

Impact of Organizational Culture on Project Portfolio Management

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Abstract: The paper considers an up-to-date issue in project management, namely the impact of organizational culture on the project portfolio management (PPM) effectiveness in contemporary project-oriented organizations. PPM has expanded in the practices of modern project management, however, the role of organizational culture has not been comprehensively explored especially in the transition economies of South Eastern Europe. It is known that PPM success is effectively aligned with the organizational strategy, so the paper provides a short review of the theoretical grounds in respect of the relation between organizational culture and PPM. It is expected that the organizational culture of project-oriented organizations plays a key role for the effectiveness of PPM. The paper also presents a selection of results from a questionnaire survey of PPM practices in over 180 Bulgarian project-oriented organizations where several aspects of PPM effectiveness have been explored in relation with particular dimensions of the organizational culture. Conclusion are derived regarding the establishment of specific organizational culture that is supportive for PPM and its core functions.

Keywords: organizational culture; project-oriented organization; project portfolio; project portfolio management

JEL Classification: O22; M10

1. Introduction

Project based activities and processes have been growing worldwide along with the expansion of project, program, and portfolio management practices in the last decades. This contemporary managerial approach proved to be effective for enhancing business organizations' competitiveness especially when project-based funding has been extensively utilized by the organizations. Such processes facilitated a sustainable transformation towards project-oriented structures and cultures at these organizations. However, in many organizations even a limited number of projects are difficult to execute due to weak and unfavorable culture for implementing appropriate project methodologies and decision-making style. This way, inefficient resource allocation, lack of project prioritization, and mismatches with corporate strategy have been frequently identified in project portfolio management practices.

The focus of the current study is on the impact of organizational culture on the project portfolio management (PPM) effectiveness. In general, the interrelations between organizational culture and PPM effectiveness/success have been rarely studied empirically. Nonetheless, research interest has been devoted to a variety of issues related to the type of organizational culture that is appropriate for a successful project management (Patanakul and Aronson 2012).

Modern business environment requires project and portfolio managers to demonstrate leadership and managerial competencies supporting the development of strong project-oriented organizational culture that provides a fundament for a successful implementation of PPM practices. These competences are oriented to an optimal and effective utilization of organizational resources, with a priority on human capital and talent management. This way, it is expected from project portfolio managers to be aware of strategy implementation, balancing, and providing synergies by execution of the complex of projects in the organizational portfolio. This cannot be achieved without developing a favorable organizational culture that supports team working, creativity, and innovation.

The aim of this paper is to provide insights on the impact of organizational culture on the effectiveness of project portfolio management. A special focus is put on a long-term perspective as far as PPM effectiveness is indicated by three dimensions of the strategic alignment of project portfolio. The first one relates to the achievement of strategic goals of the organization through selection and realization of targeted projects. The second one is focused on the strategic resource allocation by projects in the portfolio. The third one is measured by the degree of achieving sustainability of financial results from the executed projects. These dimensions reflect the degree of coordination of project selection, evaluation, prioritization, execution, monitoring, and control within an operational system of PPM. Here we assume that the effectiveness of PPM is directly related to a better alignment of projects in the portfolio with the organizational strategy.

The operation of organizations that have adopted the PPM approach depends on the existence of supportive organizational culture, however, it affects PPM processes in a concealed way. In the same time, the specifics of the organizational culture define a unique work environment with a distinct character. Ultimately, the cultural dimension could facilitate or obstruct the effective operation of any organization, and specifically, project-oriented organizations. The paper presents some results from a questionnaire study of PPM effectiveness in 184 Bulgarian project-oriented organizations where several indicators have been experimentally measured. The interrelations between these indicators and a selection of cultural dimensions have been particularly explored.

2. Literature Review

The specialized literature on project management underlines the expanding implementation of PPM approach in organizations that execute a complex of projects and its importance for the achievement of synergies and strategic goals. Along with this, some studies have focused on the influence of organizational culture on project outcomes (Shore 2008). Still, rarely the research findings are supported by empirical arguments considering the interrelation between organizational culture and PPM processes, practices, and success.

PPM as a managerial approach is based on the selection, prioritization, balancing, and control over the execution of multiple projects in a project-based organization. Typically, the goals of the selected projects are aligned with the organizational strategy and reflect the perspectives of organizational development. Within the current study, we adopt a definition of PPM as coordinated management of a portfolio of projects oriented to the achievement of the strategic objectives of the organization (PMI 2017). PPM provides numerous opportunities to the organizational leadership for implementing flexible decision making in a dynamic and turbulent environment. Moreover, it facilitates the organization to become more adaptive to the uncertainty of the ever-changing business environment (Jerbrant and Gustavsson 2013). Many benefits are identified regarding the utilization of PPM, however, still the effective implementation of this approach is a challenge to managers (Patanakul 2015).

PPM outperforms the traditional framework and mechanisms of project management due to the substantial changes required for an effective implementation of portfolio structures leading to complex synergetic effects on organizational performance. It is generally accepted that the aims of PPM are oriented to: (i) finding the right balance within the project portfolio, (ii) aligning the portfolio to the organizational strategy, and (iii) maximization of the overall value of the project portfolio (De Reyck et al. 2005). In a multi-project environment this approach contributes to the enhancement of competitiveness by maximizing the value added by separate projects along with minimizing the costs and risks associated to their execution. This way, PPM has proved to be a source of competitive advantage for the implementing organizations as well as a powerful tool for achievement of strategic goals (Alexandrova 2017).

The issue of resource allocation by simultaneously executed projects, from the practice point of view, is important to be considered within the implementation of PPM, especially, by appropriate scheduling and planning. Some authors recommend a focus on special management policies, e.g. "horse trading, interpretation, and sense making" that suggest a complex approach compared to the traditional project management methods (Engwall and Jerbrant 2003). In this respect, applied

research in project management has identified needs for additional empirical studies devoted to various organizational problems related to PPM implementation (Blomquist and Muller 2006).

Specialized literature reveals a consensus about the significant impact of culture on the organizational performance in two dimensions: effectiveness and financial performance (Booth and Hamer 2009). Some studies discuss the interrelation between strategy, culture, and performance which induce the competitive advantages of companies (Hogan and Coote 2014). Project management by itself is considered as a specific sub-culture in the framework of an established organizational culture. It assumes, among others, particular principles and practices, norms and ethical standards, emphasis on team working, effective communications, transparency, regular reporting, monitoring, and control. In order to support PPM implementation some organizations develop a project management office (PMO) as an organizational unit that provides conditions for successful simultaneous execution of projects in the portfolio aligned to the organizational strategy (Banister-Hazama and Hazama 2014).

Organizational culture can be studied by various standpoints and is defined in different ways. A classical definition of culture is given by G. Hofstede as “the collective programming of the minds” of individuals by which “one group distinguishes itself from other groups” (Hofstede 2003). In respect of the organizational culture some authors emphasize on “enduring beliefs, values and assumptions” that differentiate the members of the organization, and the organization itself from others (Cameron and Ettington 1988). Organizational culture can also be described by the mechanisms through which the “organization does things” on the basis of common norms, beliefs, and shared values. In this respect, it is closely related to the organizational structure and control system which facilitate the compliance with these norms, values, and behavior within the organization (Dess et al. 2007). Having this in mind, it should be noted that the measurement of different dimensions of organizational culture is complicated due to its intangible character, e.g. collective assumptions, shared values, etc.

Associating organizational culture with processes within a project-oriented organization generates an environment that can facilitate the successful execution of the projects as well as achieving significant organizational benefits. A better understanding of this association can reveal options for transformation of the organizational culture towards a more supportive one regarding the effective leadership and project team’s management. The specialized literature on project management mostly emphasizes on the role of organizational culture for the success of projects execution. Indeed, although many organizations expand their project activities, a particular weakness is their cultural deficiency (Palmer 2002). This way, promoting a project-oriented culture appears to be an important task that requires targeted support from the top management.

Some studies consider the organizational culture at project portfolio level focuses on resource allocation, portfolio optimization, and strategic alignment. The simultaneous execution of projects in a portfolio as well as the necessity of coordinating different project teams generate substantial complexities and require a novel project-oriented culture. Organizational culture reflects the strategic focus and orientation, this way leading to increased complexity of PPM (Martinsuo and Killen 2014). Some authors consider the contextual features of the cultural influences on project work as somehow ignored (Hanisch and Wald 2012).

Nevertheless, the study of factors influencing the PPM success has attracted interest recently (Alexandrova 2018). Special attention is put on the organizational culture as integrated into the strategic focus regarding the PPM implementation. This integration is considered in two aspects: internal and external (Unger et al. 2012). Although the existing studies are limited in exploring the range of cultural issues concerning project and portfolio management, some research reveals how the organizational culture – as well as the national culture – induces contextual effects on the way organizations execute the projects in their portfolios (Unger et al. 2014).

3. Methodology

3.1. Data Source

The empirical analysis in the current study is based on data collected by a questionnaire survey conducted in the period 2017-2018 among representatives of 184 project-oriented organizations that operate in Bulgaria. Since there is no specific register or other kind of statistical frame to facilitate a random drawing, the respondents have been selected by a purposive sampling scheme. A specific questionnaire has been developed and sent to 200 respondents (project management experts, project managers, project portfolio managers, and representatives of the top management boards). The method of individual self-interview has been applied by participation in online survey or by submitting a filled questionnaire by email. Appropriate respondents have been reached through the channels of professional networks (LinkedIn; Bulgarian Association for Project Management). All respondents have professional duties and competences in the area of project management performed in a multi-project environment. Moreover, some of them have a key role in the management of a project portfolio operated by the respective organization. Due to substantial non-response 16 questionnaires are excluded from data processing and analysis.

3.2. Survey Instrument

In order to provide empirical measurement for the organizational culture and PPM effectiveness the questionnaire instrument suggests formulations of two groups of items. Each item uses an ordinal scale with ranks 1 to 5 for evaluation of the respective feature. The questionnaire instrument has been developed specifically for the goals of the empirical study of PPM practices, factors, and effectiveness.

Table 1. Dimensions of organizational culture.

In what extent each of the following element / statement is valid for your organization?	Not at all	Rather No	Neither Yes nor No	Rather Yes	Certainly Yes
Flexible and adaptive managerial style	1	2	3	4	5
Effective project communications	1	2	3	4	5
Team-working and trust between project team members	1	2	3	4	5
Creativity and innovation stimulating atmosphere	1	2	3	4	5
Turnover and low motivation	1	2	3	4	5

Table 2. Aspects of PPM effectiveness.

In what extent do you agree with each of the following statements about your organization?	Likert Scale				
	1- Fully disagree				5- Fully agree
Project portfolio is aimed in achieving sustainable financial results	1	2	3	4	5
Projects in the portfolio have goals that fully match the strategic goals of the organization	1	2	3	4	5
Resources allocation by projects is subjected to the strategic priorities of the organization	1	2	3	4	5

The first set of items requires the respondents to evaluate the extent to which a statement is valid regarding particular dimension of the culture at her/his organization (Table 1). The second one invites the respondents to express her/his opinion about the extent to which a particular aspect of PPM effectiveness is achieved at her/his organization (Table 2).

The primary data collected by the questionnaire survey has been processed and analyzed by descriptive statistical methods as well as Spearman rank correlation method.

4. Results

4.1. Profile of Respondents

A variety of personal attributes, both demographic and professional, were recorded during the survey. The pool of respondents is relatively balanced by gender; however, the age structure shows predominantly middle-aged individuals (over 70% in the range 31-50) and about one fifth with age up to 30. The sectoral structure of employment shows that almost half of them work in organizations operating in sector "IT and communications". The next more frequently recorded sectors are "Public administration" (22%) and "Construction" (14%).

An important characteristic is the experience of the interviewed – over one third indicated a long period of general work experience (over twenty years) whereas about 11% declared just a recent experience: up to 5 years. The professional experience in project management has been identified by the number of years working in project management (project team member, project office expert, project manager, project portfolio manager). The major share (about 60%) is held by respondents with specific experience 6-15 years, and over 20% indicate professional experience over 16 years (Table 3).

Table 3. Experience of the interviewed.

Professional experience	General experience					Total
	Up to 5	6-10	11-15	16-20	Over 20	
Up to 5	100.0%	48.1%	2.9%	5.9%		19.6%
6-10		51.9%	48.6%	14.7%	8.8%	22.8%
11-15			48.6%	67.6%	39.7%	36.4%
16-20				11.8%	42.6%	17.9%
Over 20					8.8%	3.3%

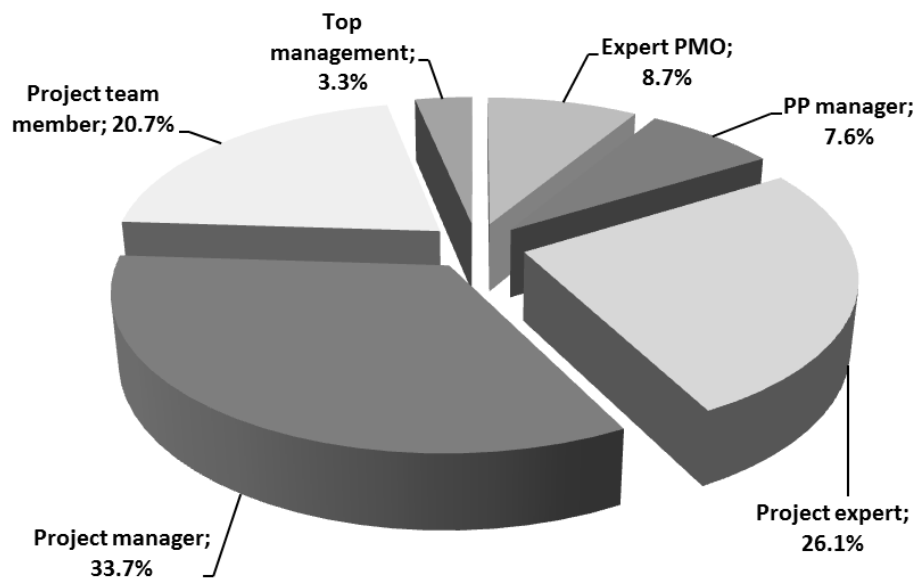


Figure 1. Distribution of respondents by position held at the organization.

Additional to the experience, the survey provides information on the positions held at the moment of filling the questionnaire. About one third of respondents act as project managers at their organization – a position which holds the largest share in the sample (Figure 1). About a quarter of the interviewed occupy various positions of project experts, followed by members of project teams (21%) and project office experts (9%). The position of "project portfolio manager" is rarely met, but still, about 8% of respondents indicate such occupation. Albeit rarely, representatives of top management of project-oriented organizations have also participated in the survey.

4.2. Impact of Organizational Culture on PPM Effectiveness

The available data provides opportunities for measuring the degree of correlation between variables representing the selected dimensions of organizational culture and the variables reflecting the PPM effectiveness. Figure 2 presents the diagram of the links between the two sets of variables where dashed line represents a negative correlation between the respective variables.

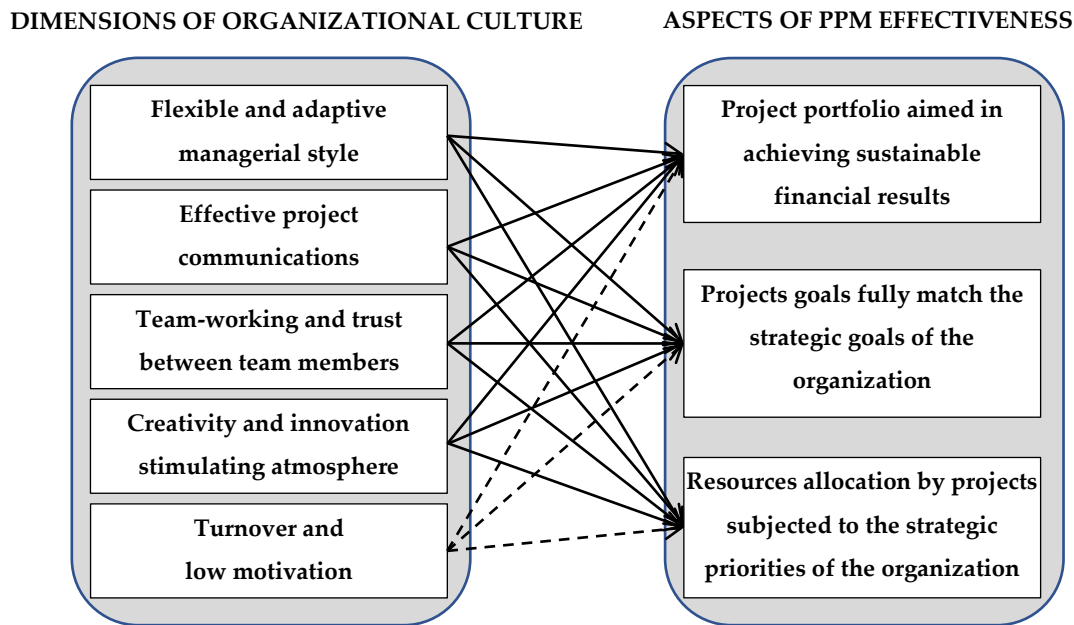


Figure 2. Impact of organizational culture dimensions on PPM effectiveness.

Table 4. Rank correlations between dimensions of organizational culture and PPM effectiveness.

Dimensions of organizational culture	Project portfolio is aimed in achieving sustainable financial results	Projects in the portfolio have goals that fully match the strategic goals of the organization	Resources allocation by projects is subjected to the strategic priorities of the organization
Flexible and adaptive managerial style	0.745	0.729	0.663
Effective project communications	0.574	0.638	0.390
Team-working and trust between project team members	0.427	0.455	0.505
Creativity and innovation stimulating atmosphere	0.388	0.356	0.303
Turnover and low motivation	-0.340	-0.302	-0.282

Table 4 presents the Spearman rank correlation coefficients estimated for each pair of variables – between each of the organizational culture dimension variable and each PPM effectiveness variable. All coefficients are significant at 0.01 or lower level (number of valid cases: minimum 179). The highest coefficients have been obtained for the dimension reflecting “Flexible and adaptive managerial style” where strong correlations are estimated with each measure of PPM effectiveness. The highest result (0.745) is obtained for the correlation with the variable representing “Project portfolio aimed in achieving sustainable financial results”. Obviously, in most cases when such managerial style has been clearly identified, the focus of project portfolio on sustainable financial results is typically achieved, and vice versa.

High coefficients are observed also for the dimension revealing “Effective project communications” where moderate correlations are estimated with the measures of PPM effectiveness. The highest result (0.638) is obtained for the correlation with the variable characterizing “Projects

goals fully match the strategic goals of the organization". This provides evidence that practicing effective communications in project-oriented organizations systematically leads to better results concerning the achievement of strategic goals through targeted project activities, and vice versa.

Relatively lower correlations, but showing the expected positive signs, are obtained for the dimensions "Team-working and trust between project team members" and "Creativity and innovation stimulating atmosphere" – moderate correlation coefficients varying in the range 0.3-0.5. These results reveal the positive impact of these two dimensions on each of the three aspects of PPM effectiveness, according to the survey data for Bulgarian project-oriented organizations.

Moderate to weak correlations are found regarding the fifth dimension of organizational culture reflecting the eventual existence of "Turnover and low motivation" in the organizations. These results are indicative for a supposition that a lack of policies for keeping high motivation and loyalty as well as for reducing turnover rates inevitably leads to worsening the results on the chosen aspects of PPM effectiveness – which provides useful insights for PPM practitioners.

5. Conclusions

Adopting PPM by project-oriented organizations requires also taking into account the intangible cultural dimensions of the organization. The current study argues that such an approach is a sustainable way to increasing the effectiveness of PPM and responding to the challenges of strategic goals of the organization. The results shed light on the recent practices of Bulgarian project-oriented organizations regarding the interrelations between particular dimensions of organizational culture and selected aspects of PPM effectiveness. They provide evidence for project portfolio managers that paying special attention on such cultural issues can be a driver of the effectiveness of project portfolio activities. In order to improve their results, it seems necessary for these managers to develop additional knowledge and skills relevant to the contemporary topics in organizational culture and its impact on PPM. A further study of the determinants of PMI effectiveness is still a challenge for project management research in Bulgaria that can be supported by sound empirical evidence.

The dimensions of organizational culture and their impact on the overall project portfolio appear to be prospective topics for future conceptual and empirical studies. The current study demonstrated that organizational culture enters in complex interactions with core elements and processes of PPM. Future research and more detailed analysis in a multivariate causal framework can reveal new underlying mechanisms of the influences of the organizational culture on the success of PPM operations and organizational strategy in different corporate contexts.

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