

Criteria for the success of construction projects

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ABSTRACT

Despite the fact that the three factors of time, cost, and quality are the main factors of the success or failure of the project, the researchers are doubted to these three factors because the projects with optimal time, cost and quality, are evaluated as unsuccessful and vice versa. Earlier research suggest that it is still not possible to comment on any single factor affecting the success of the project. This research, which was conducted using the descriptive-analytical method and based on library studies and digital resources, first studied the research background and then, by collecting the previous results, reached a unite summary. The result of this research suggests that in construction projects, two groups of criteria can be considered for the success of the project. The first group includes time, cost and quality which are the most important criteria, and the second group includes the consent of the stakeholders such as customers, etc

Keywords: Project success factors, time, cost, quality, stakeholder consent

Introduction

In recent years, various indicators have been assessed to evaluate the success of construction projects. Due to the growth of projects in our country, the evaluation of project success criteria is essential. On the other hand, in the traditional definition, the success of a project means achieving its goals at a given time, specified cost and well-defined quality. But are these three factors enough for the success of a project? For example, despite the time and cost higher than the planned amounts, the Sydney Opera House project in Australia is considered a successful project, and there are some projects that have been completed at a defined time, cost and quality but are not considered as successful. In this research, we are going to examine the traditional criteria of project success, as well as various research and different perspectives on this issue.

Problem Statement

Success is a familiar word in everyday life, but not everyone is able to achieve it. Today, technology, the diversity of projects, the large number of activities, organizations and individuals

involved in projects, have faced project managers with many problems in achieving the goals of the project.

On the other hand, the lack of adequate knowledge of the success factors of the project makes it difficult to monitor and control the project performance. Although initially, it may seem that the evaluation of success factors in projects cannot be generalized to other projects due to their unique nature, but in fact, the global industry of construction projects shares common basic characteristics [1].

In recent decades, various criteria have been considered for the success of construction projects. In this research, we are to identify the project success criteria for improving projects in the country.

The Significance of the Study

By entering the third millennium, we see rapid changes in technology and environmental complexity. On the other hand, the review of global trends also indicates that due to the need for agility and speed of decision-making in today's business management, project-based management has been taken into consideration. Today, most organizations and enterprises tend to focus on project-oriented methods in order to remain in the global competitive environment to manage their projects. In fact, these organizations see their long-term strategic goals in choosing the right projects and their full and effective implementation. Therefore, one of the main concerns of project managers and stakeholders is to accurately awareness of the progress of project and comparison of the work done with

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the predicted work and calculation of cost and time discrepancy with real performance. (Same, p. 7)

Major research in construction projects and in the field of project success indicators is limited to three factors: time, cost, and quality. The importance of this issue is determined by the complexity of projects, in terms of technology, information technology and human resources, and projects that are not being evaluated as successful in spite of having time, cost, and specified quality, and vice versa.

Research Methodology

In this research by relying on previous studies and using a descriptive-analytical method, library studies, and digital resources, we got to a conceptual structure in this field.

Research Background

Many studies on project success focus on industrial projects but rarely on construction projects. The concept of project success in construction projects has a vague definition.

Lim and Mohammed studied construction projects from the micro and macro perspective. The micro perspective refers to the implementation phase, in which the project objectives such as time, cost, performance, quality and safety are taken into

consideration. While the macro perspective is important in terms of user and stakeholders content ^[2].

Although they have met the criteria of maturity and consent, they are unaware of the strategic goals of the company ^[3]. The criteria for success are for mass production projects, environmental impacts, customer satisfaction, quality, cost, and time ^[4].

Another research has separated the project's success into two components. The first component consists of the basic criteria for project management processes and stakeholders' satisfaction, and the second component is the product's success, which includes: the owner's strategy, user satisfaction and profitability ^[5].

Robinson and Bryde reviewed the views of the employer and the contractor on the issue of project success criteria including cost, time, acquisition of technical specifications, and satisfaction of stakeholders ^[6].

With the multi-dimensional conception of success, Al-Tmeemy defines his framework in three dimensions. First, the success of project management that relates to achieving management goals in time, cost, and requirements. The second is product success that is related to technical requirements and customer satisfaction. Third is market success which is related to the potential of the project and its contribution to the long-term success of the company in terms of competition, promotion of reputation, increased market shares and profitability ^[7].

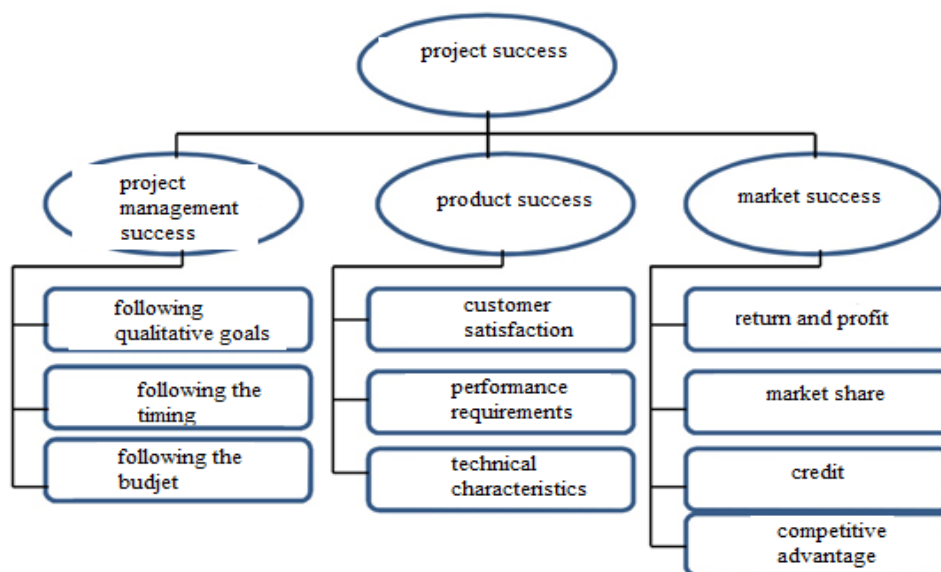


Figure 1. Success Criteria for Construction Projects, References: Al-Tmeemy, 2011

Frodell examines the criteria for success from the employer's point of view and has reached the factors such as cost, time, profitability, and achievement of project goals. Elatar has developed a hierarchical model framework for construction projects. He presents three views of the owner, consultant and contractor on the success of the project. The criteria for success in terms of the owner are: time, cost, function, quality, beauty, return on investment, marketability and minimal conflict. From the consultant's point of view are employer satisfaction, quality, wage acquisition, time, cost, consumer product, reduced

claims, range. From the perspective of the contractor, they are time, profit, cost, quality, reduced claims, consent of the parties ^[8].

Chan et al. propose two key performance criteria for construction projects. The first group includes objective subjects that include time, cost, safety, and the environment. The second group includes subjective issues that comprise the quality, function and satisfaction of the stakeholders ^[9]. In another study, four factors have been raised as the criteria for project success, which are the factor for market success ^[10].

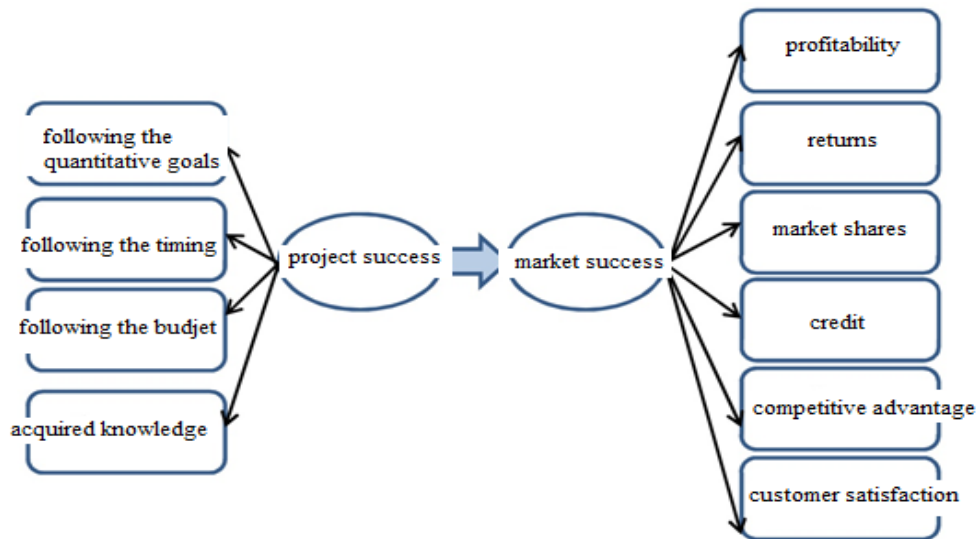


Figure 2. Theoretical Model of Function, References: (Blindenbach-Driessen 2006)

Data Analysis

Given the diversity of perspectives on the success criteria, the following table is provided for better understanding the issue and knowing which factors are more important than others.

Table 1: project success criteria from the point of view of experts, reference: Author

References/ criteria	Time	Cost	Quality	Performance	Stakeholders' satisfaction	Customer satisfaction	Market share	profitability
Lim & mohammad (1999)								
Baccarini (1999)								
Chan (2000)								
Bryde and Robinson (2005)								
Blindenbach-Driessen (2006)								
Ahadzie et al (2008)								
Frodell (2008)								
Al-Tmeemy (2011)								
conclusion	87%	87%	75%	37%	37%	50%	37%	37%

The points derived from the table above are as follows:

1. Some of the project's success criteria, such as time, cost, and quality, are more important than others.

2. Some of the issues are very general and some are very detailed, such as stakeholders' consent, which can be the employer, the contractor, the designer, and so on.
3. In some studies, the question is raised about whom the criteria of success is important? For example, the criteria for success can vary from employer and contractor perspective.

Time and cost in all studies are considered as the criteria of success.

Conclusion

Given the growth of construction projects, studying the success factors of the project has been the topic of research by many researchers in recent years. Regarding the fact that there is still no consensus on this issue, researchers' views from different countries are examined and we get to the following relative results by analyzing these views.

1. Time, cost, and quality are the main criteria for project success.
2. Satisfaction of the stakeholders, especially the customer is considered as a quadratic criterion for project success.

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