

PROJECT MANAGEMENT AND EMPLOYEES' INDIVIDUAL POTENTIAL

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Purpose: Employees' membership of project teams is seen as one of the ways, in which the individual potential is shaped. The objective of the article is to demonstrate the influence of the characteristics of project organizational culture on shaping the characteristics of employees' individual potential.

Design/methodology/approach: The review of the literature served as the basis for identifying the characteristics of project organizational culture. The research hypotheses describing the influence of the characteristics of project organizational culture on striving for perfection, curiosity, perceptiveness, commitment and determination were formulated. The research hypotheses were verified in the course of the empirical studies (questionnaire survey) carried out in December 2019 in 270 enterprises functioning in the USA.

Findings: The positive relationship between the characteristics of project organizational culture with the characteristics of individual potential was indicated. This shows the possibility of making use of project teamwork for the needs of shaping the employee's individual potential.

Research limitations/implications: Both the assessment of the norms and values of the organizational culture and the assessment of the norms and values of the project team were carried out each time by the project manager. Also, the assessment of the potential of employees in the project team and outside it was performed by the same project manager.

Practical implications: Employee participation in the project team can be considered a potential tool for staff development. The socialization of norms and values, that are typical for the project organizational culture, contributes to the growth of the individual potential of employees.

Social implications: The growing importance of projects in the activities of an organization is currently referred to in the literature as projectification, which means institutionalization of projects at all levels of social structures. Once again, the importance of variable project teams (and not stable, e.g. hierarchical, structures) for shaping the employee's high potential is emphasized.

Originality/value: A specific role of a project team for human resources development has been identified. Employee participation in the project team can be considered not only as a potential tool for staff development, but also as factor that shapes employees' individual potential.

Keywords: project team, project organizational culture, organization, management.

Category of the paper: Research paper.

1. Introduction

In the scholarly literature, the employee's individual potential is understood as the ability to adapt and develop in the face of new challenges resulting from a more and more dynamic environment (Fernández-Aráoz, 2014; Hofrichter, Spencer, 1996; van Staden, 2015; Zdonek, Wolny, 2015) or as personality properties, abilities, emotions and talents as well as the employee's attitude, behaviour, readiness to take up new tasks and duties (Hysa, Grabowska, 2017; Zdonek, Wolny, 2015).

The scholars cited above also claim that organisation survival and development will depend on employing employees with high potential or on shaping and developing their potential. For instance, Zdonek, Wolny (2015) present a research model describing the employee's potential consisting of the variables related to competences and psychological and social variables whereas other authors, such as, for example, Szałkowski (2002) or Moczyłowska (2010), focus on the process of developing the human potential of an individual person. This process concerns the regular accumulation of specialised knowledge and professional skills as well the perfection of employees' behaviours and motivation which are necessary for carrying out the present and future tasks of the organisation (Szałkowski, 2002). The effect of this process is the growth of the competences which are useful for the development of the organisation.

The process of the development of employees' individual potential is usually related to training sessions, managerial staff development programmes, mentoring and coaching, funding further studies and foreign language education (Żukowska, 2012). As observed by Kunasz (2007), the number of training methods is quite large. They can be of individual and collective character and can be administered both in a workplace as well as outside it. Furthermore, Kunasz additionally reviews the "on the job" training methods, among which he describes the employee's participation in project work as a training method. Thus, participating in project work involves assigning a trainee to a given task team working on a given project for some time. The trainee, who participates in project work, has the opportunity to gain new specialised knowledge in various fields (by solving specific problems) and to practise his/her interpersonal skills related to communication with other employees in the project team (Kunasz, 2007). Thus, it is assumed that the participation in the project team raises the employee's individual potential and the employees who are the members of project teams are characterised by their higher individual potential than the employees who do not belong to such project teams. While the relation presented above seems to be highly probable, it requires verification on the basis of empirical studies. The empirical studies conducted so far have been related, most of all, to projects in one organisation (e.g. Zhang, Yu, Lv, 2017). This served as an incentive to carry out studies on a larger research sample. Those studies were related, among others, to the

evaluation of the individual potential of the members of project teams as well as to the evaluation of the characteristics of project organisational culture.

The objective of this article is to demonstrate the influence of the characteristics of project organisational culture on shaping the employees' individual potential. In the first part of the article, based on the literature review on this topic, the characteristics of project organisational culture are identified. The second part of this paper presents the characteristics of the employee's individual potential. In the third part, the characteristics of project organisational culture are linked to the characteristics of the employee's individual potential. There, the research hypotheses are formulated. In the final – fourth – part, the research hypotheses are subjected to verification on the basis of the outcome of the empirical studies.

2. Page setup, formatting, notes – first level numbering

Already in 1982 Cleland stated that in the cultural context, project management is a complex entirety which encompasses knowledge, beliefs, skills, attitudes and other abilities as well as habits acquired by people who are members of some project community (Cleland, 1982). Likewise, as observed by, for example, Larson and Gray (2003), project heads have to shape project culture which stimulates teamwork and the high level of personal motivation as well as the ability to identify and solve project work-threatening problems fast. As a result, in the literature on this subject, many authors have attempted to determine the dimensions and characteristics of project organisational culture (Firth, Krut, 1991; Thomas, Marossezeky, Karim, Davis, McGeorge, 2002; Wang, 2001; Zuo, Zillante, 2006; Du Plessis, Hoole, 2006).

In their study, Firth and Krut (1991) contrast project culture with hierarchy culture. Project culture is characteristic of the organisation functioning in a dynamic environment which makes it possible for the organisation to adapt to new conditions in a fast and easy manner. This, as the above-quoted authors state, differentiates project culture from hierarchy culture which works well in a stable environment, when tasks and activities are repeatable and the aim is not adaptation but cost reduction. Thus, Firth and Krut distinguish the following characteristics of project culture: changes are made abruptly, facing challenges is what counts, work is of non-repeatable character, employees have many duties, work is organised around tasks, management covers the employees of various hierarchy levels, future orientation dominates, the position depends on the type of tasks performed, a limited number of principles regulate project team members' work, task teams' meetings dominate, the way of information flow depends on the needs, authority is the result of sharing knowledge with others and is dependent on the ability to cooperate with others.

In the subsequent studies, the authors relied on the competing values framework (Thomas, Marossezeky, Karim, Davis, McGeorge, 2002). While studying the Australian construction industry in terms of quality management, they concluded that the projects which achieve the results higher than average showed strong orientation towards market culture whereas clan culture was poorly emphasised¹. However, as regards quality, the projects which were characterised by the results above the average had more poorly distinguished values typical of market culture and, at the same time, had strong clan culture values. In such project “clan” culture, the emphasis was put on team cohesion, consensus and morale. Moreover, the project heads who were the mentors for project team members or who were described as “facilitators” were preferred.

In his studies, Wang (2001) searched for the key dimension of the professional culture of project management as well as the values and beliefs of professionals dealing with project management (project management culture, as he viewed it, is a set of values and benefits related to work, which are shared by project management specialists). As a result of a statistical analysis, four dimensions of project organisational culture were identified. They include:

- identification with the profession of a project head, which involves the willingness to have a career in the field of project management, identification with other project heads as a professional group, performing tasks related to project management in the time reserved for it,
- project team orientation, which involves the identity of the project team, knowledge-based influence, informal process-based team functioning,
- work flexibility, which involves no description of job positions and employees’ autonomy,
- result orientation and not human relation orientation.

As observed by Wang (2001), the identified dimensions are related to the values which are typical of project management and which have been described in the literature. It means that:

- project management is horizontal management which is significantly different from tradition management typical of highly hierarchised organisations. Thus, employees are more oriented towards tasks than towards their superiors and their status results from what they do rather than from who they are,
- project management is oriented towards teamwork, in which people depend on one another and cooperate; individuality and mutual competition are not preferred,
- project management is oriented towards change – the relations are temporary, uncertainty and change are considered to be something natural; speed and flexibility are stressed,
- project management is oriented towards results – the aim is to execute the entirety of the project.

¹ However, in their study, the above-cited author did not provide any information about how they evaluated projects in terms of quality management.

Du Plessis and Hoole (2006) defined project organisational culture in the following way: [Project organisational culture] *reflects the way projects are conducted as work by interdependent project team members in an organisational setting that supports project principles and practices to ensure focused delivery of results within a set time frame, budget constraints and with customer satisfaction (p. 37)*. Based on the literature review, questionnaire studies and concept mapping session with the participation of project heads, the above-quoted scholars determined the dimensions describing project organisational culture. They are as follows:

- strong orientation towards interpersonal relations – the relations (mutual understanding) among team members, customers and suppliers are seen as essential for the success of the project,
- team orientation – the level of project management and activities related to work is organised around groups and not around units,
- managerial staff's/stakeholders' commitment – stakeholders, including managerial staff, commit themselves, through active participation and support, to strive to complete the project successfully,
- interdependence orientation – the units in the organisations are encouraged to act in a coordinated or interdependent way,
- control and discipline – employees' behaviours are highly supervised and controlled,
- risk orientation – the level to which project environment encourages its participant to be innovative and take the risk in order to be successful,
- learning orientation – projects are seen as a chance to learn and to continually perfect the course of action,
- conflict tolerance – employees are encouraged to express their criticism and solve conflict situations,
- result orientation – the managerial staff and team members concentrate more on achieving the goal rather than on the means and methods of the course of action. For instance, the status in the organisation is less dependent on the organisation role which an individual has and it is more determined by the results which are achieved individually or in a team,
- open-system focus – project team members monitor and respond to the changes in the external environment,
- open communication – stakeholders communicate openly and share the information about the project, its problems, changes, successes and failures,
- the use of project management methodology – project heads adhere to project management processes and make use of project management tools.

According to Zuo, Zillante and Coffey (2006), project culture derives from organisational culture. While organisational culture is developed by higher-level managerial staff, project culture can be established both by higher-level managerial staff, project management office as well as project teams. Project culture affects project processes and relations among project team members. It is based on the attitudes and behaviours of project team members. Finally, the above-cited scholars distinguish five dimensions of project culture. They are as follows:

- integration – various parties participating in the project are included in its execution,
- cooperation – during project execution, there are few conflicts and emphasis is put on directing various project participants towards project goals. Teamwork is popular and project participants willingly cooperate,
- goal orientation – attention is paid, most of all, to performing work while the way in which the goal will be achieved is of secondary importance,
- flexibility – the way of project execution is very flexible; an innovative approach, including risk-taking, is supported and rewarded,
- people orientation – of high priority is developing team members' skills; culprits are not looked for; success is celebrated.

The influence of particular dimensions of project culture on the results obtained by the project was studied with reference to the following four dimensions:

- economics – commercial success, future business opportunities,
- continuous perfection – satisfaction with the course of action of project execution, conclusions drawn from the project,
- relations – satisfaction with relations with other parties,
- overall performance.

The results of the studies carried out by the above-quoted scholars show that the dimensions of project culture such as integration, cooperation or people orientation affect positively the results obtained by the project. Curiously enough, project culture which is oriented towards the goal and which is flexible negatively correlated with the results obtained by the project. Based on the results obtained and in the course of the interviews held, Zuo, Zillante and Coffey (2009) offered a model of project culture. It is composed of the following twelve characteristics: fulfilling the customer's needs (both those overt and covert), good interpersonal relations, readiness to help one another, teamwork, the equality of all parties in the project, shared values and goals, considering other parties' interests, effective communication, rewarding for cost reduction, respect and trust, top management's support, clear division of tasks, rights and responsibilities.

However, Nguyen and Watanabe (2017) identified five dimensions of project organisational culture in construction projects. They include:

- project goal orientation – it includes the clear and unambiguous specification of project goals, task division, consensus, information exchange, support for the project head, mutual trust, project supervisors' commitment,
- project executor's goal orientation – the executor commits himself/herself to meet project quality requirements, completion deadline and budget,
- cooperation orientation – the presence of the benefits resulting from the involvement in the project, interactions during work, openness and mutual trust, the exchange of ideas and support, the unambiguous assignment of responsibility, achievement recognition, customers' adherence to the terms and conditions of the agreement, involvement in decision-making,
- empowerment orientation – awarding the necessary rights to perform tasks, encouraging to make decisions, leaders' support,
- employee orientation – employee training, respecting employees, taking care of employees.

The authors mentioned above determined the influence of the identified dimensions of project organisational culture on the results obtained in the course of construction project management. They concluded that the higher project goal orientation, executors' commitment and employee orientation are, the higher project team members' satisfaction and the overall effectiveness of the project are.

On the whole, the models presented above point, most of all, to the following characteristics of project organizational culture:

- project goal orientation – strong subordination of all activities in the project team to the satisfaction of key stakeholders, timely implementation of the project scope in accordance with the budget.
- project teamwork and cooperation orientation – people depend on one another and cooperate, individuality and mutual competition are not preferred,
- openness and free information flow on the project team level – members of project team communicate openly and share the information about the project, its problems, changes, successes and failures,
- project members' and stakeholders' commitment to project execution – they commit themselves, through active participation and support, to strive to complete the project successfully.

3. The employee's individual potential

In the literature on the topic (cf. e.g. Fernández-Aráoz, 2014; Hofrichter and Spencer, 1996; van Staden, 2015; Zdonek, Wolny, 2015)), scholars have offered various approaches to the issue of the employee's individual potential. On account of the goal of this article, it was decided not to discuss them. The further deliberations are based on the model devised by Fernández-Aráoz (2014) which draws attention to five properties characterising an employee with potential. They include:

- striving for perfection in achieving a given common goal – the employee is ambitious, wishes to be respected by others, is modest and continually invests in developing his/her skills,
- curiosity, standing for the tendency to look for novelties, to acquire new knowledge, to look for feedback as well as openness to learn and changes,
- perceptiveness defined as the ability to collect and draw conclusions from the information which potentially can create new opportunities,
- commitment described as a talent to exploit the knowledge and logic to share his/her vision with others,
- determination which should be understood as the skills to fight for complex goals and to deal with difficulties and obstacles.

Fernández-Aráoz bases the process of development, maintenance and personnel development on those five properties. Interestingly enough, in the case of development, he points to the necessity to confront employees with new challenges which “push them” outside of their comfort zone. Fernández-Aráoz quotes the words uttered by one of HR department managers: “As regards the development of the managerial staff for the needs of future managerial tasks, we constantly strive to find the optimal level of discomfort in the next role or project since it is there that most learning takes place. We do not want people to be extended beyond their limits. However, we want well-rounded, value-focusing leaders who see the world through a wide-angle lens. The appropriate extending tasks help those people get there”. As can be supposed, interpreting the quoted author, the employee's individual potential could be shaped, among others, through his or her participation in different executed projects. Assuming that, by definition, projects generate unique products or services and each time new interdisciplinary project teams can be formed, it may be stated that projects will always constitute some challenges for people involved in their execution. Since projects can be of diverse character, for example, they can be more or less innovative or different in terms of technological uncertainty (cf. e.g. Shenhar, Dvir, 2008), a question can be asked whether the very characteristics of project organisational culture influence shaping particular characteristics of the individual potential. Answering this question is the theme touched upon in the further part of this article.

4. Project organizational culture and the employee's individual potential

The review of the literature on this theme served as the basis for identifying the above-mentioned characteristics of project organisational culture. It might be argued that they have a manifold influence on the characteristics of the employee's individual potential. For instance, in the case of strong project goal orientation, it might be noticed that project organisational culture should positively affect:

- striving for perfection in achieving a given common goal – projects, because of their uniqueness, provide an opportunity for new achievements. It is more probable when the executed project is more innovative or when it is more significant for a given organisation. Additionally, in the case of projects which require acquiring new knowledge (e.g. are based on new technology), there emerges an opportunity for learning,
- determination – it is commonly believed that because of the unique character of projects, there will be some execution-related problems or various risks will become materialised. Many times in the project there are critical issues which strongly hinder work in the project or make it impossible at all. Those problems, however, can be solved only thanks to the help provided from outside. Irrespective of the preparation and planned protective measures, the very moment of risk materialisation or problem occurrence is highly stressful and requires intensive efforts and high motivation. It might be thought that without some deal of determination, the project will not be successful.

On this basis, the following research hypotheses can be put forward:

- H1 – The stronger project goal orientation is, the stronger striving for perfection among project team members is. Furthermore, *vice versa*, the weaker project goal orientation is, the weaker striving for perfection among project team members is.
- H2 – The stronger project goal orientation is, the stronger determination among project team members is. Moreover, *vice versa*, the weaker project goal orientation is, the weaker determination among project team members is.

However, in the case of high team orientation, it might be observed that building project team should foster:

- striving for perfection in achieving a given common goal – project team members appreciate the contribution of particular individuals to the execution of project tasks and showing appreciation is a potent stimulus motivating for further activity,
- thoroughness – the project team enables each team member to obtain a more considerable amount of information as well as lets him/her learn from others,
- commitment – like in the case of curiosity described above, the member of the project team has an opportunity to connect with others and share his/her vision,
- determination – the team will thus support its members in executing project tasks and in overcoming potential difficulties.

On this basis, the following research hypotheses can be put forward:

- H3 – The stronger team orientation is, the stronger striving for perfection among project team members is. Furthermore, *vice versa*, the weaker team orientation and building interpersonal relations are, the weaker striving for perfection among project team members is.
- H4 – The stronger team orientation is, the stronger curiosity among project team members is. Furthermore, *vice versa*, the weaker team orientation is, the weaker curiosity among project team members is.
- H5 – The stronger team orientation is, the stronger commitment among project team members is. Moreover, *vice versa*, the weaker team orientation and building interpersonal relations are, the weaker commitment among project team members is.
- H6 – The stronger team orientation is, the stronger determination among project team members is. Moreover, *vice versa*, the weaker team orientation and building interpersonal relations are, the weaker determination among project team members is.

In the case of openness and free information flow in project organisation culture, it might be thought that it should have a positive impact on curiosity because of the ease of acquiring information. This leads to the formulation of H7 hypothesis: The stronger openness and free information flow are, the stronger the curiosity of project team members is. Furthermore, *vice versa*, the weaker openness and free information flow are, the weaker the curiosity of project team members is.

Finally, the strong commitment of project team members and project stakeholders to project execution should foster determination. The fight for complex goals and dealing with difficulties and obstacles will not be possible without firm commitment. On this basis, H8 research hypothesis can be put forward: The stronger commitment is, the stronger determination among project team members is. Furthermore, *vice versa*, the weaker commitment is, the weaker the determination of project team members is.

5. The verification of research hypotheses

The research hypothesis was verified in the course of the empirical studies carried out in December 2019 in 270 enterprises functioning in the USA. Those enterprises were characterised by the fact that they were executed many (various) projects. However, their primary activity involves routine process activity and not project implementation. This made it possible to distinguish two groups of employees in each enterprise. The first group, i.e. employees who combined work in project teams with work consisting routine activities. And the second group, i.e. employees who did not work on projects and performed only repetitive tasks. The questionnaire survey was addressed to project managers working in those

enterprises. The research company (SurveyMonkey) ensured that one project manager completed the survey questionnaire for each company. He related his answers to members of the project teams he managed or he knew, comparing their characteristics with those of employees who did not carry out project work.

Considering the majority of projects executed so far in the organisation, they were asked to assess:

- to what degree the characteristics of project organisational culture (project goal orientation, project teamwork and cooperation orientation, openness and free information flow, project members' and stakeholders' commitment) were represented in project teams in comparison to the remaining part of the organisation,
- to what degree the members of project teams were characterised by the five characteristics of individual potential (striving for perfection, curiosity, perceptiveness, commitment, determination) in comparison to the employees who were not engaged in the work of project teams.

The occurrence of the characteristics of project organisational culture as well as the characteristics of the employee's individual potential was based on the five-level Likert scale. Thus, the respondents, referring to the norms and values of project organizational culture, had four questions and five answer options to choose from. Namely, project management norms and values exist in project teams: much less than in the rest of the organization, less than in the rest of the organization, same as in the rest of the organization, more than in the rest of the organization, much more in the rest of the organization. On the other hand, in the case of properties characterizing an employee with potential, the respondents also had five questions and five answer options to choose from. Namely, properties characterizing an employee with potential occurred among project team members as compared to people not working in projects: to a much lesser extent, lesser extent, in the same extent, to a greater extent, much more extent.

Table 1 presents the coefficients of the correlation between the characteristics of project organisational culture and the characteristics of project team members' individual potential.

The data included in Table 1 allow adopting all of the formulated research hypotheses. The value of the correlation coefficients is not high but all correlation coefficients confirm the positive relationship between the characteristics of project organizational culture with the characteristics of individual potential. This shows the possibility of making use of project teamwork for the needs of shaping the employee's individual potential.

Table 1.

*The correlation between the characteristics of project organizational culture in project teams in comparison to the remaining part of the organisation and characteristics of individual potential of project team members in comparison to the employees who were not engaged in the work of project teams**

Characteristics of project organizational culture	Individual potential properties				
	striving for perfection	curiosity	perceptiveness	commitment	determination
Project goal orientation	0.502128 (H1)	0.365387	0.427460	0.469013	0.514075 (H2)
Team and cooperation orientation	0.507092 (H3)	0.434271 (H4)	0.435518	0.449429 (H5)	0.463111 (H6)
Openness and free information flow orientation	0.384584	0.386869 (H7)	0.391501	0.425541	0.390839
Project team members' commitment orientation	0.539553	0.493530	0.493818	0.496247	0.540099 (H8)

*All correlation coefficients are statistically significant with $p < 0.01$.

Source: the author's own study.

6. Concluding remarks

The objective of this article was to demonstrate the influence of the characteristics of project organizational culture on shaping the employee's individual potential. This influence was shown in the course of a questionnaire survey distributed in 270 American enterprises functioning in various industries. The studies confirmed that project management can be used in the process of personnel development for creation of employee's individual potential. As you might think, this (higher) employee's individual potential can further lead to not only better project execution but also can have positive influence on routine processes in an organisation. As Nowosielski (2018) writes in his paper, at present processes and projects exist in each organisation and their management should lead to the efficient and flexible functioning of such an organisation. In this case, it is possible to make use of project management for the needs of shaping the employee's individual potential.

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