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ORGANIZATIONAL CREATIVITY AS A DRIVING FORCE FOR COMPANY'S INNOVATIVE DEVELOPMENT

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Abstract. The article investigates the phenomenon of Creativity – the background of this term, its development and what we understand with creativity in business organizations nowadays. The concept of Creativity, Individual creativity and Organizational creativity are given, as well as provided differences between Individual and Organizational creativity. Specifically, the authors analyze the Organizational creativity, its features and influencing factors. This article provides two-step research: 1) content analysis of scientific literature, extracting factors of organizational creativity and 2) interview of business representatives with subsequent comparative analysis of the obtained results. Triangulation of research was obtained through cross verification from two sources.

Keywords: creativity, organizational creativity, innovation.

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1. Introduction

In today's rapidly changing environment and expanding global competition there is a continuing and evergrowing recognition on innovations and creativity. Innovation plays the key role in development and growth not only in particular enterprises, but in country's economy as well. Innovation has been placed at the heart of the Europe 2020 strategy: "Europe's future economic growth and jobs will increasingly have to come from innovation in products, services and business models" (Innovation Union 2013). However, European Commission claimed, that Latvian long-term competitiveness is hindered by poor development of innovation.

The research "Innovation Union Scoreboard 2015", published February 7, 2015, shows that Latvian innovation development rate is still below the EU average – among 29 surveyed countries, Latvia ranks – 26th (Estonia - 13, Lithuania - 25) (Ministry of Economy 2013). Currently, the Latvian economy is dominated by sectors with low added value, i.e., industries based on the processing of natural resources and cheap labor force benefits. To ensure long-term economic growth, it is necessary to create added value and raise productivity through a comprehensive innovation processes (Ministry of Economy 2013). So, the competitiveness of economy relies on the capacity of businesses to create high value added goods and services. That can be done only through the creative approach in all business levels.

All innovation begins with creative ideas. Successful implementation of new programs, new product introductions, or new services depends on a person or a team having a good idea – and developing that idea beyond its initial state (Amabile *et al.* 1996). Creativity is even necessary before the actual innovation process

can begin, and can thus be considered as "pre-innovation" (Burbiel 2009); therefore research of creativity may help to implement and foster innovation processes in business organizations.

Research on creativity has sprung from many academic disciplines, including psychology, organizational behavior, education, history and sociology. Psychological research on creativity has tended to focus on individuals and intra-individual factors – personality, traits, abilities, experiences, and thought processes (e.g. motivation; Amabile 1982). Within this focus, creativity is often seen as the product of a special individual in an isolated moment of insight. Researchers from other domains, particularly sociology, have focused on more macro issues concerning the influence of the environment on creativity (Ford 1996) (Pirola and Mann 2004). While researches focusing on creativity from either micro or macro perspective have made significant advances, the two approaches have tended to remain separate. It is only relatively recently, that considerable theoretical advancements have been made in linking the macro and micro levels, the work environment with intra-individual components.

Performed researches (Burbiel 2009; Yeh and Chen 2012; Zampetakis *et al.* 2009; Shalley and Gilson 2004; Amabile 1998) on creativity in business organizations show that it is not enough to hire creative individuals, it is necessary to create an environment favorable for creativity. Performed researches identify various factors on different levels – individual, group, organizational, that stimulates creativity in organizations and present different models of creativity assessment in business. These types of approaches are wide ranging and their levels of analysis widely discrepant. That's why authors investigate what does term of creativity mean, what is relationship between individual and organizational creativity, which factors influence organizational creativity, is it possible to stimulate creativity in business organizations.

The research **object** is the concept of organizational creativity.

The research **goal** is to discuss and define what exactly Creativity is, to show why creativity within an organizational setting is not simply Individual creativity and to identify factors, influencing Organizational creativity.

The research methods applied in the article are content, logical and comparative analysis of scientific literature, exploring and comparison of foreign researches.

2. Studying the concept of Creativity

In scientific literature, creativity is often mentioned as a starting point for innovation and entrepreneurship. However, the concept of creativity is rarely clearly understood or defined in business management. The field of management theories and practices contains various approaches, which touch the creativity in organizations, but a minimal part of these approaches includes creativity in a comprehensive or in a profound way. The term "Creativity" has a multitude of definitions and approaches for assessment. To understand what organizational creativity is and how it could be stimulated in business organizations, the authors need to come to conclusion, what we understand with term "Creativity".

The word "creativity" comes from the Latin term creō "to create, make". The development of the modern concept of creativity begins in the Renaissance, when creation began to be perceived as having originated from the abilities of the individual. Creativity as the subject of proper study began seriously to emerge in the late 19th century with the increased interest in individual differences. The start of the scientific study of creativity is taken as J. P. Guilford's (Guilford 1987) address to the American Psychological Association, which helped popularize the subject and focus attention on a scientific approach to conceptualizing creativity. He concluded that originality was an important dimension of a creative new product.

Interest of Creativity research began to grow in the early 20th century. Joseph Shumpeter introduced the economics theory of creative destruction, to describe the way in which old ways of doing things are endogenously destroyed and replaced by the new (Wikipedia). However, several indicators of the volume of work on creativity show that it remained a relatively marginal topic in science. Creativity and innovation are sometimes regarded as the same concept. However, many researchers have suggested that they are two disciplined areas (e.g. Amabile 1996; Barton and Tang 2011; Hopkins 2010; McLean 2005). Amabile (1996) claimed that creativity is the production of novel and useful ideas in any domain, whereas innovation is the successful implementation of creative ideas within an organization. In her Componential Model of Creativity, Amabile (1996) defined creativity as the production of responses or works that are reliably assessed by appropriate judges as being original (Yeh and Chen 2012). Amabile, 1996; Zampetakis and Moustakis, 2006

state that creativity marks the starting point for innovation and entrepreneurship. This approach is product oriented and focuses on the extent to which outcomes are creative.

Gruber and Davis (1988) used the case study method to investigate the processes of highly creative individuals and proposed an evolving system model of creativity. They concluded that the creative person is unique, developmental change is multidimensional, and the creative person is an evolving system (Yeh and Chen 2012). More recently, Yeh (2004) proposed the Ecological Systems Model of Creativity based on a thorough review of these well-known confluence models of creativity. This model emphasized that creativity is a process in which an individual generates a culturally and contextually original and valuable product in a specific domain, which derives from the interaction of four systems. The micro system specifies personal characteristics; mainly knowledge, dispositions, and skills and strategies; the mesosystem consists of family and school experiences; the exosystem comprises organizational factors that relate to an individual's work; and the macrosystem refers to a social milieu (Yeh and Chen 2012). Martins and Terblanche (2003) regarded creativity as a kind of capacity that integrates many new ideas for products, services, processes, and procedures (Yeh and Chen 2012).

Sternberg (1999) in his Handbook of Creativity suggests that Creativity is the ability to produce work that is both novel (original, unexpected) and appropriate (i.e. useful, adaptive concerning task constraints) (Sternberg 1999). Mayer's (1999) review of definitions given by authors contributing to the 1999 "Handbook of Creativity" (Sternberg 1999), provided the following definition of creativity: "[...] creation of new and useful products including ideas as well as concrete objects." A more recent, albeit unsystematic, review has confirmed the importance of this definition (Andreasen 2005) (Piffer 2012). A product which is useful but not novel, or novel but not useful cannot be considered creative (Arden, Chavez, Grazioplene, & Jung 2010) (Piffer 2012). Another concept, named appropriateness, has been introduced to account for products that are creative but not useful in a strict sense. This concept is part of a prominent definition of creativity (Zeng, Proctor, & Salvendy 2011). Appropriateness is different from impact as the former indicates agreement among the public or the community of experts about a product's creativity, whereas the latter indicates the extent to which an idea changes a particular domain, as reflected in this definition of creativity: "Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one" (Csikszentmihalyi 1996) (Piffer 2012). The traditional distinction between Big-c and little-c creativity highlights the importance of this concept. The first is synonymous with eminent creativity and is usually believed to be limited to wellknown creators or renowned individuals. Little-c, or everyday creativity, consists of the creative activities in which people might participate each day and is found across the demographic spectrum, from college students to children (Kaufman & Beghetto 2009) (Piffer 2012). Joakcim Burbiel (2009) also states that Creativity is a combination of idea generation and idea validation, highlighting the need of suitability acknowledgement of idea (Shalley and Gilson 2004). He emphasizes that creativity is essential to the innovation process: "novel ideas must be added to the innovation process anew all the time." (Shalley and Gilson 2004). Many researchers noted that no innovation in an organization may be reached without an individual creative action of its employees.

What has been given so far is a definition of "creativity". Reviewing variety of definitions it becomes clear that it is more relevant to products, people and process. Sometimes (but not always) the definition explicitly encapsulates all three elements. Thus, in Zeng et al. (2011) "creativity is broadly defined as the goal-oriented individual/team cognitive process that results in a product (idea, solution, service, etc.) that, being judged as novel and appropriate, evokes people's intention to purchase, adopt, use, and appreciate it" (Piffer 2012).

In many researches Creativity is described as an ability to think in an original and unusual way, as a specific personal characteristic, as a process and creative result received during it (Macerinskiene and Bulygina 2012; Fisher *et al.* 2005; Shalley and Gilson 2004). It is emphasized that creative ideas must be acknowledged and practically applied in order to be useful for others, in other words, they must be converted in a certain form – a product or a service. Having analyzed results of various researches on creativity, became clear that since the advocate of creativity research by Guilford in 1950, proposed definitions of "creativity" have changed from the unidimensional to the multidimensional plane; from factors related to personal characteristics to those concerning the social milieu; and from the cognitive to the affective domain. The authors agree with Mumford & Gustafson (1988) statement that creative outcomes can range from minor adaptations in workflow or products to major breakthroughs and the development of new products or processes. Based on the researches' results presented above, the authors define Creativity as goal-oriented individual/team cognitive process, in

which an individual/team generate novel, useful and appropriate ideas that results in a product, service, process, procedure, solution, etc. However, with such a broad definition, one is at a loss as to how creativity could be influenced and fostered in business organizations? What is the difference between individual and organizational creativity? Which factors positively influence individuals to be creative?

2.1. Individual creativity versus Organizational creativity

The development of scientific thinking about creativity has followed a trajectory similar to that of research on intelligence: an early emphasis upon isolated individuals and their internal traits and capabilities, followed by a developing focus upon the interaction between the individual and the environment (Sternberg 1999). The major focus in creativity research has been on the individual creator and her or his personality, traits, abilities, experiences, and though processes – we call it Individual creativity. Later research focused on the individual in context. These systems views are based on analyses of creative individuals within their social and historical contexts. Thus, these views incorporate environmental influences on creativity (Sternberg 1999).

The influence of environment is very important, because creative outcomes cannot and do not occur in a vacuum. Some might conclude that organizational creativity needs could be met by hiring individuals with right levels of intelligence, combined with other aspects of personality. However, the problems with drawing such conclusions are, first, that the individual in an organization must function within a group-oriented organizational culture, and so may not express creativity as it was expressed in isolation. Second, when drawing such conclusions, we do not know the extent of the relation between such performance and real world creativity in organizational setting (Sternberg 1999). Mumford et al. (2002) discussed creative work as being contextualized in that the success of creativity depends on the capabilities, pressures, resources, and sociotechnical system in which employees find themselves (Arena 2008).

C.M. Arena (2008) writes in his book "The business of intellectual property": "Creativity in and of itself is value neutral and, depending on the outcome, may be positive or negative" (Amabile 1998). Hence, the role of leaders is to ensure that the structure of the work environment, the climate and culture, and the human resource practices are such that creative outcomes can and do occur. So, there is an increasing need for a greater understanding of the contextual factors that may enhance or discourage employees' creativity as well as the interaction between personal characteristics and the work environment. This interaction's result – positive creative outcome in business organizations we understand under term Organizational Creativity.

Based on the information above, the authors conclude, that creativity stems from individual talent, but for development of Organizational creativity, organization must mediate this individual potential and channel it into creative production. For getting the positive creative outcome, it is essential to find factors that foster Organizational creativity. By defining and analyzing these factors, leaders will be able to manage and enhance creativity in business organizations. Systems-oriented views of creativity can help us to conceptualize the multiple factors that influence creative performance within an organizational setting.

3. Research methodology

The authors provide two-step research: 1) content analysis of scientific literature, extracting factors of organizational creativity and 2) interview of business representatives with subsequent comparative analysis of the obtained results. Triangulation of research was obtained through cross verification from two sources.

Most managers would say that they would like their employees to be more creative, but it has not always been clear how managers should lead for creative performance to occur. There is a need to identify the way for leadership to follow and stimulate the creativity in business organizations. The authors suggest that it could be done through identifying factors, influencing Organizational creativity, systematizing them and analyzing in everyday work, as well as in particular cases. Managers should be able to estimate, which factors they must pay attention at; what are the strong points and weakness; which factors could be changed, improved or even replaced for getting the best result.

There is a huge set of various factors, which influence Organizational creativity on different levels with different force. That's why purpose of the present research is not only to identify factors of Organizational creativity, but also to structure them in one comprehensive system by dividing into groups. So, in authors' opinion, the first and essential step in efficient management of Organizational creativity is identifying factors, influencing Organizational creativity and systemizing them. For these purpose, the authors conducted a content analysis of scientific literature, exploring and comparison of foreign researches.

The most often discussed models of Organizational creativity are the models of Organizational creative climate assessment and creativity and Innovativeness guarantee factors of Amabile (1988, 1996), and the Model of interactions organizational creativity of Woodman *et al.* (1993). The theoretical works of Amabile and Woodman serve as general frameworks that describe a variety of relevant factors that can either enhance or stifle employee creativity. These models present a foundation for suggestion why the context of employees work is important for their creativity. Both models have categorized the major components of the work context into individual, job, group or team, and organizational level factors.

Csikszentmihalyi, Gardner and Simonton are among the theorists who have conducted research based on the systems approach. Csikszentmihalyi (1988, 1994) sees creativity as a product of interactions between three components: 1) a person who makes changes in the contents of a domain that are acceptable to a field; 2) members of a person's field as judges the person's creative endeavors; 3) organizational influence – organizations, that encourage the optimal types of judging behaviors and attitudes will thus encourage creativity (Sternberg 1999). Gardner's (1988, 1994) understanding of creative processes is expressed on four levels of cognitive analyses: 1) the subpersonal level of genetic and neurobiological factors; 2) the personal level of development in some form of human intelligence; 3) the extrapersonal level of progress of development in bodies of knowledge or domains, and 4) the multipersonal level of a social context of a field of inquiry that is created through interactions among colleagues in a domain (Sternberg 1999). Like Csikszentmihalyi, Gardner recognizes the role of multipersonal input in the creative process, which is an aspect of organizational environments that is at least partly under organizational control.

Based on these models, the authors have divided all factors of Organizational creativity into three groups: 1) individual factors; 2) group factors; and 3) organizational factors. The authors also give an explanation, what is the concept of each group:

- 1. Individual factors are the personal characteristics of the individual, a set of skills specific to creativity. These factors depend only on each individual's cognitive abilities, personality.
- 2. Group factors are factors of interaction between individuals in one workgroup.
- 3. Organizational factors factors, concerned with the structure of organization, its internal climate, rules, strategy and technologies.

The authors' intent was to prove that Organizational creativity doesn't depend on the individual characteristics only. Organization is a system and it is necessary to take into consideration all conditions of its functioning. However, a clear picture regarding what is important and when is still emerging.

4. Dimensions and factors of Organizational creativity

Increasingly, creativity has become valued across a variety of tasks in business organizations. Work environment is very dynamic nowadays and level of creativity required and the importance of creativity can differ depending on the tasks or job in question, most managers would agree that there is room, in almost every job, for employees to be more creative (Arena 2008). The authors of the paper consider that for a company to encourage positive-outcome of creativity, it must recognize the characteristics and factors, which supports and rewards the positive-outcome. By conducting content analysis of foreign researches, the authors identified the factors that stimulate creativity in business organizations and, based on the literature and authors' practical experience, divided them into three dimensions: individual, group and organizational. The researchers' findings and factors are presented in Table 1.

Table 1. Factors, influencing organizational creativity

Authors	Quotation	Individual factors	Group factors	Organizational factors
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Teresa M. Amabile (1998)	Within every individual, creativity is a function of 3 components: expertise, creative thinking skills and motivation (Sung and Choi 2012).	expertise, skills	motivation	
Gruber and Davis (1988)	Evolution of creative ideas is influenced by an individual's expertise, motivation, emotions and environment (Yeh and Chen 2012).	expertise	environment – supportive climate; motivation	
Sternberg and Lubart (1996)	A confluence of six distinct but interrelated resources is required for creativity. These are intellectual ability, knowledge, particular style of thinking, personality, motivation and the environment (Yeh and Chen 2012).	intellectual ability; knowledge; particular style of thinking	environment; motivation	
Yeh (2004)	knowledge, dispositions and skills and strategies (Yeh and Chen 2012).	knowledge; dispositions and skills		strategy
(Yeh, 2006). Sweller (2009)	The first element of creativity is a comprehensive knowledge base.	knowledge		
Crawford and Brophy (2006)	Creativity requires a basic level of expertise and fluency within a specific knowledge domain along with deep knowledge of the subject. Apparently, knowledge is the most fundamental and critical element of creativity (Yeh and Chen 2012).	knowledge, expertise		
Tinerney and Farmer (2002)	Personal self-confidence or self- efficacy helps to foster creative behavior (Yeh and Chen 2012).	self-confidence; self-efficacy		
Claxton, Edwards, and Constantinou (2006)	Dispositions such as curiosity, resilience, experimentation, attentiveness, and thoughtfulness are important for the performance of creativity.	dispositions		
Pelled, Eisenhardt, and Xin (1999)	Range of skills, knowledge, and perspectives positively impact an individual's creative performance (Yeh and Chen 2012).	skills; knowledge; perspectives;		
Feldhusen (1995)	The process of creation requires abilities of planning and monitoring.	abilities of planning; abilities of monitoring		
Wallas (1926), Runco (2007)	Early research on creativity has demonstrated that time is an important resource; individuals should be given sufficient time if they are expected to do creative work (Zampetakis et al. 2010).		time; work load	
Mednick (1962)	Original ideas tend to be remote and are usually found far away from the original problem or initial idea. This remoteness requires time; it takes time to move from idea to idea to idea, and to find the remote associate (Zampetakis et al. 2010).		time	
Amabile (1998), Runco, (2007), Simonton, (2000)	Creative individuals are intrinsically motivated and are equipped with high levels of persistence (Zampetakis et al. 2010).	intrinsic motivation		

Gilson & Shalley, 2004 Van Engelen, & Kratzer, (2003)	Extant studies of team creativity have highlighted the importance of group composition and team emergent states or processes, such as a supportive climate (Chen and Huang 2010). Intra-team communication is important (Chen and Huang		group composition; supportive climate intra-team communicatio	
(2002)	2010).		n	
Lopez-Cabrales et al., (2009)	The ability of a team to generate novel and useful ideas is inextricably linked to task-relevant knowledge embodied in members (Chen and Huang 2010).	task-relevant knowledge		
Gerhard Fischera, Elisa Giaccardia,, Hal Edena, Masanori Sugimotob, Yunwen Yea, (2005)	Nature of creativity h s four essential pieces: (1) originality, (2) expression, (3) social evaluation and (4) social appreciation within a community (Fiscger et al. 2005).	originality; expression	social evaluation, social appreciation within a community	
Woodman et al.,(1993); Nonaka and Takeuchi, (1995); Ofori-Dankwa and Julian,(2002); Paulus,(2000)	Prior researches in the group literature have found evidences that characteristics of creative workforce, such as network structure, size and diversity are critical factors of creative output.			network structure, size and diversity
Woodman et al. (1993)	Individual characteristics are the basis for their interaction and depend on each individual's cognitive abilities, inner motivation and suitable knowledge (Macerinskiene and Bulygina 2012).	abilities; inner motivation; knowledge		
Woodman et al. (1993)	Group creativity is influenced by group composition, and group characteristics (e.g., cohesiveness, group size, member diversity, role distribution and methods of problem solution), implying that the interactions and flows of knowledge that take place across creative actors of an organizational network influence the creation of new knowledge.		group composition; cohesiveness, group size, member diversity, role distribution and methods of problem solution	
Woodman et al. (1993)	Innovation performance of the organization is a function of the creative performance of its constituent groups and salient aspects of the organization, such as resource availability, that can enhance or constrain creativity. Organizational characteristics encompass organizational culture, resources, and compensation systems and focus on organizational strategy, structure and technologies (Macerinskiene and Bulygina 2012).			resource availability; organizational culture; compensation systems; organizational strategy, structure and technologies
Schepers & van den Berg (2007)	Personal freedom, both in choosing which particular task to do next and how to tackle it, has been identified as a major source of creativity (Burbiel 2009).		personal freedom	
Heinze (2007)	Friendly competition between different groups of the same		friendly competition	

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Table 1 highlights the point that while there are individual differences with regards to creativity, social and contextual factors can enable the expression of creative activity and motivate its applications. Summarizing the information, presented in Table 1, it is seen, that there are many quite different factors, which influence creativity on different levels in business organization, but some of them are mentioned more often by bigger number of researches and some of them could be generalized into one factor. It means that all factors don't influence Organizational creativity equally and there is room for further research on the finding the most important factors, that could become tools for measuring and managing creativity in business organizations. For visibility and convenient use, the authors summarized identified factors in Table 2.

Table 2. Summary of factors of Organizational creativity

Individual factors	Group factors	Organizational factors
Knowledge	Motivation	Strategy
Expertise	Group composition	Organizational structure
Skills	Supportive climate	Organizational culture
Intellectual abilities	Intra-team communication	Sufficient resources
Particular style of	Team leader's vision,	Reward system
thinking	behavior	
Dispositions	Time	Organizational size
Intrinsic motivation	Role distribution in a team	Technologies

Behavior	Methods of problem solution	Network structure
	Work load	
	Challenging work	
	Diversity and complexity of	
	processes	
	Knowledge-sharing culture	
	Friendly competition	
	Personal freedom	

These factors indicate to what managers should pay attention at, stimulating creativity in organizations. For efficient management of Organizational creativity, the authors recommend to analyze identified factors in context of dimensions. Concerning, to Individual factors, if creativity is desired, managers should try to hire individuals with definite characteristics, listed in Table 2, that are more predisposed to be creative. Additionally, they can use an individual's predisposition for creativity as a factor in placing them in jobs where creativity may be more desirable or critical.

The emphasis on group work is based on the assumption that idea generation is best performed in groups and that interaction with others fosters creativity. The research on Group factors' evaluation suggests that leaders should provide support for role expectations of creativity by providing an environment where employees expect to receive constructive, developmental feedback on their work. Based on the research, managers should work on encouraging and supporting their employees as well as developing nurturing relationships among employees. If leaders are supportive and provide challenging work, time and freedom, creative activity should be more likely to occur.

Speaking about Organizational factors, for getting the positive outcome is necessary to follow that creative ideas are generated according to the strategy of organization, taking into consideration it's size, culture, resources, technologies, etc. But managers, in turn, need to ensure that employees have access to a reasonable amount of the necessary resources for performing their job. In opinion of various researchers, positive impact on employees' creativity has a reward system. So, rewards should be seen as something given in recognition of individuals' competence, attempts to engage in creative activity, and their actual creative accomplishments. Finally, whether creativity is a requirement or an expectation of a job, it is critical that challenges, work load, time resource, rewards, support, freedom and evaluation all be closely linked such that creative behaviors and outcomes are perceived as important.

With the aim to assess creativity factors identified in the literature interview of business representatives was organized. Respondents - business representatives (micro-small-medium) were asked to assign to which group belongs each factor influencing creativity. Fifty representatives of various business areas were interviewed. The main part of the responders (60%) was representing manufacturing sector, 30 % wholesale and retail, 10 % Human Health and Social activities. Interview result is shown in Table 3.

Table 3. Summary of interview results

Individual Factors	Group Factors	Organizational Factors
Dispositions	Challenging work	Diversity and complexity of processes
Expertise	Friendly competition	Organizational structure
Intellectual abilities	Groups composition	Organizational culture
Intrinsic motivation	Intra-team communication	Organizational size
Knowledge	Knowledge-sharing culture	Reward system
<u>Motivation</u>	Methods of problem solution	Supportive climate
Particular style of thinking	Network structure	Strategy
Skills	Personal freedom	Sufficient resources
Behavior	Role distribution in the team	Team leaders' vision, behavior

	<u>Time</u>
	Technologies
	Work load

Interviewed business representatives introduced some changes to previously developed table, which shares factors influencing creativity to three groups (Individual Factors – Group Factors – Organizational Factors). Interview results show that 54 % of respondents assigned "motivation" as Individual Factor and 58% of them attributed "network structure" as a Group Factor. Necessary to notice that "diversity and complexity of processes", "supportive climate", "team leaders' vision, behaviour" and "time" factors respondents ascribed to group of Organizational Factors while in the table 2, which was prepared from literature analysis all mentioned factors belonged to Group factors.

5. Conclusions

The heightened competition within today's business climate has forced organizations to reexamine the assumptions of traditional theories of organizational structure and operation. Established formulas for work organizing and decision-making have become less applicable. For the efficient functioning and development of business organizations, new ideas and approaches are required. Therefore the importance of Creativity is emphasized more and more nowadays. However, the term of Creativity is rarely clearly understood or defined in business management. That's why the authors studied the concept of Creativity, described in different researchers and provided their own definition of the term. The authors consider, that Creativity is a goal-oriented individual/team cognitive process, in which an individual/team generate novel, useful and appropriate ideas that results in a product, service, process, procedure, solution, etc.

The authors have come to conclusion that creativity occurs only when the appropriate mix of individual, social and environmental elements interact. The evidence suggests that individual creativity can provide the raw material for novel and useful ideas, but the creative process is perceived as taking place within the context of a particular environment rather than in a vacuum. That's why the authors distinguish two types of creativity: Individual and Organizational.

It is clear that Organizational creativity should be considered not from individual, but from more systems-oriented perspective, because creativity success in context of organization depends on the resources, opportunities, communication of group members and technical system in which employees find themselves. Different authors identified various factors that stimulate creativity in organizations in their researches, and research models were drawn up based on these factors (Amabile 1996; Amabile 1998; Wodman 1993). It was noticed, that some dimensions of factors are reflected in almost all models. So, on the basis of scientific researches and analysis of the most popular models of creativity, the authors found out the factors influencing Organizational creativity and divided them into three groups: Individual, Group and Organizational.

The authors assume that to create a favorable environment for creativity is possible by combining as many positive factors as possible. For this purpose Table 3 was created which present creativity factors assigned by business representatives to the groups. By conducting careful analyses of factors, given in Table 3, managers are able to find out which factors they must pay attention at; what are the strong points and weakness; which factors could be changed, improved or even replaced for getting the best result. By means of these factors, leaders can control and manage the creativity. In turn, dimensions of Organizational creativity, provided by authors, simplify this process by systematizing the factors and pointing out the problem area of business organization. Finally the authors conclude that the challenge for organizations is to achieve a balance between these two types of thinking and performing, so that creative ideas are available and are cultivated within the organizational setting.

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References

Amabile T.M. et.al. 1996. Assessing the work environment for Creativity, *The Academy of Management Journal* 39(5): 1154-1184. ISSN 0001-4273.

Amabile, T.M. 1998. *How to kill creativity*. Harvard Business Review. Boston: Harvard Business School Publishing, MA, USA, (September – October) Nr.5, p. 77-87. ISSN 0017-8012.

Arena, C.M. 2008. The business of intellectual property. New York: Oxford University Press. 52-53.

Burbiel, J. 2009. Creativity in research and development environments; A practical review, *International Journal of Business Science and Applied Management* 4(2): 35-51. ISSN 1753-0296.

Chen, C.-J; Huang Y.-F. 2010. *Creative workforce density, organizational slack, and innovation performance*. Elsevier Ltd. 64(4): 411-417. DOI: 10.1016/j.jbusres.2009.03.018.

European commission Homepage. Community Research and Development service. 2013. Available on the Internet: http://cordis.europa.eu/eu-funding-guide/home_en.html>.

European Comission Homepage. European Innovation Scoreboards. 2015. Available on the Internet: http://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards/files/ius-2015 en.pdf>.

Epstein, R; Laptotsky, G. 1999. Behavior Approaches to creativity, Encyclopedia of Creativity, Academic Press.

Fischer G. et al. 2005. Beyond binary choises: Integrating individual and social creativity, *The International Journal of Human-Computer Studies*, Elsevier Ltd. 63: 482-512. ISSN 1071-5819.

Guilford, J. P. 1987. Creativity research: Past, present and future, Frontiers of creativity research: Beyond the basics: 33-65.

Innovation Union Homepage. 2013. Available on the Internet: http://ec.europa.eu/research/innovation-union/index_en.cfm>.

Macerinskiene, I; Bulygina, A. The concept of creativity and innovativeness assessment in business organizations. *The 53rd International Riga Technical University Conference "SCEE'2012 Proceedings*" CD. ISBN 978-9934-10-355-1.

Ministry of Economy. Innovation fostering. 2013. Available on the Internet: http://www.em.gov.lv/em/2nd/?cat=30255>.

Piffer, D. 2012. Can creativity be measured? An attempt to clarify the notion of creativity and general directions for future research. Elsevier Ltd. 7(3): 258-264. DOI: 10.1016/j.tsc.2012.04.009.

Pirola-Merlo, A; Mann, L. The relationship between individual creativity and team creativity: aggregating across people and time, *Journal of Organizational Behavior*. 2004, Vol. 25, 235-257. DOI: 10.1002/job.240.

Shalley C.E., Gilson L.L. 2004. What leaders need to know: A review of social and contextual factors that can foster or hinder creativity, Elsevier Ltd. 15(1): 33-53. DOI: 10.1016/j.leaqua.2003.12.004.

Sternberg, R.J. 1999. Handbook of Creativity. Cambridge University press, 373-389.

Sung, S.Y; Choi, J.N. 2012. Effects of team knowledge management on the creativity and financial performance of organizational teams. Elsevier Ltd. 118(1): 4-13. DOI: 10.1016/j.obhdp.2012.01.001.

Yeh, Y; Yeh, Y; Chen, Y. 2012. From knowledge sharing to knowledge creation: A blended knowledge-management model for improving university students' creativity. Elsevier Ltd. 7(3): 245-257. DOI: 10.1016/j.tsc.2012.05.004.

Zampetakis, L.A; Bouranta, N; Moustakis, V.S. 2010. On the relationship between individual creativity and time management. Elsevier Ltd. 5(1): 23-32. DOI: 10.1016/j.tsc.2009.12.001.

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