

CONTEMPORARY APPROACH TO THE POSSIBILITY OF PROJECT'S SUCCESS INCREASE

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crossref <http://dx.doi.org/10.5755/j01.em.18.4.5710>

Abstract

The main goal of the article is to determine project's success factors and instruments allowing to reach a success while conducting a project. First, the issue of project's success criteria is investigated. Till now project's success was measured of if the project didn't exceed budget, if it was finished on time and met all quality requirements. However Iron triangle axiom is hesitated. It asserted that it is not able to provide reliable data about importance of stakeholder's influence and meeting all their needs. From the point of projects' success criteria, a question arises what should be identified as project's success – the project itself, project management or projects' product success?

Another important part of this paper represents the factors which may lead to successful finish of projects. Even though in scholar literature there can be found a lot of success factors, there is no systematic view of it. Some authors suggest that success factors are strongly related to project manager, team, environment and organization. While others affirm that view to success should be through project life cycle stages. In both cases scholars submit information based on practical researches.

At the end, after theoretical research, the paper represents structural view to project success factors – strongly defined parameters by which it can be ascertained if the project reached any success, and also it is recommended to use success factors to finish project as successful.

The type of the article: Theoretical article.

Keywords: project success factors, project success criteria, project lifecycle, project stakeholders.

JEL Classification: H 4, O 22.

1. Introduction

Project management as a science and study discipline significantly developed for several decades and its utility is undisputed. It became well known that project management can be used as contemporary instrumentation of organization of effective activity management. Strengthening and development of organization competitiveness today are based on application of contemporary project management. Continuous progressing competency creates preconditions for organizations to reach pre-defined goals and tasks more efficiently and effectively. It is usually assumed that success of each task is the main priority and project management is not an exception. But, on another hand, reaching activity success is not that easy as it seems.

Project management suggests a set of tools and methods for reasonable use of all types of resources in combining with activity quality. Project success' importance emerges for project based organizations.

Often happens that project manager has to reach project goals without having appropriate budget, rational timetable, competent project team and etc. Moreover, nowadays when environment is unpredictable and unreliable, project manager must be equipped with dependable contemporary knowledge and advanced practice experiences how to achieve project's success.

There are known lots of different project success factors and their systems researches suggested in the scientific literature. The broad abundance of these factors leads project manager to incomprehension. Project managers searching for practical solution in lack of expertise or exceptional conditions meet difficulties to formulate qualified decision customized to a particular project. Many of project managers just are not using recommended good practice and face unresolved issues because of the lack of reliable information.

We have conducted a comprehensive research in topic of leading journals project success factors. In most cases, this information has a fragmentary character and is too complicated for many managers to select and use progressive tools leading to project success.

The problem of the research – how to select most suitable project success factors to compose an acceptable contemporary instrument to meet project success in contemporary attitudes.

The aim of the research is to determine and compose project success factors and instruments to meet success of conducted project.

The paper presents a summarized theoretical background on project success factors to develop instruments to reach project goal success. The last part of the paper is devoted to discussion and conclusions regarding selection of project success factors.

2. Theoretical background

Project success conception

Inability to complete project within limited budget, time and quality is inherent to all sectors of economy. According to Standish group report (2001), there are three main characteristics which define project success – stakeholders' incorporation, vice managers support and clear understanding of requirements. But in scholar literature also can be found other definitions of project success such as critical success factors, techniques and tools used in different project life cycle stages, factors related to project manager, team, stakeholders and etc. Many of scholars (El – Sheikh, Pryke, 2010; Collins, Baccarini, 2004; Khang, Moe, 2008; Mishara, Mital, 2011, etc.) divide all these elements into two groups – project success factors and criteria.

There is no general description of how to identify if project achieved any success. Collins and Baccarini (2004) suggest that success parameters should be project's management success and project's product success. Meanwhile Khang and Moe (2008) recommend to define project success as realization of effectiveness, endeavour of projects' quality and stakeholders' requirement satisfaction. But despite all discussions, Iron triangle (time, budget and quality) is still relevant nowadays (Ika, 2009; Collins, Baccarini, 2004, Dvir, Sadeh, Malach – Pines, 2006; Kendra, Taplin, 2004, etc.).

In terms of success factors, scholars give various lists of elements which might lead to project success. Ones of the first discussing about project success factors were Pinto and Slevin (2004). They had presented ten key project success factors. Further some authors (Mishra, *et al.*, 2011; Nethathe, *et al.*, 2011) tried to reveal that project success depends on communication between manager and team, others focused on relationship with stakeholders. Ika (2009) analyzed project success conception and categorized the results by the historical context. According to the author, the main idea was that Iron triangle is still topical but it is supplemented by new element – stakeholders and the end – user impact and importance.

Project, project management and project product success

Modelling of project success factors raises a question – which part of project should be considered as successful? Usually it is presumed that project's success means to reach project's goals within budget, time and quality. But on the other hand there is no clear answer – does successful project always produce a successful product for which it was initiated or maybe successful project is determined by good project management practice?

According to Nethathe, Waveren and Chan (2011), project success is constituted of project

success itself and project management success. The first component means that project reaches all set goals; the second principle signifies just three goals – time, budget and quality. With this point of view, it is appealed that traditional Iron triangle does not give a perspective of stakeholders and end – user's needs. This impact is influential nowadays because of the quality management importance.

Meanwhile Van der Westhuizen and Fitzgerald (2005) also describe project success as a system of two components, but they argue that success is based on project management success and project's product success. Concentration on management processes and achievement of project goals is inherent to management success. Producing of successful product is typical to product success. To sum up, it is elementary obvious that project success is the sum of the above referred components:

$$\text{Project success (PS)} = \text{project management success (PMS)} + \text{project's product success (PPS)}.$$

On the basis of this formula, Van der Westhuizen and Fitzgerald (2005) propose to append two elements to traditional standpoint of project success. Traditional approach to project success includes only three elements – time, cost and quality, but the authors (Van der Westhuizen & Fitzgerald, 2005) argue that this view should be expanded by new elements – quality of project management process and satisfaction of stakeholders' needs.



Figure 1. New approach to project management criteria

(Van der Westhuizen & Fitzgerald, 2005)

Attention to quality of project management process can be understood as general quality, but with particular attention to management process and its issues. Yet there is the new element – stakeholders' satisfaction. It cannot be completely covered by quality element and therefore there was formed a separate project management knowledge area.

The success of the project issues is highlighted in the new Guide to the Project Management Body of Knowledge (PMBOK® Guide, 5th ed., 2013). According Kerzner (2010) in the way of achieving project excellence, their success factors becomes a priority decisive determinant. This provision also supports Burke (2013).

Project success factors

As we discussed before, in scholar literature there is no one answer of what factors can lead to project success. Mishra, *et al.* (2011) claims that such factors are related to project itself, manager, team, organization and environment. Scientists executed a study by which they interviewed project managers and teams which factors in their opinion lead project to success. They discovered that clearly defined scope, reality reflected schedule and plain described goals and tasks according to respondents are critical factors to project success. Associated to project manager following factors were identified – responsibility, leadership by circumstances and effective resource management. Besides when respondents were asked to identify factors connected to project team members,

responsibility also was mentioned as well as co – operation and appropriate communication. Analyzing project environment following parameters had been identified – clients' knowledge and experience, legal environment and clients' size/ type. Finally, factors related to organization were the degree of autonomy, vice management support and clear definition of work.

Other authors emphasize that projects' success depends on different project life cycle stages. Islam, *et al.* (2011) state that in project initiation stage, it is important that project is instituted to take an opportunity not to solve a problem. Also they discovered that feasibility study should be done by external organization.

Zwikael and Globerson (2006) examined that in project planning stage, definition of tasks, development of schedule, organizational planning, recruitment, communication planning and project plan development are influential to project success.

Pinto and Slevin (2008) in their research study provide the effective usage of strategic and tactic decision matrix. They disclosed that in project implementation stage, it is better to use tactic decision while strategic solutions should be admitted in initiating and planning phases.

Other scholars (Patanakul, *et al.*, 2011) suggested the list of tools and techniques which should be used in different project lifecycle stages to influence project success due its every lifecycle.

Table 1. Project management tools and techniques used in different project lifecycle stages

Project management technique/ tool	Project lifecycle stage
Analogues estimate	Initiation, planning stages
Checklist	Initiation, implementation stages
Communication plan	Initiation, implementation stages
Contingency plan	Planning, implementation stages
Cost baseline	Planning, implementation, closing stages
Critical path method	Planning stage
Hierarchical schedule	Planning, implementation stages
Lessons learned	Closing stage
Milestone analysis	Implementation, closing stages
Work breakdown structure	Closing stage

Source: adapted by the authors with reference to Patanakul, *et al.* (2011)

Represented tools are not unknown or rarely used. But the issue arises when it is used. For this reason the authors (Patanakul, *et al.*, 2011) allocate project management tools and techniques in project life cycle stages regarding to best good practices results.

3. Methods

Theoretical problem analysis has indicated that the most practice case is the lack of appropriate project success factors set selection.

Scientific literature is secreted by various critical project success factors. Their abundance does not help project manager to find a solution, as he has no clear answer which set of factors is more appropriate for a particular project. In regard to this, the purpose of theoretical research was to analyze and evaluate results of different scholars and to develop a based approach to project success factors set. The following tasks were formulated to execute the purpose:

- Following the scientific literature, to highlight the main criteria and factors that determine the success of the project.
- After critical project success criteria and factors are discovered, to define which project management tools and techniques set leads to increase the likelihood of success of the project;
- To develop a comprehensive project management success factors model.

The approach of quantitative research was applied. The 4-scale questionnaire was developed for the survey (see Table 2).

The study consists of two parts: the first part was a scientific analysis of the literature, which helped to identify and analyze project success criteria and factors associated with the project manager, team, environment, project organization, project life cycle and etc. In the second part of study there has been developed a combined model of project success factors management which provides an integrated approach to project success criteria, factors, and project success management instrumentation is recommended.

By analyzing multipartite problematic of project success, general research methods were used - systematic, logical and comparative analysis of scientific literature, synthesis. In this literature search, the main search criteria were project knowledge areas and project management processes and their groups. This analysis identified strengths, weaknesses, and opportunities to improve the approach to project success.

4. Results

Summarizing the results of various conceptual and empirical research works, all discussed project success criteria and factors can be arranged in the matrix (see Table 2). As it can be seen, there are no recommendations how to monitor and control project progress while trying to achieve its success. It can be assumed that different projects have various quality or process advance control mechanisms and it complicates recommendations. But on the other hand, the main problem remains to select and assess the appropriate approach of set of suitable project success factors and criteria, covering stakeholder needs, socially responsible project team activities, use of the latest modern management tools (and particularity project intelligence and project smart management methods as well).

In our opinion, it is purposeful to identify and select a set of the basic factors determining success for the project. It became undisputed, that the bases of project success competently performed the project planning process. Planning processes of the group determining the service sector project's success are project plan development, resource planning, cost budgeting, quality planning and communication planning. IT sectors projects' success is based on project development, scope planning, activity definition, activity duration estimating, schedule development, recourse planning, organizational planning and staff acquisition as well.

After the launch of Project Management Book of Knowledge the 5th ed. it is even more necessary stakeholder's interests to be incorporated in a new approach of increasing project management success. Regarding that, stakeholders may also exert influence over the project and its deliverables of all potentially stakeholders analyzes, responsibilities and other interests must be highlighted.

The vitality of the theoretical framework of the approach of increasing project management success was tested empirically. The empirical validation could be realized combining quantitative and qualitative methods. For pilot validation of the theoretical framework a wide project based activity of one Lithuanian University was selected.

Table 2. The project success factors and criteria matrix

Project life cycle stages				
	Initiation	Planning	Implementation	Closing
Project success factors and criteria	<ul style="list-style-type: none"> • Plain describes goals and tasks; • Project manager should be responsible, able to manage according to circumstances; • Project team should not afraid to be responsible; • Attention should be focused on clients' knowledge, experience, size/ type and legal environment; • Project should be formed to take an opportunity; • Feasibility study should be done by external organization; • Strategic decisions should be used; • Tools and techniques: • Analogues estimate, • Checklist, • Communication plan. 	<ul style="list-style-type: none"> • Clearly defined scope; • Reality reflected schedule; • Definition of tasks; • Development of schedule; • Organizational planning; • Recruitment; • Communication plan; • Strategic decisions should be used; • Project plan development. • Tools and techniques: • Analogues estimate, • Contingency plan, • Cost baseline, • Critical path method, • Hierarchical schedule. 	<ul style="list-style-type: none"> • Project manager should effectively manage resources; • Team members should cooperate with each other; • Tactic decisions should be used. • Tools and techniques: • Checklist, • Communication plan, • Contingency plan, • Cost baseline, • Hierarchical schedule, • Milestone analysis. 	<ul style="list-style-type: none"> • Project finished in time; • Project does not exceed budget; • Project meets all quality requirements; • Stakeholders' needs were satisfied. • Tools and techniques: • Cost baseline, • Lessons learned, • Work breakdown structure.

5. Discussion

The importance of the problem is still relevant. There is no one definition of how to measure project's success. Iron triangle does not give complex and finished view. Also it does not include such factors as internal and external communication, stakeholders' impact and participation as well as project's environment conditions. A new approach to project success gives extended view – it defines project success criteria, factors and also suggests tools or techniques to reach desirable goals. But on the other hand, it can be presumed that Iron triangle itself presents all those factors. Quality, time and budget cannot be determined without stakeholders' participation. All project management process is supported by time schedule, budget limit, quality indicators. But a controversial question arises – is Iron triangle helpful to project manager? It gives only hefty imagination of project success.

Of course a new approach model cannot be interpreted without Iron triangle axiom – it was a framework. A new complex model was developed in master degree thesis (Bakinaite, 2013). In that case, it was supplemented by 10 project management knowledge areas in the horizontal view. This helped to identify success factors not only by project lifecycle stages but also in deferent knowledge areas.

The interview has explored if employees are training new young employees in developing project management knowledge areas and obtaining progressive practice for project success. It leads to necessity to be able to use contemporary project management instrumentation for constant pursuit in achieving project management success.

Theoretical problem analysis has indicated that the most of not only young project manager's possibilities are not sufficient and their competences and skills need to be developed. The interview has explored if employees are training new young employees in developing project management knowledge areas and obtaining progressive practice for project success. It leads to necessity to be able to use contemporary project management instrumentation for constant pursuit in achieving project management success.

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