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The Creative Culture and Level of Innovation in the Selected Manufacturing Enterprises

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Abstract
This article presents the assessment of the creative culture and the level of innovativeness in selected manufacture enterprises. The theoretical part of the article discusses the space for creativity in the company and the microfoundations of the pyramid of needs related to creative culture. The pyramid consists of different microfoundations, which were used to create a questionnaire to assess the level of creative culture. This study assessed creative culture according to a model of the hierarchy of needs, developed by the author of this study based on Maslow's pyramid of needs. The assessment used an innovation questionnaire and a creative culture questionnaire. This article presents a sample analysis of the results obtained from two of the companies that participated in the study. Furthermore, the article summarizes the results obtained from all participating companies and gives recommendations related to establishing creative culture based on these results. Every company should implement appropriate standards to help it develop a creative working environment. The goal of assessing creative culture in a company is to assist managers in building a workplace that fosters creativity, since such a workplace is a significant factor affecting the emergence of innovation. The analysis of the creative culture of the companies revealed their weaknesses and strengths in this respect. The developed methodology will undoubtedly influence an increase of awareness and knowledge of enterprises in the field of creating a pro-creative company culture. Such actions will contribute to the increase of company's innovation, thus influencing its development.

Keywords
Creative culture, Creativity, Level of innovativeness, Pyramid of needs, Space for creativity.

Introduction

The working environment in a company is one of the most important factors that affect the emergence of innovation in manufacture enterprises. It should foster creativity, because without creativity innovation cannot exist (Dubina, 2005). Sloane (2005) defines creativity as the ability to create and produce new ideas. Creativity denotes behavior that leads to new and valuable assets. Thus, creativity involves producing ideas, whereas innovation involves transforming and implementing these ideas (Byrge & Tang, 2015; Brzeziński, 2009). As part of her model, Amabile et al., (1996) presented the factors that affected the working environment in terms of creativity, including:

- Stimulation of creativity: ensured through support given by the entire organization, management staff, and co-workers.
- Autonomy or freedom: employees can freely manage their own work and ideas, and decide how to reach a given objective.
- Sufficient resources: employees have the appropriate resources at their disposal to carry out projects.
- Pressure: employees are given a reasonable amount of work to perform within reasonable deadlines, as a sufficient amount of time to complete specific tasks can stimulate internal motivation and creativity.
- Barriers to creativity: object-related, actor-related, and psychosocial barriers.

Hunter et al., (2007) presented the components of a creative climate in the workplace, including a positive group of peers, a positive relationship with one's superior, resources, challenge, a unified mission, autonomy, support from the management staff, reward-orientation, and organizational participation and integration (Knosala et al., 2019; Ohly, 2018).

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A study conducted by Ali Taha, Sirkowa, and Ferencova (2016) showed that having employees who identify with the values of the company benefits the production of ideas, as do good interpersonal relations in the workplace and open intrateam communication about new ideas. The development of creativity within an organization involves establishing creative teams made up of professionals, regardless of each team member's position (Williams & Yang, 1999). Other factors that benefit creativity in the workplace include safety, support for innovation, clear objectives, and task-orientation (West, 2002).

In connection with the above analysis of the literature, a research question arises: Isn't possible to create innovative solutions in an enterprise without a pro-creative culture? The aim of the article is to study the level of pro-creative culture and the level of innovation of selected companies. The results of the research will contribute to determining the differences between the level of pro-creative culture and the level of innovativeness of the company.

Theoretical background: Space for creativity in the manufacture enterprises

There are different perspectives for analyzing creativity (Fig. 1). The popular classification is the "four P" model, i.e., the study on creativity through the prism of person, process, product and place (Simonton, 1990; Society, 2006).
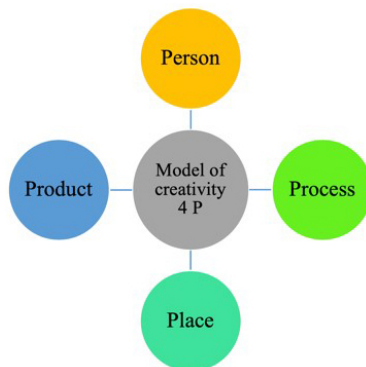

Fig. 1. Model of creativity 4P

The first aspect concerns an identification of the creative potential of the examined person. The following tools are most commonly used for this purpose (Karwowski, 2009):
- Creativity tests allowing to determine the level of fluidity, flexibility and originality of thinking.

- Techniques focused on self-description (personality questionnaires).
- Interview and observation of the examined person.

An example of tools for assessing the level of creativity was presented in Wasilewska et al. (2018).

In the case of creative process analysis, it is desirable to describe and understand what happens when a creative work arises. According to Nęcka (1995) the creative process takes place when a new and valuable result is obtained, and it is characterized by novelty and value. Analysis of the process of ideas creation is an important source of information about the examined person. Experimental tasks, most often related to problem solving, are a significant issue in the creative process examination. The role of attention, stimulation and the influence of positive or negative emotions is emphasized, then they are manipulated and their effect on activity effectiveness is determined (Karwowski, 2009).

Another approach is an analysis of the product (creative product), which also provides a lot of information about the creative capabilities of the innovator (Gruszka & Tang, 2017). In this case, the importance of the study should be attributed to experts' evaluation and content analysis (Karwowski, 2009).

The last perspective of creativeness analysis concerns the study of its over-individual dimension, i.e., the analysis of "the climate in the workplace". Task of Amabile (1997) the work environment significantly affects the search for ideas and their implementation. In this aspect, it is examined whether the company and the physical place of work favor creativity and innovation. The studies in this area are conducted using questionnaires or observations (Luecke, 2003).

An atmosphere favoring creativity concerns the characteristics of the environment, which may be a stimulant or inhibitor of creative activity. Employee-to-employee contacts and open discussions contribute to the emergence of creative ideas. They are possible due to the elimination of barriers requiring a hierarchical shift to a flattened one, where the teamwork is preferred (Ohly, 2018; Williams & Yang, 1999).

There are three important approaches that develop the concepts of climate for creativity: the G. Ekvall concept developed by S.G. Isaksen and K. Lauer (Karwowski, 2009), the view by T.M. Amabile (1997) and the concept of M. West (2002).

According to G. Ekvall, the "climate for creativity" is a factor that supports the production and introduction of new products and solutions. This approach recognizes the climate as one of the variables affecting the ability of the manufacture enterprises for modernization to continuous development. According to

the author of the concept, significant elements forming the creative climate include: challenge, openness and confidence, time for ideas realization, supporting the ideas, debate and taking the risks. G. Ekvall's approach coincides with the concept of T.M. Amabile (Amabile et al., 1996; Amabile, 1997). It is based on the belief that creativity within the company is affected by Amabile et al., 1996; Amabile, 1997:

- Ability to create innovation at the managerial level.
- Motivation of the company to carry out activities characterized by novelty.
- Resources including people, materials and time.

Such an approach was the basis for creating a tool in the form of questionnaire for the measurement of creativity climate in organizations. The questionnaire covers eight scales. In a research study by Amabile (Amabile et al., 1996; Amabile, 1997) the factors that encourage creativity include the following:

- Motivating for creative activity by the organization.
- Encouraging the creativity by the supervisor.
- Support from co-workers.
- Autonomy and freedom.
- Sufficient resources.
- Challenging work.

Two scales describing inhibitors of creative activity, such as pressure resulting from burdens and organizational difficulties blocking and disrupting the creativity, were also included in the questionnaire (Tomczak-Horyń & Knosala, 2017).

The last approach developed by M. West (2002) refers to a climate that fosters innovation in the organization. According to the author of the concept, four elements affect the creative atmosphere: security, innovation support, clear goals, and task orientation (West, 2002).

Microfoundations of the pyramid of needs related to creative culture

The assessment of creative culture is based on Maslow's hierarchy of needs, according to which individuals aim to satisfy five categories of needs: physiological, safety, belongingness, esteem, and self-actualization (Maslow, 1948). Needs are our primary motivational force (Uysal & Genc, 2017). Maslow's theory states that a human being will only reach for a higher group of needs once the lower needs have been fulfilled (Maslow, 1948). The hierarchy of needs related to creative culture contains the following microfoundations: creative working conditions, support from the management staff, a positive group of coworkers, challenges, and rewards for creative actions (Fig. 2). Contrary to A. Maslow's Hierarchy of Needs, subsequent microfoundaments can be implemented without the fully implemented previous levels. If a company meets the needs of employees in each of the five categories, it means that it has a high pro-creative culture.

Creative working conditions

The first microfoundation in the development of creative culture within a company should be to establish working conditions that benefit creativity. High-

Fig. 2. Hierarchy of needs related to creative culture

ranking employees should be able to allocate part of their work time to creative actions. Innovative employees devote 50% more time to discovery (questioning, observation, experimentation, and establishing contacts) than employees with no history of innovation. They also spend one more day per week on discovery, and believe that you need to spend time on discovery in order for a creative idea to appear. It is important to actively search for opportunities for change (Dyer et al., 2011). For instance, Google's philosophy is "innovation is everyone's responsibility": Google employees are allowed to spend up to 20% of their work time each week on projects of their choice or on helping others develop their ideas (Bock, 2018).

A manufacture enterprises should give its employees clear objectives and expectations related to creative actions. In this respect, it may be helpful to introduce the method of management through targets, which is a form of work that ends with feedback on the relevant target and allows employees to direct their efforts toward achieving particular outcomes. The tasks given to the employees should be connected to a creative objective (Knosala et al., 2019).

It is also important to allow the employees to carry out their tasks freely and choose the best method for each task on their own. Furthermore, a company needs to provide working conditions that encourage creative thinking. Many corporations use break rooms, with game consoles, billiard tables, hammocks, ottomans, foosball tables, and other items, to provide a thinking space and allow the employees to relax. A thinking space is important, as creative thinking requires a free mind.

Support from the management staff

A company should require creative thinking from all its employees. Consequently, innovation should be everyone's responsibility, rather than only the responsibility of the R&D department (Dyer et al., 2011). Steve Jobs, founder of Apple, one of the world's top creative companies, introduced the Think Different campaign to communicate to his employees that innovation is their responsibility. He expected every employee to be innovative (Gallo, 2011). It is worth adopting the same approach.

High-ranking managers should support employees in developing their creativity and innovativeness by providing them with opportunities to learn through various courses and training activities. Furthermore, employees should be able to submit their ideas for improvement. There are tools available on the market that can assist companies in managing ideas, such as various apps, including Mobile Kaizen.

Positive group of co-workers

Establishing work teams and using creative problem-solving methods may lead to innovative solutions.

Many innovations are produced by creative teams, which, thanks to their combined competences, knowledge, and energy, are able to achieve much more creative results than employees who work alone (Knosala et al., 2019). The introduction of innovative solutions into the market relies on the establishment of small, well-organized project teams (Dyer et al., 2011). Google establishes teams of three to six members. According to the CEO of Google, large groups are unproductive (Vise & Malseed, 2005).

It is also important to use creative problem-solving methods. Most of such methods rely on communication, which is a crucial component of the creative process (McLean, 2005). The use of creative problem-solving methods in a team indicates that its members share information and ideas between one another. There is no doubt that these methods help to activate the creative thinking potential in those employees who have it (Byrge & Tang, 2015).

Rewards for creative actions

Companies should motivate their employees to act creatively. Being acknowledged by management for one's individual contribution is a strong motivating force. Therefore, companies should develop an appropriate motivation system, and the use of rewards should correspond directly to the target achieved by each employee. For instance, Google uses the "pay unequally" principle: the results achieved by creative employees translate into a higher remuneration compared to non-creative employees (Bock, 2018).

Rewards should always be adjusted to the individual needs, character, and interests of each employee. Possible types of rewards include bonuses, vouchers, retreats, and in-kind prizes. Another important motivating factor is acknowledgement and an honest thank-you, given by the right person at the right time. Every company should establish how to reward its employees on its own. Nelson (1994), in his book 1001 Ways to Reward Employees, presented tested methods of rewarding employees.

Challenges

Challenges make up the top level of the pyramid of needs related to creativity. The tasks given to the employees should be interesting and challenging, and allow for self-actualization and self-development.

The company should implement an appropriate talent management strategy. Managing talents should be a priority and part of corporate culture, as employees contribute to the effectiveness of such a strategy (Armstrong, 2003). Furthermore, talent management helps employees to develop efficiently and independently, to determine their weaknesses and strengths, and to develop an effective strategy against the company's competition. It also makes it easier to assign the persons with the right qualifications to the positions where their impact on the company's development is the highest (Blass, 2009; Low, 2010). All these factors are reasons to create programs dedicated to talented employees. Johnson & Johnson (2020) implements a system that encompasses development planning and creating career paths for every employee, development planning for employees with leadership skills, and management of work effectiveness across all ranks.

Google follows the principle that each team member should take part in a conversation about his or her career development at least once every six months (Bock, 2018). It is also important to hire staff responsible for assisting other employees in creating individual career and development paths. For instance, Microsoft has a team tasked with analyzing and monitoring the engagement of exceptional employees.

Tools used in the assessment of creative culture

The study of pro-creative culture was carried out in selected manufacturing companies of various sizes and industries. The study mainly concerned innovative enterprises that introduced process, product, organizational or marketing innovations in 2016–2019. As part of the study, the creative culture of the enterprise and the level of its innovativeness were assessed.

The assessment used an innovation questionnaire and a creative culture questionnaire. Both tools were designed by the authors of this study and presented in Tomczak-Horyń (2020).

The creative culture questionnaire consists of 13 questions. Concerning each microfoundation of creative culture (Table 1). In questions 9 and 11, the respondents can choose from a selection of types and forms.

The innovation questionnaire consists of 10 questions divided into four categories (Tomczak-Horyń, 2020):

1. Company development and investments (questions 1–3).

Table 1
Questions included in the creative culture questionnaire

Category of needs	No.	Question
CREATIVE WORKING CONDITIONS	1	Are the employees able to allocate some of their work time for creative actions?
	2	Can the employees carry out their tasks freely?
	3	Have any goals or expectations concerning creative processes in the company been set?
	4	Does the company have a break room for the employees?
SUPPORT FROM THE MANAGEMENT STAFF	5	Does the company conduct training in creativity and innovation?
	6	Do the employees submit their ideas for improvement?
	7	Does the company have an idea box or an IT system for managing ideas?
POSITIVE GROUP OF CO-WORKERS	8	Are there dedicated work teams for specific tasks?
	9	Does the company make use of creative problem-solving methods?
		If so, what methods are used most often (brainstorming, crushing, De Bono Six Thinking Hats, analogies, etc.)?
REWARDS FOR CREATIVE ACTIONS	10	Are there competitions held for the best idea or improvements for the company?
	11	Are the employees rewarded for implementing the ideas they submit within the company?
		If so, what types of rewards are given (bonuses, vouchers, integration trips, in-kind prizes, etc.)?
CHALLENGES	12	Does the company offer development programs and individual career paths for employees?
	13	Is there in-house staff responsible for mentoring and coaching the employees?

2. Innovations implemented in the company and forms of funding innovations (questions 4–6).
3. Company initiatives related to the implementation of innovative solutions (questions 7–8).
4. Methods and techniques of lean production (questions 9–10).

Both closed-ended and semi-open questions are used. In questions 4, 8, and 10, respondents can choose more than one answer. The questions included in the Innovation questionnaire are presented in the paper Tomczak-Horyń (2020).

The level of creative culture and innovation is assessed on a five-point scale, where 1 denotes a very low level and 5 denotes a very high level (Table 2). One point can be scored for each question in the creative culture questionnaire. A score between 12 and 13 points indicates a very high level of creative culture in the company. The level of innovation is also assessed on a five-point scale. Four points can be scored for question 4 and one point can be scored in each of the other questions.

Table 2

Indicators of creative culture and innovation in a company

Level		Points
V	very high	12–13
IV	high	9–11
III	average	6–8
II	low	3–5
I	very low	1–2

The assessment was conducted in the form of semi-structured interview (Blandford, 2013). The interview was conducted on an individual basis with ranking employees in each company, including management staff, department managers, and specialists. During the interview, respondents completed the creative culture questionnaire and innovation questionnaire. An online version of both questionnaires was also developed, which made it easier to collect and analyze the data.

Assessment of creative culture: selected case studies

This article analyzes the results obtained from two selected companies in order to describe the course of the assessment.

The first case study was a large company from the metal industry specializing in the manufacture of rolled, milled, and ground parts. The assessment was conducted in the form of a semi-structured interview with the Manufacturing Leader, who was also the company's personal trainer.

The company scored eight points in terms of innovativeness, which indicated moderate innovative-ness. The financial situation of the company in recent years has been improving, and the number of employees has been increasing. Recently, the company built a wholesale facility and a laboratory. Between 2016 and 2019, the company introduced procedural and organizational innovations; however, they had no novelty value on the market. The company does not allocate any funds exclusively to innovation. The factors that negatively affect making innovative decisions in the company are high costs of failure and limited means of promoting a new product.

The company is not considering implementing innovative processes between 2020 and 2023, and is planning to keep its innovative activity at the current level. Currently, the company is conducting training in the optimization of production and systems. The company also applies methods and techniques for lean production, including continuous improvement (Kaizen), Total Productive Maintenance, 5S, Single-Minute Exchange of Die, and Just-in-Time.

The next stage of the assessment deals with creative culture (Fig. 3).
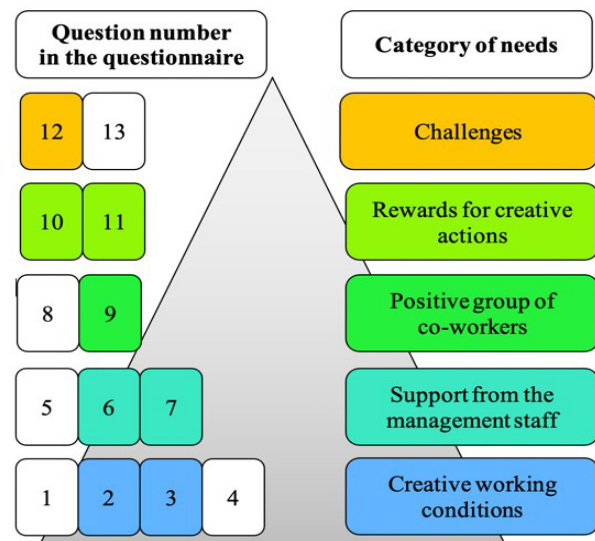

Fig. 3. Assessment of the creative culture of a large company from the metal industry

The first level of the pyramid concerns creative working conditions. Employees of the company are unable to allocate some of their work time to creative actions. However, they are free to carry out their tasks the way they want. The company has also set objectives and expectations for its employees related to creative activity. At the time of the assessment, the company did not have a break room for the employees.

The second level of needs concerns support from the management staff. The company does not organize

training in creativity or innovation. However, its employees show initiative in developing innovative solutions by submitting their ideas for improvement. The company has also implemented a support system for idea management using an idea box.

With respect to the third category of needs, i.e., a positive group of co-workers, the company does not form work teams. On the other hand, it applies creative problem-solving methods, primarily brainstorming.

The fourth level of the pyramid is rewards for creative actions. The company organizes competitions for best ideas and improvements. Bonuses and vouchers are used as rewards.

With respect to the fifth level of the pyramid, i.e., challenges, the company does not implement development programs or individual career or developments paths for the employees. On the other hand, the company employs staff responsible for mentoring and coaching.

Each level of the pyramid of needs related to creative culture is characterized by specific factors, which correspond to the questions included in the creative culture questionnaire. In Figure 3, the questions in the questionnaire that correspond to the microfoundations that need improvement in order to achieve a very high level of creative culture are marked in white.

The company scored eight points in the assessment of creative culture, which corresponded to moderate creative culture on the applied scale.

Most categories of needs were not fully met. The employees of the company are unable to allocate part of their work time to creative actions. The company also does not have a break room for the employees, nor does it form work teams dedicated to specific tasks. The company does not organize training in creativity or innovation. The employees do not follow individual career paths. On the other hand, the company employs staff responsible for coaching and mentoring. It would be advisable to include talent management in the competences of such staff. Eliminating the aforementioned shortcomings related to creative culture would undoubtedly benefit the development of the company's innovativeness.

The second case study was a company from the automotive industry. The assessment was conducted in the form of a semi-structured interview with high-ranking employees. The high-ranking employees took part in the interview: the leader of the production department and the leader of the logistics department.

The company scored 12 points on the assessment, which indicated a very high level of innovativeness. The company's financial situation varies, whereas the number of employees has remained the same in recent years. The company has recently purchased new machines and built an amenities and office building. Between 2016 and 2019, the company introduced all four types of innovation, i.e., innovations related to processes, products, organization, and marketing. The new solutions had novelty value on the market. The company does not allocate any funds exclusively to innovation. The most significant factors that discourage the company from taking innovative actions are high operational costs and insufficient technical know-how. The company is considering implementing innovative processes between 2020 and 2023. It is also planning to carry out projects from a different branch and increase innovative activity. Currently, the company is conducting training in the optimization of production and systems. The company also applies methods and techniques for lean production, including Total Quality Management, continuous improvement (Kaizen), Lean Six Sigma, Total Productive Maintenance, 5S, Single-Minute Exchange of Die, and Just-in-Time.

The next stage of the assessment concerns creative culture. The analyzed company allows its employees to allocate part of their work time to creative actions. However, they do not have the freedom to carry out their tasks the way they want; instead, they are required to discuss the tasks with their direct superior. The company has a break room for the employees. Employees show initiative in developing innovative solutions by submitting their ideas for improvement. The company has also implemented a support system for idea management using an idea box. Employees do not undergo training in creative problem-solving methods or creativity stimulation methods. The company forms work teams dedicated to specific tasks. The primary creative problem-solving method is brainstorming. The company motivates its employees to submit innovative solutions by organizing competitions for best ideas and improvements. The most frequently used rewards are vouchers, in-kind rewards, and participation in retreats. The company also implements development programs and creates individual career and development paths for its employees. It also employs staff responsible for coaching and mentoring.

The company scored 10 points in terms of creative culture, which, according to the scale used in the assessment, indicated a high level of creative culture. The employees do not have the freedom to carry out their tasks the way they want, which may constitute a barrier to submitting microsolutions related to their own position. Furthermore, the company does not organize training in creativity or innovation.

Assessment of the effect of creative culture on a company's innovativeness

This study assessed the effect of creative culture on a company's innovativeness in selected manufacturing companies from two Polish voivodeships. The companies were selected based on their level of innovativeness. The primary assessment concerns innovative companies that had introduced innovations related to processes, products, organization, or marketing between 2016 and 2019. A total of seven companies from different branches participated in the assessment:

- Five large companies from the automotive, metal, food, and construction sectors.
- Two medium companies from the packaging and industrial fittings sectors.

The assessment aimed to determine the company's level of innovativeness and the level of its creative culture. The assessment used an innovation questionnaire and a creative culture questionnaire. Table 3 shows an overview of the obtained results. In most of the participating companies, the level of innovation was similar to the level of creative culture. Only one company obtained a very high score in terms of both innovation and creative culture. Three companies obtained a high score, and the other three obtained a moderate score.

The assessment of the creative culture and a company's innovativeness showed that two companies had a slight difference (by one level) between the level of creative culture and the level of innovation. The assessment did not find any extreme differences between the level of creative culture and the level of innovation. Innovation in a company emerges depending on the culture. The assessment also confirmed that without creative culture, it is impossible to develop innovative solutions in a company.

This study also analyzed the obtained results related to each microfoundation of creative culture from the perspective of all participating companies. In most of the companies, the employees are unable to allocate part of their work time to creative actions. This constitutes a major barrier because innovation cannot develop in a company that does not devote any time to creative problem solving.

The employees of the assessed companies are free to perform their tasks the way they want. Such an approach allows them to think outside the box.

Most of the assessed companies have not set any objectives related to creative actions. The introduction of management by objectives would allow them to direct their employees toward particular work outcomes. Furthermore, management by objectives helps to suggest relevant training for the employees or modify their career paths. Because the time needed to achieve an objective depends on each employee's individual capabilities, employees are able to learn to manage their own time. By involving employees in decision-making, superiors can discuss the objectives together with the employees, who, in turn, will have the opportunity to understand and accept their objectives. Interest from an employee's superior strengthens a feeling of respect and belongingness. The last component, feedback, should be precise, descriptive, and based on facts (Knosala et al., 2019; Rogers, 2012).

Simple methods include crushing and morphological analysis, and complex methods include synectics. Specific problems can be handled with an appropriate method. In this case, it can be helpful to use a program that supports choice of method.

A strong point to note about the assessed companies is idea management. The employees are able to submit their ideas. Idea management systems have been implemented, primarily idea boxes. The companies also organize competitions for best ideas

Table 3

The assessed companies do not organize training in creativity or innovation, which no doubt contributes to their employees' unfamiliarity with creative problem-solving methods. The companies only use brainstorming. In such cases, experts recommend organizing training in heuristic methods, which are a reliable way to stimulate new ideas. There are many heuristic methods with different levels of complexity

Sector		automotive	metal	food	industrial fittings	building	packing	food
Company size		large	large	large	medium	large	medium	large
Assessment of innovation	level of innovation	high	average	high	very high	high	average	average
	points	11	8	10	12	11	8	8
Assessment of creative culture	level of creative culture	high	average	high	very high	average	low	average
	points	10	8	9	12	8	3	8

and improvements, and reward employees when their ideas are implemented. The most common reward is a bonus.

The companies form teams dedicated to particular tasks. This is very important because forming teams of professionals, regardless of their positions, is a key factor affecting the development of creativity within an organization. It is recommended that companies begin the selection process for such teams right away, during the recruitment stage. Tools for assessing the creativity of employees can be helpful in this respect. Next, the team of professionals should be encouraged using specific methods and motivated for creative work. Furthermore, the company should offer support in developing its employees' particular talents. Only some of the analyzed companies implement development programs and individual career paths for their employees. It is also advisable to recruit staff responsible for the development of the employees' talents.

Conclusions

An innovative company should encourage its employees to be creative, as creativity plays an important role in corporate processes and stimulates the company's development. Combined with knowledge and social competences, creativity is the first step in the establishment of innovation. Consequently, managers should take care to build an appropriate organizational culture that stimulates creativity among the employees and improves their engagement in designing innovative solutions. Such a culture should encourage every employee to express his or her opinion freely, experiment, take risks, and admit to making mistakes without fear of punishment (Dyer et al., 2011; Tomczak-Horyń, 2020).

This article analyzes the results of an assessment creative culture and a company's innovativeness. The assessment concerns seven innovative manufacturing companies from different branches. This is a preliminary study that will be expanded to include more case studies. The companies were selected based on an innovation questionnaire. The analysis of the creative culture of the companies revealed their weaknesses and strengths in this respect. This study assessed creative culture according to a model of the hierarchy of needs, developed by the authors of this study based on Maslow's pyramid of needs. Creative culture was analyzed in terms of organizational conditions, support from the management staff, formation of work teams, use of creative problem-solving methods, and the idea management and talent management systems introduced. This article presents a sample analysis of

the results obtained from two of the companies that participated in the study. Furthermore, the article summarizes the results obtained from all participating companies and gives recommendations related to establishing creative culture based on these results.

The results indicated that in most of the participating companies, the level of innovation was similar to the level of creative culture. Introducing innovative solutions in a company is impossible without an established creative culture. Every company should implement appropriate standards to help it develop a creative working environment. The results of research and theoretical considerations contained in this article complement the current research in the field of the construction of a creative culture in a company and may become a valuable resource of knowledge that may be useful in the preparation of dissertations in the field of management.

Currently, research is being carried out on the creative culture and the level of innovation of next manufacturing enterprises. The aim of the research will be to validate the assumption that introducing innovative solutions in a company is impossible without an established creative culture. Correlation and regression analysis will be performed in a future article. Its purpose will be to determine an assessment of the effect of creative culture on a company's innovativeness. Moreover, future research will involve new case studies. A study will also be conducted on the effect of creative culture on innovation in small companies.

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