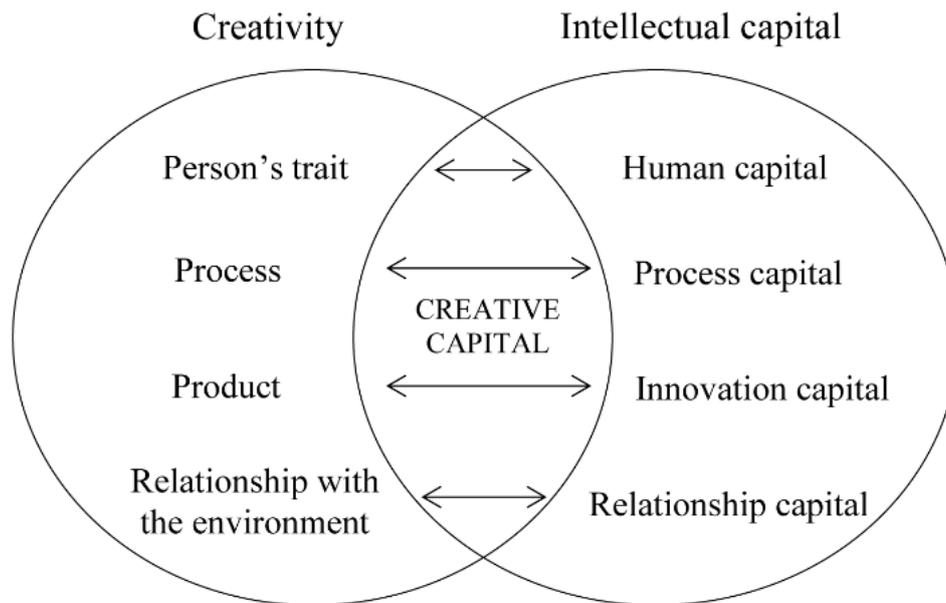


Figure 2. Relationship between Creativity and Intellectual Capital. Source: authors' own study.

According to J. Howkins (2013), it is logical to interpret creativity as a form of capital. It has the necessary features: It comes from investments that the owner can increase or change. This is a significant contribution to future creativity and creative products. Thus, creativity based on intellectual capital is not in itself an added value for an organization, it is an organization's ability to use its intellectual capital to gain added value. Organizational creativity management is the process of targeted planning, organizing, promoting, and controlling creativity for the purpose of competitive advantage by using the available intellectual capital resources.

According theoretical analysis of the organization's intellectual capital and organizational creativity management research, a conceptual theoretical model has been developed depicting the links between the areas of organizational creativity management and the components of intellectual capital, the management of which affects the acquisition of competencies, and the relationship with the external environment.

The model includes the main management functions that integrate into the fields of interaction between the areas of organizational creativity and intellectual capital. The entire conceptual model is based on the field concept and represents the interfaces of five fields (see Figure 3). Such fields are as follows:

1. Organization's competences.
2. Components of intellectual capital.
3. Management functions.
4. Areas of organizational creativity management.
5. Relationship with the external environment.

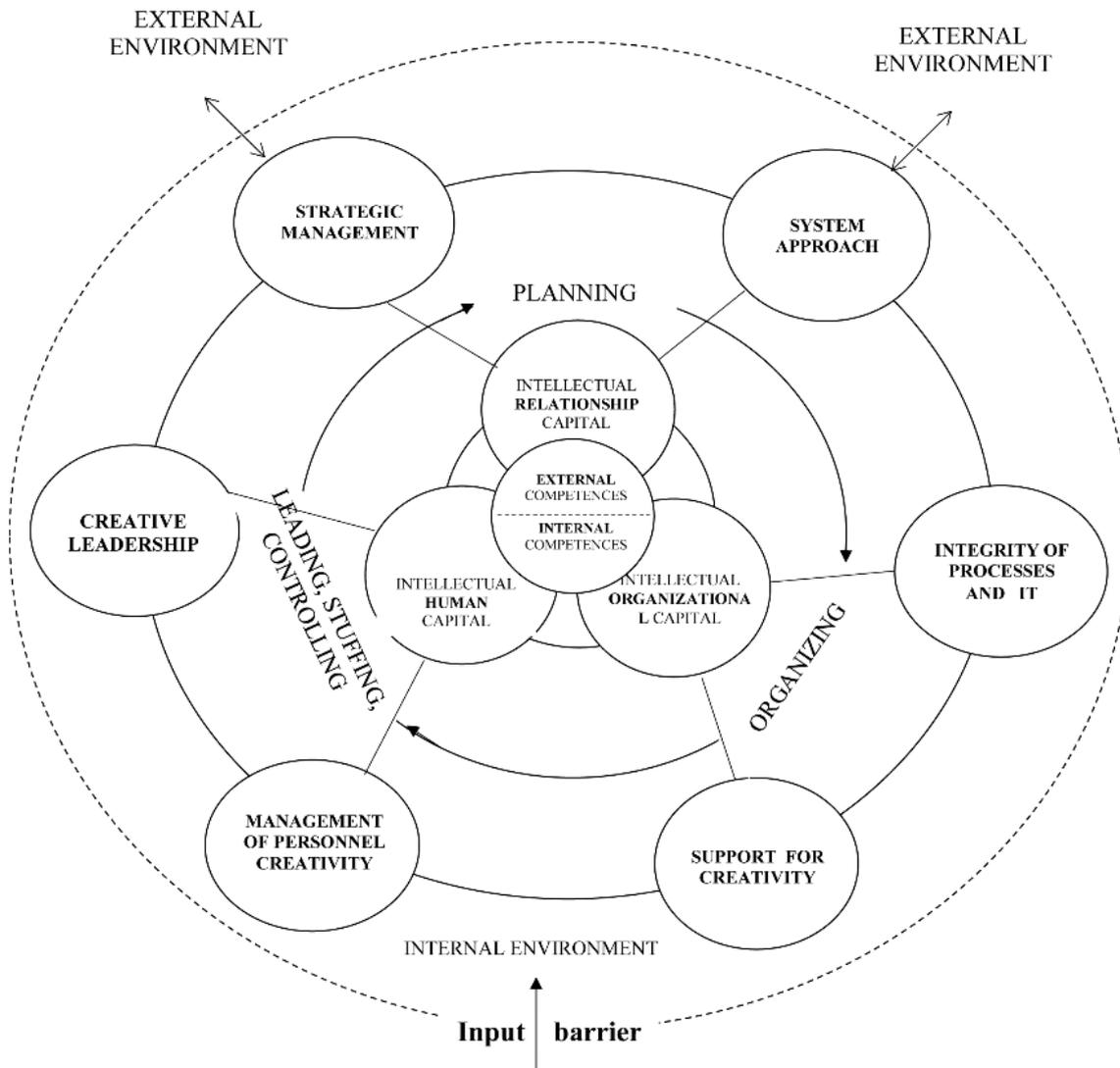


Figure 3. Theoretical Model of Creative Management Based on Intellectual Capital. Source: authors' own study.

The conceptual theoretical model has the following essential features:

- Organizational creativity management areas: creative leadership, management of personnel creativity, process and information technology integrity, support for creativity, strategic management, system approach. These areas are the dimensions of assessment of organizational creativity management.
- Links between the areas of organizational creativity management, components of intellectual capital (human, organizational, relationship capital), management functions (planning, organizing, leading, stuffing, controlling) and organization's competencies (internal, external).

Such areas of organizational creativity management as creative leadership and management of personnel creativity shape and generate the human capital. There is a general belief that management of creativity is actually related only to human resources (human capital). In the authors opinion, this dominant approach was formed by the perception of creativity as

a person's trait. However, a closer look at the concept of creativity makes it clear that organizational creativity management must also cover other aspects of management in organizations. Consequently, areas that shape and generate organizational capital become important in managing creativity. It is the integrity of processes and information technologies and the support for creativity that manifest through the organizational structure as well as the culture and the psychological climate prevailing in the organization.

Organizational creativity management areas (see Figure 3) that create human and organizational capital form the internal exclusive organization's competencies. Organizational creativity management on the basis of intellectual capital is closely linked to the relationship with the external environment of the organization. This connection is defined by the relationship capital generated by such areas of organizational creativity management as strategic management and system approach. All this helps the organization to develop its external competences. It is important to emphasize that the model developed has a systems nature, i.e. the model components describe (represent) the social and cultural aspect of an organization, which is a part of a social cultural system.

Methodology of the organizational creativity management based on intellectual capital

The analysis of creative management is based on a comprehensive adaptive theory that allows integrating different approaches. The analysis of scientific literature is conducted using the descriptive comparative method with a review of literature sources, methodologies, directions, approaches, and research results. This method has identified the areas of organizational creativity management and at the same time defined the concept of organization creativity from a system point of view as well as identified the specifics and aspects of creative management using a comprehensive approach within the context of intellectual capital.

The empirical research was conducted using an integrated research method, i.e. using quantitative and qualitative research: 1) the analysis and evaluation of the areas of organizational creativity based on intellectual capital were completed using written questionnaire and semi-structured interview. The processing of the data obtained through the questionnaire survey was based on statistical data analysis processed in SPSS program; 2) the assessment of the data obtained during the interviews was based on the content analysis; 3) the assessment of the overall organizational creativity management level using the integrated approach was based on the analysis of quantitative indicators (weighted and standardized means, weight coefficients, ratio coefficients).

The empirical research was conducted in accordance with the hypothetical deductive methodological approach, when the research was planned and methodologically justified.

The integrated empirical research consists of the results of qualitative and quantitative research. The entire empirical research consists four main parts, i.e. research segments on the organizational creativity management areas based on intellectual human, organizational, and relationship capital as well as the calculation of creativity management level in the organization.

The research was conducted in a Lithuanian maritime sector organization owned by an international corporation headquartered in Denmark. The corporation has 27 large functional divisions operating in five countries of the European Union.

The following empirical research hypotheses have been raised:

H1: The organizational creativity management areas have a connection;

H2: All six organizational creativity management areas have equal importance.

The latter hypotheses are important to prove the validity of the theoretical model of the Creative Management Based on Intellectual Capital. The empirical research hypotheses were based on the analysis of scientific literature and identified organizational creativity management areas. Their choice was conditioned by the analysis and synthesis of the results of the researchers listed in the table below (see Table 1). The empirical research is based on the system approach to investigate the maximum possible number of manifestation characteristics of the object under investigation. In this way, the probability of acquiring a general knowledge of the object investigated increases.

Table 1.

Dimensions of Organizational Creativity Management Areas

Areas	Dimensions
Area 1. Creative leadership	<i>Qualities of a director as a creative leader:</i> <ul style="list-style-type: none"> • Qualities that shape key competences, • Qualities that shape strategic competences.
Area 2. Management of personnel creativity	<i>Motivation for creativity:</i> <ul style="list-style-type: none"> • Internal – external, • Personal – group – organizational.
	<i>Creativity training and retraining:</i> <ul style="list-style-type: none"> • Individual – organizational.
	<i>Formation of creative skills:</i> <ul style="list-style-type: none"> • Creative thinking, solving of non-standard problems.
Area 3. Integrity of processes and IT	<i>Processes:</i> <ul style="list-style-type: none"> • Process tools and management systems integrated in organization.
	<i>Integrity of IT systems:</i> <ul style="list-style-type: none"> • IT introduction, application, and compatibility across processes in different management areas.
Area 4. Support for creativity	<i>Organization management structure:</i> <ul style="list-style-type: none"> • Type, specificity; application of teams, • Personalization (knowledge exchange) + codification (knowledge storage)
	<i>Organization culture and climate:</i> <ul style="list-style-type: none"> • Values, attitudes, networks, • Tolerance, time management, no fear of mistakes, physical space.

Cont. table 1.

Area 5. Strategic management	<ul style="list-style-type: none"> • Creating a creativity (innovation) management strategy • Developing a creativity (innovation) management strategy.
	<ul style="list-style-type: none"> • Using creative <i>thinking</i> and creative <i>methods</i> to form strategies
Area 6. System approach	<ul style="list-style-type: none"> • Ideas and projects focused on creating an <i>open social environment</i>. • Strong communication (social relations) and collaboration with stakeholders (suppliers, partners, etc.).

Source: authors' own study.

A case study research method was selected for the research to analyze the activities of one or several subjects in one group. According to K. Kardelis (2005), this research method can be applied both in developing new scientific knowledge and in solving various practical situations. Attention is paid to the subtlety and complexity of the individual case. The case study research method has an attribute of triangulation in terms of the complexity of the research methods.

The validity of the choice of the case study research method and the research subject:

1. the Lithuanian maritime business organization under investigation is a part of a multinational enterprise group (hereinafter referred to as the Group), which consists of organizations from Denmark, Sweden, Germany, Finland, Holland, England, France, Russia, Spain, Poland, Estonia, Latvia, and Lithuania;
2. the Group has been operating for more than 150 years, i.e. has a successful management experience;
3. the Group's recent activities are influenced by external environmental factors, which implies a need for more effective management of creativity;
4. the choice of the organization was also determined by the spheres of activity (marine business and logistics) in which the company operates. The transportation and logistics business is one of the priority areas of smart specialization strategy in Lithuania and the EU.

Results of organizational creativity management empirical research

In order to assess the overall organizational creativity management level, the results of the standardized means of the dimensions of the creativity management areas obtained through the quantitative research and the results of the qualitative research were used. Based on the generalized results of the quantitative research, each area of organizational creativity management was assessed. It has been found that organizational creativity management areas such as creativity support (mean value or standardized mean are 75.45 points) and creative leadership (standardized mean is 74.55 points) have been developed the most. Meanwhile, the organization's processes and IT integrity is weak (standardized mean is 26.5 points). In order to unify the coding of the questionnaire questions, the values of standardized means, rather than

of weighted means (from 1 to 100 points) were used to compare the areas of organizational creativity management.

The raised empirical research hypothesis H1: The organizational creativity management areas have a connection. To validate or deny this hypothesis raised, a correlation test was performed using Pearson Correlation coefficient. The assessment of the correlation (Pearson Correlation) between the creativity management areas in the organization showed that creative leadership has the most impact on other areas, i.e. its effect is the highest (1). The strongest positive correlation (.333) is observed between creative leadership and management of personnel creativity, i.e. the stronger the manager's creative leadership qualities are, the better the creativity of the staff is managed. Creative leadership has a positive impact (.254) on support for creativity, i.e. the stronger the manager's creative leadership qualities are, the more creativity support the employees receive. A positive correlation (.320) has been identified between strategic management and integrity of processes and IT. Other connections are weaker. However, there is a negative connection (-.089) between creative leadership and a system approach. Thus, the first hypothesis of the empirical research H1 has been confirmed because the organizational creativity management areas are interrelated.

In order to determine the overall mean value of organization creativity management or the creativity management level, the weight factor for each management area is calculated as the results of the correlation test show that each area of organizational creativity management has different significance. The results of the qualitative research (total values of the matrix sub-codes) are used for the determination of weight factor. Below is a summary of the qualitative research results.

The interpretation and conceptualization of the qualitative research data revealed that the topic of management of personnel creativity has most of the sub-codes (31 in total), while the topic of system approach has least of the sub-codes (6 in total). This shows the level of importance of each creative management area, i.e. the respondents have identified these categories of topics as relevant. Based on the determined total values of the sub-codes, an index (weight factor) for each connection (topic) or organizational creativity management area was calculated, where the sum of the sub-codes of each area (topic) is divided by the maximum amount of sub-codes. This makes it possible to rank the values of the creativity management area in organization (in descending order of importance or weight).

Thus, the second hypothesis of H2 has not been confirmed because all creativity management areas have different importance. The most important are management of personnel creativity and support for creativity. Ranking results for the organizational creativity management areas allow testing the hypothesis of the empirical research H2: All creativity management areas are equally important. According to the research results, the second hypothesis H2 was not confirmed as all creativity management areas have different importance.

The next step is to determine the ratio of each organizational creativity management area in a quantitative research. Since the organizational creativity management areas have different number of dimensions and questions in the questionnaire, the ratio coefficients are calculated. After determining the weight factors and ratio coefficients for each organizational creativity management area, the overall mean value or level of creativity management in the organization was calculated (see Table 2) according to the following formula as proposed by the author:

$$CML = ((X_1 * S_1 * P_1) + (X_2 * S_2 * P_1) + \dots + (X_i * S_i * P_1)) / i;$$

where:

CML – creative management level in the organization (mean value);

X1 ... Xi – standardized mean of creative management i area;

S1 ... Si – weight factor of creative management i area;

P1 ... Pi – ratio coefficient of creative management i area; i – number of creative management areas (i.e. 6).

Table 2.
Creativity Management Level in the Organization

Area	Standardized mean, in points	Ratio coefficient	Weight factor	Value, in points
<i>Creativity management areas based on human capital</i>				
1. Creative leadership	74.55	0.6	0.45	20.13
2. Management of personnel creativity	63.76	0.166	1	10.58
<i>Creativity management areas based on organizational capital</i>				
3. Integrity of processes and IT	26.5	4.05	0.61	65.47
4. Support for creativity	75.45	0.338	0.87	22.19
<i>Creativity management areas based on relationship capital</i>				
5. Strategic management	33.2	4.05	0.52	69.9
6. System approach	54.18	2.43	0.19	25.01
Total sample mean:				35.5

Source: authors' own study.

As it can be seen, organizational creativity management in the organization is not of high level (35.5 points out of 100). Thus, based on the results of the integrated empirical research, it can be stated that the organization under study does not manage its creativity in a sufficiently effective way. Most efficiently, the organization uses human capital to manage creativity (see Table 2 for standardized means of human, organizational, and relationship capital). It is worth mentioning that the comparison of the effectiveness of the management of intellectual capital components in this methodology is limited as the weight coefficients are determined in the range of all areas of organizational creativity management and their dimensions. Thus, the organization under investigation makes more use of its internal competences (based on the data in Table 2). If the use of internal and external competences (of all agents, i.e. participants of the organization and its external environment) becomes the dominant principle, the flow of knowledge between the agents is greatly enhanced by the synergy effect. Such a network of agents (participants) takes on the character of an informal management mechanism because trust becomes crucial in the organization's system of values.

Directions for the improvement of creativity management in the organization

The research of the organizational creativity management areas allowed identifying the shortcomings and difficulties faced by the organization in managing its creativity based on intellectual capital. Based on the research results, the directions that allow improving the organizational creativity management were developed.

Area 1. Creative leadership. Leader-oriented training programs should take into account the development of general competences such as communicability, interest, motivation and impartiality; and the development of such strategic competence-forming qualities as social awareness, creative approach to profession, empathy, imagination, and curiosity.

Area 2. Management of personnel creativity. Staff-oriented training programs should take into account the development of such general competence-forming qualities as the qualities of an organizer and leader as well as the development of such strategic competence-forming qualities as uniqueness, initiative, and determination. It is also proposed to organize more of training sessions on the improvement of creative thinking skills. In order to successfully implement organizational changes and alter employee attitudes according to the new declared philosophy of the organization, it is suggested to focus on creativity training for technical employees.

In regards of manager-oriented motivational programs, it is proposed to develop/improve a set of external motivation tools as a tool for managers to motivate their subordinates. It is also proposed to regulate the distribution of income and work volumes between the divisions of different countries on the Group scale. In regards of staff-oriented motivational programs, it is suggested to increase support of their initiative towards the understanding of systematic and process management (for example, to update presentations on operation of other stakeholders and other organization divisions).

Area 3. Integrity of processes and IT. To improve the management of processes and IT integrity, it is proposed to improve the quality of time management; to improve communication between departments and with stakeholders in the organization (for example, organize presentations between functional units, with customers, with suppliers (better communication, emergence of procedural and systematic approaches)).

It is proposed to allocate the organization's financial resources in the area of information technology in a more rational way. It is suggested to improve the compatibility and integrity of the processes of IT program and shipping management. Improvements are also required for IT applications that control financial management (accounting) and sales management processes.

Area 4. Support (Fromm, 1959) for creativity. To eliminate the negative consequences of restructuring of organizational structure, it is proposed to clarify the situation among the employees, to make a presentation on the updated organizational structure for the employees of

the organization. subordination, responsibility and other issues. It is also proposed to remove restrictions on personnel recruitment for cultural identity and race. It is proposed to review the workflows of the financial department and eliminate their duplication.

Area 5. Strategic management. In order to improve the creativity management process in the organization, it is proposed to implement the 'bottom-up' development of the Group's strategy, when the strategic plan is developed according to the recommendations of all management levels.

Area 6. System approach. As mentioned earlier, the organization held meetings with clients and suppliers for the presentation of their activities. Such meetings made it possible to seek for greater systematic understanding among employees. It is proposed to resume this practice with a view to developing a systematic approach.

Summarizing the results of the empirical research, it is stated that: 1) all organizational creativity management areas are interrelated; 2) the organizational creativity management areas have different effects. Creative leadership affects other areas the most, i.e. its effect is the greatest. The strongest positive relationship is between creative leadership and management of personnel creativity. In addition, there has been a negative connection found between the areas of creative leadership and system approach; 3) Management of personnel creativity is the most important creativity management area.

Summary

The concept of creativity in a comprehensive approach involves four aspects: creativity as a person's trait is an inherent characteristic of a person, component of cognitive abilities associated with divergent thinking that manifests itself unequally in different areas of individual activity; as a process, creativity is a logical sequence of certain stages and a reconceptualization of previous ideas or knowledge; as a result of the creative process, creativity is a created product that can be interpreted in terms of uniqueness, practicality, social value or universal recognition; as a connection between the creator and the environment, creativity is an interaction between a cultural symbol system, a person or an organization as a creator and a social environment.

Creativity is a way of divergent thinking and the ability to react to the environment in a non-standard way when a new product is created. Organization's creativity is the ability of an organization to generate and implement ideas, to use internal and external competencies to achieve competitive advantage. Creativity is an organization's resource to gain added value, yet is not in itself an added value for such organization.

The links between creativity and intellectual capital concepts are as follows: Creativity as a person's trait and skills is found in human capital; Creativity as a process and its result is found in organizational capital; Creativity as a result of relationships with the environment is found in relationship capital.

Organizational creativity management is the process of targeted planning, organizing, staffing, leading, and controlling creativity for the purpose of competitive advantage through the use of available intellectual capital resources.

The theoretical model of the creative management based on intellectual capital has the following essential features:

- Organizational creativity management areas: creative leadership, management of personnel creativity, integrity of processes and information technology, support for creativity, strategic management, system approach. At the same time, these areas are the dimensions of the assessment of creativity management.
- Links between the organizational creativity management areas, intellectual capital (human, organizational, relationship capital), management functions (planning, organizing, staffing, leading, and controlling) and organization's competencies (internal, external).

Calculation methodology including weight factor and weighted mean analysis is proposed to identify the overall organizational creativity management level in the organization. The uniqueness of the empirical research methodology is that it allows quantifying the level of management of the hard-to-calculate organization's resource, i.e. creativity. This methodological tool for assessing organizational creativity management is focused on medium and large service-providing organizations.

The application of the integrated method of empirical research helped to analyze organizational creativity management in the selected internationally operating organization. It has been found that the organizational creativity management areas have a correlation, i.e. the empirical research H1 hypothesis has been confirmed. Other areas are mostly affected by creative leadership. The strongest positive link is observed between creative leadership and management of personnel creativity.

In addition, a negative connection was determined between the indicators of creative leadership and system approach. It was also found that all areas of organizational creativity management had different importance (weight), thus, the second H2 hypothesis was not confirmed. The most important areas are management of personnel creativity and support for creativity.

The calculation of the overall organizational creativity management level revealed that such level is not high. This means that the organization manages its creativity in insufficiently effective way, and is attributable to the third type of non-creative organization with low creativity. The organization uses human capital to manage creativity with most efficiency.

References

1. Abualoush, S., Masa'deh, R., Bataineh, K., & Alrowwad, A. (2018). The role of knowledge management process and intellectual capital as intermediary variables between knowledge management infrastructure and organization performance. *Interdisciplinary Journal of Information, Knowledge, and Management*. <https://doi.org/10.28945/4088>.
2. Agndal, H., & Nilsson, U. (2006). Generation of human and structural capital: lessons from knowledge management. *Electronic Journal of Knowledge Management*, 4(2), 91-99.
3. Almonaitienė, J. (2011). *Kūrybingumo ir inovacijų psichologija*. Technologija.
4. Amiri, A.N., Jandaghi, G.H., & Ramezan, M. (2011). An investigation to the impact of intellectual capital on organizational innovation. *European Journal of Scientific Research*, 64(3), 472-477.
5. Antony, J. (2016). Creativity Coaching: An Experiment with Adolescent Girls in Kerala. *Journal of Social Work Education and Practice*, 1(2), 1-18.
6. Araya, D., & Peters, M.A. (2010). *Education in the Creative Economy*. Peter Lang. <https://www.peterlang.com/view/title/21285>.
7. Aryanindita, G.P., & Budi, A.S.L. (2011). The Intellectual Capital for University Ranking: A Conceptual Framework Study for Indonesian Higher Education Institutions. *ICICKM2011-Proceedings of the 8th International Conference on Intellectual Capital, Knowledge Management & Organisational Learning: The Institute for Knowledge and Innovation Southeast Asia (IKI-SEA) of Bangkok University, Bangkok Thailand*, 50.
8. Bam, L., & Vlok, P.J. (2016). Towards a framework for systemic creativity in engineering organisations. *South African Journal of Industrial Engineering*, 27(2), 95-108. <https://doi.org/http://dx.doi.org/10.7166/27-2-1288>.
9. Barkauskas, V. (2009). Intelektualaus kapitalo įtaka įmonių konkurencingumui. *Ekonomika Ir Vadyba*, 14, 223-229.
10. Bettiol, M., Di Maria, E., & Grandinetti, R. (2012). Codification and creativity: Knowledge management strategies in KIBS. *Journal of Knowledge Management*. <https://doi.org/10.1108/13673271211246130>
11. Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision*. <https://doi.org/10.1108/00251749810204142>
12. Bounfour, A., & Edvinsson, L. (2012). Intellectual capital for communities: Nations, regions, and cities. In *Intellectual Capital for Communities: Nations, Regions, and Cities*. <https://doi.org/10.4324/9780080478562>
13. Bradburn, A., & Coakes, E. (2004). Intangible assets and social, intellectual and cultural capital: origins , functions and value. *Fifth European Conference on Organisational Learning and Knowledge*. https://warwick.ac.uk/fac/soc/wbs/conf/olkc/archive/oklc5/papers/k-2_bradburn.pdf.

14. Brooking, A. (1996). *Intellectual Capital: Core Assets for the Third Millenium Enterprise*. International Thompson Business Press. <https://books.google.lt/books?id=trzBnQAACAAJ>
15. Cabrita, M.R., & Cabrita, C. (2010). The Role of Creative Industries in Stimulating Intellectual Capital in Cities and Regions. *Proceedings of the European Conference on Intellectual Capital*.
16. Campos, E. (1998). *El capital intangible como clave estratégica en la competencia actual*.
17. Caves, R.E. (2000). *Creative Industries Contracts Between Art And Commerce*. Harvard University Press.
18. Chien, Y.-C. (2015). *The Influences of Knowledge Management on Organizational Performance of Taiwan-Listed IC Design Houses:Using Intellectual Capital as the Mediator*.
19. Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators. *The Academy of Management Journal*, 34(3), 555-590. <https://doi.org/10.2307/256406>.
20. Dobson, M. (2010). *Creative Project Management*. Mcgraw-hill. <https://books.google.lt/books?id=6Fc5mAEACAAJ>.
21. Edvinsson, L. (1997). Developing intellectual capital at Skandia. *Long Range Planning*. [https://doi.org/10.1016/s0024-6301\(97\)00016-2](https://doi.org/10.1016/s0024-6301(97)00016-2).
22. Florida, R., & Goodnight, J. (2005). Managing for creativity. *Harvard Business Review*, 83(7-8), 124-131+193. <https://hbr.org/2005/07/managing-for-creativity>.
23. Florida, R. (2003). Cities and the Creative Class. *City & Community*, 2(1), 3-19. <https://doi.org/10.1111/1540-6040.00034>.
24. Flöstrand, P. (2006). The sell side - Observations on intellectual capital indicators. *Journal of Intellectual Capital*. <https://doi.org/10.1108/14691930610709112>.
25. Fromm, E. (1959). Values, Psychology, and Human Existence. In: A.H. Maslow (Ed.), *New Knowledge in Human Values*. New York: Harper and Row, 151-164.
26. Girdauskienė, L. (2011). Ar reikia kūrybinės organizacijos lyderiams ugdyti darbuotojų lojalumą? *Ekonomika Ir Vadyba*, 743-752.
27. Girdauskienė, L. (2012). *Kūrybinės organizacijos vadybos sistemos įveiklinimas žinių aspektu*. Kauno technologijos universitetas.
28. Girdauskienė, L., & Savanevičienė, A. (2010). Žinių valdymo ypatumai kūrybinėje organizacijoje. *Ekonomika Ir Vadyba*, 15, 491-497.
29. Goleman, D., Kaufman, P., & Ray, M. (1992). *The creative spirit: Companion to the PBS television series*. Dutton.
30. González, A.M. (2003). Ethics in Global Business and in a Plural Society. *Journal of Business Ethics*, 44(1), 23-36. <https://doi.org/10.1023/A:1023230222707>.
31. Grabner, I., Klein, A., & Speckbacher, G. (2018). Managing the Trade-Off Between Delegation and Task Interdependence in Creative Teams. *Academy of Management*

- Proceedings*. <https://doi.org/10.5465/ambpp.2018.14647abstract>.
32. Grundey, D., & Varnas, D. (2006). Transformations in Corporate Culture and Human Capital Management. *Transformations in Business and Economics*, 5(2), 10.
 33. Gundry, L.K., Kickul, J.R., & Prather, C.W. (1994). Building the creative organization. *Organizational Dynamics*, 22(4), 22-37. [https://doi.org/https://doi.org/10.1016/0090-2616\(94\)90076-0](https://doi.org/https://doi.org/10.1016/0090-2616(94)90076-0).
 34. Henry, C. (2007). *Entrepreneurship in the Creative Industries: An International Perspective*. Edward Elgar Publishing Limited. <https://books.google.lt/books?id=poFv9E2KC4gC>.
 35. Henry, J. (2006). *Creative Management and Development*. SAGE Publications. <https://books.google.lt/books?id=Wi-BqBgm9n0C>.
 36. Howkins, J. (2010). *Kūrybos ekonomika*. Vilnius: Technika.
 37. Howkins, J. (2013). *The Creative Economy: How People Make Money from Ideas* (2nd ed.). Penguin UK.
 38. Hussinki, H., Ritala, P., Vanhala, M., & Kianto, A. (2017). Intellectual capital, knowledge management practices and firm performance. *Journal of Intellectual Capital*.
 39. Jifeng, M., Gang, P., & Edwin, L. (2008). Interfirm networks, social capital, and knowledge flow. *Journal of Knowledge Management*, 12(4), 86-100. <https://doi.org/10.1108/13673270810884273>.
 40. Johnson, W.H.A. (1999). Integrative taxonomy of intellectual capital: Measuring the stock and flow of intellectual capital components in the firm. *International Journal of Technology Management*. <https://doi.org/10.1504/ijtm.1999.002788>.
 41. Kamath, G. B. (2007). The intellectual capital performance of the Indian banking sector. *Journal of Intellectual Capital*. <https://doi.org/10.1108/14691930710715088>.
 42. Kardelis, K. (2005). *Mokslinių tyrimų metodologija ir metodai: (edukologija ir kiti socialiniai mokslai)* (3rd ed.). Lucilijus.
 43. Krätke, S. (2012). The Creative Capital of Cities: Interactive Knowledge Creation and the Urbanization Economies of Innovation. In *The Creative Capital of Cities: Interactive Knowledge Creation and the Urbanization Economies of Innovation*. <https://doi.org/10.1002/9781444342277>.
 44. Kraus, R.G., & Curtis, J.E. (2000). *Creative management in recreation, parks, and leisure services*. McGraw-Hill College.
 45. Lerner, J. (2012). *The Architecture of Innovation: The Economics of Creative Organizations*. OUP Oxford. <https://books.google.lt/books?id=URkqKQKnWVIC>.
 46. Litovchenko, B. (2016). Origin of the Creative School of Management: Retrospective Analysis. *Journal of European Economy*, 15(4), 361-377.
 47. Luiza, F. (2016). *The role of intellectual capital in achieving the competitive advantage of economic institutions in the knowledge economy: Cement company case study*. Unpublished Doctorate Thesis. Baskra, Algeria: Mohammad Khader University.

48. Madsen, S. (2009). *Volunteerism in a Creative Organization: Factors leading to Continuing Participation*.
49. McWilliam, E., & Dawson, S. (2008). Teaching for creativity: Towards sustainable and replicable pedagogical practice. *Higher Education*. <https://doi.org/10.1007/s10734-008-9115-7>
50. Mellander, C., & Florida, R. (2014). The Rise of Skills: Human Capital, the Creative Class, and Regional Development. In: M.M. Fischer & P. Nijkamp (Eds.), *Handbook of Regional Science* (pp. 317-329). Berlin-Heidelberg: Springer. https://doi.org/10.1007/978-3-642-23430-9_18.
51. Meriam, I. (2005). Creative climate and learning organization factors: their contribution towards innovation. *Leadership & Organization Development Journal*, 26(8), 639-654. <https://doi.org/10.1108/01437730510633719>.
52. Mikulėnienė, R., & Jucevičius, R. (2000). Organizacijos intelektinis kapitalas: sandaros ir pagrindinių sąvokų interpretacijos. *Socialiniai Mokslai*, 3, 65-76.
53. Morgan, G. (1989). *Creative organization theory: A resourcebook*. SAGE Publications.
54. Morgan, G. (1993). *Imaginization: The Art of Creative Management*. SAGE Publications.
55. Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*. <https://doi.org/10.5465/AMR.1998.533225>.
56. Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: how Japanese companies create the dynamics of innovation*. Oxford University Press.
57. Nonaka, I., & Teece, D. (2001). *Managing Industrial Knowledge: Creation, Transfer and Utilization*. <https://doi.org/10.4135/9781446217573>.
58. Obeidat, B.Y., Tarhini, A., Masa'deh, R., & Aqqad, N.O. (2017). The impact of intellectual capital on innovation via the mediating role of knowledge management: a structural equation modelling approach. *International Journal of Knowledge Management Studies*, 8(3-4), 273-298.
59. Rhodes, M. (1961). An Analysis of Creativity. *The Phi Delta Kappan*, 42(7), 305-310. <http://www.jstor.org/stable/20342603>.
60. Roos, G., & Roos, J. (1997). Measuring your company's intellectual performance. *Long Range Planning*. [https://doi.org/10.1016/s0024-6301\(97\)00022-8](https://doi.org/10.1016/s0024-6301(97)00022-8).
61. Šedžiuvienė, N., & Vveinhardt, J. (2011). Žinių valdymas organizacijoje: darbuotojų kūrybingumo vystymo prielaidos. *Profesinės Studijos: Teorija Ir Praktika*, 8, 277-286. https://www.researchgate.net/profile/Jolita_Vveinhardt/publication/318377802_Knowledge_Management_in_Organisation_Prerequisites_for_the_Development_of_Personnel_Creativity_Ziniu_valdymas_organizacijoje_darbuotoju_kurybingumo_vystymo_prielaidos/links/5969e.
62. Starkey, K., Tempest, S., & McKinlay, A. (2004). *How Organizations Learn: Managing the Search for Knowledge*. Thomson. <https://books.google.st/books?id=SE8G0d0ib3EC>.

63. Stewart, T.A. (1997). *Intellectual Capital: The New Wealth of Organizations*. Crown Business.
64. Sveiby, K.E. (1997). *The New Organizational Wealth: Managing and Measuring Knowledge-Based Assets*. Berrett-Koehler Publishers.
65. Užienė, L., & Staliūnienė, J.D. (2009). Intelektinio Kapitalo Auditas : Samprata, Uždaviniai Ir Realios Galimybės. *Ekonomika Ir Vadyba, 14*, 123-131.
66. Vaškeliene, L., & Šepelen, J. (2008). Informacijos apie intelektinį kapitalą atskleidimas Lietuvos akcinėse bendrovėse. *Ekonomika Ir Vadyba, 13*, 88-97.
67. Znakovaitė, A., & Pabedinskaitė, A. (2010). Intelektinio kapitalo valdymas transporto sektoriuje. *Mokslas-Lietuvos Ateitis [Science-Future of Lithuania], 2(2)*, 126-133.
68. Кольчугина, М. (2008). Синергия образования и науки как инновационный ресурс. *Мировая Экономика и Международные Отношения, 10*, 84-92.
69. Шевырев, А.В., & Романчук, М.Н. (2008). Формирование и развитие системно-креативного мышления – базовая стратегия образования XXI века. *V Международная Научная Конференция*, 119-130.