

“Innovation potential of cross-generational creative teams in the EU”

AUTHORS

Lenka Říhová  <https://orcid.org/0000-0002-5692-1103>

Přemysl Písař  <https://orcid.org/0000-0002-0374-4123>

 <https://publons.com/researcher/AAA-4481-2019>

Karel Havlíček  <https://orcid.org/0000-0003-2887-495X>

ARTICLE INFO

Lenka Říhová, Přemysl Písař and Karel Havlíček (2019). Innovation potential of cross-generational creative teams in the EU. *Problems and Perspectives in Management*, 17(4), 38-51. doi:[10.21511/ppm.17\(4\).2019.04](https://doi.org/10.21511/ppm.17(4).2019.04)

DOI

[http://dx.doi.org/10.21511/ppm.17\(4\).2019.04](http://dx.doi.org/10.21511/ppm.17(4).2019.04)

RELEASED ON

Monday, 11 November 2019

RECEIVED ON

Friday, 31 May 2019

ACCEPTED ON

Thursday, 04 July 2019

LICENSE



This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/)

JOURNAL

"Problems and Perspectives in Management"

ISSN PRINT

1727-7051

ISSN ONLINE

1810-5467

PUBLISHER

LLC "Consulting Publishing Company "Business Perspectives"

FOUNDER

LLC "Consulting Publishing Company "Business Perspectives"



NUMBER OF REFERENCES

34



NUMBER OF FIGURES

0



NUMBER OF TABLES

4

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine

www.businessperspectives.org

Received on: 31st of May, 2019

Accepted on: 4th of July, 2019

© Lenka Říhová, Přemysl Písař, Karel Havlíček, 2019

Lenka Říhová, Ph.D., Department of Economics and International Affairs, University of Finance and Administration, Prague, Czech Republic.

Přemysl Písař, MBA, Department of Business Management, University of Finance and Administration, Prague, Czech Republic.

Karel Havlíček, Ph.D., MBA, Department of Business Management, University of Finance and Administration, Prague, Czech Republic.



This is an Open Access article, distributed under the terms of the [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

Lenka Říhová (Czech Republic), Přemysl Písař (Czech Republic),
Karel Havlíček (Czech Republic)

INNOVATION POTENTIAL OF CROSS-GENERATIONAL CREATIVE TEAMS IN THE EU

Abstract

The goal of this article is to define the key factors for the development of cross-generational creative teams, the application of which can help businesses achieve maximum use of their human capital and thereby increase their innovative potential. The need to explore this issue is due not only to technical and technological development, which is fundamentally changing the content of work and the approach to work, but also due to the current lack of workers on the labor market of the Czech Republic and other EU countries. Findings from this article are based on a quantitative study on the research sample of 341 SMEs from the EU for the period 2017–2019. The data examined were obtained based on a personalized questionnaire in the SMEs. The outputs of the key factors for innovation potential of cross-generational creative teams' linear correlation were further validated by experimental testing on a selected set of successful creative teams. During this testing in the form of in-depth semi-structured interviews, key areas of human resource management were defined in order to achieve more efficient use of human capital. It was confirmed that cross-generational creative teams have an influence on the innovative planning or financial health of a company, and four key areas of HR management were defined to increase the innovation potential of human capital: care and motivation of existing creative team members; acquisition of new creative team members; defining the competencies of creative team members; communication and digital culture.

Keywords

human resource, innovation, management, innovation strategy, labor, experimental testing

JEL Classification

J21, J24, O15

INTRODUCTION

In the contemporary world, the innovation potential of the individual companies and industries in the Czech Republic and other EU countries is influenced primarily by the growth of automation, robotization, and digitization, as well as by demographic trends and the advancement of globalization, which create new challenges for employees and employers. Employers/companies will need to seek new ways to exploit the existing human capital and increase the innovation potential maximally. For a deeper context, the aspects of the demographic trends of population and globalization are briefly outlined below.

According to the moderate variations of the scenarios of the Czech Statistics Office (2018), persons older than 65 years are projected to account for over 20.5% of the total residents of the Czech Republic by 2020. In 2050, their numbers are predicted to grow to almost a third of the population, i.e., 32.2% of the total number of residents of the Czech Republic. The issue of an aging population is a problem not only for the Czech Republic but also for other countries in the European Union. In the past ten years, European Union countries have recorded growth in the old-age dependency ratio (% of the population aged 65 and above relative to population aged 15-64 years) at an average of

over four percentage points. Specifically, from a value of 25% in 2005 to 29% in 2015 (Eurostat, 2018). The Czech Republic will be 15th in the old-age dependency ratio in 2020 and as high as 11th in 2050. We see similar growth in neighboring states, e.g., Poland, which will move from 16th to 9th place in 2050, and Slovakia, which will move from 14th to 13th.

Another significant factor that is changing the labor market is the advancement of globalization and the associated integration of markets and migration. Along with globalization, higher pressure is being exerted on the market connected to hyper competition. With the increased speed of information flow, the multiplied impact escalates of external influences on the market, industries, and individual companies. The 21st century is thus becoming a turbulent market environment in which it is necessary to constantly respond and predict potential changes or trends (Havlíček, 2011).

Following on the above aspects, it can be stated that it is human capital and the support of creative teams that bring innovative ideas and processes that will be the key factor in business success in the 21st century. If companies stop considering employees to be merely human forces and rather as a source of innovative ideas and processes, they will increase their competitiveness. Indeed, many authors at the turn of the century discussed the need to perceive human capital not merely as “resources” (Carrayannis & Grigoroudis, 2014). For this reason, human resource management is a part of business policies at the highest levels.

Findings from this article are based on a quantitative study on the research sample of 341 SMEs. The data examined were obtained based on a personalized questionnaire in SME. A questionnaire was used for the study whose reliability has been validated. The study took place over the data for the period 2017–2019. The outputs of the statistical analyses were further validated by experimental testing on a selected set of successful creative teams. During experimental testing in the form of in-depth semi-structured interviews, key areas of human resource management were identified whose development can enable businesses to achieve maximum use of human capital and to thereby ensure their innovation potential.

It should be noted that the study focused primarily on creative teams operating in individual companies. Team creativity refers to the joint novelty and usefulness of ideas regarding the products, processes, and services (Hoever, Knippenberg, Ginkel, & Barkema, 2012).

The need to actively address HR issues concerning innovation potential is also emphasized by the Innovation Strategy of the Czech Republic: “If we wish to retain our performance in a strong competitive environment, we have to focus on the final production, technical solutions, and services based on knowledge. Our goal cannot be to generate mere volume, but above all added value” (Council for Research, Development and Innovation, 2019).

1. LITERATURE REVIEW

The role of human resource management is undergoing a dynamic evolution. As recently as the second half of the 20th century, the role of human resource departments was perceived very narrowly. From the end of the 1990s, human resource management has been acquiring equal importance not only in the area of recruiting employees, but also performance evaluation, compensation, technical preparation, and more. At present, human resource management can be

defined as a complex and thought-out approach to the employment and development of people in an organization. Human resource management can be considered a specific philosophy of people management based on a range of various theories related to human behavior and organization (Armstrong & Taylor, 2015).

As a consequence of dynamic changes in society, the topic of strategic human resource is beginning to enter the discussion. In other words, the strategic incorporation of all activities associ-

ated with human resource management within an organization, which requires careful analysis and the planning of human resource by creating strategies for their incorporation and utilization in conjunction with other resources, all with a view to effectively achieving the goals of the organization (Armstrong, 2016). Strategic organizational changes within a company have nowadays proven unavoidable and are becoming a common practice of companies, not only within multinational corporations but also small- and medium-sized businesses, as well as non-profit organizations and other institutions. It should be noted that the primary objectives of strategic human resource planning should be: to incorporate the strategies in the field of human resource into the overall strategy of the organization, to acquire and retain the competent employees, to effectively develop the existing workers, and to increase the flexibility of the workforce.

Strategic human resource can be the key to success and increased competitiveness of a company, as well as the entire industry and, from an aggregate perspective, the entire country. Zaušková, Bobovnický, and Madleňák (2013) also point to a need for a change in approach to actively managing the innovation in their study focused on business in Slovakia, which is very similar in business culture to Czech companies.

This article is focused primarily on the context of using human resource when working in teams. The reason for this is clear: if we look at history, we discover that even such big ideas as the Airbus A380 or the Windows operating system were not the work of individuals but the result of effective creative social networks, which typically consists of the exchange of knowledge, skills, and experience among individual actors of these networks (Jiang, Zhang, & Zhou, 2018). Certain authors even discuss the need to focus on the context of innovation potential and human capital not only at the level of a team or company but also from a particular macro perspective, i.e., on a global scale. In order to use the innovation potential from the macro perspective, it is, of course, necessary first to understand and map out the actions of the individual actors, teams, and companies in this area.

Overall, it must be noted that the need to adequately focus on the development of companies, primarily SMEs, grows in relation to the fact that they are the cornerstones of every economy, as discussed by Belás, Dvorský, Kubálek, and Smrčka (2018). The significant importance of SMEs for the market economics of the Czech Republic and others was confirmed by a study by Mareš and Dlasková (2016) who also considered the international context of export SMEs. The importance of SMEs in the market economy has been validated both by domestic and international authors and author collectives, including the following: Draskovic, Popov, and Peleckis (2017), as well as Delibasic (2016), Belás and Sopková (2016), Vojtovic (2016).

Likewise, it must be noted that SMEs also contribute to the solution of economic and social state problems (Prasetyo, 2016).

The competitiveness itself of companies, industries, or entire economies is perceived in this article as the capability of the creative teams of an organization to generate new innovative work processes or innovative products or processes directly that bring added value to the consumer and the organization as a whole. The approach to defining the term of innovation, at the same time, is not entirely consistent throughout the technical publications. As early as the beginning of the millennium, Becheikh, Landy, and Amara (2006) detected a certain undervaluation of process innovations. According to their findings, 37% of authors focus on product innovation, and only 1% on process innovation. This lack of proportion is, of course, undesirable. The growing importance of innovations for commercial success and competitiveness in a “sustainable” economy is no accident (V. Vitezic & N. Vitezic, 2015). Innovations in and of themselves, of course, do not ensure the improvement, but must always be a part of an additional process that ultimately fulfills the Goller and Bessant’s (2017) theory of added value. According to Goffin and Mitchell (2017), innovation approaches are as follows: “Innovation is an exciting topic because successful Innovation cuts across functional boundaries – from research and development (R&D) to marketing; it relies on different disciplines.” In this essay,

the term “innovation” or “innovative process” is understood by OECD (2019) as an innovative process or product based on new technologies or processes that are outliers or significantly differ from their predecessors:

Product innovation: a good or service that is new or significantly improved. This includes significant improvements in technical specifications, components, and materials, software in the product, user-friendliness, or other functional characteristics.

Process innovation: a new or significantly improved production or delivery method. This includes significant changes in techniques, equipment, and/or software.

Marketing innovation: a new marketing method involving significant changes in product design or packaging, product placement, product promotion, or pricing.

Organizational innovation: a new organizational method in business practices, workplace organization, or external relations.

It can be summarized that strategic human resource management has a fundamental influence on the position of creative teams in an organization, their functioning, the motivation of individual members, etc. Strategic human resource management thereby emerges as a key tool for creating the conditions of innovation potential.

2. AIMS AND RESEARCH HYPOTHESES

The primary goal of this article is to define these tools of human resource management – cross-generational creative teams, the application of which can help businesses in the EU achieve maximum use of their human capital and thereby increase their own innovative potential.

Given the cultural specificity, this essay and the results of its research are primarily focused on companies and their teams primarily operating in the Czech Republic. The reason is the fact that the actual empirical research was conducted not only predominantly in the Czech Republic, but also

other European Union countries, and the learnings gained can be applied to other European economies.

In order to fulfill the goal and the purpose of the study, the following hypotheses were formulated:

H1: A significant correlation (moderately tight relationship characterized by a minimum Pearson correlation coefficient of 0.6) between HR and innovation planning and innovation audit in the company proves that the innovation activities of a company can be supported by HR development.

H2: A significant correlation (strong relationship characterized by a minimum Pearson correlation coefficient of 0.7) between HR and the level of process maturity is an indicator that a heightened level of process maturity can support the HR of a company.

H3: A significant correlation (moderately tight relationship characterized by a minimum Pearson correlation coefficient of 0.5) between the variables of HR and a company's return on equity is an indicator that HR can be considered an important factor in the financial health of a company.

2.1. Data and methodology

The selection of research methods, or initially scientific procedures, is an important step following the definition of the subject matter and objectives. Indeed, the suitable selection of proper methods, as well as the quality of their implementation, fundamentally influences the quality and relevance of scientific results.

The study sample is composed of 341 SMEs from the European Union. The data examined were obtained based on a personalized questionnaire in SMEs in the European Union. A questionnaire was used for the study whose reliability has been validated. The research was conducted with the participation of employees (cross-section positions), owners, executives, and cooperating persons. Overall, more than 1,250 people, usually 3 or more people per enterprise, were participants of the research. Only

the SME with complete survey data was included in the research sample. The study sample included only SMEs with complete data provided. The study took place over the data for the period 2017–2019.

2.2. Validating the consistency of the study sample and the reliability of analyzed data

The study sample $n = 341$ was first tested from a perspective of completeness of the test variables using the program SPSS. The study sample scored 100% in the test of data completeness. In the subsequent step, the reliability of test data was validated using Cronbach's Alpha. A Cronbach's Alpha value of 0.7 and above indicates a high level of consistency and reliability of the test sample on which the conclusions of the study were based.

2.3. Analysis of data

Correlation analysis was used for the actual analysis of the data. Correlations, in various forms, are the most common statistical characteristics throughout the technical literature (Řehák & Brom, 2015). The purpose of the correlation analysis is to determine whether a variable selected for this study demonstrates a dependency with the innovation plan of the company.

The results of the correlation analysis are listed in Tables 2, 3, 4.

2.3.1. Experimental testing on the test sample of creative teams

The outputs of the statistical analyses were further validated by experimental testing on a selected set of successful cross-generational creative teams. During experimental testing in the form of in-depth semi-structured interviews, key areas of human resource management were identified whose development can enable businesses to achieve maximum use of human capital and to thereby ensure their own innovation potential.

The selection of experimental testing was chosen primarily in light of the following facts:

- the individual creative teams differ in terms of their structure, the reason for establishment, and style and nature of their work; it is, therefore, necessary to approach the individual teams on an individualized basis;
- it was necessary to analyze the causes of certain phenomena, their motivation, and other specific drives, the determination of which requires the role of an interviewer who can lead a respondent with a series of questions from the outputs given.

2.3.2. Description of examined variables

When validating the dependencies of the examined variables, the study focused on an evalua-

Table 1. Description of examined variables

Source: Authors' analysis.

Name of variable	Definition	Scale/type of metric
HR communication	This variable represents the extent to which individual HR tools exist and are used, including an individualized approach to the individual employees (both existing and newly integrating) in the context of a company-wide implemented system	The level of HR was evaluated according to the following scale: 0 = complete absence of HR; 1 = low level of HR or initial phase of implementing HR processes; 2 = moderate level; HR is used in the company, but of course is lacking or weak in certain elements such as performance evaluation, implementation of new processes; 3 = high level; HR has a certain autonomy and is used and accepted throughout the company; 4 = HR is at the highest level and all relevant HR tools are used, including the application of specific disciplines such as talent management

Table 1 (cont.). Description of examined variables

Name of variable	Definition	Scale/type of metric
Innovation plan	This variable represents whether an innovation plan exists, has been implemented, and is developed in the examined company, with an emphasis on innovation success assessment methodology and feedback to the development of the innovation plan	The innovation plan was evaluated according to the following scale: 0 = none or inadequate; 1 = low level, initial stages, random innovations, without feedback; 2 = moderate level, innovations are managed in a basic manner, control mechanisms for innovation failures are lacking; 3 = high level – the company is working intensively on its innovation plan and demonstrates results; 4 = optimal level – the company has an innovation plan with a high standard and a process exists by which the company continually stimulates the innovation activities
Innovation audit	This variable represents the level of utilization of innovation audits in the given company, including the frequency with which they are carried out and their results applied for the optimization of processes within the company	The level of the innovation audit was measured on the following scale: 0 = complete absence of an audit; 1 = audit is carried out at least 1x per year; 2 = audit is carried out at least 2x per year; 3 = audit is carried out at least every quarter; 4 = audit is carried out more frequently than every quarter
Level of maturity of relationships and processes	The variable designated level of maturity of relationships and processes reflects the level of automation of business and IT processes. A business process itself in this context is understood as an integrated series of steps leading to the execution of a product or service	The level of maturity was measured on the following scale: 0 = very low level, processes are not managed or are managed on an ad hoc basis; 1 = low level, repetition of basic processes; 2 = moderate level, processes are documented and used; 3 = high level, processes are measured and their measurement is practiced; 4 = very high level, processes are continuously optimized and a process innovation cycle exists
Return on equity (ROE)	The investment return generated by the company's capital	This variable is calculated as a ratio of earnings after taxes to equity

tion of the relationships between the following variables: HR communication, Innovation plan, Innovation audit, Level of maturity of relationships and processes, and Return on equity.

2.3.3. Correlation analysis

To define the dependency of defined variables, the method of Pearson correlation coefficient calculation was used. This method measures the strength of the linear dependence between the variables. The Pearson coefficient is a parametric statistical test to determine how close the correlation of the variables is (to 0.20 the correlation is negligible, 0.20-0.40 is not a very close correlation, 0.40-0.70 is moderately tight correlation; 0.70-0.90 is a very close correlation and more than 0.90 is an extremely close correlation). The results allow confirmation or refutation of the hypotheses *H1*, *H2* and *H3*. Correlation analysis was performed by using the statistics program IBM SPSS ver. 25.

2.3.4. Experimental testing defining the basic key factors for effective use of human capital in creative teams

Wherever at least a moderately tight correlation was found between the variables (a Pearson correlation coefficient of 0.4-0.7), a study set was generated for further analysis. Qualitative research was used in this sample of cross-generational teams to validate the findings of the correlation analysis, with an emphasis on fulfilling the research objectives.

The next part of the study was completed based on on-site investigations and semi-structured interviews with representatives of the creative teams, focused on human resource management with the goal of defining the tools of human resource management whose application enables companies to achieve the maximum use of human capital and thereby ensure the increase of their innovation potential.

3. EMPIRICAL RESULTS AND DISCUSSION

The data were analyzed using the statistics program IBM SPSS ver. 25.

3.1. Results of correlation analysis

Before completing the correlation analysis of the variables in Table 2, a test was performed of the reliability of the variables examined by calculating the Cronbach's Alpha indicator, where a value of 0.874 for 3 variables indicated a high level of reliability and consistency of the analyzed data. As shown in Table 2, the data testing conducted confirmed a high level of correlation between the variables of HR, innovation plan, and innovation audit. The relationship between HR communications and innovation plan could be classified as a moderately tight correlation (0.678) bordering on a very tight correlation (which begins from the value of 0.7). Like the above, the relationship between HR and the innovation audit can be scored as a moderately tight correlation (0.653). The hypothesis *H1* that a correlation between the HR of a company and the innovation plan and innovation audit in the company would acquire a min-

imum Pearson correlation coefficient value of 0.6 was therefore confirmed. Innovation activities of a company can, therefore, be supported by the development and maturity of its HR.

Before completing the correlation analysis of the variables in Table 2, a test was performed of the reliability of the variables examined by calculating the Cronbach's Alpha indicator, where a value of 0.849 for 2 variables indicated a high level of reliability and consistency of the analyzed data. The data in Table 3 relate to *H2*, which focuses on the correlation between HR and the level of process maturity in the company. It was projected that a strong correlation between HR and the level of process maturity in the company with a minimum Pearson correlation coefficient value of 0.7 would indicate that the HR of a company can support its level of process maturity. As shown in the correlation analysis performed, the correlation between the variables of HR and process maturity is very tight, with a value of 0.755, which validates *H2*.

Before completing the correlation analysis of the variables in Table 3, a test was performed of the reliability of the variables examined by calculat-

Table 2. Correlation of examined variables

Source: Authors' analysis using the SPSS.

		Innovation plan	Innovation audit	HR communications
Innovation plan	Pearson correlation	1	.769**	.678**
	Sig. (2-tailed)	–	.000	.000
	N	341	341	341
Innovation audit	Pearson correlation	.769**	1	.653**
	Sig. (2-tailed)	.000	–	.000
	N	341	341	341
HR communications	Pearson correlation	.678**	.653**	1
	Sig. (2-tailed)	.000	.000	–
	N	341	341	341

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Table 3. Correlation analysis between HR communications level and process maturity

Source: Authors' analysis using the SPSS.

		HR communications	Process maturity
HR communications	Pearson correlation	1	.755**
	Sig. (2-tailed)	–	.000
	N	341	341
Process maturity	Pearson correlation	.755**	1
	Sig. (2-tailed)	.000	–
	N	341	341

Note: ** Correlation is significant at the 0.01 level (2-tailed).

Table 4. Correlation analysis between HR communications and company's return on equity

Source: Authors' analysis using the SPSS.

		HR communications	ROE
HR communications	Pearson correlation	1	.540**
	Sig. (2-tailed)	–	.000
	N	341	341
ROE	Pearson correlation	.540**	1
	Sig. (2-tailed)	.000	–
	N	341	341

Note: ** Correlation is significant at the 0.01 level (2-tailed).

ing the Cronbach's Alpha indicator, where a value of 0.846 for 2 variables indicated a high level of reliability and consistency of the analyzed data. Table 4 focuses on the variables of ROE and HR and therefore relates to *H3*, which predicts that a level of correlation between HR and the return on equity of a company that reaches a Pearson correlation coefficient value of at least 0.4 means that HR can be identified as an important aspect of the financial health of a company. As shown in Table 4, the relationship between these variables can be defined as a moderately tight correlation (0.540). The result of the correlation analysis, therefore, confirms *H3* and proves the importance of human resource management for the financial health of a company.

3.2. Definition of key areas of HR for maximizing the innovation potential of a company

Despite the great diversity of creative teams (by industry, position in the company structure, etc.), the results of the experimental validation showed that cross-generational creative teams involve very similar HR areas, whose support or active resolution could significantly assist with increasing their innovation potential. This consisted in particular of the following areas:

- 1) care and motivation of the existing members of cross-generational creative teams;
- 2) acquiring new members of cross-generational creative teams;
- 3) defining the competencies of members of cross-generational creative teams;
- 4) communication and digital culture.

3.3. Care and motivation of the existing members of cross-generational creative teams

It must be recognized that creative work does not represent merely a direct path upwards. In particular, when evaluating the outputs of creative teams, it must be taken into account that behind the creation of breakthrough innovations lie blind alleys and errors that the creative team uses to define where the path does not lead. It is indeed the right to make mistakes that leads to unique innovation, and this must be taken into account not only when motivating individual team members but also when evaluating the outputs of the team. Excessive pressure on team efficiency, therefore, can lead not only to limiting the achievement of new innovations but also to the segmentation of the team. Excessive pressure on efficiency often causes the inhibition of cross-generational collaboration; such a situation can give rise to a tendency for greater cohesion of the individual generations in the team, which has the effect of decreasing effectiveness.

In the interests of sustainability and a high level of effectiveness of a cross-generational creative team to focus on the motivation of the individual members, is appropriate to differentiate motivation for effective engagement in the team according to the generation to which that member belongs.

3.4. Motivating the oldest members of the team

Retaining the oldest members of the team (often those already of retirement age) often proves the most problematic, according to study results. The oldest members often frequently wish to remain engaged in the team, but often do

not find that full-time shifts suit them. It has been shown that despite having the goodwill to transfer their knowledge, they, of course, begin to prioritize spending their free time with their families (often grandchildren) or need a different tempo and scope of work as a consequence of their health condition. From the results of the analysis, it is clear that leadership of teams is attempting to face these needs, whether in the form of remote working or flextime or designating this team member as an external collaborator working as part of an independent trade (most frequently with employees in the 70+ age category). It is in this respect that resistance can be found in the approach of the government to the motivation of the work of these highly valued experts “using motivation elements and superstructures of social security systems, specifically retirement insurance. The construction of social systems may intentionally contain these elements so that they can contribute to ensuring the main goals of social security in the form of pension and accessible health care” (Mertl & Valenčík, 2017).

Along with the above fundamental steps for supporting the oldest team members, the need arose from the analysis to create a good cross-society image of older employees. Representatives of the oldest generation, in particular, are sometimes unfairly perceived as somewhat of a “brake” to the development or potential of a team or an entire company. For this reason, space exists as a part of supporting the innovation potential of companies for the government to support positive perceptions of seniors in society.

3.5. Motivating the middle and youngest generations

The middle generation, or workers who have their own families, sometimes must take care not only of their own children but also ailing parents (the so-called “sandwich” generation) and at the same time they have been operating for longer periods in creative teams and in general are already accustomed to performing quality work; they require the most help achieving work-life balance. The study showed that neither team supervisors, nor companies themselves have a problem with setting a custom work period or

other support of these workers. Increased demands for work-life balance are far higher with women. Of course, as confirmed by Moreno-Mínguez, Ortega-Gaspar, and Gamero-Burón (2018), it is not possible to categorically identify a skew toward women or groups of women due to the growth since the 1990s in the variety of models of organizing life and work. However, the question of work-life balance is highly individual, as confirmed by the findings of Brožová and Stroukal (2015). College-educated women have a higher probability of devoting more energy to work over family (this finding was validated for employees in the territory of the Czech Republic).

At the same time, given the socio-economic situation of these employees, caused by the very reasons of care for relatives, amortization of debts (leasing, mortgage), the certainty of financial remuneration is also important for these employees. This finding was also confirmed by the results of data analysis of employee attitudes in the Czech Republic from 2013 provided by Mysíková and Večerník (2016). The authors determined that income ranks among the important factors of satisfaction with employment, of course, they further warn that the relationship of the amount of income and satisfaction in employment is not always clear and it, therefore, does not always apply that above-average income does not ensure the greatest satisfaction with employment.

According to the study findings, it is appropriate rather to support members of the youngest generations than to motivate them. The youngest members of creative teams typically do not lack motivation, but of course, it appears necessary to create the job responsibilities necessary to avoid inhibiting their natural activity and dynamism.

Overall, the study showed that from the perspective of the individual generations, the specific needs of the oldest generation are most often addressed, while, of course, the needs of the younger generations should also not be overlooked. It is a challenge for the human resource management department to map these motivations in order to create the best conditions for the individual team members.

3.6. Acquiring new members of cross-generational creative teams

Since 2012, when the general unemployment rate in the Czech Republic was 7%, a gradual decrease in unemployment has occurred. In 2017, the general unemployment rate decreased to 2.9% (Czech Statistics Office, 2019). This has resulted in somewhat of an imbalance in the labor market, where companies are in demand of more employees than the labor market is capable of providing, as reported by all questionnaire respondents. It is this very strategic management of human resource that could help teams and companies in this situation. It has been shown to be essential to identify the strengths of the individual employees and create a space for their operation so as to keep them not only engaged but also re-engaged in order to retain them. It should be noted that from the geographic perspective, the general unemployment rate varies among the different regions of the Czech Republic. There is thus potential to use workers from other regions or even from other countries. As confirmed at the HR Forum (held 28 November 2018 in Prague) by Lenka Čábelová, Communications Manager for Central and Eastern Europe at Microsoft, from the perspective of employers, it is necessary to recognize that if the goal is to obtain a creative specialist, it must be approached from the idea of engaging an employee from another country or continent. Whereas the question of established company processes is whether a company can work with team members who will perform the work itself from a different continent than the rest of the team.

The respondents from the teams studied themselves and pointed out potential risks in the case of building a team, particularly in the form of team balancing quotas. The study performed uncovered the fears of team stability as a result of implementing the quotas related to the balanced participation of men and women in the team, or quotas related to racial diversity or cultural diversity. Compiling a creative team is a relatively fragile long-term process that should not be encumbered by quotas for team balance. Whereas it also applies that not even within creative teams should any form of discrimination occur, namely selecting or ranking individual team members according to gender, nationality, or age. In other words,

there should be the option to point to discrimination if it occurs and effective mechanisms in place to eliminate or stop it, rather, than to implement balancing quotas in advance. In the same way, it is appropriate for there to exist ways to promote the perspectives of individual generations within the team on the matter, so that narrow criteria for “success” may not suppress the presentation of approaches that do not presently “fit” the managerial leadership of the team.

3.7. Defining the competencies of cross-generational team members

The third important area is the area of defining the competencies of members of the creative team, with the most significant appeal to the team leader. The selection of the leader of the creative team, as with classic teams, is a key decision that has a fundamental influence on the potential for team success. While innovation leaders, i.e., people with high technical erudition, are capable of achieving top technical results, they often are not organizers (managers), and are often not capable of developing target phases, dividing them into timelines, appointing individual owners for the given process goals, obtaining financial and material or technical equipment. If any of the technical workers take on such tasks, they will no longer perform their technical role and will lose contact “with the surrounding technical world.”

The following must be expected of the leader of an entire creative team:

- sufficient understanding of the subject of analysis;
- know-how in resolving interpersonal conflicts;
- the capability of building up each member of the team;
- retaining mutual loyalty between team members;
- the capability of acting within the organization as part of more extensive links (to have a high degree of psychological resilience) to achieve the maximum effect to the benefit of the team.

The fact that occupational qualifications, education, and skills (in other words, competencies) are a key piece with strong links to individual success is also confirmed by the results of the study by Matějů and Večerník (2015). The authors also point to a certain limitation in the evaluation and application of individual competencies related to the form and type of interpersonal relations. At the same time, it appears to be a useful finding of the authors that the height of acquiring competencies in all three of their types is around the 32nd year of age of the individual.

What should be further noted is the importance of empathy not only in the leader of the team but also in the other members, as confirmed by a study conducted by Cerneviciute and Strazdas (2018). The authors obtained this finding based on the analysis between teams from Lithuania, Poland, Canada, China, France, Italy, Russia, and Denmark.

3.8. Communication and digital culture

Facile communication between individual team members is undoubtedly the basis for the functioning of creative teams. In the case of creative teams, teams of international composition or with one or two remote team members are no exception. The findings are inconclusive as to whether the distance between members is in the order of kilometers or tens of kilometers (in the case of working from home), or hundreds of kilometers (from the research, this included a team in Brno collaborating with a team supervisor in London, for example). It is always necessary to have the properly established communications processes or unified communications channels.

From the findings, it is clear that the different generations have different communications preferences. The result is the use of a wide range of communications channels (e.g., email, WhatsApp, Viber, Skype, proprietary information systems). In practice, this results in the individual team members or generations communicating with each other on various platforms at one time, of course, not all members use all communications channels. Shared information is therefore missed or not distributed to all team members.

Preventing the missing of information is possible by properly establishing the digital culture, i.e., setting up and respecting the exact rules of communication:

- through which communications channels will members communicate within the team;
- how to communicate (and through which communications channels) with other teams;
- how to communicate (and through which communications channels) with management.

In general, it has proven appropriate to reduce the number of communications channels and define official channels, on the other hand, the situation in information technology is such that the only email is a universal channel, in the area of messengers and voice communications most often Facebook/Skype/Viber/Whatsapp are available, in the area of web repositories there is the duopoly of OneDrive/Google Drive and several minority providers. In practice, therefore, we avoid a certain plurality (which is technologically manageable for most users despite a certain amount of diversity); at the same time, however, communications rules must provide a sufficient level of certainty of reaching the team members in question.

As confirmed by the results of the study by Chen, Chang, and Hung (2008), mutual social interaction can increase the level of creativity in research teams as well. Whereas it is for the support of this interaction that communications processes must be established. This finding is confirmed by Kratzer, Leenders, and Van Engelen (2010) who determined that teams with a wider range of social and information links come up with more creative, uninhibited, and practicable outputs than teams with fewer of such links.

4. LIMITATIONS ON APPLICATION OF RESULTS

While the results presented confirm that HR can be an innovation tool for companies, it must be noted that HR is not the sole key to company success. In summary, it can be stated that innovation systems, creative teams, and the use of synergistic effects

presume a higher level of socioeconomic processes than elementary market allocation based on the principle of momentary appropriateness and maximization of individual performance. Return on investment for the creation and operation of higher-level processes must be taken into account, and yet without losing sight of the condition of the individual key components, and if symptoms of a deviation from the desired trajectory determined, give support to the desired settings and mechanisms. In the opposite case, the risk of stalling national economies will grow, regardless of the force of the competition between the individual compa-

nies and employees. It is important to create materially advanced and high-quality solutions by which to achieve a high standard, technical maturity, and social acceptability, responding both to the purchase-enabled demand of more large groups of customers and clients.

A certain barrier to the full use of innovation potential, of course, is the fact that companies perform the majority of their decision-making in uncertainty (Belás, Dvorský, Kubálek, & Smrčka, 2018) whereas this uncertainty can be perceived as a quantified risk (Fetisovová, 2012).

CONCLUSION

Effective use and development of human capital are some of the key factors of success for companies in the 21st century. If companies stop considering employees to be merely human forces and rather as a source of innovative ideas and processes, they will increase their competitiveness, which will have positive effects for the entire economy.

The primary goal of this article was fulfilled – the definition of the tools of human resource management – cross-generational creative teams, the application of which can help businesses achieve maximum use of their human capital and thereby increase their innovative potential whereas three hypotheses were formulated to achieve the above goals associated with the relationships between HR, innovation audit, innovation plan, and company's financial health.

From the results of the study performed and experimental analysis, it is confirmed that the area of human resource management is key for the maximum use of the innovation potential of creative teams. Likewise, the authors detected a tight correlation between innovation plan, innovation audit, and human resource management.

This article offers findings particularly from four areas, including care and motivation of the existing members of creative teams, acquiring new members for creative teams, identifying the competencies of creative team members, communication and digital culture. The hypotheses formulated were confirmed and the goal of the article can thus be considered met.

In order to increase the innovation potential of teams, companies, and thereby the entire economy, it's compulsory to motivate all involved team members. Also it is very important to realize how people rationally choose the course of their lifelong professional application, including whether they manage to extend the timeframe of their active contribution.

ACKNOWLEDGMENT

The paper has been prepared within the project "Risk Management in Industry 4.0" supported by the Specific University Research Funds of University of Finance and Administration, Estonská 500, 101 00 Prague 10, Czech Republic, Funder ID: 04274644, Award number: 7427/2019/02 IGA VŠFS (The University of Finance and Administration).

REFERENCES

1. Almudena, M. M., Marta, O. G., & Carlos, G. B. (2018). A Socio-Structural Perspective on Family Model Preferences, Gender Roles and Work-Family Attitudes in Spain. *Social Sciences, MDPI*, 8(1), 1-23.
2. Armstrong, M., & Tazlor, S. (2015). *[Řízení lidských zdrojů: Moderní pojetí a postupy]* (13 vydání) (928 p.). Praha: Grada Publishing. Retrieved from [https://www.grada.cz/řízení-lidských-zdroju-\(1\)-8320/](https://www.grada.cz/řízení-lidských-zdroju-(1)-8320/)
3. Armstrong, M. (2016) *Armstrong's handbook of strategic human resource management*. Sixth Edition. Philadelphia: Kogan Page, 2016. ISBN 9780749476823.
4. Bae, Y., & Chang, H. (2012). Efficiency and effectiveness between open and closed innovation: empirical evidence in South Korean manufacturers. *Technology Analysis & Strategic Management*, 24(10), 967-980. <https://doi.org/10.1080/09537325.2012.724164>
5. Becheik, N., Landry, R., & Amara, N. (2006). Lessons from innovation empirical studies in the manufacturing sector: A systematic review of the literature from 1993–2003. *Technovation*, 26(5-6), 644-664. <https://doi.org/10.1016/j.technovation.2005.06.016>
6. Belás, J., & Sopková, G. (2016). Significant determinants of the competitive environment for SMEs in the context of financial and credit risks. *Journal of International Studies*, 9(2), 139-149. <http://dx.doi.org/10.14254/2071-8330.2016/9-2/10>
7. Belás, J., Dvorský, J., Kubálek, J., & Smrčka, L. (2018). Important factors of financial risk in the SME segment. *Journal of International Studies*, 11(1), 80-92. <https://doi.org/10.14254/2071-8330.2018/11-1/6>
8. Brožová, D., & Stroukal, D. (2015). Preference theory and women's career choice on the Czech labor market. *Politická ekonomie*, 63(3), 382-399. Retrieved from https://www.researchgate.net/publication/282958442_Preference_theory_and_women's_career_choice_on_the_Czech_labour_market
9. Carrayannis, E., & Grigoroudis, E. (2014). Linking innovation, productivity, and competitiveness: implications for policy and practice. *The Journal of Technology Transfer*, 39(2), 199-218. Retrieved from <https://link.springer.com/article/10.1007/s10961-012-9295-2>
10. Cernevičiute, J., & Rolandas, S. (2018). Teamwork management in Creative industries: factors influencing productivity. *Entrepreneurship and Sustainability Center*, 6(2), 503-516. [https://doi.org/10.9770/jesi.2018.6.2\(3\)](https://doi.org/10.9770/jesi.2018.6.2(3))
11. Czech Statistics Office (2018). *Demografie*. Retrieved from https://www.czso.cz/csu/czso/demografie_senori (accessed on February 1, 2019).
12. Czech Statistics Office (2019). *General Unemployment Rate for Czech Republic and Regions*. Retrieved from <https://www.czso.cz/csu/czso/general-unemployment-rate-for-czech-republic-and-regions> (accessed on February 1, 2019).
13. Chen, M.-H., Chang, Y.-C., & Hung, S.-C. (2008). Social capital and creativity in R&D project teams. *R&D Management*, 38(1), 21-34. <https://doi.org/10.1111/j.1467-9310.2007.00494.x>
14. Delibasic, M. (2016). Hypothetical Matrix for Institutional Modeling of the Basis for Economic Development in the Countries of South-east Europe. *Montenegrin Journal of Economics*, 12(2), 147-159. <https://doi.org/10.14254/1800-5845.2016/12-1/9>
15. Draskovic, V., Popov, E., & Peleckis, K. K. (2017). Modelling of Institutional Changes in Transition Countries – the Gap Between the Theory and Practice. *Montenegrin Journal of Economics*, 13(1), 125-140. <https://doi.org/10.14254/1800-5845/2017.13-1.9>
16. Eurostat. (2019). *Population: structure indicators* (data). Retrieved from http://ap-ssso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjanind&lang=en (accessed on December 1, 2019).
17. Fetišová, E., Hucová, E., Nagy, L., & Vlachynský, K. (2012). *Aktuálne Problémy financií malých a stredných podnikov [Actual problems of small medium enterprise finance]*. Bratislava: Ekonóm.
18. Goffin, K., & Mitchel, R. (2017). *Innovation Management: Effective Strategy and Implementation* (3rd ed.) (440 p.). London: Palgrave. Retrieved from <https://www.amazon.com/Innovation-Management-Effective-strategy-implementation/dp/1137373431>
19. Goller, I., & Bessant, J. (2017). *Creativity for Innovation Management* (332 p.). New York: Routledge. Retrieved from <https://www.amazon.com/Creativity-Innovation-Management-Ina-Goller/dp/1138641324>
20. Havlíček, K. (2011). *Management & Controlling: malé a střední firmy* (pp. 12-13). Praha: Vysoká škola finanční a správní. Eupress. Retrieved from <https://www.databazeknih.cz/knihy/management-controlling-male-a-stredni-firmy-328152>
21. Hoever, I. J., Knippenberg, D., Ginkel, W. P., & Barmekakema, H. G. (2012). Fostering team creativity: perspective taking as key to unlocking diversity's potential. *Journal Appl Psychol*, 97(5), 982-996. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/22774764>
22. Jiang, H., Zhang, Q.-P., & Zhou, Y. (2018). Dynamic Creative Interaction Networks and Team Creativity Evolution: A Longitudinal Study. *Journal of Creative Behavior*, 52(2), 168-196. <https://doi.org/10.1002/jocb.141>
23. Kratzer, J., Leenders, R. Th. A. J., & Engelen, J. M. L. (2010). The social network among engineering design teams and their creativity: A case study among teams in two product development programs. *International Journal of Project Management*, 28(5), 428-436. <https://doi.org/10.1016/j.ijproman.2009.09.007>

24. Mareš, D., & Dlasková, G. (2016). Small and Medium – Sized Enterprises – Opportunities and Challenges. *European Research Studies Journal*, 4(19), 78-87. Retrieved from <https://www.questia.com/library/journal/1G1-492735675/small-and-medium-sized-enterprises-opportunities-and>
25. Matějů, P., & Večerník, J. (2015). Kompetence, vzdělání a lidský kapitál v České republice ve světle dat OECD-PIAAC. *Politická ekonomie*, 63(2), 185-203. <https://doi.org/10.18267/j.polek.996>
26. Mertl, J., & Valenčík, R. (2017). Improving sustainability of human resources through pension system extension. *Proceedings of the International Scientific Conference of Business Economics, Management and Marketing ISCOBEMM* (pp. 180-191). Zaječín: MU Brno.
27. Mysíková, M., & Večerník, J. (2016). Spokojenost se zaměstnáním a životem v České republice. *Politická ekonomie*, 64(7), 851-866. <https://doi.org/10.18267/j.polek.1093>
28. OECD. (2019). *Defining innovation*. Retrieved from <https://www.oecd.org/site/innovationstrategy/defininginnovation.htm> (accessed on April 1, 2019).
29. Prasetyo, H. A. (2016). What driver international competitiveness? An empirical test in emerging Indonesian market. *Journal of Competitiveness*, 8(4), 124-139. <http://dx.doi.org/10.7441/joc.2016.04.08>
30. Rada pro výzkum, vývoj a inovace. (2019). *Inovační strategie České republiky 2019–2030. The Czech Republic: The Country for the Future*. Úřad vlády České republiky. Retrieved from https://www.vlada.cz/assets/urad-vlady/poskytovani-informaci/poskytnute-informace-na-zadost/Priloha_1_Inovacni-strategie.pdf
31. Řehák, J., & Brom, O. (2015). *SPSS – Praktická analýza dat*. Brno: Computer Press. Retrieved from <https://www.kosmas.cz/knihy/211330/spss-prakticka-analyza-dat/>
32. Vitezic, V., & Vitezic, N. (2015). A Conceptual Model of Linkage Between Innovation Management and Controlling in the Sustainable Environment. *Journal of Applied Business Research*, 31(1), 175-185. <https://doi.org/10.19030/jabr.v31i1.8999>
33. Vojtovič, S. (2016). The Impact of the Structural Funds on Competitiveness of Small and Medium-Sized Enterprises. *Journal of Competitiveness*, 8(4), 30-45. <http://dx.doi.org/10.7441/joc.2016.04.02>
34. Zaušková, A., Bobovnický, A., & Madleňák, A. (2013). How can the state support the innovations to build sustainable competitive advantage of the country. *Serbian Journal of Management*, 8(2), 2255-267. <https://doi.org/10.5937/sjm8-4430>