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Employees´ Creativity Development within Innovative Processes of Enterprise

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Abstract

Business practice requires creativity to be considered an important part of management because innovation is the result of it. The aim of the paper is to find out how is the creativity of employees supported in food enterprises in Slovakia. After evaluating the information obtained from structured interview and questionnaire based on the 5-degree Likert scale, there were used one way ANOVA Kruskal-Wallis test as well as Cronbach alpha and Spearman's correlation tests. The survey also highlighted the significant innovation potential of food enterprises in Slovakia. Innovation and creativity development activities can be stimulated through the use of various techniques, with some having a specific effect on a subset of innovation types and others being applicable to a wide variety of innovations.

Keywords: creativity; employees; food enterprises; innovation.

JEL classification: M12; O35.

1. INTRODUCTION

Innovation potential is the driving force of an enterprise that secures its economic growth and competitiveness. For innovation potential, knowledge about the company's innovative needs, the degree of innovation opportunities, the level of innovative business culture, the degree of motivation of employees to introduce innovation and the full involvement of their creativity are essential.

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Today creativity has a significant and special place in business especially in innovative organizations which need creative people to generate new, and useful ideas for produce new products, services, work methods, systems (Samani *et al.*, 2014). In today's hectic world managers are being asked to do more with less. And when there doesn't seem to be time or money for pursuing new or risky ideas, maintaining the status quo may be the path of least resistance. If this is happening in department, however, manager is missing out on the most valuable resource for enhancing company and group performance: the creativity of your staff (Messmer, 2001).

Business management is responsible for managing changes, that is, managing the company's innovation process, timely response to science and technology development, and rapid application to a business project. Successful business strategy is the result of potential employee´ creativity and effective management of the innovation process (Zajko and et al., 2014).

In the current business environment with economic uncertainty and rapid technological growth, creativity occupies significant role affecting organizational performance, survival and success (Anderson *et al.*, 2014). In a hyper-competitive business environment will survive and succeed only those enterprises that are able to come up with a new ideas and/or unique products or applications. Creativity goes hand in hand with innovation; higher creativity leads to more innovation (Taha *et al.*, 2016).

2. THEORETICAL BACKGROUND

The process by which creative ideas are transformed into new products and services is significantly influenced by changes in the external environment (Sarooghi *et al.*, 2015). Creativity involves the generation of new and useful ideas. Creativity is one of the most important conditions for the emergence and spread of innovation in society and its economy (Krátka, 2013).

Creativity has recently joined innovation and become a key term in debates about the knowledge economy. In new competition, innovation relies upon creativity in the generation of novel products and services. Indeed, in enterprises, it is creativity (or invention) that stimulates and supports the achievement of innovative outputs. Organizations may thus become configured to value creativity and innovation as sources of competitive advantage rather than as additional costs (Pratt and Jeffcutt, 2009). While creativity is intertwined with the history of human civilization, technological innovation is the recent result of the industrial revolutions. There are two main signs of innovation: patents and trademarks. Patents record innovations in productive processes or in products themselves. Trademarks categorize and fix an abstract type of innovation. If we wish to create a personalized promise of wellness for a product, emphasizing also its source, then we need a trademark (Legrenzi, 2005).

Creativity is always the starting point for innovation. People who have a gift for creative innovations tend to differ from others in three ways:

- Expertise- specialized technical knowledge in a particular discipline
- Creative thinking skills- flexibility and imagination as they relate to problem solving
- Intrinsic motivation

The ability to "think outside the box" is best supported in a flexible, open, nurturing environment with a leader who sees his or her primary role as supporting rather than directing (Addis, 2009). Innovative thinking means improving the thinking of people employed in the enterprise. It is necessary to check the old procedures constantly and try to replace them. For example, production process, production management, organization of work, working practices, quality of work, etc. The sooner the innovation takes place in an enterprise, the sooner it will be able to build something new (Zajko and et al., 2014).

There is a strong positive relationship between creativity and innovation (Sarooghi *et al.*, 2015). Employee creativity is a key determinant of organizational innovation and success (Zhou and Hoever, 2014). The concept of creativity is predominantly understood as the ability of man to create new and original ideas. The common denominator of the definition of creativity is therefore novelty, originality. The essential aspect of creativity must be defined as a process characterized by hard work, systematic thinking with the intention of creating new ideas, solutions, space for improvisation, but also order and discipline (Zajko and et al., 2014). Therefore, the innovation strategy of each company should to stimulate the creativity of its employees (Krátka, 2013).

The creativity of employees in an organization depends significantly on two different factors: career satisfaction and perceived self-esteem (Kim *et al.*, 2009). Internally motivated individuals generate more creative ideas, exhibit attitudes and behaviours that increase customer´s satisfaction, and show positive behaviours for achieving organizational goals positive mood, which increases productivity and efficiency (Liu, 2016).

To date, a lot of attention has been paid to the role of research and development and networking in the innovation performance of firms. While a number of qualitative studies and case studies have been conducted on the role less tangible factors such as brainstorming and multidisciplinary teams play in a firm's innovation performance, there has been relatively little quantitative analysis. The central question addressed by the paper written by Doran and Ryan (2017) is whether idea generation and creativity stimuli, other than networking or research and development, result in innovation.

According to Samani *et al.* (2014) any managers who think only by relaying on equipment, tools and techniques can develop creativity and innovations within their organizations by stimulating their employees. However, employees who are placed in traditional productivity driven organizations with formal structures, limitation on time, strict and inflexible rule and systems, similar and routine daily tasks, standardized workplaces, and so on, may not be motivated to show the required creative behaviour. In addition, people's creativity not only depends on their individual characteristics, in fact the amount of which a person generates new, useful, and valuable ideas depends on the support that is received from the work environment (Amabile *et al.*, 1996).

Innovation activities in Slovak SME are supported primarily by those business entities, which are motivated by the pressure of competition, necessity to develop and implement new technologies, to make production more effective, to penetrate to new markets, or react to changes of business environment (Lesáková, 2014).

Doran and Ryan (2017) have analysed the effect of six different types of idea stimulating factors on the likelihood of four different types of innovation. A special module issued as part of the Irish CIS 2008–2010 provided data on the methods firms use to stimulate new ideas and/or creativity among their staff. Specifically six methods of stimulating innovation were identified by the Irish CIS. These are (i) brainstorming sessions;

(ii) multidisciplinary or cross-functional work teams; (iii) job rotation of staff to different departments or other parts of their enterprise group; (iv) financial incentives for employees to develop new ideas; (v) non-financial incentives for employees to develop new ideas, such as free time, public recognition, more interesting work, etc.; and (vi) training employees on how to develop new ideas or creativity. Training employees on how to develop new ideas or creativity only has a significant impact on the likelihood of process and organisational innovation while job rotation only has a significant effect on organisational innovation. Encouraging brainstorming and facilitating multidisciplinary or cross-functional work teams can have substantial innovation benefits while financial and non-financial incentives appear to have no significant role to play in the innovation process. They further note that the co-introduction of stimulus factors further increases the likelihood of firms innovating (Doran and Ryan, 2017).

Research made by Papulova and Papula (2013) has pointed to exploring the proper use of brainstorming as a creative technique. Although 91% of managers confirmed that they use this technique at work, only 64% know and respect the rules and principles of brainstorming. Only 29% answered that brainstorming was used in their companies according to the principles and rules of brainstorming. Brainstorming is also the most used creative technique in their companies. 88% of employees have confirmed that the company is genuinely creating a creative and innovative environment for its employees. The highest barriers of creativity development in their workplace are seen by staff in a slow decision-making process (47%), in narrow departments and specializations (29%), in bureaucracy (24%), low level of autonomy in proceedings (12%), routine work (12%), hierarchical relations (12%) and written communication (12%).

3. METHODOLOGY

In today's globalized world creativity is one of the most important conditions for the emergence and spread of innovation in society and its economy, both at the macro level and at the micro level.

The aim of the paper is to find out whether the support of employee creativity (which can contribute to increasing competitiveness, market share and satisfied customers) is an important part of the innovative processes of food companies in Slovakia. Our task was to analyse (using structured interview and also questionnaire) if and how chosen tools stimulating employees´ creativity are used in food enterprises in Slovakia.

When compiling a questionnaire (where we used the Likert 5-degree scale) we followed the "Community Innovation Survey (CIS)" document, which was implemented through EUROSTAT in 2010 (Štatistický Úrad Slovenskej Republiky, 2010). EUROSTAT has also included indicators of the use and promotion of creativity and creative skills in enterprises. These indicators were optional, but most of the Member States fill it. The questionnaire in the Slovak language, listed as Inov 1-99 for 2010, provides data on methods that were considered successful in enterprises in the Slovak Republic to stimulate the creativity of employees in module 659 entitled "Creativity and Skills". These are the following methods (Krátka, 2013):

- brainstorming,
- multidisciplinary or multifunctional working teams,

- rotation of employees in different departments or other parts of an undertaking or within a particular group of undertakings,
- financial incentives for employees to develop new ideas,
- non-financial incentives for employees to develop new ideas (e.g. leisure time, social recognition, more interesting work, etc.),
- employees training on how to develop new ideas and creativity.

In 2014, another CIS survey on innovation in EU was carried out by EUROSTAT, but this year creativity and creativity of human capital did not get its special place. That's why we have decided in our survey to investigate and analyse employee creativity in food enterprises in Slovakia. These methods, which are designed to promote employee creativity, were supplemented by the following:

- brainwriting,
- mind maps,
- international working teams,
- role playing, case studies and simulations of situations,
- further education

We have done so because managers are forced to constantly expand their competencies, knowledge and skills, and bring new, untraditional solutions because the environment in which organizations operate is increasingly unpredictable. Creative individuals are the driving force of economic growth.

Our survey included 366 food enterprises in Slovakia. The questioned person was most often a product manager (if he could not participate for any reason, he was replaced by another manager at the same level of management). Research in food enterprises in Slovakia was conducted in the form of a structured questionnaire in the months of August 2017 to February 2018. In August 2017, the survey as well as structured interviews were personally conducted at the AGROKOMPLEX 2017 exhibition. There were present 36% of the companies whose managers were respondents to our survey. In the following months, the survey was conducted by telephone interviews and e-mails.

The questionnaire consisted of 9 closed statements. Because of the easier quantification of responses, 5-point Likert scale was used for all study measures (1 denotes strongly disagree to 5 strongly agree). In the frame of the questionnaire survey, the independent variables were the size of the enterprise (in terms of number of employees), the legal form of business, the capital participation of the enterprise (exclusively domestic / foreign / combined) and the region within the SR where the enterprise operates.

Data processing was performed using statistical program SAS Enterprise Guide 7.1. As a logical methodological principle of complementing the analysis, synthesis was used not only as the composition of individual phenomena or processes, but the creation of new entities. In each research, the reliability and accuracy of measurement are important. We used the Cronbach coefficients of alpha as part of the statistical evaluation of the survey conducted: the higher the homogeneity of the elements, the higher the reliability. Mathematical and statistical methods such as non-parametric Kruskal - Wallis test and correlation analysis using Spearman test were applied for statistical hypothesis testing. According to Prokeinová (2014) significant Kruskal-Wallis test indicates that at least one sample stochastically dominates one other sample. The test does not identify where this stochastic dominance occurs or for how many pairs of groups stochastic dominance obtains.

The Spearman correlation coefficient is defined as the Pearson correlation coefficient between the ranked variables. The sign of the Spearman correlation indicates the direction of association between *X* (the independent variable) and *Y* (the dependent variable). If *Y* tends to increase when *X* increases, the Spearman correlation coefficient is positive.

Interpretation of Spearman and Cronbach correlation coefficient values was based on the following Table no. 1 (De Vaus, 2002).

Table no. 1 - Interpretation of correlation coefficient values

Correlation value	Dependence interpretation
0.01 – 0.09	Trivial or none
0.10 – 0.29	Low to medium
0.30 – 0.49	Medium to essential
0.50 – 0.69	Essential to very strong
0.70 – 0.89	Very strong
0.90 – 0.99	Almost perfect

Source: De Vaus (2002)

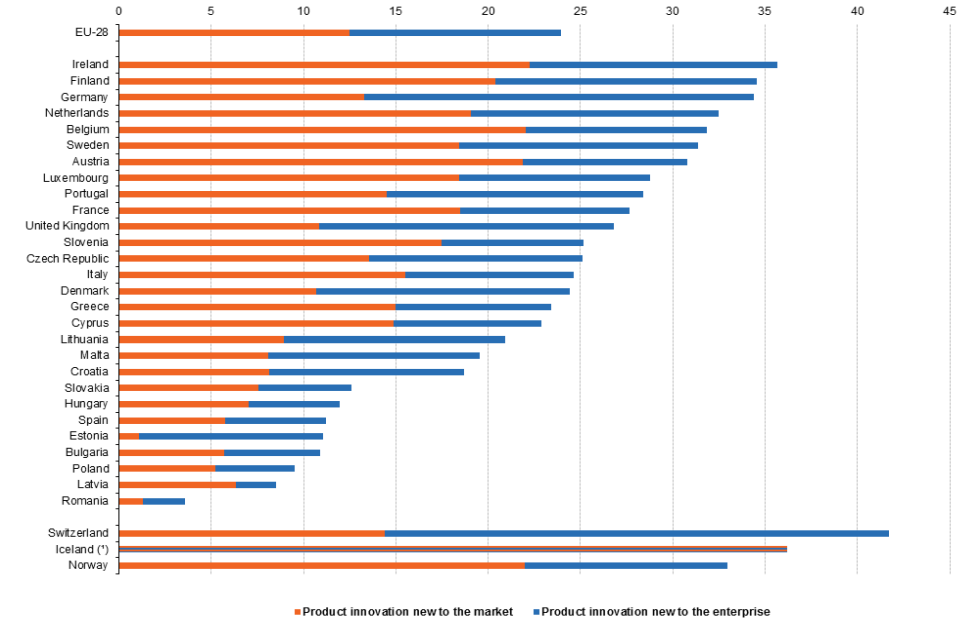
4. INNOVATIONS IN ENTERPRISES WITHIN EU

Innovation forms part of the Europe 2020 strategy due to its role in creating job opportunities, increasing the competitiveness of enterprises in global markets, improving the quality of life and contributing to more sustainable economic growth. (Innovation Union, 2017.) Indeed, EU policies often focus on encouraging and stimulating innovation. The Community innovation survey (CIS) provides statistics analysed by type of innovators, economic activity and enterprise size class. The survey is carried out every two years across the EU, some EFTA countries and some EU candidate countries and focuses on innovative activity during a three-year period (2012–2014 for the most recent results of the survey).

The main economic driver of economic growth in the EU is innovation. This is why the EU needs to improve its performance in innovation. Europe and its Member States and regions need to act together in partnership to help innovation flourish.

Figure no. 1 shows the share of European enterprises that had product innovations in period 2012-2014. The orange line represents product innovation new to the market and the blue one product innovation new to the enterprise. From V4 countries, Czech Republic belongs to the better half of EU 28. There is a big challenge for Slovakia, Poland and Hungary to improve innovation system. There innovate only 10-15 % of enterprises.

Based on information of the European Innovation Scoreboard 2016, the Slovak Republic belongs to the moderate innovators. Regarding the degree of innovation Slovak Republic is divided into three parts, Western Slovakia, Central Slovakia and Eastern Slovakia. Western Slovakia is characterized by a decline in innovation performance by 13% compared to the previous two years. Central Slovakia is also characterized by a decline in innovation performance by 21% compared to the previous two years. On the contrary eastern Slovakia recorded an increase in innovation performance by 11% compared to the previous two years. The downward trend is due to a lack of funding to innovation, a lack of links between science and research and the business sector, a lack of public finances supporting innovation.



Note: the survey reference period was 2012–2014.
(*) Data are only available for the total.
Source: Eurostat (online data code: inn_cis9_prod)

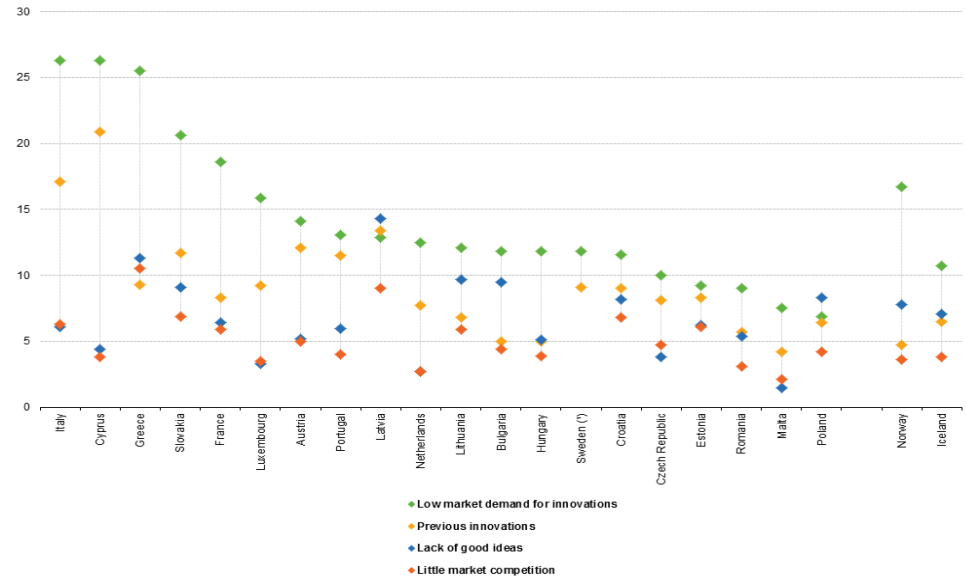
Source: Innovation Union (2017)

Figure no. 1 – Share of enterprises that had product innovations, 2012–2014 (%)

On Figure no. 2 there are pointed highly important reasons for which non-innovative enterprises did not consider innovating during period 2012-2014. From all V4 countries, Slovakia is represented especially by lowest market demand for innovations. Polish enterprises stated as most common reason "lack of good ideas".

In Slovakia is the proportion of innovation activities in large enterprises according to small enterprises twice higher. The share of enterprises with innovation activity in total number of enterprises has declined in the year 2010 in all types of enterprises. There are several reasons for decline. The main reason given by SME (small and medium enterprises) is the lack of capital, particularly venture capital, which concerns particularly the business sphere. Although the situation has recently improved, the capital markets in Slovakia continue to be underdeveloped. The persisting problems concerning availability of external capital are indicated also by the fact that SME innovate primarily using their own funds (Lesáková, 2014).

The development of the food industry is closely linked to the development of agricultural primary production, which implies, in the 2014-2020 programming period, impulses aimed at revitalizing agriculture, especially as regards livestock production and specialized crop production. The food industry has sufficient capacity to process increased agricultural production but necessarily needs investments in modernization, innovation and greening of production. Despite the persistent problem of domestic sales, new opportunities for cooperation with trade chains are emerging to increase the share of domestic traditional and fresh food, which is increasingly demanded by Slovak consumers.



Note: Belgium, Denmark, Germany, Ireland, Spain, Slovenia, Finland and the United Kingdom: not available. The survey reference period was 2012–2014.
(*) Little market competition and lack of good ideas: not available.
Source: Eurostat (online data code: inn_cis9_noin)

Source: Innovation Union (2017)

Figure no 2 – Enterprises´ reasons for no innovation (% of non-innovative enterprises)

The decline in employment in food products is due to the ever - decreasing volume of exports of food products - higher value added products, and a relatively increasing volume of primary production exports. In the food sector, the situation is more favourable in terms of the number of employees at a younger age compared to agriculture. Every tenth employee in the food industry has a university education. Despite this slight decline, this trend is clearly positive in terms of sector modernization. In general, the educational structure is improving in the food sector as well as in agriculture. Support for science, research and innovation is presented in the document "Knowledge for Prosperity - Research and Innovation Strategy for Intelligent Specialization of the Slovak Republic" (Government Resolution No. 665/2013 of 13 November 2013), which was approved by the Government.

Support for increasing and improving the transfer of knowledge in food practice should be implemented in cooperation with the Ministry of Education, Science, Research and Sport of the Slovak Republic, taking into account the available resources of the Operational Program for Research and Innovation, Agency for Research and Development and the European Horizont Program 2020.

Employment development in food industry will stem from the progressive development of crop and livestock production and from increasing the direct primary agricultural production. Based on the food verticality analysis processed in Agricultural Development Concept (developed in the 2014-2020) it is clear that employment can be achieved by combining quantitative and qualitative measures at all levels of vertical food chain.

5. RESULTS AND DISCUSSION

Following from the above employee´s creativity and its application in food enterprises is today an important factor with a proper impact on the effective functioning of businesses, not to mention the differentiation from enterprises with the same focus or competitiveness on the market. What is the situation in the enterprises that participated in the survey, we present in the next part of the paper.

We have applied statistical verification of research hypotheses to analyse relationship and the dependences between questions and identification signs and also to analyse correlations between variables. The following hypotheses were determined and verified in our own research:

***H1**: We assume that there are statistically significant differences between "boosting employee creativity through financial incentives and capital origin of an enterprise".*

***H2**: We assume that there are statistically significant differences between enterprises in terms of their size and supporting employee creativity through further education.*

***H3**: We assume a positive correlation between the creation of working teams inside and outside the company and the possibility for employees to be part of international professional teams.*

***H4**: We expect a positive correlation between application of financial and non-financial incentives by enterprises in Slovakia in favour of creativity development.*

***H5**: The non-financial way of stimulating and evaluating creativity has a positive impact on supporting of employees´ creativity development in different work positions.*

Based on the first research presumption (H1) we set a zero and alternative hypothesis:

H_0: There are no statistically significant differences between supporting employees´ creativity through financial stimulation and the origin of the enterprise capital.

H_1: There are statistically significant differences between supporting employees´ creativity through financial stimulation and the origin of the enterprise capital.

The hypotheses were tested using nonparametric one-way ANOVA by Kruskal-Wallis test. The test results are shown in the Table no. 2 below.

Table no. 2 – Nonparametric One-Way ANOVA: Kruskal-Wallis test for the 1st hypothesis verification

Wilcoxon Scores (Rank Sums) for Variable Financial stimulation Classified by Variable Capital origin					
Capital origin	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
Combined capital	86	16181.0	15781.0	837.085394	188.151163
Slovak capital	230	40827.0	42205.0	954.058259	177.508696
Foreign capital	50	10153.0	9175.0	678.063031	203.060000
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-Square	2.7460
DF	2
Pr > Chi-Square	0.2533

Source: own research

We compared obtained value 0.2533 with the determined value Alfa, which had value 0.05. We can see, that obtained value from the Kruskal-Wallis test is higher than Alfa=0.05. That means that we accept zero hypothesis and we reject the alternative hypothesis. Therefore, we don´t continue with other testing.

According the Kruskal-Wallis test, we can summarize, that there are *no statistically significant differences between supporting employee creativity through financial stimulation and the origin of the enterprise capital. So the results did not confirm our research assumption*.

However, although none of the above-mentioned authors was addressing the problem of dependence of creativity support through financial stimulation and the capital of the enterprise, Lesáková (2014) writes that innovation activities are primarily supported by by those business entities, which are motivated by the pressure of competition, necessity to develop and implement new technologies, to make production more effective, to penetrate to new markets, or react to changes of business environment. Financial and non-financial incentives are found to have no effect on any form of innovation considered in the analysis of Doran and Ryan (2017). Also be mentioned Addis (2009) who thinks that promoting creativity depends on the leader who sees his own primary role in supporting rather than directing. Moreover, according Zajko and et al. (2014), the concept of creativity is predominantly understood as the ability of man to create new and original ideas. And it is therefore doubtful, whether it is possible to invoke creative thinking and original ideas by financial stimulation, let the origin of corporate capital be from anywhere.

On the base of H2: "We assume that there are statistically significant differences between enterprises in terms of their size and supporting employee creativity through further education", we set a zero and alternative hypothesis as following:

H_0: There are no statistically significant differences between enterprises in terms of their size and supporting employees´ creativity through further education.

H_1: There are statistically significant differences between enterprises in terms of their size and supporting employees´ creativity through further education.

The hypotheses were also tested by using nonparametric one-way ANOVA by Kruskal-Wallis test. The test results are shown in the Table no. 3.

Table no. 3 – Nonparametric One-Way ANOVA: Kruskal-Wallis test for the 1st hypothesis verification

Wilcoxon Scores (Rank Sums) for Variable Further education Classified by Variable Size of enterprise					
Size of enterprise	**N**	**Sum of Scores**	**Expected Under H0**	**Std Dev Under H0**	**Mean Score**
Large enterprise (250 and more)	64	12332.0	11744.0	740.004136	192.687500
Small enterprise (1-49 employees)	240	45108.0	44040.0	925.617554	187.950000
Medium enterprise (50-249 employees)	62	9721.0	11377.0	730.757574	156.790323
Average scores were used for ties.					

Kruskal-Wallis Test	
Chi-Square	5.2448
DF	2
Pr > Chi-Square	0.0726

Source: own research

Obtained value 0.0726 is higher in comparison with Alfa=0.05.That means we also accept zero hypothesis and we reject the alternative hypothesis. Therefore, we don´t continue with further testing. However, if significance level were Alfa = 0.1 we should reject the zero hypothesis and accept alternative hypothesis. Subsequently we can say, that there are statistically significant differences between enterprises in terms of their size and supporting employee creativity at the level of significance Alfa=0.1.

Consequently, we can say that the test results at the level of significance Alfa=0.1 confirmed our second assumption that there are statistically significant differences between enterprises in terms of their size and supporting employee creativity.

It is obvious that larger and economically stronger companies have recourses to acquire and support qualified, capable and creative employees whose knowledge and skills are prerequisite for processes and outputs in the form of innovation. It is necessary to employ people who doubt old solutions and try to replace them with other, better solutions (Zajko and et al., 2014). And as the authors Diliello *et al.* (2011) and also Ibrahim *et al.* (2016) wrote, supporting creativity and creating perceived support helps to improve creativity in many organizations. Employees who feel restricted by the organization and perceive that their creativity is unsupported cannot achieve their creativity potential (Diliello *et al.*, 2011).

Following three research presumptions (H3) deal with correlation. Like the first we have determined Cronbach coefficient alfa to evaluate reliability of the realized research. As Prokeinová (2014) wrote, the value 0.7 and more mean sufficient internal consistency of the scale. As shows Table no. 4, the value of this indicator is 0.751725. It represents very high file reliability based on interpretations of correlation according to De Vaus (2002).

Table no. 4 – Reliability testing

Cronbach Coefficient Alpha	
Variables	**Alpha**
Raw	0.749844
Standardized	0.751725

Source: own research

Thirdly we set a zero and alternative hypothesis based on the third research presumption and we used the Spearman correlation coefficient to evaluate the correlation relationship between Q2 and Q3.

H_0: There is no positive correlation between the working teams' creation inside and outside the company and possibility for employees to be a part of international professional teams (files are not dependent).

H_1: There is positive correlation between the working teams' creation inside and outside the company and possibility for employees to be a part of international professional teams (files are dependent).

Spearman correlation coefficient for the relationship between Q2 and Q3 has value 0.36039 (Table no. 5). This value represents ***medium correlation*** between working teams' creation inside and outside the company and possibility to be a part of international professional teams at the level of significance Alfa=0.01.

The obtained p-value is lower than 0.0001and it is lower than the determined value 0.05. So that means, that we reject the zero hypothesis and we accept the alternative hypothesis. Therefore, we have confirmed that there is medium positive correlation between

creating working teams inside and outside the company and possibility to be a part of international professional teams, so *the files are dependent*.

According to Krátka (2013), the creation of multidisciplinary and multifunctional teams is one of the methods of stimulating the creativity of employees. As already mentioned, creativity involves the generation of new and useful ideas. Encouraging and facilitating multidisciplinary or cross-functional work teams can have substantial innovation benefits (Doran and Ryan, 2017). Aggregated individual creative personality, as well as functional heterogeneity, promotes team creativity, which in turn interacts with climate for innovation such that team creativity enhances innovation implementation only when climate for innovation is high (Somech and Drach-Zahavy, 2013).

Creativity itself predetermines employees to be promoted and involved in teams not only for the purpose of achieving the objectives but also for the sustainable development of an enterprise. It is natural that capable and creative employees who have something to offer can also be part of international professional teams.

The fourth research presumption (H4) was "we expect a positive correlation between application of financial and non-financial incentives by enterprises in Slovakia in favour of creativity development". We set a zero and alternative hypothesis as following:

H_0: There is no positive correlation between application of financial and non-financial incentives by enterprises in Slovakia in favour of creativity development (files are not dependent).

H_1: There is positive correlation between application of financial and non-financial incentives by enterprises in Slovakia in favour of creativity development (files are dependent).

Also for testing the fourth hypothesis we used the Spearman correlation coefficient to evaluate the correlation relationship between Q6 and Q7.

Spearman correlation coefficient for this relationship has value 0.59612 (Table no. 5). This value represents high correlation between application financial and non-financial stimulation by Slovak enterprises in favour of creativity development at the level of significance Alfa=0.01.

The obtained p-value is lower than 0.0001 and it is lower than the determined value 0.05. So that means, that in this case we also reject the zero hypothesis and we accept the alternative hypothesis. Therefore, we have confirmed that there is ***essential to very strong positive correlation*** between application financial and non-financial stimulation by Slovak enterprises in favour of creativity development, so files are dependent. Our results do not agree with Doran and Ryan (2017) conclusions that financial and non-financial incentives appear to have no significant role to play in the innovation process and that financial and non-financial incentives are found to have no effect on any form of innovation.

The last research presumption H5 we stated as following: "The non-financial way of stimulating and evaluating creativity has a positive impact on supporting of employees´ creativity development in different work positions". These two - zero and alternative hypothesis - were formulated:

H_0: There is no positive correlation between non-financial support of employees´ creativity and supporting the development of employees´ creativity in different working positions by managers at levels of management (files are not dependent).

H_1: There is positive correlation between non-financial support of employee creativity and supporting the development of employees´ creativity in different working positions by managers at different levels of management (files are dependent).

We used the Spearman correlation coefficient to evaluate the correlation relationship between Q7 and Q1.

Spearman correlation coefficient for this relationship has value 0.12751 (Table no. 5). This value represents ***very low correlation*** between non-financial stimulation and supporting the development of employee creativity in different working positions by managers at different levels of management at the level of significance Alfa=0.05.

The obtained p-value is 0.0146 and it is lower than the determined value 0.05. So that means, that we reject the zero hypothesis and we accept the alternative hypothesis. Therefore, we have confirmed that there is ***low positive correlation*** non-financial support of employees´ creativity and supporting the development of employees´ creativity in different working positions by managers at levels of management. These files are dependent, but they are dependent in very small extent. That means even if money is a powerful stimulant, a suitable non-financial stimulus is often an effective method of initiating employees' initiatives regardless of their job position.

Despite of that we didn´t formulate research presumption for correlation between employees' further education and trainings, how to create new ideas and own creativity, we decided to describe also this relation. Spearman correlation coefficient for that relation has value 0.63733 (Table no. 5). It is the highest value in the table. It represents ***very strong correlation*** between employees' further education and trainings for creating new ideas and own creativity at the level of significance Alfa=0.01.

Creativity increases as employees accept or appreciate that their work is meaningful. This suggests that if employees complete a task that is important and valuable to them, they use their skills fully to be successful or further develop themselves in the job. At the same time, this result also proves that by assigning suitable tasks that match the qualifications of the employees, managers can encourage more creative behaviours (Akgunduz *et al.*, 2018). Research made by Papulova and Papula (2013) has pointed to only 76% of employees feel that their supervisor fully supports their creativity.

Table no. 5 – Spearman correlation coefficient for relationship of all questions

Spearman Correlation Coefficients, N = 366									
Prob > |r| under H0: Rho=0									
	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**
Q1	1.00000	0.20966**	0.25223**	0.16075**	0.36527**	0.15058**	0.12751*	0.21282**	0.15942**
Q2	0.20966**	1.00000	0.36039**	0.36945**	0.23556**	0.27820**	0.26036**	0.29565**	0.16873**
Q3	0.25223**	0.36039**	1.00000	0.15772**	0.33155**	0.05640	0.10032	0.09125	0.05481
Q4	0.16075**	0.36945**	0.15772**	1.00000	0.18081**	0.16973**	0.20585**	0.26370**	0.21990**
Q5	0.36527**	0.23556**	0.33155**	0.18081**	1.00000	0.19228**	0.24622**	0.08998	0.26257**
Q6	0.15058**	0.27820**	0.05640	0.16973**	0.19228**	1.00000	0.59612**	0.37597**	0.33349**
Q7	0.12751*	0.26036**	0.10032	0.20585**	0.24622**	0.59612**	1.00000	0.42948**	0.44687**
Q8	0.21282**	0.29565**	0.09125	0.26370**	0.08998	0.37597**	0.42948**	1.00000	0.63733**
Q9	0.15942**	0.16873**	0.05481	0.21990**	0.26257**	0.33349**	0.44687**	0.63733**	1.00000

Note: *Q1 – Brainstorming & Brainwriting; Q2 – Working teams; Q3 – International professional teams; Q4 – Employees rotation; Q5 – Playing roles and simulating situations; Q6 – Financial stimulation; Q7 – Non-financial stimulation; Q8 – Further education; Q9 –Trainings, how to create new ideas and own creativity.*

Source: own research

In Table no. 5, there are shown all values of Spearman correlation coefficient for relationship of all questions (Q1-Q9) between each other.

Values marked with "*" mean, that they are statistically significant at the level of significance Alfa= 0.05. Values marked with "**" mean, that they are highly statistically significant at the level of significance Alfa=0.01. Values marked with "pale yellow" mean, that they represent medium correlation and values marked with "dark yellow" mean, that they represent high correlation between two variables.

Important findings of the survey point to the no differences of food enterprises in Slovakia by using tools for employees´ creativity development in innovation process in terms of size of enterprises or the origin of capital. We have confirmed statistically significant correlations between some creativity developing tools – financial and non-financial stimulation, further education and trainings and others.

6. CONCLUSION

Despite of fact, that creativity is a basic condition of innovation, attention is paid to the result – innovations but not creativity and its support. This is the reason why we decided in our survey to identify and analyse creativity supporting of employees within the food enterprises in Slovakia.

We searched for the information about the current state of employee creativity. Although the CIS which we were based on was not specifically geared to the food industry, our survey showed that managers are award of the need to promote the creativity of their employees.

The survey also highlighted the innovation potential of food enterprises in Slovakia in terms of employees´ creativity development. As part of the continuation of the investigation, we see enough scope for deeper analysis and offering solutions for positive change. It is important to invest resources in development, innovation and effective individual approach to human resources.

On the base of structured interview, managers of food enterprises in Slovakia are convinced that the company creates a sufficiently creative and innovative environment and thus presents itself. And as managers, they create enough support to develop the creativity of their subordinates. Creativity is, in managers´ opinion, the basis for the innovation that is essential for the company's success. Tracking trends and properly preparing for these trends allows the company to gain a competitive advantage. Maintaining a market position without innovation and creativity is not sustainable.

Managers involved in the survey perceive the creativity of their employees as the ability to bring their own ideas, solutions, and practices into work. They are therefore looking for people who bring a new view, new ideas, and at the same time stand alone at work. Today, however, only some of them have a demand for creative employees when choosing their employees.

Unlike managers, employees perceive the situation in the innovation process and their creativity. Many employees, however, see and appreciate the promotion of their creativity and their ability to be creative. Employees in the surveyed enterprises feel this fulfilling and stimulating at work. The fact that they get the space to apply their own creativity makes them more satisfied and happy.

Capturing creativity in the vision of a company is seen as an important element in the company's progress. The vision is perceived as a motivating element that encourages and shifts the employees forward. Using creativity in vision creating allows a company to look ahead, not just on standard areas, but also on something new, innovative and potentially beneficial for the future.

Our further research in this field will be focused on new tools of creativity supporting as well as others industries to compare creativity of human capital in enterprises in Slovakia.

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