# Creativity of Different Managerial Generation Groups in the Slovak Industrial Enterprises



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## 1 Introduction

Creativity has always been at the heart of business [1]. Organizations and enterprises are pushing in order to solve the problems that have arisen through creative methods. Therefore, creativity is becoming as an important tool. Government businesses also need to adapt to new technologies, as threats require ingenuity and creativity [2].

Creativity is an important part of managerial work and overlaps with all management functions. Creative thinking is therefore part of planning, organizing, leading people and making decisions. A number of scientific articles and books are written about the issue of creativity. Various authors have discussed the mentioned issue and therefore it is necessary to define the characteristics of creativity.

Studies conducted in the previous period have focused on creativity as a way of problem as an option of solving problems requiring the interaction and integration of general knowledge of specific areas, skills in scientific processes and different scientific creativity [3]. The author Konigova [4] defined creativity as the most manifestation of life. Creative thinking is a prerequisite for original ideas, where we engage the imagination, apart from bounding reality and strive for new insights both on ourselves and on social issues or professional and scientific issues. According to the author Muzik [5], creativity is the ability of a person to be active, creatively receive new knowledge and be productive in the mental area. Without creativity, solving a problem that requires more than the reaction itself and learned action would be completely unthinkable.

The authors of the scientific monograph chapter agree with the author Konigova who defines creativity with an emphasis on creating original ideas and resolve any questions. Creativity can be seen from a variety of perspectives, as it is based on the characteristics of a person. Currently, there are four generation groups at the labour market. Each generation group has grown up under different conditions and therefore has different characteristics, positives, negatives and expectations from the employer.

Representatives of the Baby boomers generation group are characterized by their years of birth between 1946 and 1962. In general, they are hardworking and their position, benefits and prestige act as a motivating factor. They also like long working weeks and often point to their work success. Members of mentioned generation group are confident and independent. As the generation group grew up in a period of frequent reforms, representatives are convinced that they could change the world. The oldest generation group is deeply focused on success and career and they are characterized by commitment, finesse, ingenuity and the desire to win in every situation [6].

Next in line is generation group X, which is characterized by the fact that it is currently the second oldest generation group on the labour market and they were born between 1963 and 1977. According to the author Kane [7], the mentality of the generation group X members is greatly influenced by the shift of the manufacturing economy towards the service economy. Finesse in the technological skills is due to the fact that they were first to grow up with the computers and thus technology is an integral part of their lives. Compared to the other generations, members of generation group X are more willing to change jobs to achieve their goals. They are also willing to adapt to change and are relaxed towards an alternative lifestyle. Representatives of generation group X are in general very ambitious, willing to learn new things and acquire new skills. On the other hand, they like to do things according to their own ideas. Managers who represent generation group X often use humour and games in their work activities.

Generation group X is followed by the third generation group on the labour market, Millennials or generation group Y. The Millennials were born between 1978 and 1992. According to the author Kane [8], generation group Y is the fastestgrowing segment in the labour market. At present, enterprises tend to compete for talented people, so managers cannot ignore and neglect the needs, desires and attitudes of the most widespread generation. Each generation group is characterized by certain traits, which are also caused by the conditions and culture in which they grew up. Technologies are the most common characteristic of generation group Y. They rely on technology and also seek support in it in order to carry out their work more efficiently. Members of generation group Y use smartphones, laptops and other technological means through which they are available 24/7. The most popular means of communication include e-mail, text messages and communication via new social media platforms such as Twitter or Instagram. In this way, they communicate not only with friends, but also with colleagues, because without Internet or smartphone they cannot imagine the world. Generation group Y likes to work in a team. One of the disadvantages of mentioned generation group is the fact that they are often looking for new and better jobs. It is no exception that they stay in the enterprise for only a few years and during that time they do not have enough time to work their way up to another better position.

The last generation group Z is currently also the youngest generation group on the labour market. The members were born between 1992 and 2010. Francis and Hoefel [9] identified members of generation Z as digital natives. From an early age, they were greatly influenced by the Internet, social networks and mobile system. Due to the mentioned technological conveniences, from generation Z grew up a comfortable generation in the collection of information and their subsequent verification. They feel a strong need for the free speech and also want to understand all types of people. Members of generation group Z are financially literate, they feel the importance of saving money for the future. With this fact, they consider the stability and security of the job as important and the salary is at the second place. They also prefer full-time work compared to part-time work, which was a surprising finding compared to generation group Y.

Based on the study of theoretical background [10–13], the authors of the scientific monograph chapter have created Table 1, which gives an overview of generational groups and their common features and differences.

As various generation groups work side-by-side at the workplace, enterprise's behaviour should change in order to adapt to each generation [14]. According to the author Murphy [10], there are several benefits of the multigeneration work team:

- 1. The team has the ability to attract and keep talented people of all age categories.
- 2. The team tends to be more flexible.
- 3. The members of multigeneration team tend to gain and keep the larger market share through the members, which reflect a multigeneration market.
- 4. Decisions are stronger and right because they are based on several aspects.
- 5. The team has the ability to be innovative and also more creative.
- 6. The team with people from various age categories is reflecting the needs of a diverse public and can achieve more effective cooperation.

As it is evident from the characteristics of each generation group, the authors consider as important to look at the issue of managerial creativity not only in terms of hierarchical status, but also in terms of belonging to the generation group.

## 2 The Current Situation of Employees on the Labour Market in the Slovak Republic

Each generation group is characterized by its qualities, positives and negatives. For this reason, the authors of the scientific monograph chapter have looked at the issue of creativity from the perspective of generational groups. The authors also consider it as crucial to analyse the current labour market situation in terms of age categories and changes in their structure.

Table 1 Common features and differences of generation groups

	Baby boomers	Generation X	Generation Y	Generation Z
Work and work ethics	Workoholic, quality work	Work as hard as needed, flexibility, meaningful and independent work	Meaningful work, enterprising approach	Meaningful and independent work
Preferred learning style	One-on-one coaching, classroom instruction, peer interaction and feedback	One-on-one coaching, assessment and feedback, discussion groups	Discussion groups, assessment and feedback, need to see context and value	Online education, interactivity in the classroom
Work-life balance	Did not know about work-life balance. Sacrificed personal life for work	Spend more time with the family. Appreciate work-life balance	Work-life balance is needed—they came with this idea	Work-life balance is necessity—they will do nothing to the detriment of the family
Preferred method of communica- tion	Phone calls, personal interaction	Voice mail, Email	Text messages, Email	Instant messages, social networks
Motivation	Have affection to be motivated by leaders who get them engaged and show them how they can attain a difference	Allow them to get the job done on their own schedule	Have affection to be motivated when their managers connect their acts with their personal and career aims	They are motivated by job freedom, flexible job forms and laissez-faire style of management
Rewards	Personal appreciation, promotion, and recognition	Free time, upgraded resources, opportunities for development, bottom-line results, certifications	Awards, certificates, tangible evidence of credibility	Financial rewards and career advancements
Developmental areas	Computer training, leadership	Skills training in areas of expertise, team building	Problem-solving, decision making	Interpersonal relationship, communication skills

Over the next 10 years, the proportion of older employees in Europe will increase. The above-mentioned fact is due to the demographic changes (longer life expectancy and low birth rates). The European workforce will be older and up to 30% of the employed will be the older employees [15].

In Table 2, it can be seen the distribution of labour force (in thousands) by age category and years in the Slovak Republic [16–19].

For better clarity, the authors of the scientific monograph chapter have decided to process the table into a graphical form (Fig. 1).

Table 2 and Fig. 1 show that the number of employees in older age categories is increasing. This increase is steeper compared to employees in younger age categories. Compared to 2015 and 2018, the number of employed in the oldest age category increase by 10 thousand. The age category of employees 55–64 has the steepest increase in employment between 2016 and 2017, particular 29.1 thousand. In the age category from 45 to 54, the number of employees increased by 22.9 thousand compared to 2017 and 2018. Similarly, employees in the age group from 35 to 44 recorded an increase of 22.5 thousand between 2015 and 2016. The age category that recorded a decrease of employees is a category from 25 to 24. In 2016, 626.6 thousand were employed in the mentioned age category. In 2018, however, it was only 609.6 thousand and in this case, there was a decrease of 18 thousand employees. Also, the age category from 15 to 24 recorded a decrease, especially between 2016 and 2017 by 14.2 thousand.

The authors of the scientific monograph chapter have transformed the age categories of employees into generational groups. Figure 2 represents generational employee groups in 2018.

Based on Fig. 2, there can be seen that currently there are four generational groups on the labour market in the Slovak Republic. Almost half of all employees are employees of generation X. The second-largest group are the employees of generation Y. The youngest generation in the labour market, generation Z accounts

**Table 2** Employed by age category and year (own elaboration, 2019)

	15–24	25–34	35–44	45–54	55–64	65+
2015	155.2	608.8	701.3	570.3	337.7	18.6
2016	151.7	627.6	723.8	589.9	349.5	19.1
2017	165.9	613.8	736.9	591.3	378.6	26.2
2018	155.8	609.6	742.7	614.2	391.9	28.6

**Fig. 1** Overview of employees by age category and years. (Own elaboration, 2019)

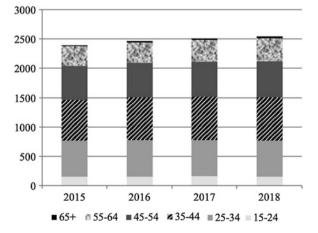
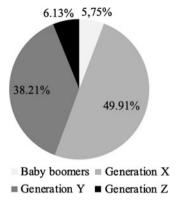


Fig. 2 Generation groups of employees in the Slovak Republic. (Own elaboration, 2019)



for 6.13%. The least employees are members of the oldest generation group, Baby Boomers, who make up 5.75% of all employees in Slovakia.

## 3 Materials and Methods

The aim of the research was to investigate and characterize the perception of creativity and its importance among managers of different generation groups in industrial enterprises in the Slovak Republic.

# 3.1 The Research Sample and Data Collection Tools

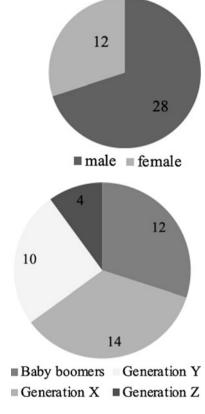
The research sample consisted of managers of industrial enterprises from the Slovak Republic. The research was carried out in April 2019. The industrial enterprises were in the field of automotive (Tier 2) and electrotechnical production. The questionnaire was physically distributed to enterprises. In total, 42 managers of industrial enterprises participated in the research. Forty questionnaires were returned correctly. The questionnaire contained eight questions and respondents chose from closed answers. Figure 3 shows the composition of respondents by gender.

Figure 3 shows that 70% of respondents (managers in industrial enterprises) were males and 30% of respondents were females. Figure 4 shows the composition of the respondents according to the generation group.

It can be seen from Fig. 4 that the largest generation group of respondents is the generation group Y (35% of total). The second largest group is generation X, followed by Baby boomers. At least, 10% are respondents from generation group Z. It is clear that the composition between generation groups is unequal, but the authors can say that the representation of respondents corresponds to the composition

**Fig. 3** Composition of respondents according to the gender. (Own elaboration, 2019)

Fig. 4 Composition of respondents according to the generation group. (Own elaboration, 2019)



**Table 3** Composition of respondents according by hierarchical status and generation group (own elaboration, 2019)

Generation group/type of manager	First line manager	Middle line manager	Top manager	Cumulative
Baby boomers	8	3	1	12
Generation X	5	8	1	26
Generation Y	8	2	0	36
Generation Z	3	1	0	40
Sum	24	14	2	

of generation groups on the labour market. Table 3 shows the composition of respondent by hierarchical status and generation group.

It is clear from Table 3 that respondents from generation group Z are, for the most part, first-line managers (e.g. team leader, head of department or head of the working team). It can be assumed that especially due to their young age and lack of work experience, they are not part of top management (board member, plant manager, president, vice president). A similar situation exists with the generation group Y. The largest part of middle line managers (e.g. economic, personnel, technology,

production, logistics) are respondents from the generation group X. One respondent from mention generation group belongs to the top management. A similar situation (one respondent from top management) exists with the generation group Baby boomers.

## 3.2 The Research Methods

In order to evaluate the collected data, the authors of the scientific monograph chapter used quantitative statistical methods, such as frequencies histograms, pie charts and additional analysis in table form.

## 3.3 The Research Question (RQ)

**RQ1**: What is the current state of perception of the importance of creativity by managers in the Slovak industrial enterprises according to the generation group?

**RQ2**: Is creativity part of daily work of managers from different generation group in the Slovak industrial enterprises?

**RQ3**: What methods do employers support the creativity of managers in the Slovak industrial enterprises?

**RQ4**: Do managers of different generation groups in the Slovak industrial enterprises have an interest in developing their creativity?

## 4 Results and Discussion

*The evaluation of research questions:* 

**RQ1**: What is the current state of the important perception of creativity by managers in the Slovak industrial enterprises according to the generation group?

In order to evaluate the first research question, the authors of the scientific monograph chapter have used the fourth question from the questionnaire: "In my opinion, creativity is an important part of every manager".

The respondents had the opportunity to choose one answer from five offered: 1—strongly disagree, 2—disagree, 3—neutral, 4—agree, 5—strongly agree. In the authors' opinion, it is important to analyse how the individual generation groups perceive creativity, especially due to their differences.

Figure 5 shows respondents' answer according to generation groups.

It follows that 25% of the respondents from generation Baby boomers considers creativity as unimportant. Creativity is the most perceived by the respondents from generation X. The respondents from generation Y and generation Z agree with the opinion that creativity is very important. The authors of the scientific monograph

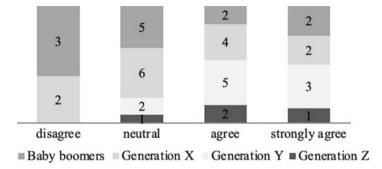


Fig. 5 Perceiving the importance of creativity according to the generation group. (Own elaboration, 2019)

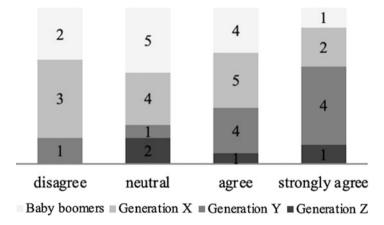


Fig. 6 Creativity as part of my daily work according to the generation group. (Own elaboration, 2019)

chapter consider as positive that neither respondent mark the answer "strongly disagree".

**RQ2:** Is creativity part of daily work of managers from different generation group in the Slovak industrial enterprises?

In order to evaluate the second research question, the fifth question from the questionnaire was used: "Creativity is part of my daily work". The respondents were asked again to choose an answer from the offered range: 1—strongly disagree, 2—disagree, 3—neutral, 4—agree, 5—strongly agree. The authors of the scientific monograph chapter also have decided to evaluate the second research question from the perspective of the generation group of managers in order to find out which generation uses creativity most often in their work. The evaluation of the second research question can be seen in Fig. 6.

It follows that the youngest generation group, generation Y and generation Z use the creativity in daily activities in the highest rate. The "disagree" answer in terms of

creativity as part of daily activities was most often marked by the generation group X and Baby boomers. From the above findings, it can be concluded that younger generations are closer to creativity. A positive finding is the fact, similarly to RQ1, that neither respondent market the answer "strongly disagree".

**RQ3:** What methods do employers support the creativity of managers in the Slovak industrial enterprises?

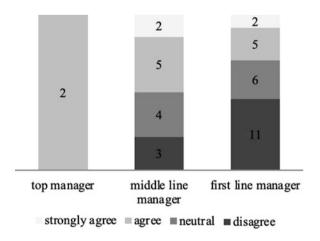
The evaluation of the third research question is based on the sixth and seventh question from the questionnaire survey. Question 6 was: "The employer supports me and other managers in making creative thoughts/ideas/solutions". As in previous questions, the respondents had the opportunity to choose one answer from five offered: 1—strongly disagree, 2—disagree, 3—neutral, 4—agree, 5—strongly agree.

The third research question is not evaluated by the generation group, but according to the manager's hierarchical status. The aim was to find out which group of managers has the greatest support by the employer in creating creative ideas and solutions. The evaluation of the third research question is shown in Fig. 7.

It follows that the top managers are supported by the employer in the creation of creative ideas, due to the need of creative thinking following directly from the nature of the work. The employer at least supports the first-line managers in making creative ideas. The authors of the scientific monograph chapter have considered the mentioned finding as negative, as this group of managers is leading most people and it is often associated with problem-solving which often requires a high degree of creativity.

The second part of the third research question is based on the seventh question from the questionnaire survey: "If your employer supports you and other managers in making creative thoughts/ideas/solutions, by what method?" The respondents had the opportunity to choose from eight answers (brainstorming, SWOT analysis, synectics, mind map, bank of ideas, Delphi method, flow method, other). Table 4 shows the evaluation of responses.

**Fig. 7** Promoting managers' creativity by employers. (Own elaboration, 2019)



It is clear from Table 4 that the most utilized method for supporting creativity is the brainstorming method. Brainstorming is followed by mind map and SWOT analysis. As the area for improvement, the authors consider the development of the method "bank of ideas" to the practice of the industrial enterprises, as it represents an extension of the brainstorming method and it is advisable to use the mentioned method in unusual situations where anonymity is appropriate.

**RQ4:** Do managers of different generation groups in the Slovak industrial enterprises have an interest in developing their creativity?

The fourth research question is based on the last, eighth question from the questionnaire: "If the employer gave me the opportunity to take part in a course/training/workshop aimed at developing my creativity, I would participate in this activity". The respondents once again chose the answer on scale 1—strongly disagree, 2—disagree, 3—neutral, 4—agree, 5—strongly agree. The respondents' answers are shown in Fig. 8.

Figure 8 represents that the youngest generation groups—generation Y and generation Z have the greatest interest in creativity training and creativity development workshops. Part of the generation X and generation Baby boomers marked that they would not be interested in training and workshops. In the authors'

Method/type of manager	Top manager	Middle line manager	First line manager
71 0	Top manager	Wilder ille manager	That fine manager
Brainstorming	1	3	2
Swot analysis	0	2	1
Mind map	0	1	3
Bank of ideas	0	0	1
Other	1	1	0

Table 4 Methods for supporting creativity (own elaboration, 2019)

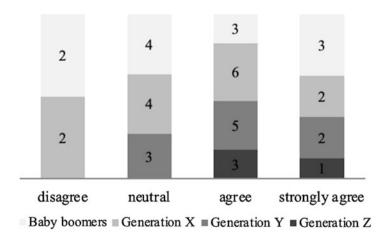


Fig. 8 Interest in developing creativity according to the generation group. (Own elaboration, 2019)

opinion, this finding should be an incentive for the employer. Employers should emphasize the importance of creativity for older employees in the enterprise. It is the older generation groups that create employees who transfer their knowledge and experience to younger generations, and creativity is an essential part of these activities.

In the context of the managers' different generation groups creativity, the authors of the scientific monograph chapter also have considered the managing multigenerational work teams as very important. On one hand, the only creative manager can manage multigeneration teams. On the other hand, a manager who manages subordinate employees in an appropriate style can also create a working environment which encourages employees to think creatively and to make creative and innovative ideas.

According to the author Hannam [12], there are five several areas which include the following measures to focus on successful multigeneration management:

## 1. Communication

- (a) There is a need to build awareness of the four generations presence benefits. Communicate about diversity. The goal is the effective communication in different ways for creativity and innovation. The unique skills of each generation can unleash hidden potentials.
- (b) Speak and communicate in a way that motivates each generation. Effective communication is needed for all generation groups at the workplace. Unclear matters can have long-term consequences, especially for inexperienced employees.
- (c) Author Murphy [10] also includes in the field of communication the need of initiating conversations about generations. When the negative aspects of individual generations get out, they become less personal and general. It is easier to talk about them.
- 2. Work-life balance is one of the indicators that distinguish good and great organizations. The author of Delecta [20] characterized the term as an individual ability, through which it is possible to fulfil work and family responsibilities, as well as other responsibilities and activities that do not arise from working life.
  - (a) Work-life balance helps to retain top employees who generate creative and innovative ideas. It is necessary to reconsider what the work is, when it is done and where it can be done. Managers should review how may be concerned the flexibility for employees.
  - (b) Before the introduction of flexible job forms it is necessary to have clearly defined objectives and performance results for each job.
  - (c) On the basis of the author Tolbize [11] finding, the members of generation group X most likely want to work-life balance, member of age groups also aspire to the same thing.
- 3. Growth and development—each generation groups has its own method for processing information and the author Tolbize [11] stated that members of

all generation group value personal growth and personal gratification. For generation group X and generation group Y it is less likely that they would prefer reading guides. Rather, the mentioned method is favoured by the generation of Baby Boomers.

- (a) The younger generation needs to be involved in meaningful projects to satisfy their desire for meaningful and important work. Members of generation group Y want to make a change and they will leave, if they feel undervalued.
- (b) Some companies have banned social networks at the workplace. However, wherever it is possible, it is appropriate to use social networks to attract, engage and retain the best talents.
- (c) Through mentoring and employee development, employees can enhance and improve their performance and learn new skills. Mentoring programs that connect leaders and managers with the best employees are suitable.
- 4. Providing recognition and rewards—according to the author Hansen [21], the terms recognition and reward are often considered as synonyms. However, they are different and also they are essential tools for achieving the employee satisfaction.
  - (a) The recognition and reward system needs to be reviewed in order to be not outdated and meets the need of all generation group of employees. In the interest of quality system, it is necessary for employees to define what they really expect.
  - (b) It is useful to offer a system of rewards and recognition and to diversify it according to generation groups. The system should reflect different priorities and motivating factors. The list of rewards can include the simplest rewards and employees should choose rewards based on their preferences.
  - (c) Many enterprises also appreciate employees for the small things that employees do. The awards should reflect both the culture of the enterprise and the generational preferences of the employees.
  - (d) Recognition of employees should be an important part of each manager and should be included as part of performance evaluation.
- 5. Employee engagement—author Ologbo [22] characterise employee engagement as an important factor for every business. Engaged employees contribute to business success and commitment is reflected in customer service. As a result, committed employees help create loyal customers.
  - (a) Engaged employees are needed for the enterprise and they can inspire other employees. Engaged, productive and talented employees need to be noted. Large proportion of managers focuses their attention on employees who are average or below average.
  - (b) It is appropriate to transform average or part involved employees into committed employees.

Collaboration of different generational groups in the workplace can bring its advantages and disadvantages. These are the older employees who should transfer

their experience and knowledge to the younger ones. On the other hand, younger employees should help older colleagues in technology and modern trends. Such collaboration also provides a quality work environment in which employees feel comfortable and are also creative and innovative. In Table 5 are shown the strengths and weaknesses of older employees according to the author Svobodová [23]:

Older employees have also opportunities and threats [23], shown in Table 6.

A creative and innovative manager should be able to take advantage of the benefits of older employees and eliminate the negative aspects. It is also necessary to focus on the opportunities that come with older employees. However, enterprises must also be aware of the threats and try to prevent them as much as possible.

Table 5 Strengths and weakness of older employees [23]

Strengths	Weaknesses
Experience, practice, expertise	Mental productivity
Experience, practice, expertise, skill, knowledge, knowledge in the framework of already forgotten skills (fur processing, textile blending, etc.)  Characteristics	Psychophysical changes (in making decision, concentration), deteriorating sensory perception (sight, hearing), loss of potential, short-term memory, bad habits, stereotypes <i>Motivation</i>
Reliability, opinion stability, responsibility, thoroughness, care, prudence, perseverance, patience	Loss of self-esteem, phlegmatism, lower willingness to professionally educate, low motivation for performance, low work commitment
Relation to the work performed	Performance
Knowledge of problems, knowledge and orientation in the field, effort to give the best work performance, self-realization	Reduced rate of physical performance and mobility, increased fatigue, stress, decreased productivity
Relationship to the company	Health condition
Loyalty, business loyalty, job stability, low turnover	High morbidity, health restrictions, more health problems, transition to disability
Contacts	Adaptability
Knowledge of a given group of companies, companies and individuals for making contacts of work importance	Less creativity, distrust of news, routine, worse adaptability, worse adaptation to new methods
Priorities	Relationship to the new technique
Clear priorities, possibility to devote to work fully (grown up children), time flexibility, enough time	Lower computer literacy, unwillingness to learn, lower levels of internet literacy
Relations, dealings	Relations, dealings
Mature approach to people, managing emotions, good interpersonal communication, prudence	Reduced tolerance, explosiveness, inadaptability
	Other
	Unwillingness to teamwork, less ability to keep up with younger employees

Opportunities	Threats
Job forms	Job opportunities
Working part-time, working weekends, calm work pace	Fewer job opportunities, age discrimination, fear of job loss, fast pace
Use of experience	Costs
Exploitation of life and professional experience, exploitation of strong knowledge potential	Higher societal costs, morbidity, occupational accidents, disability
Sharing experiences	Employee/employer relations
Transfer of knowledge and experience, reciprocal exchange with younger employees	Non-existent systems of working with older employees, not interested in exploiting the potential of older employees
Retraining, education	Relations between older and younger employees
Courses, revitalization programs, lifelong learning, support for professional growth	Intergenerational tension, competition in the form of young colleagues, young management
New technologies	Health care
The possibility of using technology if older workers have the will to learn new things	Failure to provide optimal medical care in case of illnesses, failure to provide adequate care
Other	Presentation of elders
Longer vacation, state support for the retention of older workers, retirement opportunities for active retirees	Stereotyped thinking about employees aged 50+

**Table 6** Opportunities and threats of older employees [23]

## 5 Conclusion

The main aim of the scientific monograph chapter was to investigate and characterize the perception of creativity and its importance among managers of different generation groups in industrial enterprises in the Slovak Republic.

The analysis and the realization of the questionnaire survey confirmed that there are currently four generation groups on the labour market—generation Baby boomers, generation X, generation Y and generation Z.

The questionnaire survey conducted some negative findings. The authors of the scientific monograph chapter can conclude that 12.5% of respondents do not consider creativity as an important part of every manager. 15% of respondents do not consider creativity as part of their daily work. On the contrary, positive findings include the fact that up to 40% of managers are supported by the employer in creating creative ideas, and up to 62.5% of the respondents are interested in training and workshops in the field of creativity development.

The authors of the scientific monograph chapter have considered as very important that employers support employees in creativity and give them opportunities to further develop their creativity, as well as author Lenhardtova et al. [24] and Hornak et al. [25]. Manager's creativity level affects two upper levels the same

way as the enterprise's creativity level affects the creativity level of employees and of a specific manager [26]. Mentioned issue is still relevant, as evidenced by the number of articles and books on creativity. Due to the current demographic situation, the authors of the scientific monograph chapter consider the need to look at creativity also from the perspective of generation groups. All four-generation groups are currently meeting at the workplace and the employer should adapt the conditions to ensure their satisfaction. The analysis has shown differences between generations, which proves the need to approach to generation groups individually and also according to author Caganova et al. [27] constantly monitor their opinions and needs.

The authors of the scientific monograph chapter have considered all the findings from the questionnaire to be important in relation to the industrial enterprises practice.

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## References

- 1. T.A. Amabile, K. Mukti, *Creativity and the Role of the Leader* (Harvard Business School Publishing, Cambridge, MA, 2008)
- 2. S. Williams, Increasing employees' creativity by training their managers. Ind. Commer. Train. **33**(2), 63–68 (2001)
- 3. K.K. Yang et al., Exploring the significant predictors of convergent and divergent scientific creativities. Think. Skills Creat. **31**, 252–261 (2019)
- 4. M. Konigova, Creativity: Techniques and Exercises (Tvorivost: Techniky a Cviceni) (Grada Publishing, Praha, 2007)
- 5. J. Muzik, Andragogical Didactics (Andragogicka didaktika) (Codex Bohemia, Praha, 1998)
- S. Kane, Baby boomers in the workplace, https://www.thebalancecareers.com/baby-boomers-2164681. Last accessed 2019/4/5
- Kane, The common characteristics of generation X professionals, https:// www.thebalancecareers.com/common-characteristics-of-generation-x-professionals-2164682.
   Last accessed 2019/4/5
- Kane, The common characteristics of millennial professionals, https:// www.thebalancecareers.com/common-characteristics-of-generation-y-professionals-2164683.
   Last accessed 2019/4/5
- T. Francis, F. Hoefel, True Gen: Generation Z and its implications for companies, https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/true-gengeneration-z-and-its-implications-for-companies. Last accessed 2019/4/5
- 10. S.A. Murphy, Leading Multigenerational Workforce (AARP, Washington, 2007)
- 11. A. Tolbize, *Generational Differences in the Workplace* (University of Minnesota, Research and Training Center on Community Living, Minneapolis, MN, 2008)
- 12. S. Hannam, B. Yordi, Engaging a Multi-Generational Workforce: Practical Advice for Government Managers (IBM Center for the Business of Government, Washington, 2011)
- A. Turner, Generation Z: Technology and social interest. J. Indiv. Pyschol. 71(2), 103–113 (2015)
- B.A. Kaifi, W.A. Nafei, N.M. Khanfar, M.M. Kaifi, A multi-generational workforce: Managing and understanding millennials. Int. J. Business Manag. 7(24), 88–93 (2012)

- 15. J. Ilmarinen, Promoting Active Aging in the Workplace (Podpora aktivneho starnutia na pracovisku) (Europska agentura pre bezpecnost a ochranu zdravia pri praci, Bratislava, 2012), https://osha.europa.eu/sk/publications/promoting-active-ageing-workplace. Last accessed 2019/4/10
- 16. Statistical Office of the Slovak Republic, Q1 Results of the Labour Force Sample Survey 2015 (Vysledky vyberoveho zistovania pracovnych sil za prvy stvrtrok, Statisticky urad Slovenskej republiky, 2015), ftp://193.87.31.84/0206754/ Vysledky\_vyberoveho\_zistovania\_pracovnych\_sil\_za\_1\_stvrtrok\_2015.pdf. Last accessed 2019/4/10
- 17. Statistical Office of the Slovak Republic, Q1 Results of the Labour Force Sample Survey 2016 (Vysledky vyberoveho zistovania pracovnych sil za prvy stvrtrok, Statisticky urad Slovenskej republiky, 2016), https://www7.statistics.sk/PortalTraffic/fileServlet?Dokument=0c1140b1-4d10-4ae1-bcfa-e8be6502f379. Last accessed 2019/4/10
- Statistical Office of the Slovak Republic, Q1 Results of the Labour Force Sample Survey 2017 (Vysledky vyberoveho zistovania pracovnych sil za prvy stvrtrok, Statisticky urad Slovenskej republiky, 2017), https://slovak.statistics.sk/PortalTraffic/fileServlet?Dokument=71ad7534-cea3-496a-8b5f-be445be01090. Last accessed 2019/4/10
- Statistical Office of the Slovak Republic, Q1 Results of the Labour Force Sample Survey 2018
   (Vysledky vyberoveho zistovania pracovnych sil za prvy stvrtrok, Statisticky urad Slovenskej
   republiky, 2018), https://slovak.statistics.sk/PortalTraffic/fileServlet?Dokument=3f33a5ee c977-488b-b12e-77bd839cdc07. Last accessed 2019/4/10
- 20. P. Delecta, Work life balance. Int. J. Curr. Res. **3**(4), 186–189 (2011)
- 21. F. Hansen, M. Smith, R.B. Hansen, Rewards and recognition in employee motivation. Comp. Benefits Rev. **34**(5), 64–72 (2002)
- C.A. Ologbo, S. Saudah, Individual factors and work outcomes of employee engagement. Proc. Soc. Behav. Sci. 40, 498–508 (2012)
- 23. L. Svobodová, Occupational Health and Safety and Risk Factors of Employees over 50 Years— Employment of Older People in the Work Process with Proposals for Measures at Sector and Company Level (BOZP a rizikove faktory pracovniku nad 50 let—uplatneni starsich osob v pracovnim procesu s navrhy na opatreni na urovni odvetvi a podniku) (VUBP, Praha, 2009)
- 24. Lenhardtova, Z., Caganova, D., Gyurak Babelova, Z.: Contemporary situation in the creativity area in the Slovak republic. In: Annals of DAAM and Proceedings of DAAM Symposium 2009: 20, 1: Proceedings of the 20th International DAAM Symposium "Intelligent Manufacturing & Automation: Focus on Theory, Practice and Education", pp. 937–938, DAAM INT Vienna, Vienna (2009)
- F. Hornak, D. Caganova, M. Cambal, The role of managerial creativity in human potential development, in *EAEEIE 2012 23rd EAEEIE Annual Conference*, (University of Cagliari, Cagliari, 2012), 4 p
- 26. Y. Raschshepko, Creativity of company and creativity of manager: How to measure them, in Proceeding of the 4th International Conference of Management, Leadership and Governance (ICMLG 2016), (Acad Conferences Ltd., Curtis Farm, 2016), pp. 516–519
- D. Caganova, D. Ruskova, Creativity in ESP, in CO-MAT-TECH 2005 Proceeding/International Scientific Conference 13th, (STU v Bratislave, Bratislava, 2005), pp. 166–169