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FACTORS CONTRIBUTING TO THE FORMATION OF A PROJECT TEAM SUBCULTURE – CASE STUDIES

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Purpose: In the literature relatively little attention is paid to the project team subculture. On the other side, according to theory of weak ties, even with a minimal amount of contact among people, it is possible to develop shared norms and values. Also the project management practitioners believe that the execution of projects often requires a different project culture. The purpose of this paper is twofold. Firstly, it aims to describe the factors that foster the formation of a project team subculture with the use of the case study analysis. Secondly, it attempts to assess the importance of these factors for forming this subculture, making use of the respondents' opinions.
Design/methodology/approach: The research method used for this study is the multiple case study, in which cases are replicated so as to show both similarities and differences found in the phenomena studied and in their context. The case studies used various research techniques such as interviews, direct observation and participant observation as well as surveys.
Findings: The formation of the project team subculture was fostered primarily by organisational structure, project properties and the authority or power of the project manager.
Research limitations/implications: The role in the formation of the project team subculture (1) by the acceptance of working in a project team, (2) by the education and qualifications of project team members and (3) by dynamics and complexity of the project environment is not clear and this indicates the need for further research in this area.
Practical implications: Organizational culture has been considered an important success factor for over 40 years. In the case of the project team subculture, a similar relationship can be expected.
Originality/value: The case studies have illustrated the existence of the project team subculture. This means that, if individual projects are unique, searching for norms and values in the project team is more relevant than making general recommendations at the project management subculture level or the organisational culture level. The subculture of the project team becomes a level of analysis that is difficult to ignore and should be a part of the project management research.

Keywords: project management, project team, culture.

Category of the paper: research paper.

1. Introduction

The growing importance of changes and projects in the activities of organisations is now referred to in the literature as *projectification*, which means that projects have become one of the primary forms of implementing activities, not only within organisations but also outside of them (Jałocha, 2019). In the case of enterprises, their management increasingly seeks to build a project organisation, which is a collection of individuals and institutions working (successfully) together to execute projects. However, it quickly becomes apparent that the introduction of project management involves numerous organisational changes, including those present in the sphere of organisational culture. This problem is reflected in scientific studies on, among others, cultural aspects of project management. Thus, first of all, there has emerged an entire research trend oriented towards the search for an organisational culture that positively influences project management and, consequently, project success (e.g. (Kendra, Taplin, 2004; Belassi, Kondra, Tukel, 2007; Morrison, Brown, Smit, 2008; Aronson, Lechler, 2009)). Secondly, scholars have started to describe the subculture associated with project implementation in the organisation, which reflects, on the one hand, the norms and values of the process organisation and, on the other hand, the norms and values typical of project work, i.e., the project organisational culture (e.g. (Firth, Krut, 1991; Thomas, Marossezeky, Karim, Davis, McGeorge, 2002; Wang, 2001; Zuo, Zillante, 2006; Du Plessis, Hoole, 2006; Stare, 2012; Nguyen, Watanabe, 2017; Aguilera, Alba, 2018)). In this context, some authors have started to see another – third – area of exploration. For example, Kerzner (2001) notes that both the project manager and line manager can develop a mutually acceptable project culture and cooperation principles, pointing to an even lower possible level of analysis, which is a specific single project and the project team associated with it. In this way, a subculture is to be formed. Such subculture results from norms and values arising from the needs of carrying out a specific project and the constraints that the organisation with its culture creates. Kerzner's observations are echoed in studies carried out by such authors as Aronson and Lechler (2006), Fellows, Grisham and Tijhuis (2007) and Szeptuch and Dyla (2015). Interestingly, by 2022, the number of queries of the term *project team subculture* in Google Scholar databases was only a few literature items, which indicates that the potential research direction signalled by Kerzner has not received the attention of many researchers. This can be explained by the probable belief that, first of all, the composition of project teams is often not fixed. Individual people involved in the project come in, complete their tasks in the project and leave. Therefore, there will be project team members who are in it from the beginning to the end as well as those who will be in it only for a while. Secondly, the people involved in the project can simultaneously, for instance, on the same day, work in their line position and the project. This means that they divide their working time to perform both repetitive processes and unique tasks in the project. Thirdly, many employees are simultaneously members of several project teams. Fourthly,

the project manager himself may also change. All of this speaks somewhat against the emergence of a project team subculture even in relatively long-running projects. Nevertheless, the existence of the aforementioned project organisational culture in the organisation can accelerate the formation of norms and values in the newly formed team, whose members not only form a kind of project community in the organisation but may also already know one another from previous projects. In addition, for example, according to Granovetter's (1983) theory of weak ties, even with a minimal amount of contact among people, it is possible to develop shared norms and values (Grzesiuk, 2015), which is facilitated today by the available modes of communication and social networks or social roles of project team members. Finally, it is essential to keep in mind that the subcultural distinctiveness of a project team does not have to apply to all aspects of the culture and could mean, for example, just a different approach to risk or a different way of managing employees. Likewise, the project team subculture does not have to challenge the core norms and values of the organisational culture; instead, it can highlight them.

Doubts arising from the nature of projects and, in addition, few theoretical studies justify researching the issue of the project team subculture. Thus, the purpose of this article is twofold. First, it aims to describe the factors that foster the formation of a project team subculture with the use of the case study analysis. Secondly, it attempts to assess the importance of these factors for forming this subculture, making use of the study respondents' opinions.

2. Theoretical framework

As Mingus (2002) notes, traditional project management is seen mainly as planning, scheduling and controlling a project to achieve its objectives. The author points out that this understanding of project management, unfortunately, overlooks important personnel relationships. She rightly points out, therefore, that the success of a project is measured not only by its completion on time, maintenance of the planned budget, fulfilment of goals or customer satisfaction but also by good relations among employees. This perception of project management is consistent with the definition offered by the Project Management Institute, according to which project management stands for the application of knowledge, skills, tools and techniques of project operations to meet or even exceed the needs and expectations of project stakeholders (Mingus, 2002). In the following discussion, what will be regarded as project-related stakeholders will be primarily participants in the project organisation who are, on the one hand, the representatives of the organisational culture of the entire enterprise and, on the other hand, members of the project team. Within the project team, as indicated, for example, by Kerzner (2001), Aronson and Lechler (2006), Fellows, Grisham and Tijhuis (2007) or Szeptuch and Dyla (2015), specific norms and values typical of the project currently

underway, different from those of the enterprise's organisational culture, are developed. Moreover, they lead to the formation of an organisational subculture. This subculture is referred to as the project team subculture. It is characterised, on the one hand, by norms and values typical of the organisational culture (e.g., of a particular enterprise) and, on the other hand, by norms and values developed during project management and in the course of carrying out project tasks by project team members (Kamiński, 2021).

According to Kerzner (2001), a project team subculture is created by project managers. They can develop subcultures for their projects, especially when the timeframe for their implementation will be many years. Such project cultures develop within the constraints created by the organisational culture, which justifies calling them subcultures. As observed by Kerzner, this results from the fact that the project manager should not expect top management will express their consent to completely free activities. Therefore, within the scope of his/her authority, he/she must respect not only the interests of the project but also those of the organisation in which the project is implemented. Kerzner states that this means that a subculture results from norms and values arising from the needs of executing a specific project and, at the same time, from the constraints created by the organisation along with its culture.

Aronson and Lechler also point to the project team subculture (2006). In their view, the content of the subculture is specific to the project and reflects the work carried out within the project and the basic tasks that team members must perform. The authors provide the factors influencing the formation of subcultures. These are the nature of the project that differs from routine tasks carried out by the organisation, the matrix organisational structure in whose area the projects are carried out or the norms brought to the project team by its members. Aronson and Lechler show that constructive project team norms (achievement orientation, self-fulfilment, humanism, affiliation, that is, the norms that lead to taking the initiative and collaboration) influence project success. In fact, a constructive project team subculture is an essential predictor of project success which may include business success, customer satisfaction and increased project knowledge.

However, Szeptuch and Dyla (2015) note that project teams produce their own organisational culture. Therefore, the project manager plays a critical role in building culture in the work of the project team. It is up to the project manager whether what will be promoted in the team is, for example, a culture of blame or influence, which, according to the authors, significantly translates into project success. The following characteristics of the project team subculture emerge from their empirical research: lack of prejudice and inhibition in team cooperation with people of other nationalities and cultures, a common language and system of terms, the influence of norms and principles of behaviours promoted in the organisation on integrating employees within the project team.

Based on the analysis of the studies cited, it can be noted that the authors point to factors that affect the formation of a project team subculture. These include the nature of the project, the (matrix) organisational structure and the figure of the project manager. In addition, it should

be noted that the literature on the issue of organisational subcultures points to several other factors influencing their formation (Maanen, Barley, 1985; Trice, Beyer, 1993; Boisnier, Chatman, 2003; Schreyögg, Geiger, 2016; Schein, 2017). Thus, in the first place, these include the organisation participants' education and qualifications, their properties and their environment. The impact of all the already mentioned factors on forming the project team subculture will be discussed below.

If it is assumed, following Aronson and Lechler (2006), that **the project nature** is related to how the project differs from the routine tasks performed by the organisation, then the description of project characteristics developed by Shenhar and Dvir (2008) can be used to determine this nature of the project. They base their approach on four dimensions of a project – the degree of novelty or innovation of the project, its complexity level, its pace and the level of technology. Thus, in project innovation, Shenhar and Dvir (2008) distinguish its three levels: a derivative project, a platform-based project and a breakthrough project. As far as project complexity is concerned, they identify assembly, system and matrix projects. As regards the project pace, they specify a normal pace, a fast (competitive) pace, a critical pace and an instant pace. Furthermore, in the case of the level of technological uncertainty, they speak about technologically non-advanced projects based on mature, known technologies, technologically medium-advanced projects, high-technology projects with significant technological uncertainty involving new but already known technologies and very high-technology projects with very high technological uncertainty requiring the development of new technologies that do not exist at the time of project initiation. The cited authors recommend a differentiated approach to projects of a different nature in terms of the dimensions discussed. When the intensity of project features is not high, the project can be managed based on an approach similar to the management of enterprise's routine operations. On the other hand, when the innovation, complexity and pace of project implementation are greater and the type of project technology is higher, the more the nature of the project deviates from the routine tasks performed by the organisation and the more it will foster the formation of a project team subculture (Kamiński 2020).

As regards **the organisational structure**, it was studied by, among others, Trocki (2009), who made an extensive review of project-related structural arrangements. Among others, he distinguished between a line-structured project organisation, a line-staff project organisation, a matrix project organisation, or a "pure" project organisation. According to him, the aforementioned forms of project organisation can be characterised by two factors – the position and autonomy of the project in the structure of the parent organisation. The project position depends on the importance of the project to the parent organisation and its specialisation while the project autonomy depends on its complexity and innovation. Thus, if in the case of a project organisation in a line structure, there is the highest degree of integration of the parent structure and the project team and the project tasks are performed by the units of the parent organisation, then, in the case of a "pure" project organisation, there is

complete separation of current activities from the activities for the project (there is no involvement of the people implementing the project in the current activities of the institution). The project manager has the total organisational capacity necessary to manage the project, and the assignment of employees to the project is also complete and unambiguous. This isolation of project team members (in a pure project organisation) should promote the formation of different norms and values and, consequently, the formation of a project team subculture (Kamiński, 2020).

Then, attention should be directed to **the project manager**'s possible influence on forming the project team subculture. It is so since it is widely believed that executives strongly influence the formation of norms and values (Schein, 2017; Zbiegień-Maciąg, 2005; Kets de Vries, Miller, 1984). This influence should be analysed with respect to two aspects: (1) the project manager's ability to influence the project team and (2) the norms and values the manager will disseminate to the project team. As Lichtarski (2008, 2018) observes, in the case of power, regardless of the way projects are executed in the organisation and their temporality, the implementation of projects means a move away from the unity of giving commands towards a multiplicity of power centres; it means a distortion of the stable hierarchy, which will be replaced by a more complex and fluid heterarchical coordination. What is more, project managers are increasingly seen as leaders whose role is not only to manage the project but also to create shared norms and values within the project team (Grzesik, Piwowar-Sulej, 2013; Jędrych, Pietras, Szczepańczyk, 2016; Marek-Kołodziej, Łapuńka, Jagoda-Sobalak, 2018). Therefore, whether the project manager's behaviour is in line with the organisational culture or whether it is based on other norms and values (e.g., external to the organisation or his/her own) will, as might be thought, influence forming the project team subculture. This influence, however, depends primarily on the project manager's power. Therefore, the project manager with more power also has more power to shape the subculture of the project team (Kamiński, 2021).

In the case of the influence of **the education and qualifications of organisational participants** on subculture formation, it is essential to point to the studies of Trice and Beyer, which are deemed to be fundamental in this regard (Trice, 1993; Trice, Beyer, 1993). Those scholars, who focus on professional subcultures, point to the importance of the existence of specific hermetic knowledge and know-how, high or unusual emotional demands (the nature of work in many professions requires dealing with various emotions), awareness of people's membership in a given professional group, the omnipresence of professional norms and contacts that go beyond the work-related sphere, the favourable image of a given professional group, the extent to which representatives of a given profession are a point of reference for one another in shaping behaviours (developing a professional subculture will be possible if the members of professional groups imitate one another, treat one another as authorises or compare themselves to one another).

Assuming that the project implemented requires, to some degree, (by definition, so to speak) a unique approach, it will also sometimes require specialised knowledge, education and qualifications different from those typically needed to carry out repetitive processes in the organisation. As might be thought, it is the different education and qualifications of project team members that may lead to the formation of a specific subculture. In other words, the more project team members differ in their education and qualifications from other employees in the organisation, the more this will foster the formation of the project team subculture.

Further, **the properties of organisation participants** related to their (1) reactivity, (2) satisfaction and (3) commitment (Boisnier, Chatman, 2003) are also factors contributing to the formation of subcultures. According to the cited authors, these factors influence people's propensity for joining and/or forming subcultures.

First, the psychological phenomenon of reactance involves an individual's desire to restore his/her freedom of choice, which is threatened by someone trying to impose something on him/her or prohibit him/her something). Reactance is measured by determining whether people tend to polemicise, are unwilling to cooperate, behave in a manner described as deviant, are unwilling to take advice from others and, for instance, to ask others how to do a job. It is believed that the phenomenon of reactance is stronger if a more important opportunity for action is taken away from a person, more opportunities are blocked or taken away or the threat to freedom of action is greater (Trejderowski, 2009). In the case of organisations, those who do not share the values of the prevailing organisational culture will therefore flee to subcultures in which certain generally unacceptable behaviours are acceptable. In this context, Boisnier and Chatman (2003) suggest that the phenomenon of reactance is more likely the stronger the organisational culture is. Ultimately, people characterised by higher reactance are more likely to join subcultures as they will reject the values of the (strong) culture regardless of their content.

Thus, in the case of a project team, some members of the organisation may view working in a project team as a more attractive alternative than their work in carrying out repetitive processes which are executed, for example, in the manner typical of a mechanistic organisation. Restricting the freedom of organisation members by the managers' authoritarianism, subordinating the individual to the social group, displaying conservatism, and achieving a high degree of standardisation and specialisation of activities may induce some organisation participants to escape to the subculture.

The drive to regain freedom and the desire to engage in innovative projects are indicated, for example, by Hammer (1998) and Wozniak (Wozniak, Łokaj, 2009). Hammer (1998) notes that if organisational cultures operate according to the principles of paternalism, employ control and bureaucratic mechanisms and target personal freedom, then all invention is lost in the maze of formal company rules. Hence, creative thinking is more likely to be developed outside working hours. However, during an interview, Wozniak speaks "about a small garage on the side-lines of the corporation". In his view, corporate culture can hinder the development of

ideas and a group of innovators should not be placed too deep in the organisational structure. It means that such a structure should not have too many hierarchical levels. Those innovators should not have too many superiors and decision-making dependencies above them. The management of the organisation must understand that true innovation, which brings things that are so new that they are called "revolutionary", is almost always created not in the organisation but at home. It is created by young people who often work in their garages. This is why highly innovative organisations provide their employees with 20% of their working time to develop their own ideas and projects independently.

Additionally, people's propensity for joining and/or forming subcultures depends on employees' satisfaction with the dominant values in the subcultures in question (Martin, Siehl, 1983; Graham, 1986; Rose, 1988; Cha, Edmondson, 2001; Boisnier, Chatman, 2003). This effect is amplified if, for example, employees are additionally dissatisfied with the organisational culture in which they find themselves or when the organisational subculture helps create norms and values that are more relevant to them (e.g., from the perspective of the work they do). Thus, if the organisation participants see an opportunity to achieve their goals better in the subculture than in the organisational culture, they will willingly join the subculture.

Furthermore, commitment, loyalty and identification with the organisation can also influence the formation of subcultures (Meyer, Allen, 1991; O'Reilly, Chatman, 1996). This strong commitment to the organisation can result from dispositional characteristics (i.e., the individual properties of an employee) and the organisational context. As regards the context, participants in organisations with a strong organisational culture are more committed and loyal and identify themselves more strongly with the enterprise. This phenomenon intensifies when there is the normative commitment to the organisation (organisation participants strongly identify themselves with and internalise its values), reducing the tendency to form subcultures. However, as the cited authors point out, in the case of the organisations where participation rests on the compliance-based commitment to the organisation or is instrumental, *e.g.*, there is a need for extrinsic motivation for people to identify themselves with the organisation, the relationship between commitment and the presence or absence of subcultures is no longer explicit.

Similarly, in the case of commitment, loyalty and identification with the project team, it is possible to identify employees who are less attached to the organisation and identify themselves more strongly with their work in project teams. As Kanter (1998) noted many years ago, today's highly skilled employees work hard, from task to task, and are concerned with the quality of their benefits, deriving their sense of self-esteem from the nature of the work they do, not from their association with a particular enterprise. Their professional value is reputation because employees need the professional values, skills and reputation they can use in many other jobs. Kanter states that "[t]hey are motivated by the attractiveness of the industry and the challenges that require constant improvement of skills and they dream of starting their own businesses in the future" (Kanter, 1998, p. 166). Such employees will identify themselves less

with the organisation and more with the project, which will foster the formation of the project team subculture.

In conclusion, if members find working in a project team more attractive than working in an organisation, they will believe that participation in a team leads to satisfying their needs and they will be committed to the project team. This, in turn, will promote the formation of the project team subculture.

Finally, Boisnier and Chatman (2003) distinguish yet another vital factor (indirectly) contributing to the formation of subcultures. It is **the dynamics of the environment** that, causing structural changes, trigger the emergence of subcultures. This is because the more dynamic the environment is, the greater the need to hire new employees with changing skills or to delegate power is. According to Bloor and Dawson (1994), it is just the dynamic environment that provides the opportunity for the emergence of occupational subcultures that begin to interpret the surrounding environment differently.

Like the factors considered at the organisational level, the way groups operate depends on the dynamics of the environment. If, for example, the demands of a particular environment segment become unusual, those involved in "serving" it will begin to develop a subculture that depends on it. For example, the need to respond to emerging problems of the environment may make the research team focus on adapting better to market needs the technology it has just developed and which has been positively received by the market, instead of developing another new technology (Benner, Tushman, 2003). In the case of this particular team, it will mean a change in values from those favouring research to those typical of a department dealing with implementation.

Project management depends on the context in which it takes place. This issue has been discussed by, among others, Collyer and Warren (2009), Stead (2010), Świętoniowska (2015) or Kopczyński (2013, 2016). They believe that the increase in the dynamics and, additionally, in the complexity of the environment affects the way projects are managed. They also highlight that traditional project management methodologies based on mechanistic approaches and cause-and-effect thinking cannot meet the challenges of modern projects. For this reason, there is a growing need and ability to adapt the project management approach to the current circumstances defined by the complexity, uncertainty, scope and criticality of the project, the nature of the people involved, their relationships and the project environment.

In the analysis of the impact of the environment dynamics and complexity on project management, it should be noted that the theme of projects executed in highly uncertain environments is one of the key project management issues which is still discussed today (Gray, Larson, 2011; Szpitter, 2012). It is linked to such issues as planning uncertain outcomes, balancing flexibility with reliability and accountability, balancing the quality of decisions against the speed of decision-making, and freezing project scope during rapid changes. According to Stead (2010), the complexity of the project environment affects the diversity of project team members in terms of their skills and experience. A diverse mix of what employees

bring to the team regarding their technical, business and cultural backgrounds increases the likelihood of project success.

In the context of the approaches presented above, it can be concluded that the increasing changeability and complexity of the environment requires the project manager to apply a situationally tailored approach to project team management. If it is assumed that the organisational culture reflects the management of repetitive activities, then its norms and values will refer to a higher degree of standardisation and formalisation of activities, lower risk, more evolutionary changes and relying primarily on historical data. However, in a project, the degree of standardisation and formalisation of activities will be lower, the risks higher, the changes rather radical and the project team rather future-oriented. Thus, it can be thought that the project team, depending on the environment in which it is located, will develop a specific subculture relevant to the current conditions. The extent to which it will be done will be the greater, the more heterogeneous and variable its environment is.

3. Research methodology and data collection

The research method used for this study is the case study method. Since organisational subculture is always understood with reference to the organisational culture, which is broader than the organisational subculture, the case study will allow showing the functioning of the project team in a broader organisational context. In addition, the case study will show how the processes and behaviours of the project team members affect the project team context and, conversely, how this context affects the processes and behaviours of the project team members. Furthermore, the so-called multiple case study was used, in which cases are replicated so as to show both similarities and differences found in the phenomena studied and in their context. The case studies used various research techniques such as interviews, direct observation and participant observation as well as surveys. Thus, the relationship of the factors leading to the formation of the project team subculture with the occurrence of the project team subculture will be discussed based on two case studies. The case studies presented differ both in the formation of the factors that foster the development of the project team subculture and in the strength of the project team subculture. In the first case study, the subculture of the project team is strong while in the second one, it is weak.

As regards the interviews, the sponsors of two projects, the manager of each project and four members of each project team were interviewed. Each interview lasted about one hour. After each interview, the summaries of the interviews were prepared.

As for observation, in one project, it was non-participatory observation (the author of this paper was a consultant of the management board of the enterprise where the project was implemented) while in the other project, it was participant observation (the author of this paper was a member of the project team).

Finally, survey questionnaires were also distributed to those interviewed to identify the strength of the project team subculture. The project team subculture will be stronger when, as viewed from the perspective of project team members, there is a difference in a bigger number of dimensions of culture (up to seven possible dimensions of culture) between the project team and the rest of the organization. The seven equivalent dimensions of culture (i.e., employee autonomy, degree of formalisation, support given to subordinates, identification with the organisation, rewards for performance, acceptance of conflict and acceptance of risk) were based on a study conducted by Hopkins, Hopkins and Mallette (2005). With one difference, the subculture of the project team is weak whereas it is very strong with seven differences. No such differences between the project team and the organisation mean that there is no project team subculture. The respondents were two project managers and six members of each project team (most of whom were non-participants in the interviews). Finally, seven correctly completed survey questionnaires were obtained for each project.

First, an attempt was made to assess the strength of the subculture of each project team. Then, the importance of various factors that foster the formation of the project team subculture was discussed in each of the two projects. Thus, reference was made to the nature of the project, the organisational form of the project, project team members' education and qualifications, project team members' acceptance of work in a given project, the project environment, and the figure of the project manager.

4. Case studies

4.1. Case study 1 – a project in heavy industry

The first project was executed in heavy industry. The core business activity of the enterprise was the execution of repetitive processes carried out on a large scale. The enterprise's position was stable (*e.g.*, in terms of its revenue), its operations were and are highly formalised and its processes are subject to strict procedures. Hence, it is necessary to meet state standards and regulations. Despite the strong repetitive nature of the processes carried out, the organisation had a total of dozens of projects divided into large (strategic), medium and small projects. It can be said that the implementation of projects according to a structured approach has become an element built into the organisation and directed to support the main business processes,

both in the area of improving efficiency, introducing innovation and in the area of solving problems and responding to production and organisational challenges.

The selected project concerned the development of changes in the way the enterprise's production facilities operate in order to achieve process parameters (Key Result Indicator (KRI) and Key Performance Indicators (KPI)). The context for its introduction was to change the long-established practice of production management based on planning and holding production plants accountable for final production outputs measured in such quantifiable quantities as pieces, tons, etc. This long-established practice led to a situation where the performance of production tasks in most periods and production plants was precisely equal to the assumed annual plans. In addition, due to external factors, planned and obtained production volumes steadily declined on a year-to-year basis. What is more, given the multitude of external factors affecting production processes, in the managers' opinion, the described approach did not allow understanding whether a given plan was optimal or whether it was too unambitious or its implementation came at an excessive cost. For this reason, frequent were the questions asked by the members of the supervisory board, for example, about the efficiency of the management of the production process. This prompted the enterprise's management to initiate a project involving the development of a production management strategy based on KPI measures. Due to its strategic importance and the required high level of involvement of top managers, the project was given priority, with a lead time of several months. The responsibility for its various modules was assigned directly to the directors of each production plant. The issues of coordination and "facilitation" of the material preparation process were entrusted to a unit located at the enterprise's management. The project was implemented on the basis of a corporate methodology developed from the PMBOK library of best practices.

As far as the individual dimensions of culture are concerned, the project team differed from the rest of the organisation in terms of:

- the autonomy of project team members: the team included directly and indirectly the top management of all production plants reporting directly to the vice-president of the management board so the project team members had a very high degree of autonomy as to how to perform project tasks;
- the lower degree of formalisation of activities: when the whole organisation was characterised by a very high degree of formalisation, the way of performing project tasks was practically not regulated by any documents, except for very general guidelines for working out the various elements of the project. However, it should be noted that the final result of the project was to be a comprehensive written study describing a functional production strategy;
- the support given to subordinates: the role of the project manager usually focused on the implementation of the project scope, schedule and budget; however, during the work of the team, the project manager provided assistance by clarifying doubts, supported the flow of information and shared his/her knowledge of the functioning of the entire

organisation and the desired parameters of the production processes. While the project team members were very independent, they were eager to involve the project manager in their discussions of the solutions being developed;

- the acceptance of conflicts: within the team, there was a very high degree of the acceptance of conflicts that arose. It can be said that they were a direct result of the nature of the project, which aimed to give a single direction to the various production facilities. Before the project, the activities of many plants were divergent and subordinated to the individual ambitions of their directors. What is more, it is worth noting that some of them were people with very strong personalities. In order for the project work to continue, the inconsistent activities had to be mitigated at the level of the project work (the role of the project manager) and at the level of their immediate supervisor, i.e., the vice-president;
- the acceptance of risk: the risk was to take many members of the project team outside their current comfort zone. They always met annual production targets while the project involved, among other things, identifying new key operating parameters and setting ambitious goals over a multi-year horizon. The solutions formulated in this way thus diverged sharply from operating on the basis of an annual horizon and on the basis of the fact that it was previously almost 100 per cent confident that annual plans would be achieved.

As regards the other two dimensions of culture, it should be noted that the project team members did not differ from the rest of the organisation's employees in terms of identifying themselves with their work. Likewise, there was no additional remuneration for participating in the project (like in other projects, except for the cases in which project managers were hired from outside or were delegated to the project full-time). However, an annual discretionary bonus system was in place throughout the organisation. It offered the possibility of additional remuneration for people who, for example, were involved in additional project work next to their line functions.

As can be seen, the project team differed from the rest of the organisation in terms of the five dimensions of culture out of the possible seven dimensions. Therefore, there was an attempt to explain the occurrence of a relatively strong subculture of the project team by analysing the various factors contributing to its formation.

Thus, the first factor considered to foster the formation of the project team subculture can be presented in the following way. In the case of the following project properties:

- the innovation of the project: It entailed aligning, within a single strategy, the interests of individual production facilities both as to their direction and business parameters, identifying and measuring key performance indicators (KPIs) so that the system forms a coherent and logical whole depicting cause-and-effect relationships and formulating a schedule of tasks to be implemented in order to achieve the identified KPIs. While the approach to solving problems was new, there had been a number of similar

projects in the enterprises before. This prompts us to characterise the project as a derivative project (according to Shenhar and Dvir) involving improving existing solutions,

- the level of complexity of the project: the project concerned the improvement of existing business practices at a number of plants linked together in a production sequence. What was characteristic of the project was the multiplicity of stakeholders and the divergence of their interests, which – in Shenhar and Dvir's typology –would allow classifying the project as moderately complex or systemic;
- the pace of the project: the project was to be implemented over several months so that the results could be presented at a specific meeting of the supervisory board. From this point of view, the project can be categorised as a time-critical project as long as completing the project on time was not crucial for the competitiveness of the enterprise. However, the expectations of the management board concerning the project deadline were clearly defined and absolutely unbreakable;
- the level of technology of the project: the project referred to existing and already used technologies in the enterprise. New technological solutions resulted at most from the project's defined undertakings scheduled for implementation at a later date. Therefore, the uncertainty of project technology was very low.

According to the respondents, what made the implemented project different from the others and contributed to the formation of a unique – in their opinion – subculture of the project team was, in the first place, the high pace of the project (i.e., high speed of project implementation resulting from the critical time of its implementation). Furthermore, the analysed organisation was always characterised by relatively long-term planning and the high degree of formalisation, standardisation of activities and centralisation (i.e., the bureaucratisation of the enterprise) meant that even small projects were implemented over a long period of time. On the other hand, while the complexity of the project (it is a systemic project) should argue for a stronger subculture of the project team, there have been many other projects of this nature in the organisation and the project in question did not stand out from the others in this regard. This is because a large number of projects in the organisation had multiple stakeholders, consisting of many subgroups and subcontractors (often coming from outside the organisation) and were coordinated by a central, formalised project office.

Second, members firmly accepted working in a project team. This is because the project was carried out as an official order from the vice-president directly to his subordinates. Because of the rank, subject matter, somewhat innovative approach to the project and the requirement for the project manager's frequent reporting, the plant directors were heavily involved in the work. The team members' commitment required them to devote time to working out the various components of the project but this did not interfere with other current responsibilities, which – for a short time – receded into the background. The project was assigned the highest priority, which facilitated its implementation. Thus, the team members fully accepted the project's

typical way of working and values (*e.g.*, the flexibility of action, cooperation with others in a diverse environment, the need to share knowledge, learning, self-discipline and creativity). It should also be noted that the results of the project were strongly linked to the personal interests of many project team members (primarily the maintenance of their jobs in the long term). It was the high acceptance of working in a project team, the desire to attend all team meetings and the need "to have their finger on the pulse" that, according to the respondents, contributed significantly to the emergence of the project team subculture.

Third, the respondents pointed to the organisational form of the project. Its head served as a department director reporting directly to one of the vice-presidents of the management board (i.e., the sponsor). The project team consisted of the directors of each production plant also reporting directly to the sponsor. The project work at each manufacturing plant involved their top managers. In addition, the so-called "liaisons" were designated for operational and administrative work at the level of each production site, streamlining the transfer of data, arranging meetings and preparing materials, which greatly facilitated the project. In total, dozens of people participated in the project work. Using the forms of project organisation distinguished earlier, it can therefore be considered that the project was implemented in a line-staff structure. While this form of collaboration was not judged to be unique in the organisation, the project team, firstly, brought together individuals from the highest level of the hierarchy of the enterprise's organisational structure and, secondly, was highly interdisciplinary as it included individuals representing the entire value chain of the enterprise. According to the respondents, this specific composition of the project, induced by the organisational form of the project, translated into a unique set of norms and values adhered to by the project team, different from the one found in the organisational culture.

As for the education and qualifications of the project team members, it should be noted that the project team members differed significantly from other employees of the enterprise. First of all, the project manager had extensive experience both in implementing projects involving all production plants and in understanding the business processes at each production plant, which allowed him to both efficiently coordinate the work and act as a facilitator and challenger in the development of the document. Secondly, the team consisted of production plant managers who had both technical expertise (also required by law) and management expertise confirmed by years of experience in managerial positions. The same was true of plant-level work teams. They consisted of senior managers and "liaisons" who served as the "right hand-men" of plant directors and were characterised by excellent knowledge of their organisations. Third, the project required educating the team on both the implementation approach (the strategy development process) as well as its individual elements (including, but not limited to, goal setting, strategic analysis, KRI and KPI parameter system, etc.). Fourth, the project was implemented with the support of an external company that both provided the implementation approach as well as provided the necessary training for the team and acted as a facilitator in discussions at the plant level and ensured that the work and results of the project

were consistent across the enterprise. In summary, the members of the project team had education and qualifications different from those which other employees of the organisation had. Thus, the respondents again stated that while people from outside the organisation were not included in the project team and no training was provided for the acquisition of skills related to the implementation of project tasks, the education and qualifications of the team members were justified the formation of a specific subculture.

According to the respondents, the formation of the subculture was not influenced by the figure of the project manager and the project environment. When the project manager started the project, he had already served for several years as a department director responsible, among others, for improving the efficiency of production. He also reported directly to the vice-president of the management board. The appointment as the project manager involved neither vertical nor financial advancement. His authority stemmed from his reporting directly to the vice-president of the management board (the sponsor), as well as his recognition at production sites as a result of previous projects. He also enjoyed the confidence of both production plant directors and top managers. As a result, he acted as both the coordinator of the work, the moderator and the aforementioned challenger during the content-related discussions. The sponsor's decisions were made following the project manager's recommendations. However, in the assessment of the influence of the figure of the project manager on the formation of the project team subculture, it should be noted that according to the respondents, the project manager's ability to influence the project team was relatively low. He had a weaker position in the line organisation compared to the project team members (in the rank of directors higher up the organisational structure hierarchy) and, although the norms and values he represented could be the basis for creating an organisational subculture, he did not strongly influence the norms and values of the project team members.

Finally, as regards the environment, its elements were relatively stable. The project team included the division of one of the vice-presidents of the management board. However, throughout the project and its importance for the production processes, a group of new internal stakeholders became active, mainly from support functions outside the production division. This had a twofold dimension. On the one hand, it became clear that the projected changes in production required changes and the involvement of other support functions and their confirmation of the implementation capabilities. However, on the other hand, there was a need to make the approach and action plan more consistent for those support functions that had already planned and implemented their own changes independently of project implementation. Hence, during the implementation of the project, it proved necessary to identify points of contact with other areas of the organisation and jointly develop an action plan. Overall, the project was characterised by the moderate uncertainty of the high complexity of the environment (it was stable and heterogeneous – i.e., it was complex), which, according to the respondents, was not crucial for the formation of the subculture of the project team.

4.2. Case study 2 – a project in the consumer goods industry

The second project was carried out in the Polish branch of an international enterprise involved in producing and promoting consumer goods, including household goods, medicines, and personal care products. The enterprise in question has dozens of production facilities and sells its products worldwide. The enterprise's operations have been and continue to be highly repetitive, dominated by mass production on automated production lines in a three-shift system. Due to the nature of production, the implementation of projects according to a structured approach was – at least in the Polish branch – very sporadic. The project in question consisted of launching the production of a new type of household chemicals, which was later to be sold on the European market. The project manager used a very general definition, schedule and budget for the project and it can be said that his conduct was largely intuitive.

As far as the individual dimensions of culture are concerned, the project team differed from the rest of the organisation in terms of:

- the autonomy that members of the project team had: they made their own decisions on how to set up the production line, they conducted experiments on their own and they learned from many mistakes;
- a lower degree of formalisation of activities: the activities implemented in the project were not regulated in any way;
- the acceptance of risk: the members of the project team took relatively high risks because there was very little time between finding a technological solution and implementing it in mass production. Thus, there was no question of long tests, trials, etc. The team's work could therefore have ended in a major failure and costly production line downtime.

As regards the other dimensions of culture, project team members were no different from the rest of the organisation's workforce. First, both in the repetitive activities of the enterprise (i.e., the production of household chemicals on production lines) and in the project, the employees were supported by their superiors. The project manager was always available to the project team members and they could count on his assistance. It can be said that management's availability to rank-and-file employees has been an enduring part of the enterprise's organisational culture. Second, the project team members were no different from the rest of the organisation's workforce in terms of identifying themselves with their work. The work they did in the project was as important to them as the organisation they worked for. It should be noted that the main reason for working in the manufacturing plant as well as in the project team, according to the interviewee, was the salary received. Third, conflicts were not accepted both inside and outside the project team. Differences of opinion were unlikely to arise or were not communicated by the employees. The deciding vote was always given to the supervisor – the line manager or, in the case in question, the project manager. Fourth, there was no additional compensation for project performance. This was in accordance with the

enterprise's policy that employees were paid according to the enterprise's prevailing wage scale. There was no bonus tied to the enterprise's performance.

As can be seen, the project team differed from the rest of the organisation in terms of three dimensions of culture out of the possible seven dimensions. This indicates the presence of a relatively weak project team subculture. An attempt was made to account for the weakness of the project team subculture by analysing individual factors.

In the case of the properties of the project, the factors that foster the development of the project team subculture were as follows:

- the innovation of the project: there were and still are more than a dozen types of similar products in the organisation's offer but the new product was characterised by the use of a different component that facilitated the production process and gave the end user a better quality of washed dishes. This was a pioneering solution as no manufacturer of dishwasher tablets had yet used it. On this basis, it can be concluded that the project was of platform character;
- the level of the complexity of the project: the project was an assembly project. It was performed within a single department (the production department), with the intensive exchange of information mainly among its employees, without administrative staff and special paperwork or documentation. The project manager focused on costs, quality and getting production up and running relatively quickly;
- the pace of the project: the project had to be completed quickly, within a few weeks. Completing the project on time was essential for the enterprise's competitiveness and its position as a leader as no one in the market had yet offered such a solution. In Shenhar and Dvir's typology, it allows classifying the project as fast or competitive;
- the level of project technology: the project had a medium level of technological uncertainty. The project team was tasked with developing a new technology for combining existing product ingredients with a new, innovative component. The technology was unknown and had yet to be developed during project work.

What can be regarded as the main factor conducive to the formation of the project team subculture is the properties of the project – its innovation, pace and technological uncertainty. According to the respondents, the project was something unique in the analysed organisation and strongly differed from repetitive production processes. The tasks carried out in the project required autonomy, a low degree of formalisation of activities and risk-taking, which stood in contrast to the norms and values of the process part of the organisation.

The emergence of a specific project team subculture and its functioning in the enterprise was attributed by the respondents secondarily to the person of the project manager. The project manager was the quality director. This person had worked at the plant for several years and had been in management for about two to three years. He enjoyed great authority among all the employees. The source of this authority was mainly his personality as the quality director was a very professional but – at the same time – a very warm and likeable person. Hence, while the

project manager's formal authority was high, it was coupled further with his knowledge and experience gained within the organisation. Naturally, the duties of the project manager and quality director had to be carried out simultaneously. However, as the respondents viewed it, in the case of the project manager who is simultaneously "entrenched" in the line structure, his authority is based not only on the authority he has been given to implement the project but also on the potential power he enjoys in the line structure. Thus, he is not a "temporary" figure for the project team members; he can often be their line supervisor and effectively seek the resources necessary to complete the project. As a result, he not only has a more significant impact on his subordinates than a project manager dedicated solely to project management but, by increasing the chances of project success, he also gets people more involved in the team.

Ultimately, from the perspective of the respondents, the different norms and values in the project team may have developed in certain isolation from the daily performance of duties thanks to the organisational form of the project. In addition to the project manager – the quality director, the project team consisted of the production manager, production line workers and quality department employees – a total of fifteen people. The team, including the project manager, was subordinate to the plant management. Thus, given its location in the organisational structure, it might be stated that there was the project organisation in a line structure with a separate project team (task force) to facilitate cross-functional work.

Other factors that foster the formation of the project team subculture were rated relatively low by the respondents. This means that in the case of:

- the education and qualifications of the project team members, it should be noted that the project team members were no different from other employees of the enterprise. The project manager selected the most conscientious people for the team from the production staff, who he was confident would fully commit to the project team after their working hours. There was no project-related training in the project. Nor were people from outside the organisation included in the project;
- the acceptance of working in a project team: the interviewees said that participation in the project team came with additional compensation, which was the main motivator for their involvement in the project. Project work was not perceived by anyone as a distinction or something attractive. The team also met on Saturdays, which was quite a burden for the employees working three shifts. The young production manager and the quality director could be considered the people most involved in the project. The project was challenging but they also found it interesting, allowing them to develop their creativity, learn more about the plant and processes, expand their management knowledge and test it in practice;
- the environment: due to the short duration of the project, it could be considered stable and simple. During the execution of the task, not even once was the team confronted with a change in external conditions or, for example, problems brought by new previously unaccounted-for stakeholders.

5. Concluding remarks

The case studies presented above have illustrated the factors that foster the formation of the project team subculture and, based on interviews and questionnaires, allowed assessing the importance of these factors for forming this subculture. Thus, in the first case study, the formation of the project team subculture was fostered primarily by such factors as the properties of the project (in particular, its pace), followed by the acceptance of working in the project team, the education and qualifications of project team members and, ultimately, the organisational form of the project. On the other hand, according to the respondents, in the household chemical manufacturing project, the essential factors were the properties of the project, the figure of the project manager and the organisational form of the project.

While the organisational structure has long been regarded as a factor that fosters the emergence of organisational subcultures (Maanen, Barley, 1985; Trice, Beyer, 1993; Boisnier, Chatman, 2003; Schreyögg, Geiger, 2016; Schein, 2017), project properties, according to the respondents, seem to foster the emergence of project team subcultures to varying degrees. The strength of the project team subculture can therefore vary as each project is a new constellation of management challenges and the project management process cannot be reduced to the repetition of familiar steps and procedures. Hence, as the case studies show, organisations can have both project teams whose norms and values will be close to the organisational culture and project teams that differ from the organisational culture in many ways.

Secondly, the research conducted indicates a possible link that exists between the authority or power of the project manager and the presence of the project team subculture. However, this is not just about the manager's authority with regard to project management but the authority he or she enjoys within the organisation. Hence, the power of any project manager is also dependent on the support he or she obtains for the project (Prosci, 2018). In addition, the authority of any project manager may depend on whether he or she is a line employee, whether he or she is also a line manager in the organisation where the project is being implemented or whether he or she comes from outside the organisation (Kamiński, 2022). It can be assumed that the project manager, who is at the same time "entrenched" in the line structure, whose authority is based not only on the authority he has been given to implement the project but also on the potential power he enjoys in the line structure, will have a greater ability to shape the subculture of the project team. This is because he is not a "temporary" figure for the project team members; he can often be their line supervisor and effectively seek the resources necessary for the project. As a result, not only does he have a more significant impact on his subordinates but, by increasing the chances of project success, he also gets people more involved in the team.

Thirdly, while the respondents in the household chemical manufacturing project did not attribute much importance to the issue of the acceptance of working in a project team, the heavy industry project members attributed critical importance to it (acceptance) in forming a strong project team subculture. Thus, it remains an open question to what extent the weak subculture of the project team in the household chemical manufacturing project is precisely the result of the weak acceptance of the project work by those involved.

Fourthly, as it might be assumed, the education and qualifications of project team members should be addressed in an analogous way as a factor that contributes to the formation of a project team subculture. Indeed, the selection of people for the project team from among the organisation's employees, the low diversity of the team, and the lack of training or people coming from outside the organisation may have contributed to the weak subculture of the household chemistry project team.

Finally, the case studies presented in this paper have not provided answers to the question of to what extent the dynamics and complexity of the project environment are essential factors. In both cases, the project environment was not strongly different from that of the organisation, which contributed to the respondents' assessment of the project in this way.

In conclusion, it should be noted that the case studies presented above have illustrated the existence of the project team subculture. This is because in the organisations under consideration, the norms and values in the project team differed from those found in the organisational culture. These differences were the stronger, the stronger the shaping of the factors favouring the emergence of the subculture of the project team was. This means that, as might be assumed, if individual projects are unique, searching for norms and values in the project team is more relevant than making general recommendations at the project management subculture level or the organisational culture level, as mentioned in the introduction. The subculture of the project team thus becomes a level of analysis that is difficult to ignore and should be a permanent part of the study of cultural aspects of project management.

References

1. Aguilera, A., Alba, D. (2018). Designing an Organizational Culture Model in the Projects Environment: A Constructivist Approach. *CES Psicología*, *Vol. 11, Iss. 1*, pp. 118-133.
2. Aronson, Z.H., Lechler, T.G. (2006). *Coexistence and Role of Adaptive and Unadaptive Cultures in Project Success*. Conference: Academy of Management Conference.
3. Aronson, Z.H., Lechler, T.G. (2009). Contributing beyond the call of duty: examining the role of culture in fostering citizenship behavior and success in project-based work. *R&D Management*, *Vol. 39*, *Iss. 5*, pp. 444-460.

4. Belassi, W., Kondra, A.Z., Tukel, O.I. (2007). New Product Development Projects: The Effects of Organizational Culture. *Project Management Journal*, *Vol. 38*, *No. 4*, pp. 12-24.
5. Benner, M., Tushman, M. (2003). Exploitation, Exploration, and Process Management: The Productivity Dilemma Revisited. *The Academy of Management Review*, *Vol. 28*, *No. 2*, pp. 238-256.
6. Bloor, G., Dawson, P. (1994). Understanding professional culture in organizational context. *Organization Studies*, *Vol. 15*, *Iss. 2*, pp. 275-295.
7. Boisnier, A., Chatman, J. (2003). The role of subcultures in agile organizations. In: R. Peterson, E. Mannix (Eds.), *Leading and managing people in the dynamic organization* (pp. 87-112). Mahwah: Lawrence Earlbaum Associates.
8. Cha, S.E., Edmondson, A. (2001). *How strong organizational values can inhibit learning. Working paper*. Cambridge, MA: Harvard University.
9. Collyer, S., Warren, C. (2009). Project Management Approaches for Dynamic Environments. *International Journal of Project Management*, *Vol. 27*, *Iss. 4*, pp. 355- 364.
10. Du Plessis, Y., Hoole, C. (2006). An operational 'project management culture' framework (part 1). *SA Journal of Human Resource Management*, *Vol. 4*, *No. 1*, pp. 36-43.
11. Fellows, R.F., Grisham, T., Tijhuis, W. (2007). Enabling project team culture. In: M. Saxton, K. Kähkönen, S.L. Lu (Eds.), *Organisation and Management of Construction Perspective. CIB Priority Theme – Revaluing Construction: A W065,* CIB Publications (pp. 27-44), No. 313. CIB Rotterdam: Salford University.
12. Firth, G., Krut, R. (1991). Introducing a Project Management Culture. *European Management Journal*, *Vol. 9*, *No. 4*, pp. 437-443.
13. Graham, J.W. (1986). Principled organizational dissent: A theoretical essay. In: B.M. Staw, L.L. Cummings (Eds.), *Research in Organizational Behavior* (pp. 1-52), *Vol. 8*, Greenwich, CT: JAI Press.
14. Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological theory*, *Vol. 1*, pp. 201-233.
15. Gray, C.F., Larson, E.W. (2011). *Project Management – The managerial process*. New York, NY: McGraw-Hill/Irwin.
16. Grzesik, K., Piwowar-Sulej, K. (2013). Kierownik projektu - menedżer czy przywódca? *Zeszyty Naukowe Wyższej Szkoły Bankowej we Wrocławiu*, *Vol. 36*, *Iss. 4*, pp. 97-114.
17. Grzesiuk, K. (2015). *Zakorzenienie społeczne gospodarki. Koncepcja Marka Granovettera*. Lublin: Wydawnictwo KUL.
18. Hammer, M. (1998). Dusza nowej organizacji. In: F. Hesselbein, M. Goldsmith, R. Beckhard (Eds.), *Organizacja przyszłości* (pp. 41-47). Warszawa: Business Press.
19. Hopkins, W.E., Hopkins, S.A., Mallette, P. (2005). *Aligning organizational subcultures for competitive advantage: a strategic change approach*. New York, NY: Basic Books.

20. Jałocha, B. (2019). Projektyzacja jako przedmiot badań w ramach studiów nad projektami. *Przegląd Organizacji*, *No. 8*, pp. 34-41.
21. Jędrych, E., Pietras, P., Szczepańczyk, M. (2016). *Skuteczny project manager. Jak w sposób sprawny i efektywny realizować postawione zadania o charakterze projektowym*. Łódź: Wydawnictwo Politechniki Łódzkiej.
22. Kamiński, R. (2020). Czynniki kształtujące siłę subkultury zespołu projektowego. *Zeszyty Naukowe Politechniki Poznańskiej. Organizacja i Zarządzanie*, *No. 81*, pp. 73-91, doi: 10.21008/j.0239-9415.2020.081.06.
23. Kamiński, R. (2020). Wpływ formy organizacji projektowej na subkulturę zespołu projektowego. In: E. Sońta-Drączkowska, I. Bednarska-Wnuk (Eds.), *Wybrane aspekty zarządzania procesami, projektami i ryzykiem w przedsiębiorstwach* (pp. 191-203). Łódź: WUŁ. doi: 10.18778/8220-331-8.14.
24. Kamiński, R. (2021). *Subkultura zespołu projektowego*. Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej.
25. Kamiński, R. (2022). Project manager type and project success. *Zeszyty Naukowe Politechniki Śląskiej. Organizacja i Zarządzanie*, *No. 157*, pp. 195-206, doi: 10.29119/1641-3466.2022.157.12.
26. Kanter, R.M. (1998). Pozyskiwanie ludzi dla organizacji przyszłości. In: F. Hesselbein, M. Goldsmith, R. Beckhard (Eds.), *Organizacja przyszłości* (pp. 159-172). Warszawa: Business Press.
27. Kendra, K., Taplin, L. (2004). Project Success: A Cultural Framework. *Project Management Journal*, *No. 35*, pp. 30-45.
28. Kerzner, H. (2001). *Strategic planning for project management: using a project management maturity model*. New York, NY: John Wiley & Sons.
29. Kets de Vries, M., Miller, D. (1984). Neurotic Style and Organizational Pathology. *Strategic Management Journal*, *Vol. 5*, pp. 35-55.
30. Kopczyński, T. (2013). Zarządzanie projektami na tle wzrastającej złożoności i dynamiki otoczenia. *Nauki o Zarządzaniu [Management Sciences]*, *Vol. 4*, *Iss. 17*, pp. 73-82.
31. Kopczyński, T. (2016). Podejście sytuacyjne w zarządzaniu projektami. *Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu. Sieci międzyorganizacyjne, procesy i projekty w erze paradoksów*, *No. 421*, pp. 255-263.
32. Lichtarski, J.M. (2008). Barriers of Project Structures' Development. *Management*, *Faculty of Economics and Management Press*, *Zielona Góra*, *Vol. 12*, *No. 2*, pp. 108-119.
33. Lichtarski, J.M. (2018). Project-Driven Heterarchy: An Empirical Study On Project Teams' Learning Abilities And Creativity. *European Project Management Journal*, *Vol. 8*, *Iss. 1*, pp. 10-16.
34. Maanen, J. van, Barley, S. (1985). Organizational Culture: Fragments of a Theory. In: P. Frost, L. Moore, M. Louis, C. Lundberg, Martin J. (Eds.), *Organizational Culture* (pp. 31-53). Beverly Hills, CA: Sage.

35. Marek-Kołodziej, K., Łapuńka, I., Jagoda-Sobalak, D. (2018). Model kompetencji kierownika projektu według najnowszych wytycznych IPMA Project Execellence Baseline 4.0. *Marketing i Zarządzanie, Vol. 51, Iss. 1*, pp. 259-268, doi: 10.18276/miz.2018.51-25.
36. Martin, J., Siehl, C. (1983). Organizational culture and counterculture: An uneasy symbiosis. *Organizational Dynamics*, *Vol. 12*, *Iss. 2*, pp. 52-64.
37. Meyer, J., Allen, N. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, *Vol. 1*, *Iss. 1*, pp. 61-89.
38. Mingus, N. (2002). *Zarządzanie projektami*. Gliwice: Helion.
39. Morrison, J.M., Brown, C.J., Smit, E.M. (2008). The impact of organizational culture on project management in matrix organizations. *South African Journal of Business Management*, *Vol. 39*, *No. 4*, pp. 27-36.
40. Nguyen, L.H., Watanabe, T. (2017). The Impact of Project Organizational Culture on the Performance of Construction Projects. *Sustainability*, *Vol. 9*, *Iss. 5*, pp. *781*-802.
41. O'Reilly, C.A., Chatman, J.A. (1996). Culture as social control: Corporations, cults, and commitment. In: B.M. Staw, L. Cummings (Eds.), *Research in Organizational Behavior, Vol. 18* (pp. 287-365). Stamford, CT: JAI Press.
42. Prosci (2018). *Best Practices in Change Management - 2018 Edition*. Prosci.
43. Rose, R.A. (1988). Organizations as multiple cultures: A rules theory analysis. *Human Relations*, *Iss. 412*, pp. 139-170.
44. Schein, E.H. (2017). *Organizational Culture and Leadership.* Hoboken, New Jersey: Wiley.
45. Schreyögg, G., Geiger, D. (2016). *Organisation: Grundlagen moderner Organisationsgestaltung. Mit Fallstudien.* Wiesbaden: Springer Gabler.
46. Shenhar, A.J., Dvir, D. (2008). *Nowe spojrzenie na zarzadzanie projektami*. Warszawa: APN Promise.
47. Stare, A. (2012). The impact of a project organisational culture and team rewarding on project performance. *Journal for East European Management Studies*, *Vol. 17*, *Iss. 1*, pp. 40-67.
48. Stead, D. (2010). *Improving project success: managing projects in complex environments and project recovery*. Paper presented at PMI® Global Congress.
49. Świętoniowska, J. (2015). Podejście kontekstowe w zarzadzaniu projektami. *Studia Ekonomiczne. Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach*, *Vol. 2016*, pp. 118-134.
50. Szeptuch, A., Dyla, S. (2015), Wpływ kultury organizacyjnej na pracę w zespole projektowym. *XVIII Konferencja Innowacje w Zarządzaniu i Inżynierii Produkcji. Zakopane*. Retrieved from www.ptzp.org.pl/files/konferencje/kzz/artyk_pdf_2015/T1/t1_0316.pdf, 19.10.2020.
51. Szpitter, A. (2013). *Zarządzanie wiedzą w tworzeniu innowacji: model dojrzałości projektowej organizacji*. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.

52. Thomas, R., Marossezeky, M., Karim, K., Davis, S., McGeorge, D. (2002). The importance of project culture in achieving quality outcomes in construction. *Proceedings of the IGLC-10*, pp. 1-13.
53. Trejderowski, T. (2009). *Socjotechnika. Podstawy manipulacji w praktyce.* Warszawa: ENETEIA.
54. Trice, H.M. (1993). *Occupational subcultures in the workplace*. New York, NY: ELR Press.
55. Trice, H.M., Beyer, J.M. (1993). *The cultures of work organizations*. Englewood Cliffs, NJ: Prentice Hall.
56. Trocki, M. (2009). *Organizacja projektowa*. Warszawa: Bizarre.
57. Wang, X. (2001). Dimensions and Current Status of Project Management Culture. *Project Management Journal*, *Vol. 32*, *No. 4*, pp. 4-17.
58. Wozniak, S., Łokaj, A. (2009). Mały garaż na uboczu korporacji. *Magazyn HBRP*, *No. 82/83*.
59. Zbiegień-Maciąg, L. (2005). *Kultura w organizacji. Identyfikacja kultur znanych firm*. Warszawa: PWN.
60. Zuo, J., Zillante, G. (2006). Project Culture – The X Factor for Achieving Optimum Performance in Construction Projects? *Construction Information Quarterly*, *Vol. 8*, *No. 4*, pp. 173-177.